

Burial and identity in the Late Neolithic and
Copper Age of south-east Europe

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ABSTRACT

In the Late Neolithic of south-east Europe, c. 5000 cal BC, a new form of burial practice appeared, as communities started to bury their dead in discrete extramural cemeteries. At the same time as this new formal burial practice, we see an increase in the number of grave goods placed with burials. There was a greater interest in the expression of identity through objects in the mortuary realm.

This change was not simultaneous across the region of south-east Europe. It took two different trajectories, one in the Lower Danube and Black Sea coast region (the eastern region) and another in the Carpathian Basin (the western region). In the eastern region, cemeteries appear as discrete formal areas to bury the dead suddenly, c. 5000 cal BC, in stark contrast to the unknown burial practice that preceded it. In the western region, settlement burial in groups became the norm first, before fully extramural cemeteries appeared c. 4400 cal BC.

This thesis analyses a number of these first cemeteries from both regions, looking at who was buried in them and what they were buried with. It is interested in what was being expressed about individual and social identity in the mortuary context. It uses correspondence analysis to look for patterns within the grave goods which may reveal specific social identities, such as age grades, gender or status. It concludes that the expression of difference through the body was an important part of the emergence of cemetery use. Furthermore, it provides new data about the timing of cemetery emergence by radiocarbon dating the Romanian cemetery site of Cernica.

1 INTRODUCTION

“It is in vain that the Bororo crown their system with a fallacious impersonation of the dead: they have been no more successful than other societies in denying the truth that the image a society evolves in the relationship between the living and the dead is, in the final analysis, an attempt, on the level of religious thought, to conceal, embellish or justify the actual relationships which prevail among the living”

- Claude Levi-Strauss, *Tristes Tropiques*

7000 years ago, around 5000 BC, in what is now Durankulak on the Bulgarian Black Sea coast, a community decided to do something different. Instead of leaving their dead out to rot and be taken by animals the community chose a place, outside their settlement, and buried the first body in it. The grave was carefully dug, and the body placed in it wearing suitable clothing and ornaments. Over the next 470–650 years this place would be used to bury 1191 people, men and women, young and old. A new way of treating the dead had emerged, and this practice would spread to become the dominant mortuary practice throughout the Lower Danube region until the Bronze Age kurgan mounds.

The appearance of cemeteries in south-east Europe in the Late Neolithic marks a striking change in the way people were thinking about the dead. In some areas suddenly and others gradually, the dead stopped being buried in the areas of the living and were placed in an area specifically for the dead. Just as the people of the Neolithic had settled down, so the dead were being settled down in their own permanent place. The placement of the dead, the repeated revisiting of the same place, took on a new importance for Late Neolithic and subsequent Copper Age communities.

Along with this new form of placing the dead came a new way of adorning the body in burial. Far more than in the preceding periods, people were buried with items of ornamentation, tools, pottery, and probably foodstuffs. The funerary rite was a spectacle, of which the display of the body was an important part. It seems that the use of objects to convey meaning about an individual's identity was either increasing throughout society in general, or now more important for the dead. Intriguingly, while the settlements of the period show little evidence of inequality, the distribution of grave goods indicates that there was stratification within society; some people had more than others. This tension between equality and inequality indicates the importance of the mortuary sphere in reproducing and renegotiating society.

This thesis considers what the changing mortuary practices of south-east Europe can tell us about the communities who were burying their dead. It asks who the deceased were, but it also asks what the deceased can tell us about the societies that they came from. What were the social structures of these communities? It is also concerned with what prompted this change in mortuary practice. Why do we apparently see a wholesale change in worldviews relating to the dead in this period? It is argued that a key element in this change is the display of difference on the body, an inequality that could not be expressed in the settlement sphere.

As a body of work, this thesis provides a number of unique contributions to knowledge. Most significantly, it provides brand new data for dating the start of the cemetery phenomenon in south-east Europe by radiocarbon dating the cemetery of Cernica. Cernica is typologically thought to be one of the first examples of cemetery burials in the region. Not only does our radiocarbon dating project contribute to our understanding of the beginning of cemetery use, but it also provides more dates for a regional radiocarbon chronology that is generally lacking. The dating of Cernica was intended not only to establish the date of possibly the earliest cemetery, it also aimed to understand Cernica itself better. It answered

questions about the way that Cernica was used, how different areas related to each other, and for how long the site was in use.

Secondly, it employs a novel technique to the assessment of burial practices, in particular the grave goods included in burial, in correspondence analysis. This use of multivariate analysis helps to by-pass some of the researcher biases, by allowing the data to suggest patterns, rather than interrogating the data on the basis of certain assumptions, i.e. the relationship between sex and gendered identities.

Finally, in a region often divided on national grounds, this thesis also provides a broader scale of analysis than is usually employed, ranging across the related cultures of the Pannonian Basin and Lower Danube.

The main questions that this thesis will answer are:

- How can we use the study of burial practices to understand past personhood?
- What types of individual were buried in south-east European cemeteries in the Late Neolithic and Copper Age?
- Can we identify objects (as grave goods) that represented or constituted specific aspects of individuals' identities?
- What were the timescales and characteristics of the adoption of cemetery use, and how did this differ in the two study areas?
- What factors were responsible for the emergence of the cemetery phenomenon in south-east Europe?

The thesis is structured to outline the problems in current understanding of burial practices in the Late Neolithic and Copper Age of south-east Europe, before going on to suggest potential approaches which are then applied in two large case study chapters. Chapter Two provides a brief history of the study of burial practice, demonstrating the need for a different

approach. Chapter Three provides the theoretical framework and Chapter Four describes the methodological approach. Chapter Five introduces the regional archaeology, providing the archaeological context for the case studies. Chapters Six and Seven are the two case study chapters. Chapter Six, the eastern region, analyses three large cemetery sites: Cernica, Durankulak and Varna. Chapter Seven uses a greater number of smaller and less well published sites: Kisköre-Damm, Polgár-Csőszhalom, Gomolava, Alsónyék-Bátaszék, Aszód, Mórágypuszta-Tűzkődomb, Tiszavalk-Kenderföld and Tiszapolgár-Basatanya. Finally, the results from the case studies are analysed and synthesised in the discussion chapter.

2 ARCHAEOLOGICAL STUDY OF MORTUARY PRACTICE

“The bourgeois did not much care for being buried in the Vaugirard; it hinted at poverty. Pere-Lachaise if you please! to be buried at Pere-Lachaise is equivalent to having furniture of mahogany”

- Victor Hugo, *Les Misérables*

2.1 INTRODUCTION

Archaeological research in south-east Europe has been on-going since the turn of the last century. In that time archaeological thought has gone through many trends, resulting in shifts in research focus. This chapter is a summary of how those shifts have played out in the study of mortuary practice, explaining the dominant paradigms, increasingly focusing on south-east European studies. In doing so, it will highlight the inadequacies of previous approaches, and demonstrate that new methods and ways of thinking are still necessary to better understand the cemetery phenomenon.

2.2 CULTURE HISTORY

The aim of culture history, as described by its leading figure, V. Gordon Childe, was to chart “cumulative tendencies” in human culture (Childe 1945, 13), using aspects of material culture to trace cultural groupings and relationships. Focus on objects, particularly pottery and tools, was important as they indicated technological sophistication (Hawkes 1940). Culture historians differed from the antiquarians who preceded them in that they were more interested in understanding past people than objects (Trigger 2007, 247). Their work retained a broadly evolutionary perspective, working under the assumption that cultures naturally advanced from a primitive savagery towards the pinnacle of European civilisation. In cultures that had failed to make this advance something was considered to have happened

to retard this process. Thus Neolithic mounds were “more civilised” versions of death disposal than the Tévéc Mesolithic midden burials (Hawkes 1940, 147). The evolutionary view became increasingly less accepted. In 1965, Piggott wrote that the emergence of civilisation was abnormal and (while still employing terminology with evolutionary connotations, such as ‘civilisation’ and ‘barbarian’) he stressed the need to consider cultures on their own terms (Piggott 2007 [1965], 19).

Although burials often supplied various aspects of material culture in the form of grave goods, the burials themselves gained little consideration in culture-historical works. Funerary structures were utilised as markers of cultural connectedness; for example, Hawkes considered that the building of megalithic tombs around the Atlantic coast demonstrated a cultural unity from the Mediterranean to Scandinavia in the Neolithic (Hawkes 1940). Burial rituals were seen as conservative and stable and therefore good indicators of people’s movements (Whitley 1991, 23). Little attempt was made to engage with funerary practice as a source of cultural or social understanding. Indeed, social organisation was rarely considered in relation to burials or any other evidence, beyond assumptions about ranking and status, seen as signs of increasing civilisation. Hawkes (1940, 145), for example, saw barrow burial as being for the “most honoured dead”. Funerary practice was seen to be representing religious ideas rather than social (Hawkes 1940, 150).

Despite this it would be unfair to claim that archaeologists of the mid-20th century had no interest in social practice; the problem was that they were sceptical about what could be deduced from the archaeological record, particularly for prehistoric periods. Childe’s interest lay not only in identifying cultural traits, but also in using those to create a kind of ethnography of the way past cultures lived (Trigger 2007, 246). In his 1945 paper on mortuary practice, Childe proposed that the development of spiritual culture could be studied in the same way as material culture. Reviewing burials from Europe and the Near

East from the Palaeolithic onwards he developed the hypothesis that in stable societies grave goods and tomb constructions become fewer and poorer. This, Childe argued, was due to less social competition in more stable societies, meaning less of the deceased's wealth in life would be buried with them (Childe 1945, 17). This stability could be upset by the introduction of new forms of wealth through processes such as colonisation or trade, which would create a peak in competitive burial displays. Jacquetta and Christopher Hawkes also considered funerary practice to provide "insight into religious belief and practice" (Hawkes and Hawkes 1948, 39) and in their book *Prehistoric Britain* they speculated on the nature of the beliefs that may have motivated not only the building of prehistoric tombs but also the treatment and placement of the corpse (Hawkes and Hawkes 1948).

Culture historians' thinking about past cultures tended to be divided into technology, economy and religious and social aspects. In 1952, in *Prehistoric Europe – the economic basis* Grahame Clark focused on cultures' economies, but expressed scepticism over the archaeologist's ability to infer social practice. This attitude towards the division of cultural aspects is epitomised by C. Hawkes' 1954 paper, since dubbed the 'ladder of inference'. Here Hawkes divided human activities into four categories; technology, subsistence/economy, socio-political and religious institutions, and spiritual life. The first of these Hawkes considered fairly easy to determine archaeologically, but they became increasingly more elusive as they became more "specifically human" (Hawkes 1954, 162). Subsequent archaeologists, especially post-processualists, have criticised Hawkes for ignoring the non-material. However, Evans (1998) has argued that Hawkes had a strong interest in understanding people and individuality and the paper actually demonstrates a lack of available approaches for thinking about social and spiritual life, rather than a lack of curiosity. A more pertinent criticism would be that the division of cultures into discrete aspects is a false division, as cultures function as interrelated wholes, where technology and spiritual life cannot be separated.

Piggott demonstrated a similar pessimism towards the possibility of understanding social practice when he wrote “using archaeological evidence alone can inform us only of the broadest aspects of social structure or religious belief, and that often in a very tentative way” (Piggott 2007 [1965], 8). He argued that the archaeological view was inevitably technological and material because that is the evidence available, rather than believing they were more significant (Piggott 2007 [1965], 7). However, in the same year in *Pre-historic societies*, co-authored with Grahame Clark, he did make some attempts at understanding ritual behaviour, discussing the magical properties of Palaeolithic rock art and ideas of the mother goddess from Neolithic figurines (Clark and Piggott 1965). Piggott had also previously attempted to address Hawkes’ fourth stage of inference by studying megalithic tombs (Piggott 1959). He considered burials were a good marker for social structure, likely to demonstrate differences in status, class and wealth (Piggott 1959, 11). Childe similarly used burials to inform on “elusive” social institutions (Childe 1951, 54). For example, he interpreted smaller Bronze Age burial mounds clustered around a central mound as chieftains around a common ancestor. Although he felt confident in describing these individuals as powerful, he did not consider it possible to comment on the nature of that power (Childe 1951, 59).

In 1969 Peter Ucko published a paper in which he used a number of ethnographic examples to challenge accepted views of funerary practice, and demonstrate that ethnology had potential to expand archaeological interpretations. Although culture historians had recognised potential for ethnographic analogy they tended to be pessimistic, as Hawkes stated, you needed to “show some real connection” (Hawkes 1954, 162) between the modern culture and the archaeological example being studied (Ucko 1969, 263). Ucko was critical of the simplistic connection between formal burial and grave goods and a belief in an afterlife, arguing that the ethnographic record implied that the reality was more complex and for some societies it constituted a practical disposal of the body, while others consider the

tomb as being a home for the soul without necessarily believing in an afterlife (Ucko 1969, 265). The key point of Ucko's argument was that ethnography demonstrates that burial practices are so varied that it is not possible to create rules about them. Practices that appear similar can have vastly different meanings from culture to culture, although burial practices "may in some cases characterize particular societies" (Ucko 1969, 275). Ucko's work should have stood as a cautionary tale for those among the next generation of archaeologists looking to create cultural generalisations.

2.3 STATUS AND HIERARCHY – THE PROCESSUALIST PREOCCUPATIONS

New Archaeology, also known as processual archaeology, emerged in America in the 1960s. Processualists were concerned with understanding social structure and organisation, using ethnography to establish cross-cultural rules within and between societies. They were generally functionalist; reasons for cultural change could be explained as rational reactions to certain environmental or circumstantial factors a society encountered. Climatic change and population pressure (e.g., Boserup 1965, on population pressure as a driver of agrarian technology) were both seen as important variables. Despite Ucko's (1969) caution on using ethnography as a way to build cultural generalisations, New Archaeology's new scientific rational approach set out to establish cross-cultural rules using ethnographic examples. Certain reactions to death and the representation of society in burial ritual were considered universal (Whitley 1991, 24). Archaeologists needed to recognise these generalisations through the study of ethnography and then find ways to distinguish them in the archaeological record.

The leading figure of New Archaeology was Lewis Binford. Binford (1968, 26) argued that archaeologists needed to go beyond culture history, and that they should be more optimistic in the potential of archaeological interpretation in reconstructing past lifeways; "we assume that the past is knowable; that with enough methodological ingenuity, propositions about

the past are testable.” He felt that archaeology’s contribution to anthropology (of which archaeology is considered a sub-discipline in the USA) was up to that time only descriptive of the evolutionary process, and that it needed to be explanatory (Binford 1962). He considered that archaeology had strong potential for this study of evolutionary change because of the large time and geographical scales of possible study. Binford (1962) argued that explanations must be sought in cultural systems, and as material culture was considered as a functional adaptation to humans’ physical and social environment he expected similarities between cultures in similar environments (although avoiding charges of environmental determinism by stressing that culture was an intervening variable). He compared cultural systems to ecological systems, as made up of various sub-systems and the relationships between them, and the more complex a society the more sub-systems it consisted of (Binford 1965).

A common theme for processualist studies was social hierarchy or ranking, the study of which it was felt archaeology lent itself to because of its reliance on objects. Burials were a particular focus, as contrasts between the wealth of individual graves could be used to infer the degree of ranking within a society (Brown 1981, 25). As Binford (1982, 161) put it, “[t]he inference of ranking and various social inequalities is seemingly linked almost exclusively to mortuary arguments.” Once the degree of ranking had been established, further information about the society, its size, and complexity could be inferred (Brown 1981, 26). Despite Binford’s stress on New Archaeology as being explanatory (Binford 1962; 1968) processualists were unable to shake off preceding evolutionary ideas and viewed increasing complexity as a natural progression, leading to a failure to engage with ideas of *why* these changes came about (Chapman 2000a, 29).

Binford specifically addressed burial practice in his 1971 paper *Mortuary practice: their study and their potential*, in which he criticised preceding approaches for considering burial practice as a

form of cultural marker and their stress on its connection to religious belief. He argued that burial practice involved culturally constituted symbolism that varied according to the structural complexity of the cultural system. Symbols were used to represent the deceased's social persona, and the number of social personae represented would be fewer in an egalitarian hunter-gatherer society and greater in stratified societies (Binford 1971). Individual's statuses could be symbolised by grave goods, grave location or construction. He also argued that contrary to culture historical views, similarity between burial practices did not demonstrate a genetic or affiliational relationship. Rather, cultures react differently, choosing to adopt or ignore certain traits according to their cultural origins and system organisation. Binford (1971) proposed that archaeologists must search for the "causative variables" that formed the laws of cultural change.

The text that had the most significant impact in processualist studies of burial practice was Saxe's 1970 PhD dissertation *Social dimensions of mortuary practice*. Here Saxe proposed a number of hypotheses regarding the relationships between burial practice and social organisation and status, and then tested these using ethnographic data. He employed role theory, an anthropological theory developed by Goodenough in 1965, to consider social relationships and how they relate to ranking. In role theory an individual's social persona is made up of various social identities, or roles, such as mother, teacher or hunter (Tainter 1978, 106). As Binford (1971) also argued, more complex societies, having a greater number of social roles, would be expected to express these through various differential symbols in burial practices, while conversely egalitarian societies would have fewer modes of differentiation (Tainter 1978, 118). The expression of a large social persona for a child, who had little time to develop such relationships, may be taken to represent, according to Saxe, a society in which social rank is inherited. However, the use of role theory in burial analysis suggests that the representation of social identities is always carried out in funerary practice (Whitley 1991, 24). There are in fact a number of ethnographic examples that demonstrate

that this does not always take place, and in some cases status may even be inverted (Hodder 1980; Hodder 1982b; Huntington and Metcalf 1979; Parker Pearson 1999).

One of Saxe's hypotheses, Hypothesis 8, was further developed by Goldstein. Saxe's original hypothesis, verified against three ethnographic examples, stated:

“To the degree that corporate group rights to use and/or control crucial but restricted resources are attained and/or legitimized 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.” (Saxe 1970, 119, in Tainter 1978, 123).

Saxe had based his hypothesis on the ethnographic work of Meggitt (Meggitt 1965) with the Mae Enga of New Guinea, who argued that the Mae Enga “responded to population pressure by emphasizing agnatic [patrilineal] descent”, but it has been argued that the Mae Enga do not actually fit Saxe's hypothesis (Morris 1991, 150). Goldstein re-examined the hypothesis using 30 societies. She criticised Saxe for assuming that all societies would use the same way of ritualising “a particular aspect of their social organization” (Goldstein 1981, 61), and rewrote the hypothesis in three parts allowing for more cultural variation and emphasising that burial in formal disposal areas was only one way of ritualising lineal descent.

The Saxe-Goldstein hypothesis was utilised by John Chapman in his 1983 study of burial in the prehistoric Balkans (cf. Chapman 1994b; 1997a; 2000a). He proposed that before c. 5500BC, burial practices indicated a two-tier society, where a lower group were disposed of in pits within settlements, while the mortuary practices of the higher group were archaeologically unrecognisable (J. Chapman 1983, 10). Changes in burial practice after 5500BC, in which burial was increasingly formalised, represented a societal shift as family lineages became increasingly important. This occurred to greater and lesser degrees across

the area, with some burials in household clusters, and others in unoccupied areas of settlements or in specific cemeteries. Chapman interpreted this as representing family groups (household clusters), or corporate identity (cemeteries) (J. Chapman 1983). As cemeteries became larger and more formalised in the Late Neolithic Chapman suggested that separate burial rows represented individual family groups, and that kinship was increasingly important.

Another theme drawn from Saxe's work was the relationship between formal burial areas and territorial land claims. For example, the megalithic tradition in Western Europe was explained as the expression of territorial claims on scarce farming resources (Renfrew 1976). However, Robert Chapman (1981) later suggested a need to broaden the conceptual framework. He felt that there may be more complex processes at work beyond population pressure and resource competition. Looking at the changing relationship between people and the land in the Mesolithic/Neolithic transition he argued that Mesolithic people had a strong continuous connection with the land, caused by their movement within it. In the Neolithic, establishment of more permanent places and greater investment in them through agriculture created a need to connect to the past and led to the emergence of ancestor cults (R. Chapman 1981, 73). This resulted in monumental expressions of community through megalithic burial monuments, connecting community to the land through the ancestors.

Various studies around burials and status followed Saxe, as burial practices came to be seen as the best way to identify social ranking within a culture (Brown 1971; 1981; Peebles and Kus 1977, 431; Renfrew 1982, 4). For European prehistorians such studies were a way to identify small scales of change in a period when there was a seemingly inexplicable amount of time between the emergence of small chiefdoms and the next 'evolutionary step' of urbanisation and state societies, especially in comparison with what happened in the Near East (Shennan 1982; Sherratt 1982; 1997). In the American tradition there was a stronger

engagement with the theoretical aspect. Studies such as that of Peebles and Kus (1977) of the Moundville burials in Alabama sought to further refine evolutionary categories based on measures of complexity, such as the inequality of burial practices, hierarchy of settlement type and society-wide production and organisation, making the labelling of societies easier.

Tainter questioned the usefulness of such studies and the way in which they sought to understand societies through evolutionary typologies; “worrying over what to call a past society is a waste of effort” (Tainter 1978, 117). Labelling a society as ‘a chiefdom’ fails to take into account the great degree of variability of social organisation possible. He also felt that basing assessments of the degree of social complexity on burial practices was flawed. He recognised that Saxe’s use of social persona represented by funerary practice did not take into account individual variations, whereby status may be expressed in different types, qualities and quantities of artefact (Tainter 1978, 120). Furthermore, Tainter discussed ethnographic examples that demonstrated that grave goods were just one factor by which status may be expressed in funerary ritual, and other expressions, such as the number of mourners at a funeral, are often archaeologically unrecognisable. He therefore considered Binford’s ranking by energy expenditure, allowing consideration of more than one variable, more useful (Tainter 1978, 125). Using both the spatial distribution of burials and the energy expenditure to carry them out, Tainter developed a quantitative model to measure social complexity.

The representation of social differentiation in the archaeological mortuary record was investigated by John O’Shea. Concerned that New Archaeology had focused more on ethnographical examples than archaeological ones, he conducted a study of five cemeteries representing three North American Central Plains groups in the late eighteenth to early nineteenth centuries, in which he compared ethnohistorical accounts of social organisation and burial practices with the archaeological evidence (O’Shea 1982). He found that while the

main hierarchical distinctions were clearly defined in burial customs in all three groups, horizontal subdivisions were difficult to perceive. This, he proposed, was due to the use of markers that were archaeologically unrecognisable, such as organic items, or where features were preserved they were distributed across the population normally, in such a way as to appear random (O'Shea 1982).

European archaeologists were in general less enthusiastic about processualist theories. They had a greater interest in reconstructing societies rather than identifying and categorising cultures as social types (Whitley 1991, 32). In her study of Bronze Age cemeteries from south-west Slovakia Susan Shennan (1982) identified a gradual increase in differentiation through quantity and richness of grave goods. She concluded that the increase in wealth seen in the burials of a powerful group (which she defined as 'rich' individuals) did not represent an increase in social differentiation within society through the Bronze Age. Rather, it was the result of an ideological change in which the material expression of differentiation was emphasised through access to new artefacts, especially metals (Shennan 1982, 30). The development of hierarchy in this society was driven by the importance of competition through display as seen in burials. Emulation of the 'rich' was seen in the general use of artefacts in later phases which had previously been exclusively used by the 'rich'. The importance of the funerary ritual for conspicuous display was demonstrated by the richer earrings of females being worn on the side facing upwards in the grave (Shennan 1982, 30).

Similarly, in his 1986 paper Renfrew used conspicuous display of objects at the Varna cemetery on the Black Sea coast to demonstrate the emergence of wealth and status. In his 1973 paper on the early Bronze Age Wessex culture he had taken a social evolutionary approach to the development of mortuary monuments, arguing they could be used to trace the emergence of hierarchy in the Neolithic to the Bronze Age chiefdom (Renfrew 1973). The richness of the finds at Varna, discovered in 1972, was a shock to Balkan prehistoric

archaeology, as they appeared to demonstrate a social differentiation previously unseen in the region (Renfrew 1978, 199) and was dubbed the “dawn of European civilisation” (Ivanov and Avramova 2000). Settlement evidence indicated a relatively egalitarian social organisation (Renfrew 1978, 201). The excavator, Ivanov, suggested that the cemetery represented a state level of social organisation in the Black Sea region, with Varna acting as a central cemetery for chiefly burials (Ivanov 1978, in Renfrew 1978, 202). Varna indicated not only that the Copper Age Black Sea coast communities were ranked, but that there may have been a degree of state formation. Renfrew (1986) proposed that the Varna cemetery served a number of surrounding settlements and was the focal point of an organised hierarchy or ‘chiefdom’. This contradicted the previous view of the period as consisting of independent villages linked through kinship and exchange networks (Renfrew 1986, 150).

Renfrew (1978) also felt that the cemetery pointed towards a social context for the early production of copper and gold, in which they were developed by the need for conspicuous display. He saw funerary ritual as an opportunity to affirm social status through the display of valuable artefacts; in this case those made of the new resources, copper and gold. Processualists viewed objects in the mortuary domain as social indicators, with a value ascribed by society according to labour value, use value or value related to its associations or history (after Marx, in Renfrew 1986, 159). Renfrew proposed that the development of metallurgy was related to its social function as an indicator of status, as demonstrated in mortuary ornamentation. Early metal, while being weak and of little practical use, was suited to displays of wealth, both by its rarity and its intrinsic aesthetic properties (Renfrew 1978).

Renfrew developed this concept of the emergence of wealth in prehistoric society in his 1986 paper. He argued that although we cannot assume gold had an intrinsic value it did have a value beyond its use and labour values in Black Sea Coast communities. It was used to adorn the body in privileged positions such as the face and genitals, and a number of

objects were found coated in gold in an attempt to make them look as if they were entirely made of it (Renfrew 1986, 148). Renfrew argues that metals, both copper and gold, played an important part in the development of a new social structure in south-east Europe in the Early Copper Age. While recognising that objects had an active role in their relationships with people, Renfrew considered them as direct indicators of social rank and wealth, missing possible complex relationships as social symbols or creators of individual personhood.

Another significant processualist study in the prehistory of south-east Europe is Andrew Sherratt's 1982 paper on the development of social complexity among the farming groups of the Great Hungarian Plain from the beginning of the Neolithic into the Copper Age. Here he combined both settlement and mortuary evidence in assessing social structure, contextualising burial practices to develop a more nuanced understanding of the social changes that occurred over this time frame. He focused on the way identity was defined through group membership expressed in funerary ritual. Sherratt argued that the intramural burial practiced by Körös groups in the Early Neolithic demonstrates a lack of concern with descent. As settlements became larger agglomerations in the fifth millennium BC, burials maintained a domestic or lineage group context, implying that settlements were formed of co-habiting lineage groups rather than having a single community identity (Sherratt 1982, 19). By the later fifth millennium formalised cemeteries emerged at the same time as settlements dispersed, suggesting, in Sherratt's scheme, the development of a community identity.

Sherratt linked this process to economic factors, in particular the exchange of cattle, which he considered would have been bred on the Plain and then exchanged for resources such as stone from the surrounding Carpathian Mountains (Sherratt 1982). In the earlier Neolithic, small groups were linked through exchange of utilitarian artefacts and there was competition and instability. Tell communities formed as cattle became a form of negotiable wealth, as

larger settlements were more secure than dispersed ones and large-scale cattle rearing was easier. Sherratt sees the lack of communal burial in this phase as evidence for an egalitarian community linked by necessity and governed by ritual and ideology (Sherratt 1982, 22). The dispersal of settlement in the late fifth millennium was caused by the decline in importance of the Plain as a cattle rearing area as mountain areas were cleared of trees and became suitable for cattle. He argued that the importance of cattle as a form of wealth diminished and new items with little practical value were used in the competitive exchange networks, and this is demonstrated in the grave goods found at large cemeteries in the Early Copper Age. This Sherratt (1982, 23) saw as the emergence of ranking in the area. In Sherratt's interpretation, objects, including cattle and women, represent a form of wealth for exchange, to be used in alliances or to demonstrate prestige, and economic factors were seen as the driving force for change.

During his processualist phase John Chapman saw the emergence of cemeteries in terms of arenas of social power. For Chapman (1991) the use of cemetery areas in the Lower Danube area was a result of tensions between the strictly egalitarian space of the tell, constantly being recreated in the same form, and an emerging competition between corporate lineages. "The basic reason for the creation of mortuary space was the elaboration of the categories of relationships between the living and the new dead" (Chapman 1991, 165). The use of the new dead to create claims of inheritance, of status or property, contrasted with the preceding lack of importance of the new dead on the tell settlement, which was itself a physical reminder of the ancestral dead. Chapman (1991) saw Cernica, with its relatively low differentiation in terms of grave goods, as a demonstration of the tensions between the egalitarian ideology of the tell and the new interest in asserting inheritance through kinship. These first expressions of inequality could not have been performed on the tell, but Chapman considered that they were successful in advancing the importance of lineages, as in the Copper Age we see evidence of differentiation on settlements too. For Chapman (1991),

the wealth of Varna burials was a result of increasing competition between lineages, who used the dead to make claims of their power and status.

For the Pannonian Plain, where tell settlements were less common, and less long-lived Chapman (1994c) saw the burial of the deceased on settlements in the Middle Neolithic, essentially physically incorporating the ancestors into the site, as a “parallel strategy” (Chapman 1994c, 81) to the creation of tells. It performed the same function of incorporating the ancestors into the domestic arena. After a phase of tell settlement use in the Late Neolithic, the following Copper Age dispersed settlements meant, for Chapman (1994c), an increase in the importance of the household, local inter-settlement networks, and the accumulation of prestige goods, in comparison to the egalitarian community of the tell. This is demonstrated in the burial record by the use of cemeteries disassociated from any particular settlement, used by a number of communities in the local area, with grave groups or lines representing households. The interest in the increase of accumulation can be seen in the increasing number of grave goods present.

2.4 POST-PROCESSUALISTS AND MESSY HUMAN RELATIONSHIPS

The processualist focus on functionalism and the structure and rules of society was challenged by a new generation of archaeologists who felt that such an approach ignored the actions of individuals and skimmed over the complexity of human sociality. This post-processualist agenda was initially advanced by a group of archaeologists mainly based in Cambridge in the early 1980s. Contributors to Ian Hodder’s 1982 *Symbolic and structural archaeology* made the case for a more dialectic archaeology. They were concerned with the reflexive nature of the relationship between the individual and society, and also in the role of material culture in creating and recreating social structure (Hodder 1982b; Miller 1982b). They saw themselves as being descendants of the culture-historians, in particular Childe, in

their more humanistic approach, rejection of universalisms and view of material culture as expressions of cultural ideas (Hodder 1982b, 11).

Post-processualists felt that functionalism failed to explain the complexity of human society and that ascribing functional explanations to cultural practice implies a conscious rationality among a group's members of group needs, an awareness that is unlikely to have existed (Giddens 1984, 12). The reality is far more complex, with individuals' (or agents') actions having both intended and unintended consequences. For Giddens, a British sociologist whose work has been highly influential in British archaeological theory, the structure of society is created and maintained by the actions of individuals, who consciously follow social rules and in doing so unconsciously pass those rules on (Giddens 1984, 24). Similarly, Hodder has argued that all human actions are contextual and only understood through a shared cultural understanding (Hodder 1982b). Material culture plays a key role in the relationship between culture and social action, as symbolically loaded objects pass on information in a reflexive relationship.

A further problem that post-processualists saw in processual archaeology was the viewing of cultural remains as a reflection of people's actions (Hodder 1982b, 4). In this scenario material culture has a passive role in human society; an object's symbolism came from its intrinsic qualities. For example, grave goods made from gold demonstrated wealth or status. Post-processualists argued that artefacts do not have intrinsic meaning; meaning is culturally ascribed and often fuzzy. Miller (1982a) argued that objects are categorised according to categories derived from the natural environment, that humans use the natural world to create cultural order. His inspiration can be seen in the writings of Levi Strauss (1966) on linguistic categorisations based on individual cultures' worldviews. Miller argued that identifying categorisation criteria would help to identify the processes of social construction, as such categorisation was linked to the way a society understood the world. Miller provides

the example of the pottery in a central Indian village, which is categorised based on the caste system by which the society is organised, and the associated concepts of purity and pollution (Miller 1982b). This dependence on the social hierarchy has led to the development of a multitude of different vessels to express differential status, distinguished by form and decoration, which serve only a small number of functions. Archaeologists will often ascribe an idealised 'type' object to a perceived category of objects, describing other examples as better, or worse, than the 'type' object, but variability in form may represent a multitude of factors of individual preference or differences in function (Miller 1982a, 22).

Like the New Archaeologists before them, post-processualists considered burials as an important resource in understanding past societies, but like Ucko (1969) they questioned the validity of cross-cultural generalisations, arguing that things were rarely so simple. Hodder attacked the processual approach to burial studies in his 1980 paper *Social structure and cemeteries: a critical approach*. He used the ethnographic example of the Nuba of Sudan to illustrate that burial practices were not a reflection of social structure but were in fact used to express an ideal. The Nuba have matrilineal succession, but daily life is male dominated. When women marry they move to live in their husband's community but at death will be returned to be buried with their matrilineal group. Thus, Nuba burial practices represent an idealised, rather than the lived, reality (Hodder 1980).

Post-processualists working on burial practices were influenced by the work of a number of anthropologists on attitudes to death. Unlike the processualists, who sought to find cross-cultural rules in anthropological examples, the post-processualists used ethnography to demonstrate the variety of human responses to death (e.g., Bloch 1971; Bloch and Parry 1982; Huntington and Metcalf 1979). The work of Maurice Bloch (1971) on the Merina of Madagascar is an often cited example of burial practice expressing idealised rather than actual social organisation.

Judith Okley's work on British Gypsies demonstrated how concepts of purity can influence the way people are buried. Gypsy life is regulated by strict rules concerning purity and pollution, which are seen in the way they interact with non-Gypsies (Gorgios), who are considered dirty, the careful preparation of food, and the separation of items for washing clothes and the body (Okley 1975 in Hodder 1982, 62-64). Death is considered a polluting event, and everything is reversed as in death: a Gypsy becomes like a Gorgio and is sedentarised in a Gorgio cemetery. The deceased individual's possessions are also considered polluted and must be disposed of by being broken, burned or buried at a distance from the camp. The soul is appeased by an elaborate funeral. This example demonstrates the importance of social attitudes and understandings in the disposal of the dead (Hodder 1982c, 145; Parker Pearson 1999, 25).

Mike Parker Pearson (1982) discussed the way social attitudes influenced the treatment of the dead using the example of a modern British cemetery. He linked changes to funerary ritual to changes in attitudes about religion and the material expression of class. With the decline in religious belief in the twentieth century, burial was increasingly seen as a practical disposal of the body, leading to an increase in the un-Christian practice of cremation, while the blurring of class boundaries and the tendency for the upper classes to define themselves through roles of power rather than conspicuous display caused a decline in extravagant funerary monuments (Parker Pearson 1982).

He also criticised the way processualists used grave goods to infer roles within society, and thus social organisation, stating that "social systems are not constituted *of* roles but *by* recurrent social practices" (Parker Pearson 1982, 100, original emphasis). Parker Pearson proposed that mortuary rituals are times of social gathering that are used by certain groups to reinforce the dominant ideology, redefine social roles or advertise social power or wealth. The funerary treatment of the dead is not, therefore, a passive reflection of their social role

but a form of social competition through material expression by the living (Parker Pearson 1982, 101). Rather than representing social reality they are more likely to be an expression of idealised social relationships. Parker Pearson proposed that the social context of burials (in other words the relationship between the living and the dead) needed to be assessed to form a better understanding of the social roles they may be representing (Parker Pearson 1982, 110).

Shanks and Tilley (1982) also considered mortuary practices to have been a way to legitimise the existing social order and reinforce the ideology that underlies it. In their study of Neolithic mortuary practices in southern England and southern Sweden they proposed that collective burial was an assertion of group solidarity and equality through the disarticulation and regrouping of individuals (Shanks and Tilley 1982, 150). Importantly, they do not see this as representing the social reality, but rather the promotion of an ideology to conceal or legitimate actual power relations.

The first full study of burial practices using a post-processualist approach was Morris' (1987) analysis of the rise of the Greek city state. Unlike prehistorians, Morris had the benefit of historical sources and artwork to inform his interpretations. Despite employing a post-processual approach, Morris was not dismissive of the preceding era (cf. Morris 1991); he felt that the Saxe-Goldstein hypothesis was relevant to Greece, where the use of descent claims to control vital resources is recorded in textual evidence (Morris 1987, 53). However, Morris argues that all forms of burial rituals are culturally defined, and that each culture deals with the dead according to its own ideologies and understandings. Although, following Hertz (1960 [1907] in Morris 1987, 30) and van Gennep (1960 [1909] in Morris 1987, 30), it can be argued that all societies treat death as a rite of passage in which the relationships between the deceased and living are renegotiated, every society deals with this in a different

way. Not only this, but burial represents only part of the way people deal with death, and many responses to it are archaeologically unrecognisable.

Like Parker Pearson, Morris felt that funerals were a time when the ideals of a society are enacted and displayed, and as such they provide an opportunity for archaeologists to understand social structure. Archaeology lends itself to the study of long term change and Morris wanted to use burial evidence to understand how the polis emerged as the form of Greek society from 1100 to 500 BC (Morris 1987, 1). He did this by tracking changes to the principles that shaped burial practice in the community. Analysing the demographic of the burial population he found a division between adults and sub-adults, and in some periods sub-adults do not appear to have been formally buried (Morris 1987, 62). This coincided with declines in total burial population that previous researchers had proposed to have been caused by a population crash caused by drought (Camp 1979). Instead, Morris suggested that these fluctuations, characterised not simply by fewer burials but also smaller cemeteries, were related to restrictions on burials, so that only those of high-rank had access to formal inhumation, and then a later relaxation of these restrictions to include the non-elite (Morris 1987, 94). He argues that this greater inclusion suggests that the polis emerged in the mid-eighth century when we see the idea of the citizen demonstrated in the expansion of formal burial to all people.

Whitley (1991) has also used burial evidence in a study of Dark Age Greece, and like Morris he also used a combination of analytical and theoretical approaches. Whitley's aim was to establish whether there was a link between the style of painted pottery decoration and the development of Greek society, arguing that there was a link "between artistic progress and changes in social behaviour" (Whitley 1991, 10). Whitley's methods involved the use of cluster analysis, to assess the degree of similarity or dissimilarity between graves, and factor analysis, which assesses variability and finds the most important variables within the dataset

(Whitley 1991, 76). He assigned wealth scores to different items according to their material, size and workmanship. The study was long-term, looking at the development of Athenian society in a cultural context. He argued that the vases were specifically chosen for burial according to what the buriers wanted to express, and that in this way social change drove stylistic changes in vase decoration. Although both Morris and Whitley expressed post-processualist intentions in the end both of their studies were in the processualist vein: strongly data-driven, they analysed burials as expressions of status.

Not every archaeologist was a post-processualist convert and the processualist tradition has remained particularly strong in the United States. Many felt that post-processualist approaches lacked scientific background, and it was dismissed as pseudo-psychology. O'Shea's 1996 *Villagers of the Maros* was a resolutely processualist approach to the study of burials. Rejecting post-processualist fuzziness, O'Shea used objects as cultural markers to identify a number of age, gender, wealth, craft specialisations and social positions among individuals in the Early Bronze Age cemetery of Mokrin, Serbia. These included hereditary statuses that required reaching a specific age category before they could be fully taken on, expressed through female sashes and male head ornaments, both of which are found alongside some sub-adults, but worn by some adults (O'Shea 1996, 265). Ceramics were taken to represent subsistence status, with those buried without any vessels having no reciprocal obligations with their kin, who therefore provided no funeral feast (O'Shea 1996, 266). O'Shea read variations of artefacts within categories as further sub-classes, as they tended to cluster. Individual preferences did not feature into O'Shea's schema, and objects were always taken as signifiers devoid of other symbolic associations.

What emerged from post-processual archaeology was a greater diversity of approaches. While some, particularly in the American and German traditions, were dismissive of the new ideas, many others embraced the potential of a more interpretive approach and, taking ideas

from other social sciences, began to explore themes such as gender, agency, material culture and personhood.

2.5 FEMINISM AND THE EMERGENCE OF GENDER ARCHAEOLOGY

In the early 1980s feminist critique, which had been developed in other social sciences in the 1970s, was introduced to Anglo-American archaeology by Conkey and Spector (1984). The first discussions of this feminist archaeology were around the position of women within the profession, the development of archaeological gender theory and the representation of women in the past (Lucy 1997, 153). The male bias of previous archaeological interpretations, arising from the dominance of men within the discipline, meant that women were often excluded from interpretations, or when they were included it was as passive figures of veneration or as objects for trade or marriage alliance (e.g., Sherratt 1982). Feminist archaeologists sought to place women in narratives of the past, and in particular focussed on challenging gender stereotypes by looking for women in so-called 'male' activities such as hunting (Lucy 1997, 153).

However, it was soon recognised that a feminist approach of simply 'adding' women and women's activities to past narratives, although challenging male bias, was continuing many problematic assumptions about gender relations (Conkey and Gero 1991; Lucy 1997, 153). Discussion of male and female roles as being distinct and dichotomous maintained Western cultural stereotypes, when in many cultures gender identity can be a fluid and changeable construct (Meigs 1990). The contemporaneous post-processualist focus on active material culture and viewing the individual as an active social agent contributed to the emergence of a gender archaeology, in which gender is seen as actively created and variable (Lucy 1997, 154).

Ruth Tringham is a British archaeologist with an interest in the prehistory of south-east Europe whose work has been strongly influenced by gender archaeology. In *Households with faces* Tringham (1991) acknowledges her initial scepticism towards the subject before her realisation that only by engendering prehistory can you begin to think of “human entities” (Tringham 1991, 94). She saw it as a way to understand human processes on a more detailed scale, such as the household or family unit, to get away from the essentialising generalisations of macro-scale approaches (Tringham 1994). Tringham argues that engendering prehistory develops not only awareness of gender but also of the role of all social actors, male/female, young/old, and the way that events, people and things have multiple meaning for individuals. In her own work it led her to consider the end of the use-life of houses on the tell settlement of Opovo, Serbia, as something more than the inevitable demolition and replacement seen by processualists, and so to excavate the rubble more carefully. She started to consider the biography of the house and the way it was connected to the biographies of those who lived in it, leading to interpretations of evidence of burning as being a deliberate killing of the house (Tringham 1991; 1994). Thus gender archaeology, as part of the post-processual movement, caused changes not only in interpretation, but in the way archaeologists approached excavation.

While Tringham worked with architecture, elsewhere in south-east Europe mortuary practices have been seen as a rich source for gendered studies due to frequent cases of differentiation between male and female grave goods during the Late Neolithic and Copper Age. An early example of a gender-aware study is Ida Bognár-Kutzián’s 1963 study of Tiszapolgár-Basatanya, in which, using grave good distribution, she assessed gendered status, labour division and life conditions. Tiszapolgár-Basatanya was also the focus for Sofaer Derevenski’s gendered archaeology (1997a; 2000). In her 1997 paper she discussed the way gender is socially constructed through material culture. Arguing that children should not simply be discarded from archaeological interpretations because they cannot be sexed, she

suggests that children at Tiszapolgár-Basatanya may well have been gendered. The engendering of children would have been a process of learning correct actions and associations. In burial practices we are presented with the group understanding of gender identity, and are likely to see idealised representations (Sofaer Derevenski 1997a, 875).

The same volume included a study by John Chapman that looked at the changes in the representation of gender in the mortuary domain across the Hungarian Plain in the Neolithic and Copper Age, in relation to settlement evidence. The study was based on Chapman's arenas of social power model (as discussed above), where places gain value through the important cultural activities that are carried out there and the narrative connections with the past through such activities (Chapman 1991). Chapman proposed that the increasing differentiation expressed in grave goods is representative of a new ideology of power, and the preceding importance of the ancestors was replaced, leading to the separation of the living and the dead. Chapman linked this change to the secondary products revolution and an increase in gendered roles relating to it (Chapman 1997a).

Recognition of children's role in the reproduction of a culture also emerged from gender archaeology. In previous approaches, children, perhaps more than women, were unseen. Considered in Western culture as dependents lacking any social agency of their own, children were discounted as having any impact on a society, ignoring the role that children play in cultural reproduction (Scott 1997, 6; Sofaer Derevenski 1997b, 193). Children learn correct social roles through observation and instruction; in many cultures they have their own roles including work to carry out, but they may also rebel against such rules (Scott 1997, 6). Prehistoric cemeteries from south-east Europe provide interesting material for the study of gender development in children. Children are often overlooked because they cannot be reliably anthropologically sexed, however, in south-east Europe strong correlations between sexed adult individuals and side of burial, as at Tiszapolgár-Basatanya (Sofaer Derevenski

1997a), or gendered grave goods at Mokrin (Rega 1997) have been used to infer the gender of children, although such assumptions are clearly not unproblematic.

In the case of Mokrin, a Maros culture Bronze Age cemetery in the Banat region of Serbia, 94% of the biologically sexed adult individuals fit into the division of females being buried with their heads to the south or south-east on their right sides and males on their left with their heads towards the north or northwest (Rega 1997, 230). As the discrepancies fall within the expected error range for anthropological sexing, Elizabeth Rega suggests that the society was highly gendered based on biological sex. Sexing of children using permanent teeth (although only having 69-79% accuracy) suggested that they too conformed to this gender orientation. Analysis of artefacts associated with individuals found that a number of artefacts were exclusively female or exclusively male. One of these artefact types, bone needles, was found with female adults and south-orientated children, some of whom would probably have been too young to use them. This implies that either they represent the extension of gendered identities into childhood, or they were a 'girl' symbol women carried into adulthood (Rega 1997, 233). The lack of infant burials (there were no children under the age of one year) may indicate that before this age children were not considered to have a social identity or be part of the community (Rega 1997, 238).

2.6 PERSONHOOD, IDENTITY AND MEMORY

The post-processualist reaction against processual structuralism and the focus on individual agency that emerged from that led to a new problem – the polarisation of the individual and society. When individuals were considered agents acting consciously and independently, the role of the wider society became insignificant. The concept advanced to break down this dichotomy was personhood (Gillespie 2001). Personhood at its most basic is “the condition or state of being a person” (Fowler 2004, 7). It expands the person beyond the bounded individual, as personhood is continually created through relationships with people, objects

and the environment (Fowler 2004). Thus personhood, by situating the person in a web of social relationships, is able to connect the individual and society.

Gillespie considered how ancient Mayan conceptions of personhood were expressed in mortuary rituals. Mayan society was organised in named houses, or kin-linked units, and belonging to a house formed an important part of identity (Gillespie 2001, 91). Names or titles within houses were often associated with ancestral or legendary figures, and those living individuals who took those positions were considered to take on a part of their identity. Thus Mayan personhood was based not only on the living and the recent dead but also more distant figures. Some believe that the recent dead are reincarnated as later family members who have the same name, so that the ancestors continue to be a part of the house (Gillespie 2001, 94). Being able to link a house to important ancestral or legendary figures was a way of increasing social standing and this was done both through writing and depiction of descent, and through the passing down of heirloom objects and their associated oral narratives (Gillespie 2001). Such relationships are open to negotiation and manipulation, and mortuary rituals would have been a time when this happened, as the death of an important individual left a gap in relationship networks. During funerals, heirlooms were displayed and oral traditions were recited as the living sought to claim ownership of the deceased and through them their status (Gillespie 2001, 96).

In the same year Rosemary Joyce (2001) considered the role played by mortuary ritual in the development of social identity and social memory. The public nature of funerals and their use to promote group or individual interests or renegotiate social relationships has been recognised by post-processualists (e.g., Parker Pearson 1999; Chesson 2001). However, the role played by emotions has largely been ignored due to the perception that detachment is scientific, in both archaeology and anthropology. Yet death can be a time of deep emotions of grief, loss and anger; human responses, but which take different cultural forms (e.g.,

Rosaldo 2004). Joyce (2001, 12) argues that the strong emotions shared during funerary rituals are an important part of the formation of social memory and identity. She constructed speculative biographies for three female burials at the site of Tlatilco, Mexico City, a settlement site where individuals appear to have been buried within houses. While statistical analysis indicates patterns within the burial population, such as 15 – 19 year old females having the most elaborate graves, Joyce argued that the uniqueness of each burial was a result of the various relationships which the deceased had with the living (Joyce 2001, 20). The wealth of their group, access to material resources and the difference in impact their death had to social relationships, according to their age at death, were also reflected.

The site of Moundville, in Alabama, USA, has been the focus of a study by Gregory Wilson on corporate identity and social memory, in which Wilson draws from the Saxe-Goldstein hypothesis to suggest that the establishment of corporate group cemeteries was linked to the need to demonstrate historical links to political and resource claims (Wilson 2010). The settlement at Moundville, starting around A.D. 1120, became highly formalised around A.D. 1200. Paired mounds were arranged around a central plaza, in an arrangement that metaphorically reflected social structure, with larger mounds to the north representing more powerful clans and smaller ones to the south with less powerful (Wilson 2010, 9). Strong spatial associations are also seen on the smaller scale, as sub-clans or family groups repeatedly built domestic structures in the same place.

Around the thirteenth century a significant change in settlement pattern occurred, and people left Moundville for smaller dispersed settlements in the surrounding valley. The cause of this movement is debated, but what is clear is that such a move would have meant that clans and families were disconnected from the space which had become so important to their corporate identity (Wilson 2010, 12). Moundville continued to be used for ceremonies and ritual, and was the site of a variety of cemeteries that remained in use for about 200

years after the dispersal. Wilson suggests that these cemeteries represent a conscious connection with the past by physically reclaiming previous occupation sites. Significantly, these cemeteries were always positioned over areas of preceding residential group occupation (Wilson 2010, 12). Not only this, but their arrangement fits the size and shape of domestic structures. Wilson convincingly argues that this activity formed part of a conscious claim in which commemorative ceremonies served as a deliberate transition of group memory. Through time this may have become a less conscious aspect of the ceremony, which nevertheless was about linking with ancestral places (Wilson 2010).

Arguments over what objects can tell us about the past developed through the post-processualist period. Previously objects had been analysed functionally and stylistically, as can be seen in the way culture historians equate different pottery types with individual cultures. Post-processualists argued for a more active role for objects in social life (e.g., Hodder 1982a; Miller 1982a). The relationship between people and objects was developed by the use of object biography, in which the agency of the object is connected to its associations with people through its creation, use, and disposal. Other work has built on Miller's (1982a) discussion of categorisation, which draws on the form of objects to identify the way in which a culture categorises its world.

One of the most influential approaches for the study of material culture has been agency (e.g., Dobres and Robb 2000; Barrett 2001; Knappett 2005). Malafouris' approach to objects in burials is rooted in agency theory; in his 2008 work he discusses how the swords found in Mycenaean male warrior burials were not simply items of possession but extensions of the self. In a phenomenological concept of the body as being an active part of the way we think and experience the world (as opposed to merely being a container of the mind in a Cartesian scheme), objects and tools alter or extend the body. The Mycenaean sword was not,

according to Malafouris, a material symbol but an agent that can be considered alive due to its inclusion in the cognitive system (Malafouris 2008, 120).

Thus other objects found in burials, particularly items of bodily ornamentation, may have become conceptually part of the body and altered an individual's awareness of self. In south-east Europe in some cultures females are found with bead girdles at all ages, and others have *Spondylus* arm rings which may have been placed on the arm at a young age and never removed. Such items may well have been seen not as accessories but as integral embodied components of self, expressing various idealised identities (Stratton and Borić 2012).

2.7 RECENT BURIAL STUDIES IN SOUTH-EAST EUROPE

The Neolithic and Copper Age cemeteries of south-east Europe have made appearances throughout this discussion of the history of archaeological approaches to burial practice, from the work of Bognár-Kutzián (1963) in the 1960s, to Sherratt's (1982; 1997) studies of long term social change and Sofaer Derevenski's (1997a; 2000) gender studies of Tiszapolgár-Basatanya. Large cemeteries with many grave goods, including Varna, Durankulak and Tiszapolgár-Basatanya, have naturally drawn much attention, and continue to do so as new methods of interpretation are developed. As these older excavations are returned to, problems are being encountered with their archives. The quality of excavations and records are variable, there is a poor publication record with many significant sites remaining unpublished (e.g., Varna, Cernavodă and Aszód) but the major problem lies with the loss of material. Due to the political and resulting structural upheavals, archives have been lost as museums moved their collections, whilst a poor quality of archiving means that in some cases even when material remains it has not been adequately marked and cannot be identified to contexts (Bondár and Raczky 2000; Gaydarska 2007; Kogălniceanu 2009b). When looking for datable material from Cernica, for example, the author discovered that many skeletons were missing, no animal bone had been kept from the cemetery site, and

many of the smaller bones were unmarked despite several individuals being kept in the same box. The loss of information is frustrating, but recent work by various researchers has demonstrated that it is not all unrecoverable (e.g., Budakalász in Hungary, Bondár and Raczky 2000; Cernica and Cernavodă in Romania, Kogălniceanu 2009b).

Until very recently, few Eastern European archaeologists (with some notable exceptions, e.g., Borić 1996; Sofaer Derevenski 1997a) engaged with the social theory that was dominating British, and to a lesser extent American, archaeology. For the majority of these former Soviet Bloc countries, archaeological interpretation was closely controlled along Marxist lines during the communist period. After the fall of communism suspicion of archaeological theory has remained, and, with the possible exception of Hungary (e.g., Siklósi 2004; Raczky and Anders 2006), cultural historical approaches continue to dominate. Despite increasing awareness of post-processual approaches among archaeologists in south-east Europe, for many they remain irrelevant and of little value (pers. comm. Raluca Kogălniceanu and Catalin Lazar). The main international collaborators who now bring funding into the region are Germany, the USA, and Britain, representing very different approaches. Culture history remains dominant in Germany, while American and British approaches are a mixture of processualism and post-processualism.

A comprehensive synopsis of the Neolithic and Copper Age burials throughout south-east Europe was completed by Clemens Lichter for his PhD thesis, which was published in 2001. The study included a wealth of information on all the known burials of the period, but the interpretation did not go beyond description of the data. Lichter's approach is typical of German studies, which largely continue in the culture historical vein.

The most active British researcher in the region is John Chapman. As mentioned previously, Chapman's work in the 1980s focused on power and place, but his work has become increasingly interpretative. In 2000 he published *Tensions at funerals*, a discussion of micro-

traditions in Hungarian prehistoric cemeteries, using three case studies from the Late Neolithic to the Late Copper Age (Chapman 2000a). Here he proposed that instead of analysing the cemetery as a whole, and thereby obtaining a general view of burial practices among the whole community, if we analyse smaller groupings representing kinship traditions or micro-traditions it can inform us about the relationships between community and sub-group social practices. Chapman's theoretical approach to social structure is based on Miller's dynamic nominalism (Miller 1987a). Miller argues that people use objects to categorise social roles in a mutually constitutive way, whereby artefacts objectify the social roles of individuals. This is linked to the idea of object biography, in which an item gains meaning from its relationship with people who made, owned or used it. Chapman considers cemeteries to be an important source for the study of social structure, due to the way the deceased are entered into the community of the dead, and the use of object symbolism. Each burial occurs within a structure of previous traditions and symbols that must be negotiated for every burial; choices must be made about whether to continue or break with tradition (Chapman 2000a, 162).

Chapman used micro-analysis of burial lines to assess this process within sub-groups at three different cemeteries. This micro-analysis is based on the assumption that burial lines within cemeteries represent a single group who signified their relationship through the spatial relationship of their burials (Chapman 2000a, 39). According to Chapman, micro-traditions are expressed or challenged with each interment, following social understandings rooted in social memory of past interments (Chapman 2000a, 38). Feeding micro-traditions back into the larger community can help identify expressions of identity such as age or sex across the group as a whole. Chapman found that the three cemeteries had quite different patterns; the Late Neolithic Kisköre-Damm showed little focus on age or gender but there was strong group identity, at the Early Copper Age cemetery of Tiszapolgár-Basatanya there were more

community-wide identities expressed, particularly relating to age and gender, and at the Middle Copper Age Budakalász there was a greater degree of individuality (Chapman 2000a).

Such an analysis of cemeteries is problematised by our poor understanding of the chronological relationship between individual graves. Although cemeteries may be dated with a fair degree of accuracy by radiocarbon dating, the order of burial, especially considering burials may be a couple of days, months or years apart, is difficult to define. For Chapman's analysis it is necessary to assume that each burial line represents a chronological sequence and that the lines were not broken. Chapman argues that a regular distance between graves and consistent orientation indicates there was continuity of burial as previous burials must still have been visible on the surface (Chapman 2000a, 39).

In the same year Chapman also published work on the concept of fragmentation, which was related to the theoretical stance of *Tensions at funerals*, in that it argues the relationship between people and objects is mutually constitutive. He argued that objects were deliberately fragmented, and that the resulting fragments were distributed among people to form enchainment relationships, with the fragments having a mnemonic role (Chapman 2000b). Accumulation of such objects can form an important role in the creation of status. Following from the ethnographic work of Strathern (1988) in Melanesia, Chapman links this distribution to the idea of dividual personhood, which unlike the Western individual is a form of extended personhood made up of external relationships with people and exchangeable substances and thus is being constantly transformed (Fowler 2004).

Chapman has argued that fragmentation and enchainment were an important part of personhood in the Neolithic and Copper Age of south-east Europe. Refitting exercises have demonstrated the presence of refitting fragments on different sites, such as pieces of a vessel in a grave at Durankulak also found on a nearby settlement (Chapman and Gaydarska 2007, 156). In his collaboration with Bisserka Gaydarska, they studied the *Spondylus* rings found in

Varna and Durankulak cemeteries. They argue that these objects were important items of personal adornment linked to status that embodied and formed relationships between individuals. At Varna the fragments did not constitute more than half of a complete ring in any burial. Chapman and Gaydarska (2007) argue that the rest were taken away as a symbol of the relationship between the living and the deceased individuals.

Hungarian archaeology, perhaps due to the more relaxed political situation in the Communist period, has been more open to using interpretative approaches. Anders and Nagy's (2007) analysis of the burials found in the Late Neolithic flat settlement of Polgár-Csőszhalom-dűlő, associated with the nearby tell, looks at the social identities expressed using grave goods, noting a strong gender division, with male burials on their rights and females on their lefts, burial being in a crouched position. Similarly, Siklósi (2007) conducted an age and gender study of the Late Neolithic cemetery of Aszód-Papi-földek which considered the demographic distribution of the cemetery, burial position and grave goods. She identified a number of life stages for both males and females, noting in all but a few cases children were not buried with gender associated items.

Both papers (Anders and Nagy 2007; Siklósi 2007) address the problems of representation. While it has always been clear that the few individuals found in Early and Middle Neolithic settlements represent a very small proportion of the living population, how well the burial populations of large scale cemeteries represent the living has been less well problematized. The problems are two-fold; 1) how can we know what percentage of the population was buried when any demographic estimations are of doubtful accuracy? and, 2) does the buried population represent a true cross-section of society, or are certain groups more likely to be buried than others? The second question can be estimated in terms of gender or age distributions according to the mortality rates predicated for pre-historic populations. For example, as infant mortality is predicted to have been very high, between 30-60% (Anders

and Nagy 2007), it seems clear that children are under-represented. This may be due to poorer survival of infant bones (Djurić *et al.* 2011), or social factors relating to the status of children (Anders and Nagy 2007, 90). However, if individuals were buried according to other factors, such as specific clans, or social positions, it may be less easy to estimate from the archaeological remains.

2.8 WHERE ARE WE NOW?

When Lewis Binford wrote, on the archaeological study of mortuary practice, that “we as scientists should be striving to gain sufficient understanding to enable us to formulate the laws of cultural change and evolution” (Binford 1971, 25) he clearly envisioned that the development of his new approach would bring this about. Yet despite New Archaeology’s search for generalisations and cross-cultural rules, a unified approach to the study of mortuary practice has not emerged. Instead, it has become clear that the development of cultures and the actions of their component individuals were far more complex and varied than such rules allowed for. Since the emergence of post-processualism the study of mortuary practice has become more diverse, including themes such as gender, agency, personhood, memory, which seek to understand this diversity and the relationships between people and things. This is not to be dismissive of the contributions of archaeologists who are not post-processual in their approach. The culture historians’ ‘cultures’ are still the basic building blocks of archaeological investigation. The analytical and statistical techniques introduced by the New Archaeologists dramatically enhanced our abilities to use the data available to us, identifying patterns that demand explanation.

The dominant approach in south-east European archaeology is culture historical, and, with some notable exceptions (Borić and Stefanović 2008; Chapman 2000a; 2000b; Raczky and Anders 2006; Sofaer Derevenski 1997a; Whittle 2003), theoretical archaeology is regarded with suspicion. This results in studies in which very little interpretation is attempted (Lichter

2001), or where burials are viewed as reflections of past societies (Todorova 2002). These approaches mean that there remains a great deal of potential for further interpretation.

Current trends in archaeology have moved away from the black and white, 'you're either with us or against' attitude that prevailed in the early days of post-processualism. Polarisation of approaches has lessened as researchers recognise that having a robust methodology for dealing with your dataset does not exclude the possibility of approaching those results more interpretatively. Understanding that society is complex does not preclude us from attempting to find and explain patterns in the data, as long as we remember that all analysis is a form of interpretation.

This thesis considers how changes to burial practices were linked to changes in worldview. Archaeological theory on memory and time will be important in understanding this, as will approaches to identity and personhood. Mortuary ritual is taken to be a time when idealised social identities are expressed, and the archaeological remains cannot be read as a reflection of actual social organisation. Material culture must be considered as agents with roles to play in human activity.

This study will be data-led, and techniques for spatial analysis of the development of cemeteries and finding possible groupings, as well as statistical techniques for finding patterns in grave goods and furnishings which may be linked to social identities such as gender, age or kin, will be invaluable when dealing with sites with hundreds, or even thousands, of burials.

3 SOCIETY, THE INDIVIDUAL, AND THE TREATMENT OF THE DEAD: TOWARDS AN APPROACH FOR THE STUDY OF BURIAL PRACTICE

We carry the silt of our own memories within us, like the castle's loft-stored treasures, and we are top heavy with it. But ours is geological in its profundity, reaching back through our shared histories, blood-lines and ancestries to the first farmers, the first hunting band, the first shared cave or nested tree. By our wit we look further back, and out, so that we bear the buried stripes of all our planet's earlier geology in the strata of our brains, and contain within our bodies the particular knowledge of the explosion of suns that lived and died before our own came into being.

- Iain Banks, *A song of stone*

3.1 INTRODUCTION

As has been shown in Chapter 2, the majority of previous studies have approached the south-east European cemeteries as examples of emergent hierarchy. Status continues to be a focus of attention (eg. Siklósi 2004 on Polgár-Csőszhalom; Enea 2009 on Cernica; Windler *et al.* 2013 on Durankulak), while some authors have applied specifically gendered approaches (e.g., Sofaer Derevenski 1997a on Tiszapolgár-Basatanya; Anders and Nagy 2007; Chapman 1997a on Polgár-Csőszhalom).

By and large (with the notable exception of John Chapman's *Tensions at funerals* (2000a)) these studies are one-dimensional; they focus on a specific aspect of prehistoric social identity but do not take into account the many aspects which may make up an individual's identity, their persona. Personal identities are complex and many-layered, from membership of a large social group, such as an ethnicity or language group, to individual preferences for

certain clothing or foods. Individuals may conform to traditions or challenge social norms. Single focus studies of burial practice may find broad patterns or general rules, but they are dismissive of exceptions and contradictions, yet these contradictions themselves are full of meaning.

This chapter will explore the variety of identities that may be expressed through bodily adornment or other types of material culture in order to demonstrate that studies of only a single variable, be that status or gender, cannot possibly come near to understanding the complex meanings about the individual and society expressed by aspects of the burial record.

Furthermore, regional cemetery studies have tended to view cemeteries not as a process but as a single event (again, with the exception of Chapman 2000a; c). Cemeteries did not just appear, fully formed. At some point someone was the first to decide to bury their dead in a place outside of the community, and others then chose to repeat this practice, in opposition to previous traditions. The chapter will also therefore consider the processes behind cultural change.

3.2 THE BODY AND IDENTITY

3.2.1 The individual, the body and “being in the world”: the importance of the everyday in creating identity

The body has recently become the focus of much archaeological discussion (e.g., Sofaer 2005; Joyce 2008; Robb and Borić 2008; Harris and Robb 2013). Recognition of the importance of the body in the creation of human identities has emerged in archaeology from sociological writings on ‘being in the world’ (Heidegger 1962; Bourdieu 1977; Ingold 2000) and material engagement (Malafouris 2013; 2008; DeMarrais *et al.* 2004), as well as via gender archaeology (Moore and Scott 1997; Gilchrist 1999; Gero and Conkey 1991; Joyce 2008).

The relationship between mind and body has long been a topic of debate for philosophers, sociologists and anthropologists. Cartesian dualism, which saw the body and mind as entirely separate, dominated Western scientific thought in the latter half of the last millennium. This view has been challenged and largely rejected in recent years in favour of a concept of embodiment, or 'being in the world'. Rather than, as Descartes would have it, the body being a container of the mind the, body should be seen as playing a part in how we think. It is through our body that we physically engage with the world around us, through which we experience space, time and materiality by touch, sight, smell, hearing, and taste (Seremetakis 1996a; b). These bodily experiences are a key component in how we think and understand ourselves and the world we inhabit (Gosden 1994).

Post-processual archaeological thought has been strongly influenced by phenomenology and the work of Heidegger (1962), which focused on individuals as 'Being-in-the-world': people do not exist in isolation from the world, they are embedded in it. The meaning of objects emerges from engagement with them and is constantly being created. Thus, everyday objects play a role in our experience of the world, and the world continually comes into being through a person's daily activity (Ingold 2000).

3.2.2 The clothed body

An important aspect of daily life is clothing. Clothing of course does have practical uses, for warmth, protection, or modesty, but clothing the body is also used to convey information about the wearer (Sørensen 1997; Loren 2010). Meaning can be conveyed in a multitude of ways, from the types of material clothing is made of, the style it is made or worn in, to specifically symbolic designs or adornments (Burt 2009; Loren 2010). Clothing is used as a social medium, through which people express who they are. It can be actively used to convey information about a person's ethnicity, status, age, gender, sexuality and occupation, to name a few.

‘Clothing’ includes not only clothes, and items of adornment, but any item that someone ‘wears’ which may include tools or weapons (Loren 2010). These items will all have meaning for the wearer, even though they may appear to be principally practical. The use of categories such as clothing, jewellery and tools can therefore be problematic – they may obscure the shared meaning of these items, the way in which they came together to create the person. Clothing was not just to keep warm, jewellery was not just to show off or look pretty, and tools were not only for working with. Furthermore, the wearing of these items does not just convey information, it also helps to actively create these identities, through the association of clothing and adornment (Butler 1990; 1993).

As the mind is shaped by the body, so the everyday items that we use and wear also shape the mind (Malafouris 2008; 2013). Material culture has the ability to extend the potential of the body. As Malafouris (2008, 116) argues,

“the boundaries of the mind are not determined solely by the physiology of the body, but also from the available constraints and affordances of the material reality with which it is constitutively intertwined. In other words, if the body shapes the mind then it is inevitable that the material culture that surrounds that body will shape the mind also.”

Malafouris (2008) uses the example of the Mycenaean warrior’s sword, and asks the question, “is it me or is it mine?” The sword extends the body schema (the neurological understanding of the body in space), altering the body and, by the new potential for action which it provides, changing the way we see ourselves. Just as in Dreyfus’ (1979) example of the blind man’s stick, the sword becomes an unconscious extension of the self. The everyday objects that we use and wear, then, constitute ourselves. Those objects which we see in graves as grave goods may have become conceptually part of the body. This is particularly likely in the case of items of ornamentation, some of which it appears may have been put on during

childhood and never taken off (Sofaer Derevenski 1997a; Sørensen 1997).

3.2.3 The role of memory in the creation of identity

The role of the past in the past has, after a long period of neglect, been recognised as significant in the creation of cultural identities, and a wealth of archaeological scholarship on the topic has emerged over the last 15 years (e.g., Bradley 2002; Whittle 2003, chapter 5; Edmonds 1999; Williams 2003; and papers therein; Borić 2010 and papers therein). Much of the initial focus has been on the ideas of origins, and the use of monuments and related phenomena to deliberately create a physical symbolic connection with a community's past, with a strong focus on ancestors (Bradley 1998; Midgeley 2005).

However, studies that claim to be about memory often fail to engage with remembrance and society. Instead they tend to focus on the long durations of use of certain sites, or see memory as a separate theoretical issue to be applied in certain circumstances. Whittle (2010) has argued that studies of memory have tended to treat memory as consisting of different types for different studies depending on how it fits the data. He cites the example of Bradley (2002), where LBK memory is concerned with the distant past, while in the Bronze Age more recent memories were drawn on. Instead, Whittle argues, we need to think of memory as constantly working on different scales and modes, to get “a sense of the simultaneous operation of different kinds of memory” (Whittle 2010, 35). Memory is an integral part of everyday life, and a key way that both individual and social identity is formed and the world is understood. It is memory that, in the form of repeated behaviours and shared understandings, forms the shared characteristics and practices that are considered “culture”. It is also memory, therefore, either through forgetting or through conscious rejection that is responsible for change.

Every individual has a multiplicity of identities that come together to form their personhood. Meskell (2001) has argued that social identities operate on two levels; the ‘individual or

personal level' based on individual subjective experience through a lifetime, and the 'social level' based on the social constraints and categories of the society an individual exists in. Archaeology has a tendency to focus on the social level, like status, hierarchy and gender while ignoring the personal. Indeed, as pointed out above, single-issue studies are common but these ignore the multiple identities that every individual has (Meskell 2001). Subjective experience plays an important role in the formation of identity, alongside formal or what may be thought of as 'given' identities. Sex, for example, maybe thought of as given, but it is a person's experience and interaction with the world that creates their gender identity (Butler 1993).

Memory therefore plays an important role in the creation of identity. On a personal level individuals can be thought of as a sum of their personal experiences. Every action and interaction builds through a lifetime to create a constantly changing understanding of personal identity. Furthermore, memory also plays a role in the creation of social identity, be that collective memory of a groups' past or markers such as clothing for certain categories of people arising from repeated practice or roles. Within the Neolithic and Copper Age of south-east Europe key identities were likely to have been constructed around households or kin groups, age and gender. More varied personal identities would have emerged from roles relating to farming practice, hunting, tool or pot making, or other specialisms. As for identities related to social stratification, the burial record demonstrates that there were individuals who were considered to merit greater numbers of grave goods, indicating the presence of some form of vertical ranking.

3.2.4 Social memory, community, and traditions

"...our recollections depend on those of all our fellows, and on the great frameworks of the memory of society."

- Halbwachs 1992, 42

There is a tendency to view memory as a personal capacity, something that resides within the individual to be called up at will. In fact, all memory relies on repetition and reinforcement from external factors, be it other people or objects, smells, or sounds (Halbwachs 1992). The idea of social or collective memory may seem abstract but it is essentially the shared memories of individuals within a group or community. A group identity, from a group of friends to a nation, is constructed through the repeated remembering of past shared events. As such its accuracy is unreliable, as it is subject to other influences and impressions (Whittle 2010). My grandmother, who is 92 years old, tells me that her sister makes things up about their childhood. Recently reciting a story her sister told about the neighbour's pig getting into their vegetable patch she insisted Daphne must have made that up, because "next door never kept pigs," but Daphne remembers equally clearly that they did. Both are convinced that it is their version of the past that is 'true'. Such inconsistencies arise through the recall of specific memories under different circumstances and events that leave their own impressions on the memory. As Halbwachs says (1992, 47) "...because these memories are repetitions, because they are successively engaged in very different systems of notions, at different periods of our lives, they have lost the form and appearance they once had." People who regularly recall the same memory between each other, for example a group of school friends getting together to re-live the old times, are likely to have correlating memories of events, while individual relation of memories is likely to lead to divergence.

Social memory is formed through public performances; collective experiences help to form collective identity (Connerton 1989). It is the sharing of experiences that creates a shared identity, a feeling of 'us' and 'them' among those with shared experiences. Memories are created through the social relations established in ceremonies and events (such as funerary ritual). The gatherings during such events surely included remembering of previous events and stories relating to the importance of particular practices, reinforcing and reproducing shared understandings and identities.

Memory in an oral tradition of course differs from that in historical traditions; everything must be remembered rather than be externally stored. That is not to say that items of material culture cannot be mnemonic, but the implication is that social memory cannot endure as long. It is not clear how long that is. It has been suggested (Bradley 2002, 8) that oral societies may be able to maintain a memory for 200 years. But what does that mean? Surely, each time something is passed on it loses something, as it also loses the context of other associated events. At what point does it change from memory to myth? Some of The Dreaming myths of Aboriginal Australians are thought to have originated from memories of movement into new areas, and may date back thousands of years (Nash and Chippindale 2002, 10; Taçon 1991, 204). Deep time depths have also been suggested for LBK communities orientating longhouses towards their place of origin (Bradley 2001). Whittle has suggested that sheep in the European Neolithic would have been a “living embodiment” of origins in a different place, as sheep are a non-native species (Whittle 2010, 38).

To a large extent the consistency of memory, for example the passing on of ritual knowledge, is dependent on the methods of sharing. When the passing on of knowledge is less structured and more open, changes may be rapid. The tribes of the Ok of highland New Guinea have a series of male initiation ceremonies in which ritual knowledge is gradually passed on to novices (Barth 1987). Only a very few elders are fully initiated, meaning only they are in possession of the full sacred knowledge of their tribes, and in the case of clans there may be only a single fully initiated elder. Such a system allows for a high probability of change over generations. Firstly, sacred knowledge is kept private from the majority of the tribe, meaning knowledge is possessed by a few, sometimes only a single individual. Knowledge can easily be lost if an elder dies before he has passed on knowledge. Individual memory can be unreliable, resulting in (largely unacknowledged) changes occurring when aspects of ritual are forgotten (Barth 1987). Some changes may be deliberately introduced, such as bringing in aspects of a ritual of neighbouring tribes with similar worldviews, but the

success of these depends on the ability to reconcile these new aspects with the existing sacred understanding (Barth 1987).

Both Küchler (1987) and Whitehouse (1992), developed Connerton's (1989) concepts of 'incorporating' and 'inscribing' memories, a distinction that they see as more important in terms of the transmission of culture and the degree of continuity than literate and non-literate. An inscribing practice relies on frequent repetition of spoken word that forms part of a widely known cultural knowledge. Incorporating practices rely on symbolism, secrecy and exclusion; Barth notes that little is said in Ok ritual, instead there is a reliance on ritual symbolism of objects, substances and colours. These 'wordless conceptions' allow sometimes contradictory symbolism, or contradictions to Ok cosmological understanding (Barth 1987). Rowlands (1993) has linked inscribed practice to a literary tradition and Western concepts of linear time; while they may be oral transmission their sequential nature has similarities to the way writing is used to write histories. So we may argue that memory and cultural transmission in prehistoric Europe was more akin to the Ok's practice, featuring a high degree of symbolism surrounding the natural world, and particular objects, substances, and colours.

3.2.5 Social roles and identities and their material expression

Personal identities are connected with other people and things, kin and non-kin, household and community, the living and the dead (Gillespie 2001). None of these is inherent; each social role is enacted. An individual's age is significant not simply due to the number of years they have been alive, but due to their lived experiences. Different identities or aspects of an individual's personhood may be more significant than others. For example status may cut across age or gender, with there being more similarities between individuals of the same rank than difference on the basis of gender (Joyce 2008, 125).

Below is a brief outline of the most common (or perhaps most commonly identified?) identities expressed physically, using various ethnographic and archaeological examples.

3.2.5.1 Age

'And how is my daughter, Ezinma?'

'She has been very well for some time now. Perhaps she has come to stay.'

'I think she has. How old is she now?'

'She is about ten years old.'

'I think she will stay. They usually stay if they do not die before the age of six.'

- Chinua Achebe – *Things Fall Apart*. 2010 [1958], 74.

Archaeology for a long time had a tendency to focus on adults (generally men) as carriers of a cultural type (Lucy 1997). However, as part of the focus on the unrepresented that came with gender archaeology, children and childhood has become a focus of study (e.g., Moore and Scott 1997). The importance of children as those in whom culture is reproduced and renegotiated has been acknowledged (Scott 1997). Children can have a very different experience of life than adults. Although the idea of a 'childhood' is a 19th century invention, infants and young children are generally treated in different ways to adults, and have different roles to play in a community. As an individual progresses through childhood, adolescence, and adulthood their identity constantly changes and develops as they interact with others and form associations with places and objects.

It is not uncommon for infants to be considered as not 'proper' people (Astuti 1998). If identities are acquired through relationships and interactions with the physical world then it should come as no surprise that for many societies a new-born, lacking any such interactions, is not considered to be a real person. They have not yet entered the socialised world, they do not have a social persona, and are dependent on others. The treatment of children in death can therefore be revealing about attitudes to hereditary wealth and status,

on the basis that as a child cannot have acquired these in its own right, any expressions of such must be due to inheritance (Saxe 1970).

The view of infants as not being fully part of society can result in specific funerary treatment for when a child died. For example, their lack of social persona may mean that their passing is considered of little significance, and they may be given no ceremony (Wedgewood 1927), buried in a shallow grave, or buried in a specific separate area of a cemetery (Meskell 2000). Alternatively the un-socialised child can be viewed as vulnerable, and this may account for the examples of young infants being buried under house floors or kept within the home (Borić and Stefanović 2008; Scott 1997, 7).

Modern Western perceptions of age are dominated by the counting of years, and the celebration of particularly significant ages. These may be social milestones, such as turning 18 in the UK, when it is legal to vote, smoke and drink alcohol, or simply reaching round numbers. However, not all societies measure age by counting years. Indeed, it is more common for tribal societies to measure age by membership of an age group (Siklósi 2007).

The Lokop of Kenya (Larick 1991), have age cohorts, in which males of the same generation advance through life stages together. There may be a difference of 10–15 years in their numerical ages, but they are all considered as a cohort who took the male initiation rites together. As a cohort they progress from most junior adults to the senior elders. For the Lokop membership of an age cohort is symbolised, primarily, through the carrying of certain spear types (Larick 1991). There are three main age grades for males: boys (7–17 years), warriors (13–33 years), and elders (30+). Each is divided into junior and senior, and in the case of the elders there is also an intermediate stage. The largest spears are carried by the senior warriors, while those of the boys and elders are smaller. It is the men who are physically in the prime of their lives and whose responsibility is herding and fighting who

have the most impressive spears, while the elders who hold the political power in the tribe have ones of the same size as the boys.

The timing of various life stages, such as initiation into adulthood, marriage, or becoming an elder, varies from culture to culture. Archaeologically such life stages have been studied through grave goods (e.g., Sofaer Derevenski 1997a; 2000; Stoodley 2000) or spatial separation of burials in cemeteries (e.g., Meskell 2000). It is not uncommon for men and women to have quite different life stages (Gilchrist 1999; Stoodley 2000).

3.2.5.2 Gender

“My granddaughter went to a birthday party. I asked her, “Were there more little boys at the party, or little girls?” She replied, “I don’t know, they didn’t have any clothes on.”

–Victor Borge

The above quotation comes from a video by the comedian Victor Borge that I used to watch as a child. Since I started thinking about gender construction this joke has resurfaced in my memory. It may be that this resonated with me even as a child; from a very young age I had an aversion to dresses and the colour pink and preference for playing with trucks and tractors, and generally resisted female gendered associations. Borge’s joke highlights the central role that material culture, in particular clothing, has long played in Western concepts of gender, and the way in which gender is constructed using these items even from birth.

In Western society gender, the cultural interpretation of sexual difference, is seen as binary and based on the sex of the individual. The gendering of a child starts from birth, with boys and girls being given different clothes, different toys, and until very recently prepared for different roles as they grow up. This system has completely ignored the existence of intersex individuals, who are forced to take on the gender associations of either male or female (Meskell 2001). The existence of this exception emphasises that gender is a social construct, formed through the enactment of specific roles, the use of, or association with certain

material culture, and interaction with other individuals (Strathern 1988; Conkey and Spector 1984; Sørensen 1991; Wylie 1991).

Archaeologists, typically Western academics, have tended to view past societies in terms of binary gender categories, transmitting their cultural understanding of gender onto archaeological remains (cf. Meskell 2001; Weglian 2001). Evidence of household activities was attributed to women, while tool making, hunting or fighting was male; a modern understanding of labour division was projected onto the past. The rise of gender and queer studies from the 1980s onwards (e.g., Strathern 1988; Conkey and Spector 1984; Wylie 1991; Gero and Conkey 1991; Butler 1993), has led to more broad archaeological attempts to understand gender identity in the past beyond the expression of binary categories, amid acknowledgment that other societies view gender in different ways (Lesick 1997; Rega 1997; Joyce 2008).

As gender is a cultural construct it is constantly changing and fluid. Indeed in some societies gender is a process rather than a category (Strathern 1988). Young children and the elderly may be un-gendered or weakly gendered, while during sexual maturity it becomes stronger. The Hua of Papua New Guinea provide an interesting example of a gender structure that is variable and enacted (Meigs 1990). Up until their initiation as adults Hua children are considered *figapa*, meaning 'like women'. Initiation occurs during adolescence, and for male children it involves strict avoidance of women and female substances. Women are considered to lose their female substances over their lifetimes (for example, through menstruation and giving birth) and older women past child bearing years are called *kakora*, 'like men'. They effectively have the status of males, and may live in the men's house. The Hua concepts of gender are thus based on biological realities but rooted in the loss of or contact with female substances.

For the Vezo of Madagascar identity is performative. A child is born with a sex, but its gender is created through actions (Astuti 1998). Thus the Vezo have a word, *sarin'ampela*, meaning a man who is 'an image of a woman', in other words who performs female tasks and ways of living. However, identity is performative and the biological fact of their maleness is never forgotten. When *sarin'ampela* die they are treated in funerary ritual as men (Astuti 1998).

A further challenge to Western notions of binary gender categories are the examples of cultures that recognise a third sex, such as the Thai kathoey, or the better known hijra of India and Bangladesh. Hijra are occasionally intersex, but the majority are biological males who adopt feminine names and clothing, and who may be sacrificially castrated (Reddy 2005). Although they may perform feminine tasks and roles and dress in a feminine way, they do not consider themselves women, and are considered a third sex.

The gender relations expressed within the funerary ritual are likely to only cover a part of the whole of a society's gender relations. As Barth (1987, 43) observed among the Ok of New Guinea, groups that have very similar gender relations may emphasise very different aspects of male experiences of women, such as desire, love or nurturing, through ritual activities. The freedom of ritual practitioners to elaborate rituals means that the practices in, for example, Ok male initiation, make use of different symbolic items and substances across the sub-groups, in ways which often seem to contradict or invert ritual understandings.

3.2.5.3 Descent/kinship

Descent and kinship can cover a wide range of identities, from the idea of shared origins or ethnicity, to close family relationships. Issues of kinship and descent are often featured in archaeologies of prehistory as a way to explain, for example, Neolithic communal tombs (Tilley 1996), repetitious house building on tells (Chapman 1997b), or the series of LBK longhouses built consecutively next to each other (Whittle 2012).

The idea of the power of the ancestor, as someone who has died but whose descendants live on, has long had considerable weight in prehistory (Thomas 1991; Parker Pearson and Ramilisonina 1998; Edmonds 1999). However, the tendency to cite ancestors uncritically as motive in almost any situation has been strongly criticised by Whitley (2002). Whitley argues that the ancestors, as invoked largely in British prehistoric studies, are a vague concept, failing to take into account the wide variety of relationships that people can have with ancestral beings. From the mythological creatures of the Australian Aboriginal Dreamtime to the direct antecedents of a family, the ancestors may appear in many forms.

For the ancient Maya ideas of ancestry were linked to the house. Names or titles were passed through the generations, as the Maya believed that the souls of the dead were reincarnated in later family members (Gillespie 2001). Gillespie argues that the souls of the dead could be considered a part of the property of the house passed down through the generations. Physical objects with ancestral associations were also passed down (Gillespie 2001).

In many sub-Saharan African societies the ancestors play an active role in the community (Kopytoff 1971). The dead are not passive, they are communicated with, they are appealed to in times of crisis or involved in important rituals. They are an important part of the lineage structure, and may be seen as respected elders of the community (Kopytoff 1971). In order to become one of the ancestors there is usually a rite of passage to be gone through. According to van Gennep's (1960) three stage process, the deceased must be separated from the world of the living before they can be accepted into the world of the ancestors.

If ancestors can become a part of the descent system, then what of these systems themselves? Archaeologists, in particular processualists, have sought for various kinship structures defined by sociologists. Binford (1972), for example, identified a matrilineal society with a matrilineal descent system at Galley Pond Mound, Illinois, on the basis of burial practices. He hypothesised that complete skeletons were locals, while incomplete skeletons

were non-local. As all the female skeletons were complete he concluded that the society was matrilineal. More recently, DNA studies have been used as a way to assess continuity in the male or female line, and from this hypothesise about the descent system (e.g., Lacan *et al.* 2011; Szécsényi-Nagy *et al.* 2014), while isotopes can be used to infer residency patterns (e.g., Bentley 2013).

Even in societies where descent is presented as a clear patri- or matrilineal structure the reality is often more complex than this. In his novel *Things fall apart*, about the effects of Christian missionaries on an Igbo village in Nigeria, Chinua Achebe describes how the main protagonist, Okwonko, is forced to go and live with his mother's kinsmen after committing a taboo act which exiles him from his father's village. Igbo society appears strongly patrilineal; girls marry away from their home village, polygamy was practiced, and children belong to their father and his family. The deep-rooted understanding of this is expressed in a conversation between Okwonko and his friend Machi about differences in traditions with other tribes:

"The world is large," said Okwonko. "I have even heard that in some tribes a man's children belong to his wife and her family."

"That cannot be," said Machi." (Achebe 1958, 69).

When Okwonko arrives among his mother's kinsmen he is welcomed by his uncle, Uchendu, who reminds him that while a man may belong to his father and fatherland it is to the mother and motherland that he turns in need and for comfort. This, Uchendu explains, is why the name Nneka, 'Mother is Supreme' is such a common Igbo name. Women, rather than being buried with their husband's family, are returned to be buried in their motherland. This is a similar pattern to that described for the Nuba (Hodder 1980).

3.2.5.4 *Status and prestige*

Much has been written discussing the topic of status, particularly in the mortuary realm, as was seen in chapter 2. Studies have focused on evidence of inequality, counting the number and types of artefacts to establish the degree of hierarchy. However, as Bognár-Kutzián (1963, 386), pointed out “[i]f we wish to establish, as is usual, relative wealth and poverty among the graves of the cemetery, we must first work out adequate criteria.” The criteria used by archaeologists to assess relative wealth are usually based on modern values. For example, in the recent study by Windler *et al.* (2013) of Durankulak cemetery, gold was considered the most valuable item. In fact, the value systems of ancient societies may have been very different from our own.

Status and prestige, although they tend to be used interchangeably, are two different things. Status describes a person’s position within a social hierarchy, it is a fixed category, while prestige is achieved through actions and can be lost or gained (Siklósi 2004, 7). Prestige does not necessarily relate to social power, as Larick writes “the connection between social prestige – essentially the goal of Lokop personal adornment – and real economic or political power is not necessarily direct” (1991, 326). Power and prestige are constantly being negotiated.

Expressions of status and prestige are likely to be difficult to distinguish archaeologically. They can both be expressed through the wearing or use of objects and through behaviours. Although we might expect to see greater status or prestige expressed through bigger, more elaborate, or richer things, this is not always the case, as the Lokop case demonstrates. Lokop elders have the greatest social status within the society, yet they carry spears of the same size as boys, while the adult men, those taking part in fighting, carry the largest spears.

The funerary ritual is a significant opportunity for the display of power or wealth. At Balian funerals of important men, status is expressed through number of people carrying the body,

the height of the funeral tower, the quality of its decoration and the overall drama of the event. The funeral was an important time for political units to impress their followers, ensuring they did not transfer their allegiance (Huntington and Metcalf 1979, 133).

The Berawan of Borneo have a relatively egalitarian society, based around four long house communities (Huntington and Metcalf 1979, 133). However, they have two different types of funeral, a 'normal' and an extended version. Who gets the extended treatment reveals differences in rank among the community. Rank is based on the claims of descent from past chiefly men. Only those who can get the necessary resources and support can have extended rite. It is a resource heavy business, they need to provide rice and rice wine for guests and to feed the tomb builders. They need to have enough social standing to attract guests, and the support of community is vital, as they will have to provide everything needed (by fishing, hunting, and preparing food). Thus the extended mortuary rite is a demonstration of the status not of the deceased but of those burying the deceased and their lineage.

Objects can play a key role in symbolising and creating status. Curated objects can be markers and legitimators of power, especially in the case of hereditary or chieftain statuses (Lillios 1999). Such objects, or heirlooms, provide a link to predecessors, previous owners of the object (again we see the importance of the ancestral past), who's status the current holder lays claim to. The possession of such objects legitimates their power and status. Heirlooms are usually small, portable items that can be worn or easily displayed, such as personal ornaments or tools (Lillios 1999).

The use of space may also be used in the creation of status. Through control of space, and restricting access to certain areas, political elites demonstrate their authority over others. At Moundville, Alabama, USA, c. AD 1200, clans' statuses were demonstrated through the location of their settlement mounds (Wilson 2010). The largest mounds are found to the north of the circular settlement area, while they decrease in size, and status, towards the

south. The layout was a physical representation of the ranking of the community (Steponaitis and Knight 2004).

3.2.5.5 Roles

It has been argued (Binford 1971) that as societies become more complex there is an increasing number of roles within a community, both in diversity (horizontal differentiation) due to specialisation for example of crafts, and hierarchy (vertical differentiation) due to the ability to accumulate wealth. Potential specialist roles in communities in the Late Neolithic and Copper Age could include metal working, flint and stone tool making, pottery, hunting, herding or farming. On the other hand it may be that none of these roles were carried out by specialists, but instead anyone might perform these tasks. Either way, it is worth considering how such roles may have been portrayed on the body, in life and death.

Malafouris (2004; 2008) has argued that the phenomenological experience of bodily engagement with the world is extended by our use of tools and other objects. He argues that we should break down the Mind/Body/World divide just as we would break down the Mind/Body divide. Material objects extend the bodily experience of the world through altering and extended the physical possibilities of the body. Such objects can be seen as ‘*material agents*’ that actively play a role in the cognitive process (Malafouris 2008). Malafouris uses as his example the sword of a Mycenaean warrior, but the concept could equally be applied to a Copper Age axe (Stratton and Borić 2012), or any other object that extends the potential actions of the human body. Objects regularly used by individuals in specific daily roles come, by their qualities that enable that specific task, to be considered as a part of that individual (Stratton and Borić 2012).

Similarly, Skeates (2010) argues that personal ornaments, those worn on the body, become entangled in the social practices of the individual, and through their constant association are “imbued with their identities, values and potencies” (Skeates 2010, 74). We may expect,

therefore, to see artefacts associated with tasks, the tools of their trade, buried with an individual, as the tools themselves constituted a part of the individual.

3.3 IN MORTUARY PRACTICE

3.3.1 Burial and identity

Since Binford and New Archaeology archaeologists have been interested in what burial practices can tell us about the organisation of society (Chapter 2). However, contrary to how processualists saw burial practices (e.g., Saxe 1970; Binford 1971), they are not a reflection of lived experience. The dead do not bury themselves, rather it is the living who chose how a person is presented in death (Parker Pearson 1999). The way communities react to death is a complex mixture of tradition, belief, politics and emotion (Seremetakis 1996a; 1991; Tarlow 1997; Parker Pearson 1982; 1999; Shanks and Tilley 1982). The death of an individual leaves a gap and causes ruptures in a society that must be filled; it is during the funerary ceremonies that the living assert their relationship with the deceased, and community and individual relationships and statuses are communicated. In such situations the choice of the way an individual is buried and with what items is dependent on the persona that those burying them wish to display to others (Chesson 2001; Parker Pearson 1999; Jones 2007, 117).

Archaeologists tend to think of burials as being the best resource for understanding past peoples. Burials, after all, contain the physical remains of prehistoric people, and the artefacts they were buried with were chosen for burial with them, maybe because that is what they wore or used in life, they might have been needed in an afterlife, or maybe because they symbolised aspects of the deceased to those present at the funeral.

However, the deceased individual is no longer the same as when they were living. As Fowler (2013, 511) points out, there is a paradox in trying to understand identity from burials, in that “the deceased whose identity we may wish to interpret underwent a transformation in

identity during the very mortuary process that provides archaeologists with their evidence.” Furthermore, the buriers may use mortuary practices to present idealised social relationships and realities of lived experience (Fowler 2013).

Despite the ‘realness’ of the physical remains, there is still a great deal that is missing. While the skeleton can increasingly tell us about life (when the individual died, what their diet was like, whether they suffered from various diseases), it is still just a skeleton, de-fleshed and apart from the occasional ornament, unclothed. We are missing several layers in our understanding of this individual’s world. What about the skin, with which this person touched? Was it painted, tattooed or scarred? Was hair worn long, short, or tied up in intricate and meaningful ways? And what clothes were worn, what textures and smells permeated their everyday? Were different weaves, furs or decorations indicative of clan, family, or simply personal preference? Such evidence is now lost to us, but it is important to bear in mind that when we talk about burials without grave goods these people originally may well have been ornamented in a variety of ways.

It is also important to consider exactly what grave goods are. Items included in a burial may have been made especially for that purpose, the clothing worn in death may have been a special type of mortuary costume, not something worn by the living (Sørensen 1997, 101). Alternatively, they could be items that the individual wore and used in their lifetime. The context of the use of grave goods is therefore also highly significant in understanding their meaning, whether they were worn or newly made (Joyce 2008, 32). In fact, should such items not be thought of as grave goods at all, but as items from the individual’s life (Joyce 2008, 28)?

Whether or not they were part of the deceased’s everyday life, they were chosen for and actively placed in the burial. They are full of meaning, albeit that meaning may not be the same in the mortuary context as it was in life (Ekengren 2013). Indeed, the mortuary

practices themselves played a part in the creation of that meaning. As Nick Stoodley (2000) has written for Anglo-Saxon England, the display of artefacts on the body had an active role in the construction of life stages, as this was a time when they were particularly emphasised.

3.3.2 The location of burials

It is not just the body itself and its associated artefacts that are of significance in mortuary practice analysis. The placement of the body, including its position in the grave, its position in relation to other burials and in relation to the wider landscape, are all significant. Choices over the positioning of the body are actively made, whether an individual will be buried in the same position as the other previous burials, or whether they will deviate. Similarities of burial position, orientation and grave cut all speak of shared memory of previous burials, but also community cohesion.

Space may be used to symbolise differences within the burial population. In New Kingdom Egypt at Deir el Medina burials were spatially arranged by age – neonates at the bottom of the hill, adolescents on the slope, and adults at the top (Meskell 2000). Similarly, the placement of burials at the periphery of a cemetery may signal low status, different parts of a cemetery may be used by different sub groups, and some individuals may be excluded altogether, such as in the case of suicides in traditional Christian cemeteries.

Places themselves can become significant due to the practices taking place there and the memories associated with them. A good example of this is Chapman's discussion of places of social power (1991; 1994c). Chapman argues that the repeated use of the tell settlement, with the physical incorporation of the past into the settlement mound, made tells places of social power. Similarly, Tsamis (2010) argues that the tell embodied the experiences of daily life over generations. Chapman argues that a similar process occurs on cemeteries, with the physical presence of the ancestral dead lending social power to the place.

3.3.3 Commensality and the funerary ritual

“Commensality can be defined as the exchange of sensory memories and emotions, and of substances and objects incarnating remembrance and feeling” (Seremetakis 1996b, 37).

Burial has a practical purpose; it is a method for disposing of a dead body, a body which will rot and if not properly dealt with cause disease. There are numerous ways of disposing of a body, including exposure to the elements or animals, which do not involve a formal burial. Indeed, it seems that the major mortuary practice of the period preceding the period of study, the Early and Middle Neolithic, may have involved excarnation. Certainly, the majority of the dead from this period have left no archaeological traces.

The choice to bury their dead in a formal area indicates that the people of the Late Neolithic and Early Copper Age in south-east Europe were making the funerary ritual a public display in which the dead was being used by the living. This is not to say that this was all cynical; it is not my intention to diminish the importance of emotion and the expressions of grief that no doubt accompanied the loss of a loved one and member of a community.

Hamilakis (1999) has written about how the sensory experience of the consumption of food and drink plays a role in the formation of social identity. The preparation and method of consumption of food are culturally specific. Food and drink consumption is an act that incorporates emotions, feelings and memories (Hamilakis 1999). Memory is an embodied practice (Seremetakis 1996a; b; Tsamis 2010), and experiencing a certain smell, sound, taste or touch all have the power to recall past experiences.

3.3.4 Continuity and change in mortuary practice

Neither the processualists nor post-processualists have dealt well with questions of change. For processualists, explanations of change tend to be deterministic, being caused by external factors such as climate change or population pressure which cause imbalance in the existing

social structure. In contrast, post-processualists have tended to avoid questions of change altogether, focusing instead on the small scale and immediate. In post-processualist studies society is considered as a static entity:

“Archaeologically, what we see as cultural change – the rise of a new burial rite, the spread of an assemblage, a dramatic shift in economic production – is often moments of genre formation, where an existing variant practice is proclaimed as a new orthodoxy, often with a new uniformity of practice and material culture, a rearrangement of social relations and a new elaboration of ancient symbols”
(Robb 2007, 17).

In focusing on the small-scale, short-term snap-shot of a society, post-processualist studies avoid the question of the long term, and what drives continuity or change in social practice. However, archaeology as a discipline has an excellent perspective on the long term. Processualist studies were interested in the long term, however explanations of change tended to be determinist; change was a result of external pressures on a population, to which they had to adapt. There was no place in this for individual action, choices and subversion.

What can be done to bring together these two scales of analysis, the ethnographic time and the long term? Part of the problem, outlined by Robb (2007) and Robb and Pauketat (2013), is that ethnographic studies have not looked at long-term change. There are accounts of the sudden changes brought to communities with colonisation, but not of gradual change. Indeed, Robb (2007) points out, long periods of little change tend to be characterised as stagnation or stasis.

Robb and Pauketat (2013) argue that the scale of analysis which best suits archaeology is not that of millennia or a generation, but a few centuries. Yet within this, change may occur gradually or suddenly. It may be the result of environmental or social factors, and Robb

argues against the tendency to see long-term changes as a result of environmental stimuli, and short-term changes as social (Robb 2007, 293). Social reproduction occurs within an already existing social framework (Bourdieu 1977). How people react to situations will be culturally constituted, and in turn their reactions will feed in to the reproduction and change of culture. Change therefore comes from human actions as reactions to both environmental and social stimuli.

Plenty of archaeological discussion has been had over the political nature of funerals (Parker Pearson 1982; 1999). They are a time when community cohesion may be created or challenged, a time when symbolic associations with for example, gender or social roles, are reinforced. They may be a time for asserting the social or political power of a family or lineage through displays of wealth or prestige objects in the grave. Burial practices can be used to reassert tradition or challenge it (Gillespie 2001).

This thesis is interested not only in who and how people were buried in cemetery areas, but also why there was a move towards formal burial practice at this time. What prompted the adoption of a new way of dealing with the dead in the region? Of course, this question is also tied up in when and where, as more accurate timescales could demonstrate both the spatial and temporal relationship between the individual sites. Leaving that issue to the side for the moment, what factors could be driving this change? We have seen that the processualist arguments (section 2.3) tend towards an increasing accumulation of wealth and competition within more densely settled places. A variation on this is Chapman's (1991; 1994c) arenas of social power, where he sees burials as being used to make claims of inheritance on the newly dead in a society where a strongly egalitarian ethos dominates the settlement sphere. Is it then, that cemetery use is a product of a specific set of regional circumstances? Did increasing population and aggregation of settlement lead to competition and the need to assert kinship links?

The alternative is that there was a diversity of reasons for the adoption of cemetery burial, with each site being the result of a diverse set of circumstances. Such an approach allows more scope for human agency to have played a part. As the example of the mountain Ok shows, cultural change is driven by human agents, not always in a deliberate or rational manner.

3.4 SUMMARY

This chapter has touched on a wide variety of subjects, necessarily only briefly. Two key threads that will be followed through the case studies can be extracted.

First, we see the creation of the self through relationships with other people and things. It is argued that the everyday items that people used and wore played an important role in the creation of individuals. These objects, when placed in a funerary context, are indicators of the deceased's lived identities. The wide variety of identities that could be expressed was considered.

Secondly, we see how social memory and shared experience are keys to social reproduction. The case studies following cover a period of 1000 years. Societies in this time were not static. Some practices will have their origins in the past, others will be innovative. Change comes about through the actions of individuals, from the ritual practitioner who erroneously remembers their part, to the 'Big Men' who drive increasing competition by their desire to demonstrate status and power. Some changes are incidental, others are conscious. Every time someone participated in mortuary ritual they made a decision to either continue past traditions, or contradict them. Throughout the case studies we will see how the past influenced practices.

Having set out our ways of thinking about the expressions of identity in mortuary practice, there follows brief methodology chapter to outline the choice of datasets and how they will be analysed.

4 METHODOLOGY

My methodological approach combines archaeological theory and statistical analysis, specifically correspondence analysis, to analyse specific south-east European Late Neolithic and Copper Age cemeteries. I will apply various theoretical ideas, focusing on the body and identity, as discussed in Chapter 3, to help rethink the role of grave goods. In doing so I hope to prevent certain assumptions being made about identity when interpreting burials.

Having already discussed theoretical concepts in the previous chapter and provided an overview of approaches to burial studies in Chapter 2, in this chapter I will put forward my rationale for site selection, explain what steps the primary data will be put through (including explanations of the statistical analyses utilised) and outline my approach to data analysis in relation to the concepts in Chapter 3.

4.1 SITE SELECTION

As discussed in Chapter 1, I have subdivided south-east Europe into two regions of analysis. These regions, the eastern and western case studies, are physically divided by the Carpathian Mountains, and demonstrate an archaeological consistency within them. It is in the eastern region, on the Black Sea coast, that the largest cemeteries are found. In terms of data analysis these cemeteries provide large datasets for inquiry. In the western region, the cemeteries tend to be smaller. These smaller datasets allow less scope for statistical analysis. Therefore, more sites were chosen for study in the western region. The sites were also chosen to be representative of the whole period, ranging from the Late Neolithic into the Copper Age.

The most important criteria for the inclusion of a site was availability and quality of publication. Unfortunately, publication of sites in the area is generally poor (Lichter 2000). This immediately limited the selection, with few sites having been fully published including a detailed catalogue of graves. The excavations of Durankulak, Cernica, Kisköre-Damm, Mórágý-Tűzkődomb, Tiszavalk-Kenderföld and Tiszapolgár-Basatanya were chosen on this basis.

However, a second group of burial sites were also included, despite only being partially published to varying extents. Varna, Aszód, Polgár-Csőszhalom, Gomolava, and Alsónyék-Bátaszék offer interesting preliminary data which appear to be pertinent to certain themes. In Kisköre, burials appeared to be associated with house structures, with interesting implications for understanding who was chosen to be buried. In Polgár, there were burials from both tell settlement and flat settlement contexts from the same site, allowing comparison between the two. Gomolava contains almost exclusively male burials, and is therefore an interesting study relating to importance of sex and gender. Alsónyék was chosen because it has recently been subject to detailed radiocarbon dating, and could provide the most up-to-date information of cemetery timing and duration, as well as having an internal site chronology. Finally, Varna is a significant and well-known site that has been studied a great deal, yet the methods I use may bring out novel ways of understanding it.

4.2 STATISTICAL APPROACHES

Each site in this thesis provides different information. It is not possible to produce a single approach to looking at the cemetery data, as the same data are not available for all of them. In some cases, the whole site is fully published with details of the burials and grave goods, in other cases only preliminary data is available. Each site will necessarily be treated differently, according to the nature of the information available. However, an ideal methodology can be outlined, which will be used for those fully published sites, and adapted for those not.

The first step is to assess the data available. For those sites with a catalogue of burials and grave goods a spreadsheet will be produced noting various aspects about the body (burial position, orientation, sex, and age) and the grave goods associated with it. The number and type of grave good in each burial will be recorded. At this point a decision must be made regarding categorisation: what categories will be used, and why? This issue is complicated by the various publication styles. It is not practical to use the same criteria across all the sites, as the amount of detail varies, with some publications using broad categories, such as bone tools, while others are much more specific, such as bone awl or needle. Amalgamating objects into broader categories would mean a loss of detail, especially on the larger sites, such as Durankulak. Therefore, as much a possible categorisation was made according to type as assigned by the excavator. Comparability between sites was deemed less important than maintaining as many of the nuances in the object types as possible. Attempts to combine artefact types that to us appear superficially similar may have masked subtle differences in the meaning of these objects for the people who made and used them.

4.2.1 Univariate analyses

The resultant site datasets will first be analysed using univariate statistics. Univariate analysis is a useful way to look for patterns within a dataset, where a single variable is to be analysed.

Aspects of the site burial position will be assessed, looking at burial positions used, the orientation of the body, whether any grave constructions were present, and how frequent the inclusion of grave goods was. These aspects will be interesting in terms of regional cross-site comparisons. Wherever possible the cemetery population, i.e. the age and sex demographics of the population, will be assessed. This can inform us whether the cemetery represented a normal population, or if certain groups of people were underrepresented. The positioning of the body will be compared with the age and sex of the deceased, to identify differentiation in treatment on those grounds.

4.2.2 Correspondence analysis

Correspondence analysis is a statistical method of studying categorical data. In this thesis, the program CAPCA 2.0, a Microsoft Excel plug-in designed for archaeologists by Torsden Madsen (www.archaeoinfo.dk) was used. The mathematics behind the method is better explained elsewhere (Baxter 1994; Greenacre 2007). Here will be provided a basic overview to enable interpretation of the results.

Multivariate statistics, such as correspondence analysis, enable a number of variables to be compared to one another. This is particularly useful when looking for potential patterns between grave goods. Whereas with univariate analysis we must choose a variable to compare the data against, say whether there was any correlation between age and the inclusion of certain artefacts, with multivariate analysis we look for connections between the grave goods themselves, and then, by adding in further information such as age, we can see if these variables explain the variation seen in the dataset. Multivariate analyses are particularly useful because they open up the range of potential factors affecting grave good inclusion. While our univariate analysis is limited by the questions we think to ask, multivariate analysis can show groupings of objects which may represent a social role we could not access through univariate analysis.

Data for correspondence analysis are arranged by row, the objects (in the case of burial analysis this would be the individual burials) and column, the variables (in this instance the different types of grave good). The correspondence analysis works on a presence/absence basis. It does not take into account the number of items in any individual grave. In order to qualify for the analysis each object and variable must be represented twice (each burial must contain two or more grave good types, each grave good type must occur in two or more burials).

Correspondence analysis uses the chi-squared metric to define the differences between points. As Baxter (1994, 114) explains, correspondence analysis “can be seen as an attempt to define new variables that explain as much as possible of the departure of a table from the form it would have if there were no association between rows and columns.” The resultant matrix can then be transferred on to a two-dimensional scattergram or plot, representing two of the three principal axes along which the data varies. Plots can therefore be made up of the first and second principal axes, first and third, or second and third. The first principal axis represents the greatest degree of variation within the dataset. Those artefacts types and graves which are most closely linked will cluster more closely together on the plot, while those with less inter-association plot further apart.

Artefacts or burials which are outliers in correspondence analysis are also of interest. They very likely represent an unusual association between artefacts, or a burial which contains an unusual assortment of items. In other words, a burial which plots away from others is an individual who has been buried with a combination of artefacts not seen in the rest of the burial population.

The use of multivariate analysis should be in no way considered a silver bullet for understanding cemetery data. Rather, it should be looked at as a way to tease out potential patterns and associations which can then be considered. It is essentially a descriptive technique; it shows the relatedness of burials and objects, but it does not tell us why or what these represent.

The key issue with correspondence analysis, as with the use of any statistical technique in archaeology, is how the data is arranged before it is analysed. However rigorous archaeologists may wish to present themselves as, the fact remains that the data we use are highly subjective. We make decisions about how the data are recorded and divided. The categories which we place artefacts into are entirely subjective, based on a common-sense

approach about what makes sense in our own cultural environment. The division of grave goods into tools, pottery, ornaments or food offerings may have made no sense to those who originally placed these items. The different pottery styles may have had less significance than function, or vice versa. There was probably a large amount of ambiguity and contradiction in past peoples' categorisation of artefacts (Loren 2010).

For this thesis there has also been the further problem of a lack of consistency between sites. Some have been published in detail, with accurate age and sex information, others have none, and some have used broad categories such as child or adult. Some subdivide material culture categories into many different artefact types, while some have bundled those same types into one category. This has meant that cross-comparison of the data can be difficult. However, correspondence analysis is still able to draw out interesting patterns from the individual datasets.

4.3 METHOD AND THEORY

The use of correspondence analysis in this thesis is intended to explore the way past societies used the inclusion of artefacts in graves to represent the identity of the deceased. The choice to use correspondence analysis for this is intended to avoid starting grave good analysis with certain assumptions. The types of artefact are not simply compared to a factor of interest to the researcher, such as sex, instead the data takes the lead. By recognising groups of burials with similar grave goods we can then attempt to draw conclusions about what these groupings may have meant.

As detailed in Chapter 3.2.5, personal identities are made up of a multitude of different aspects, which could include sex, gender, age, family, clan, household, social status, wealth, roles, and skills. All of these aspects interact, and one may be more important within certain situations. Burial may well have been a time when certain aspects of identity were stressed or

repressed. With all these interacting factors the reasoning behind the inclusion of certain artefacts in a grave is clearly complex. However, correspondence analysis allows us to focus on burials that cluster based on the inclusion of specific artefact types, and then consider what it is that they may be representing. The easiest of these to consider is age and sex, as these can be compared to the skeletal information. To this end, age and sex information will be added to the correspondence analysis plots, highlighting where clusters are related to either of these. Other aspects of identity, such as family or roles within the community, are harder to identify and often abstract (although the use of aDNA to establish family relationships, and skeletal analysis for repetitive action would both make interesting additions to this study). Groupings that do not appear to be related to age and sex, or that are sub-groups within these categories relating to something else, must be assessed on the basis of what the artefacts they cluster around are. Consideration of the artefacts, what they may have been used for, how they were made, or what they were made from, will provide clues to what these artefacts could be relating to, and what they can tell us about the individuals they were buried with.

4.4 SUMMARY

This chapter has outlined the methodological approach that will be taken in this thesis. It has explained the rationale behind site selection, and the collection of data. It also provides a description of the statistical approach used, correspondence analysis. Having situated the reader in the theoretical context (Chapter 3) and the methodology (this chapter), I now go on to provide the archaeological context in the next chapter.

5 WHAT'S IN A NAME? THE CULTURE-HISTORICAL COMPLEXITY OF SOUTH-EAST EUROPE

“Now and again a person dies, and pretty frequently someone is born; but, on the whole, the tide of time creeps on very imperceptibly, and though in the course of nature the entire population is changed every sixty years or so, nobody seems to realise that it is changing”

- H. Rider Haggard

5.1 INTRODUCTION

The Balkan region has been historically seen as a bridging zone between Asia, the Near East and Europe, between Christianity and Islam, a liminal zone not completely a part of anywhere (Bjelić 2002). This view of the region as a meeting point and melting pot of different cultures has also been applied to prehistory; it is through this area that innovations from the Near East (agriculture, ceramics, metal working) are thought to have entered Europe. The Balkans contain the most northerly extent of tell settlement, but are also the developmental setting for a different sort of agriculture, more suited to Europe compared to the Near East, which then spread across the continent.

The Neolithic and Copper Age archaeological communities of south-east Europe demonstrate a degree of similarity and relatedness of material culture and social organisation across the region throughout prehistory. Bounded by the Carpathian Mountains to the north, the Balkan Mountains to the south and the Adriatic and the Black Sea to the west and east, difference in climate made the region's development distinctive from the central European cultures in the cooler wetter regions to the north and Anatolian cultures in the arid Near East.

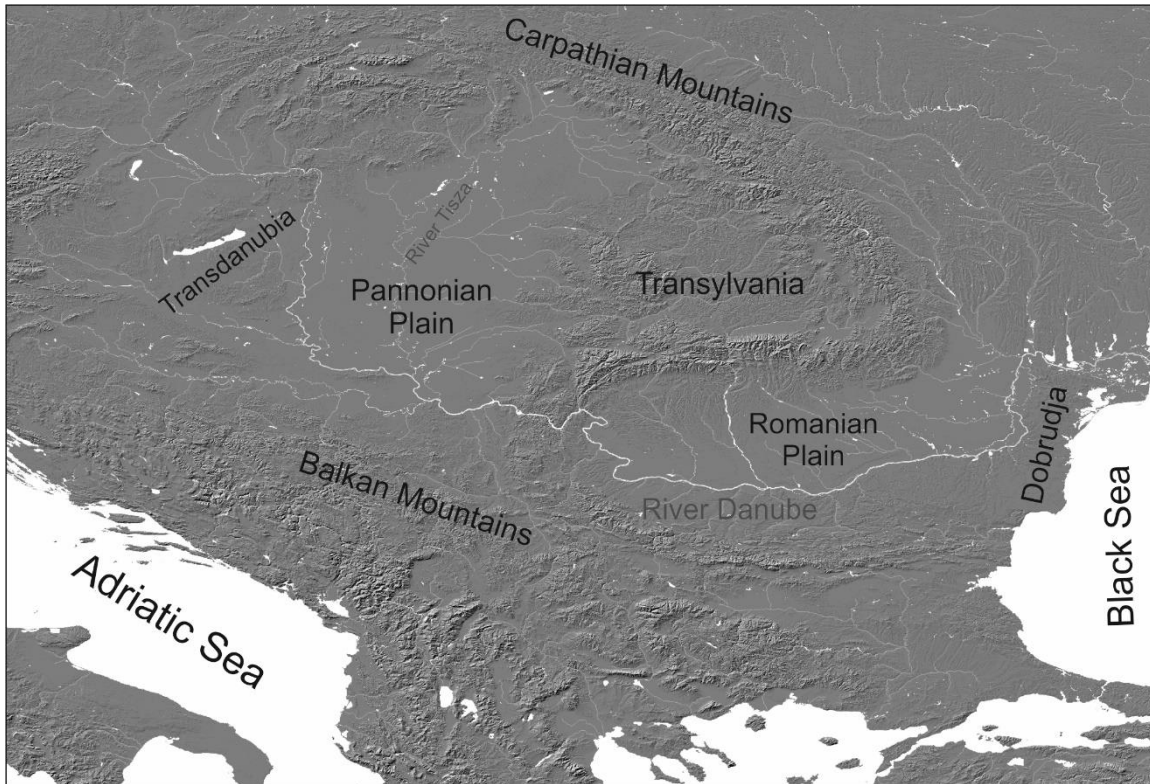


Figure 1: Physical map of south-east Europe (base map credit D. Borić)

The southern part of the Balkan Peninsular is physically dominated by a series of mountain ranges (fig.1); the Dinaric Alps along the Adriatic coast, the Pindus range at the southern point of the peninsular in Albania and Greece, the Rhodopes along the border of Bulgaria, Greece, and Macedonia (F.Y.R.O.M.), and the Balkan Mountains stretching east-west from Serbia through central Bulgaria. These ranges meet in southern Serbia, forming a barrier between Thrace (between the Rhodope and Balkan Mountains and the Aegean and the Black Sea, part of modern Bulgaria, Greece, and Turkey) and the plains of the lower Danube and Pannonia. A number of major rivers flow south from the mountain ranges to join the Aegean, including the Maritsa which flows through Thrace and the Sturma that flows through the Rhodopes. These rivers are thought to have provided traversable routes into the mountains in prehistory (Todorova 1995, 83; Biagi *et al.* 2005, 45).

Rivers from the north of the Balkan range, such as the Morava and the Alt, fall into the Danube catchment, and flow across Vojvodina (a southern part of the Pannonian Plain in northern Serbia), and the Danubian Plain in Bulgaria. The Pannonian Plain is a large, flat fertile region bounded by the Carpathian Mountains. The greatest part is in Hungary, where it is also known as the Hungarian Plain, but it also includes parts of western Romania and north-eastern Croatia and northern Serbia. The Plain is crossed by numerous rivers, the most significant being the Danube and its large tributaries: the Tisza in Hungary, and the Sava and Morava in Serbia. Modern flood control and drainage mean that the area is mostly dry, but previously it was a mixture of steppe grasslands and marshes (Gillings 1997).

The Danube crosses the southern spur of the Carpathians in a dramatic region known as the Danube Gorges, on the border of Serbia, Romania, and Bulgaria. Once through the Gorges the Danube again flows through a flat plain, known as the Romanian Plain to the north of the Danube (in modern Romania) and the Danubian Plain to the south (in Bulgaria). Many more tributaries flow into the Danube from the Carpathian and Balkan Mountains, the largest being the Olt in Romania, before it curves northwards and breaks into its broad delta along the Romanian and Ukrainian Black Sea coast. South of the delta the low hilly region between the Danube and the Black Sea is known as Dobrudja, and extends south into Bulgaria.

The 'boundaries' of this region were by no means impenetrable to people. In places the physical barriers of seas, rivers, and mountain ranges existed, but rivers and seas can be used for transport, and mountains can be lived in and traversed. These boundaries therefore also allowed for the movement of people and the transfer of ideas. Throughout the period of study cultural influences from surrounding areas are visible; in the arrival of the first farming communities, in the appearance of tell settlements, and in Lengyel pottery from Transdanubia found on settlements on the Pannonian Plain.

The archaeology of Neolithic and Copper Age south-east Europe is defined by a complex series of cultural groups (see Table 1). The prevalence of culture history in the region makes it a daunting study for outsiders, but more than that, the use of such bounded groups creates an unrealistic image of the processes and connections that existed. These cultural sequences have been largely based on detailed ceramic typologies. The assumption that ceramic typologies, rather than other aspects of material culture, architecture or funerary tradition, represent an ethnic or cultural group, is itself problematic. In part the culture history model dominates because tell settlements lend themselves to culture history phasing. Each habitation layer within a tell's stratigraphy can be considered a distinct 'phase' and labelled separately. Similar examples of these ceramic phases can then be searched for regionally to establish their spatial extent. Such practice ignores a number of possible problems. Movement of settlement foci on individual settlements may mean that certain phases are missing on any given excavation area (Gulyás *et al.* 2010). Stratigraphic sequences have not always been well excavated, recorded or interpreted. These neat cultural phases, which can

Calendar years BC	Greece	South-central Bulgaria	Lower Danube and Black Sea coast	Northern Romania, Moldova and Ukraine	Slavonia and Bosnia	Serbia	Great Hungarian Plain	Transdanubia
3000	Yunatsite	Early Bronze Age I-III/Ezero	Glina	Corded Ware	Pit Grave	Jevišovice	Vučedol	Bell Beaker
				Coțofeni		Baden		Kostolac-Cotofeni
3500	Final Neolithic	Karanovo VI	Cernavoda III-Boleraz	Cucuteni B	C	Baden	Baden	IV?
			Cernavoda I	Cucuteni A		Usatovo		Baden
4500	Late Neolithic	Karanovo V	Gumelnița	Cucuteni A	B	Salcuța IV-Boleraz/Baden I	Salcuța-Krivodol	Hunyadihalom
			Varna	Pre-Cucuteni		Balaton-Lasinja		Bubanj-Hum
5000	Middle Neolithic	Karanovo IV	Spantov	Eastern Linear Pottery	A	Lengyel	Vinča	Bodrogkeresztur
			Giulești					Hamangia
5500	Early Neolithic/Proto Sesklo	Karanovo III	Boian	Cris	III	Sopot	Starčevo	Proto-Tiszapolgar?
			Vidra					Bug-Dniester II
6000	Early Neolithic/Proto Sesklo	Karanovo II	Bolintineanu	Bug-Dniester I	II	Sopot	Danube Gorges Middle Neolithic	
			Dudești					aceramic
6500	Early Neolithic/Proto Sesklo	Karanovo I	?	?	IA?	Sopot	Danube Gorges Transitional/Early Neolithic	Szatmar
			?					?
6500			?				Danube Gorges Late Mesolithic	?Mesolithic

Table 1: Chronological table of the main archaeological cultures of south-east Europe (compiled by the author, using Ammerman and Cavalli-Sforza 1973; Benkö et al. 1989; Biagi and Spataro 2005; Biagi et al. 2005; Bonsall 2007; Boric 2015b; Boric and Dimitrijevic 2007; Chapman et al. 2006; Dinu et al. 2007; Durman and Obelic 1989; Forenabber 1993; Forenabber and Miracle 2005; Gatsov 2007; Gulyás et al. 2010; Hertelendi et al. 1995; Hertelendi et al. 1998; Higham et al. 2007; Horváth et al. 2008; Machnik 1990; Makkaý 1996; Nikolava 2006; Obelic et al. 2004; Nikolova 2006; Oross and Bánffy 2009; Orton 2012; Raczky et al. 2015; Raczky and Siklósi 2013; Regenye 2002; Reingruber and Thissen 2009; Siklósi 2009; Todorova 2003; Videjko 1995; Whittle et al. 2002; Wild et al. 2001; Yerkes et al. 2009; Zalai-Gaal et al. 2014.

be drawn up conveniently in a table, belie the complexities of the situation. The approach assumes that an individual cultural phase spread across an area at a single moment in time, and that phases occur in sequence across a region, ignoring the possibility of small-scale local processes (Yerkes *et al.* 2009), and leading us to think in terms of clearly defined cultural blocks (Whittle 2010).

Increasingly, radiocarbon dating is challenging the established cultural historical chronologies, as results demonstrate overlaps of ceramic styles and settlement hiatuses (e.g., Furholt 2008; Gulyás *et al.* 2010; Hertelendi *et al.* 1995; 1998; Raczky and Siklósi 2013; Reingruber 2009; Bánffy *et al.* 2016; Yerkes *et al.* 2009). Unfortunately, absolute dating remains patchy across the region and problems with the calibration curve, with a plateau around the Late Copper Age, mean that precise chronologies are not possible for some periods (Siklósi 2009; Yerkes *et al.* 2009, 1088).

Despite the many problems with the ceramic typologies it remains difficult to talk about the Neolithic and Copper Age of south-east Europe without referring to these “cultures” and “cultural groups”. The fact remains that they have historically been used and thus have become a necessary structure to discuss the archaeology of the region. At the least, they form a framework, and to attempt to do without them altogether would leave one in a vacuum. This chapter aims to situate burial practices within the context of the regional archaeology, and will employ culture history labels where necessary, while remaining sceptical of their validity.

5.2 THE POLITICS OF BALKAN ARCHAEOLOGY: ETHNICITY, COMMUNISM, AND NATIONALISM

The recent political history of south-east Europe has inevitably shaped the research frameworks and interpretations of its archaeologists (Novaković 2011). Consideration of

these historical events is essential to put into context the work of archaeologists in the region, and to understand, in part, the continued favouring of the culture history approach.

The culture history understanding of a 'culture' is as a homogeneous bounded entity, recognised by the presence of certain 'type' artefacts or other criteria. This idea of cultural homogeneity is wishful thinking in a region of such ethnic diversity. The prehistory of south-east Europe is likely to have had parallels with the current situation; a complex mixture of ethnic groups with differing traditions and origin stories, but who also share many cultural traditions (such as, in modern times, the Serbo-Croat language). There were heartlands, where a certain group dominated, and areas of mixed populations inhabiting the same settlement (perhaps seen in the occurrence of a wide variety of pottery types at Polgár-Csőszhalom (Razcky *et al.* 1997)).

The idea of equating an archaeological culture with a specific ethnicity emerged in Germany and Russia in the mid-nineteenth century, initially as a method of classifying archaeological material (Dolukhanov 1996, 202). The German prehistorian Gustaf Kossinna took this a step further and claimed to be able to connect specific archaeological cultures, defined on the basis of material culture, to modern ethnic and historical groups. Linking the German people to a prehistoric 'Germanic' tribe he laid territorial claims based on continuity of occupation (e.g., Kossinna 1911). The European prehistorian Vere Gordon Childe adopted Kossinna's concept of culture, although he rejected the idea of linking past cultures to modern people. For Childe (1929) an archaeological culture was a combination of aspects of material culture (building structures, tool typologies, pottery styles, and burial practices) particular to a certain social group. It is Childe's (1929) view of an archaeological culture as representing a people that formed the basis of the culture history approach.

Early archaeology in south-east Europe was not much different from that of western Europe. At the turn of the century, interested and educated individuals were undertaking the

first archaeological excavations of prehistoric sites. In Serbia the first Neolithic settlement was discovered in 1889, and the systematic excavation of Vinča started in 1908 (Srejić 1988, 5). The first excavation in Bulgaria was started by a French-led team in 1898 on the tell settlement Rachura Mogila (Todorova 1995).

Archaeologists at the end of the 19th and the beginning of the 20th century were primarily concerned with collecting materials for museums and identifying new site locations. Excavations were on a small scale. Combined with generally poor recording techniques, particularly in understanding stratigraphy, this caused problems with interpretation. This was exacerbated by expectations of classical world primacy in cultural development. Vasić for example, in *South-eastern Elements in the Prehistoric civilisation of Serbia* (1907–8) considered that Vinča was dependant on the Aegean Bronze Age. Further misunderstandings of chronology and stratigraphy, such as the Middle Neolithic of Bulgaria being equated with the Bronze Age Troy II (Todorova 1995, 79), led to a proposed short chronology for the region's prehistory. This was finally challenged by the start of the radiocarbon revolution, which indicated that the entire sequence needed shifting back by several millennia, although it took some time for these new dates to be accepted (Renfrew 1969; 1971; 1973; Yerkes *et al.* 2009). The so called "long chronology" was not accepted until the 1990s in Hungary, and remains controversial for some due to its discrepancies with the ceramic sequences (Horváth *et al.* 2008; Benkö *et al.* 1989).

After the Second World War suspicion of the West and lack of accessibility to the works of Western academics meant that archaeologists in Eastern Europe did not engage in the processualist and post-processualist theoretical debates (see Novaković 2011). During the communist period academics were expected to tow the party line, and archaeological interpretations either used Marxist theory or very little interpretation. Allocation of state funding often relied on the researcher having the correct political affiliation (Bailey 1998).

The degree of Party control over academics varied from country to country depending on the political situation; Hungary was relatively free, in Bulgaria the Party was more closely controlling (Bogucki 1993, 147; Bailey 1998).

During this period there was little regional research cooperation between nation states. Ceaușescu's Romania in particular was isolated (Wilcock and Sanie 1996). There were, however, a number of international projects with western institutions (e.g., the 1970s Selevac excavations in Serbia between Berkeley and the National Museum in Belgrade (Tringham and Krstić 1990)). The regional nation states were often in competition, or indeed, outright conflict (Chapman 1994a). Attempts to justify land claims or create a cultural homogeneity led to varying or even contradictory interpretations of the same evidence (Curta 2001; Niculescu 2004-2005). Lack of cooperation meant that each nation developed its own chronological system, which has resulted in the confusing regional chronological tables that attempt to make sense of these different national chronologies (some attempts at synthesising these include Piggott 2007 [1965] and Tringham 1971). Similarly, the name of a cultural group can change across national borders (Bankoff and Winter 1990; Tringham 2000).

Since the fall of communism, archaeology has been used in some countries in Eastern Europe as an aid in creating a resurgent nationalism. There was a desire to link newly independent nations with cultures of the past, and this has included using archaeological “cultures” to justify territorial claims (Dolukhanov 1996; Díaz-Andreu and Champion 1996; Meskell 1998). For Romania, prehistoric archaeology has been side-lined to a degree by Roman and post-Roman studies (Raluca Kogălniceanu pers. comm.), as the Romanian state is popularly seen as being an unbroken entity from the Roman province of Dacia (Dolgu 2005). This Latin, European origin is emphasised by Romanians in their effort to escape from the Balkans into Europe “proper” (Cioroanu 2002). Other arguments have focused on

an autochthonous development from prehistoric populations, attempting to define this region on the edge of Europe as firmly *in* Europe by emphasising past connections (Nikolova 2005, 92; Stefanovich 2003; Niculescu 2004–2005).

Although there have been many changes in recent years, the problem of a reliance on the culture history approach remains. Some Eastern European archaeologists remain sceptical of the value of theoretical archaeology (Nikolova 2005), preferring instead to focus on methodology and empirical approaches (Dragoman 2009). Archaeology is portrayed as a science, as Dragoman (2009, 170) expresses it, “the reader gets the impression that Romanian archaeological practice is free of imagination, subjectivism, uncertainties, contradictions or introspection.” The main institutions are still led by archaeologists schooled in the previous era and, particularly in the case of Romania and Bulgaria, it is extremely difficult to criticise the established order or present new approaches (Dragoman 2009).

The change from a communist to a capitalist system of government also caused major changes to research frameworks. Funding, which was previously available from local and national authorities, has decreased and now comes through highly competitive state agencies or international cooperation (Bogucki 1993, 145-147). International collaborations have increased, but they mostly involve Western European academics bringing funding and working with an Eastern European collaborator. These collaborations face issues of different excavation methods and standards, and will generally come with a research agenda led by the funding partner. Collaboration between different states in the region remains poor, although some regionally arranged conferences such as the annual *Neolithic Seminars* at Ljubljana and the multi-period *Homines, Fumera, Astra* conference at Alba Iulia are increasing cooperation.

5.3 MESOLITHIC OCCUPATION IN SOUTH-EAST EUROPE

There is scant evidence for human occupation in much of south-east Europe before the arrival of Neolithic farming communities. Unlike in much of the rest of Europe no distinctively Mesolithic flint industry developed (Bailey 2000, 36), and the term Epipalaeolithic is preferred by some researchers to emphasise the continuity from the Palaeolithic (Bonsall 2008, 239; Runnels 2001, 245). The majority of evidence for Mesolithic occupation comes from coastal areas of Greece and the Adriatic (Borić 2005; Mihailović 1999; Miracle *et al.* 2000; Perlès 2001). These sites are predominantly caves. Information on the subsistence economy is mainly derived from lithic tool typologies, although faunal remains are also informative. Sites do not appear to have been permanently occupied; some were for seasonal use, for example, following red deer herds into the uplands, while others were longer term bases (Miracle *et al.* 2000).

Evidence of pre-Neolithic hunter-gatherers has been rare in other areas of the Balkans, particularly on the plains of Hungary and the Lower Danube (van Andels and Runnels 1995, 481). This seems to have been at least partially due to a lack of research, with later periods having received greater focus (Svoboda 2008). Work by Eichmann and Kertész has found evidence of Mesolithic activity in the central Pannonian Plain, in the Jászság region (Kertész 2002), and to the north (Eichmann 2004; Eichmann *et al.* 2010), and an expansion of research to other areas may well lead to similar results. Recent projects (pers. comm. Dušan Borić) indicate that exploration of previously un-investigated mountainous regions may also prove productive. In some lowland areas, however, the landscape has changed since the late Pleistocene. During the Early Holocene there were significant alluvial processes of erosion and deposition on the floodplains of both the Pannonian Plain and the Lower Danube which may have destroyed or deeply buried any evidence of Mesolithic occupation (Borić 2005, 19).

If, as the current state of research suggests, Mesolithic occupation was largely limited to coastal areas then many sites may have been submerged after the Early Holocene sea-level rise. The only known Mesolithic site in Bulgaria, Pobiti Kamuni, is situated on interglacial sand dunes in the Black Sea region west of Varna (Gatsov 2007; Bailey 2000; Todorova 1995; 2003). The lithic material found there is similar to finds, also in sand dunes, to the north of Istanbul, supporting the idea of a coastal population around the Black Sea coast (Kozłowski and Kaczanowska 2009, 365; Todorova 1995, 82). However, it may be that the state of research is such that we cannot yet draw any conclusions about the patterns of Mesolithic occupation (Galanidou and Perlès 2003; Svoboda 2008).

An exception to this pattern is the Danube Gorges region, where evidence from sites including Lepenski Vir and Padina demonstrate that a flourishing hunter-gatherer community was occupying the area from c. 13,000 cal BC to the Neolithic transformation c. 6300 to 5950 cal BC (Borić and Miracle 2004; Dinu *et al.* 2007; Bonsall 2008; Borić 2007; 2011). Best known by the type-site of Lepenski Vir (Srejović 1967), the Early Mesolithic phase (c. 9500–7400 BC) is characterised by unusual ‘seated’ burials with crossed legs (Borić 2011). Radiocarbon dates from Vlasac indicate that the first experiments with the most famous aspect of the Danube Gorges archaeology, the trapezoidal buildings, took place at the beginning of the 7th millennium, in the Late Mesolithic phase (c. 7400–6300/6200 cal BC). However, the structures at Lepenski Vir and elsewhere date to what may be considered the transitional period, c. 6300/6200–5900/5950 cal BC, which is the likely arrival time of the first Neolithic groups into the area (Borić and Dimitrijević 2007).

Burial practices also changed in this phase, with the adoption of burial in a crouched position, a tradition considered to originate in the Near East and previously unknown in the region (Bonsall 2007, 54; Borić and Dimitrijević 2007; Borić 2011). New types of grave goods made from exotic material such as *Spondylus* shell were preferred to those seen in the

Late Mesolithic (Borić 2011). The chronology of the Danube Gorges demonstrates that, in this area at least, Neolithisation was a process of cultural hybridisation between the existing hunter-gather population and farming newcomers (Whittle 1996; Borić 2011; Bonsall 2007; Borić and Miracle 2004; Radovanović 2000). Strontium isotope analysis supports this, with evidence for migrants arriving in the Gorges from c. 6200 cal BC and continuing to do so for several hundred years until the Neolithic lifestyle was fully adopted (Borić and Price 2014).

5.4 EARLY NEOLITHIC (C. 6500–5500 CAL BC)

Much attention has been focused on the beginning of the Neolithic as a period of dramatic social change. Many works, including international projects (e.g., Ammerman and Cavalli-Sforza 1973; 1984; van Andel and Runnels 1995; Whittle *et al.* 2002), have attempted to trace and explain the spread of farming into Europe, but there remain gaps in our understanding, particularly in the earliest phases, for which evidence is sparse.

The first Neolithic communities in south-east Europe appear in Greece around 6500 BC, following what appears to be a 2000 year hiatus from the last known Mesolithic activity. The lack of evidence for any preceding communities in the area and similarities in economy and material culture with the Anatolian Neolithic mean the arrival of the farming economy is generally attributed to migration from the Near East (Todorova 1995, 83; although for a critique of this view see Kotsakis 2003).

Kozłowski and Kaczanowska (2009) have suggested that, on the basis of lithic typology, this process may have occurred via the Aegean Islands rather than directly from Anatolia. However, Özdoğan (2011) has proposed the existence of a simultaneous route via Marmara through Turkish Thrace and into Bulgaria. Certainly a second ‘strand’ of Neolithisation spread along the Aegean coast (Chapman and Müller 1990; Biagi *et al.* 2005; Forenbaher and

Miracle 2005). The subsequent development of the Dalmatian coastal Neolithic shared less with the interior Balkan Neolithic than with an Adriatic coastal network that connected it to the Italian peninsula (Robb 2007).

Initial settlement in Greece appears to have been in Thessaly, where only a single site is known to have been occupied in the Mesolithic, Theopetra cave, which has a habitation sequence from the Palaeolithic to the Chalcolithic (Facorellis *et al.* 2001). After a period of slow expansion, agricultural communities spread quickly into the rest of south-east Europe, possibly covering 550 kilometres in 150 years (Biagi *et al.* 2005, 45). Radiocarbon dates for the first stages of Neolithisation across the region are patchy, meaning a clear picture is impossible to complete (Biagi and Spataro 2005). It seems that these changes spread through the river valleys, from Thessaly north up the Vardar, Struma, Nišava and Morava rivers to the Danube, and from there into the Pannonian Plain through the Tisza and Maros rivers (Todorova 1995, 83; Biagi *et al.* 2005, 45; Whittle *et al.* 2002, 89; Whittle 2007).

The nature of the spread of the Neolithic has been the subject of much debate in archaeological literature, for a long time polarised between a colonisation by farming populations from the Near East (Ammerman and Cavalli-Sforza 1984; van Andel and Runnels 1995; Biagi *et al.* 2005) and an indigenous adoption of farming with movement of ideas rather than population (Higgs and Jarman 1969; 1972; Dennell 1983). The colonisation scenario is supported by the apparent emptiness of the region, the speed with which it spread through south-east Europe, and its homogeneity over the region, the so-called “Neolithic package” of crops, animals, pottery, stone tools, settlement types and burial practices. However, this homogeneity has been challenged, especially in the Danube Gorges where there is evidence of adoption and adaptation (Srejović 1985; Borić 1999; Budja 2003). Indigenous contribution to tool technology has been supported by lithic analysis on the Bulgarian Black Sea coast and northern Thrace (Gatsov 2007), as has lithic technology that

appears to be a Mesolithic adaptation to the new agricultural economy on the Pannonian Plain (Bánffy 2004). Kaczanowska and Kozłowski (2009), however, have argued that the first Neolithic lithic technologies show no roots in pre-Neolithic techniques, with variations being associated with differences in subsistence economy.

Founder crops and domesticated animal species have been demonstrated not to be indigenous to south-east Europe, and must have been brought in from Anatolia, ending any argument for the exclusive local development of agriculture (Perlès 2001; Colledge and Conolly 2007). However, these domesticated species could either have been brought by colonisers or traded with indigenous populations along with the knowledge necessary for their survival. DNA analysis of modern European populations implies that a complex process of population movement over time occurred involving indigenous people and newer arrivals, rather than a single migration event from the Near East (Budja 2009; 2010). These migrations, however, may prove to have been in much smaller numbers of individuals than many had assumed (Soares *et al.* 2010).

Changes to the “Neolithic package” indicate that a more complex process than colonisation took place (Tringham 2000; Borić 2005; Mihailović 2007; Robb and Miracle 2007). It is likely that there were exchanges of ideas, foods, and raw materials between the indigenous population and newcomers, and as the Neolithic economy advanced through Europe it is clear that in some places it was adopted by indigenous populations (Thomas 1996; Price 1996). This interactive process has been variously expressed in the recent literature of the region as a mosaic (Tringham 2000), advancing agricultural frontiers (Zvelebil and Lillie 2000), fusion (Whittle 2003), and co-existence (Greenfield 2008).

These first agricultural groups have been considered broadly homogeneous. Thin-section analysis of ceramics has shown that the technology used (clay choices, temper material, and firing temperatures) was the same across the region, irrespective of differences in vessel

form or decoration (Spataro 2006; 2010). This initial phase is known variously as the First Temperate Neolithic (Nandris 2007), the Monochrome Neolithic, or the Starčevo-Körös-Çris-Karanovo I complex, a term that seeks to bring together the various local groups identified in the region. Some of these cultural assignments follow modern political boundaries and their distinctiveness is debatable (Nandris 2007). However, over-arching labels obscure genuine regional variations in the nature of the first Neolithic groups in terms of ceramic typology, lithic technology and subsistence patterns (Bánffy 2004).

5.4.1 Agriculture

While the Neolithic is generally considered as an agricultural economy, archaeozoological evidence indicates that the degree of dependence on wild versus domesticated animal species varied significantly between settlements (Greenfield 2008; Kovács *et al.* 2010). Livestock with south-eastern origins, especially sheep, were poorly suited to the cooler, wetter north Balkan climate, particularly of the Pannonian Plain, yet sheep continued to dominate the domestic animal assemblages (Bartosiewicz 2005; Halstead 1989). The preference for sheep over more suitable livestock, for example pigs, has been attributed to “deeply ingrained cultural traditions” (Bartosiewicz 2007, 311). Kertész (1996) has suggested that the specific ecological needs of the early Neolithic farmers limited their spread into all parts of the Plain, allowing Mesolithic communities to exist coevally in “ecological niches” (Kertész 1996, 25; Kalicz *et al.* 1998).

5.4.2 Settlements

The first farming populations had a preference for fertile and well irrigated floodplains and levees for their settlements, allowing exploitation of various domesticated and wild resources (van Andel and Runnels 1995; Nandris 2007; Runnels 2003; Sherratt 1997). More varied habitats were utilised by the Starčevo communities in Transdanubia, where settlements are found farther from waterways and in the hills (Bánffy *et al.* 2010). Settlements

characteristically followed river courses, and consisted of household clusters which were closely distributed across the landscape (Sherratt 1997). The settlements varied in size; they were generally small, of between five and ten houses, but up to 50 houses can be found on these horizontal settlements. It is unlikely that these were all contemporaneously occupied; rather these linear settlements may be the result of house abandonment and rebuilding on a different location over a long period of time (Horváth 1989, 85).

5.4.3 Burials

Settlements display little evidence of social differentiation, either in the construction of the houses or their associated finds. Likewise, those burials which have been found in settlements beneath house floors or in pits between houses (which must represent only a small proportion of the population) display no indicators of identity, rank or status. Grave goods are very rare and it often seems that little care was taken over burials. As well as in pits, burials have been found in ovens at the Starčevo contexts at Alsónyék-Bátaszék (Osztás *et al.* 2012), and neonates were buried in jars in a number of Karanovo I settlements (Bacvarov 2007). Although the whole spectrum of the population appears to be represented in these burials, from infants to the elderly of both sexes, there does appear to be a proportionally high number of children and neonates buried under houses. Furthermore, those occasions when burials are accompanied by grave goods in this period are generally in child burials (Bailey 2000). The absence of the majority of the population in the burial record raises questions over the funerary rites given to those who have been disposed of in archaeological unrecognisable ways, and the reason that some individuals were buried intramurally (Schuster *et al.* 2008).

5.4.4 Beyond the Starčevo-Körös-Çris-Karanovo I complex

Not all Early Neolithic populations fit into the Starčevo-Körös-Çris-Karanovo I complex. The Sopot culture of Slavonia, northern Croatia, was originally thought to have been a result

of the spread of the Vinča into previously Starčevo areas in the Middle Neolithic. However, a radiocarbon dating programme has produced results that demonstrate that the Sopot preceded the earliest Vinča. Indeed, although the first phase, Sopot IA, remains undated, dates from Sopot IB place the second phase around 5480 to 5070 cal BC, 160 years earlier than the first Vinča dates (Obelić *et al.* 2004).

To the north-east of the northern-most expansion of the Criş, in modern Moldavia and Ukraine, indigenous involvement in the Neolithisation process is clearer. In the valleys of the southern Bug, Dniester and Prut rivers, around 6500 BC, the Bug-Dniester culture emerged (Zvelebil and Lillie 2000, 72). The first phases of Bug-Dniester settlements were aceramic and wild animal species dominate the bone assemblages, but they were also raising domesticates (Dergacev and Dolukhanov 2008; Kotova 2009). This can be interpreted as a result of farming communities' influences on local Mesolithic populations (Zvelebil and Lillie 2000, 72; Dergacev and Dolukhanov 2008). After this long aceramic phase pottery production started around 6000 BC, bearing evidence of Criş technological influence as well as local features (Zvelebil and Lillie 2000, 73). Later, LBK influence can be seen in the abandonment of semi-subterranean in preference of above ground houses. The Bug-Dniester would eventually merge with the Tripolye culture in the Late Neolithic.

5.5 MIDDLE NEOLITHIC (C. 5500–4900 CAL BC)

5.5.1 Western Region

In the Middle Neolithic, the Pannonian Plain saw the development of a cultural phenomenon that was to have a significant impact on the Neolithisation of Europe, a broadly homogenous group that spread almost to the Atlantic coast in the area of the Netherlands by 5300 BC (Price *et al.* 2001). The first appearance of this phenomenon is known as the Alföld Linear Pottery culture (henceforth AVK), but in its developed stages

that spread across Europe it is known as the *Linearbandkeramik* (commonly the LBK). It appears to have initially emerged in the Upper Tisza region around 5600–5400 BC from the northern variant of the late Körös known as Szatmár (Makkay 1996; Domboróczki 2010; Domboróczki and Raczky 2010; Kaczanowska and Kozłowski 2003; Kozłowski and Nowak 2010; Raczky *et al.* 1997). It is characterised by white painted linear incised pottery and timber-framed longhouses.

AVK populations had a similar settlement pattern to the Körös, but expanded farther into marginal areas along smaller river tributary valleys and into the northern Carpathian foothills (Kosse 1979; Sherratt 1997, 286). Although settlement was still focused along rivers, there appears to have been a decrease in the importance of fishing and wild resources in general, with greater reliance on domesticated cattle (better suited to the environment than sheep/goat) and possibly cereals (Kosse 1979; Sherratt 1993; 1997; Bartosiewicz 2005).

To the south of the AVK, from south of the Maros valley on the Pannonian Plain, the Vinča culture emerged c. 5500 BC, expanding to cover an area from Transylvania to Macedonia, north-east Bosnia to Oltenia (Tringham and Krstić 1990, 568). The origins of the Vinča culture are debated, with theories ranging from a second wave of migration from the southern Balkans (Ursulescu 2002) to a local evolution from the preceding Starčevo-Körös-Criș (Srejović 1988). Ceramic typologies and settlement evidence indicate that the more likely scenario is indigenous development (Makkay 1990; Jerinić 1988; Biagi and Spataro 2005; Paluch 2010). The Vinča culture does display some elements of traditions from the south; it is in the Vinča period, for example, that the first tell settlements were founded on the Pannonian Plain. Vinča settlements were predominantly located in river valleys surrounded by low hills, on river terraces or on dry raised areas in marshlands (Jerinić 1988; Jovanović 1995; Ristić-Opačić 2005). The Vinča agricultural economy also demonstrated strong Near Eastern influences. Horváth and Virág (2003) argue that the more developed

Vinča agriculture enabled the establishment of long-term permanent settlement, in comparison to the shifting settlements of the neighbouring AVK. Orton (2012) has also suggested that it was the increasing size of cattle herds that led to greater permanence of settlement. Burials are mainly found on settlements in very small numbers, but two Vinča period cemeteries, Botoš with 17 burials and Gomolava with 31, are known (Lichter 2001).

Around 5260 cal BC the homogeneous AVK began to break up into distinct local groups. Both ceramic typologies and radiocarbon dating indicate that these diverse Middle Neolithic culture groups overlapped spatially and chronologically, rather than occurring in a successive typological sequence (Hertelendi *et al.* 1995). The Szakálhát group, identified by distinctive ceramics with painted patterns outlined with incised lines, emerged in the lower and middle Tisza area, an area where the AVK and Vinča seem to have met, with artefacts attributable to both groups being found on the same settlement (Paluch 2010). To the north-east the Esztár group produced dark painted ceramics (Sherratt 1982, 298). Among the northern foothills emerged smaller groups, the Bükk, Tiszadob and Szilmeg, with their own distinctive finewares. These groups, although creating distinctive ceramics of their own, were also in contact with their neighbours and individual settlements display a variety of ceramic types (Sherratt 1982, 298; Paluch 2010).

It has been suggested that a dense hunter-gather population in the Carpathians prevented the northern spread of the Neolithic groups until the Middle Neolithic, and that the limits of the spread of the Neolithic before this point are based on cultural boundaries (Makkay 1996; Valde-Nowak 2010). Alternatively, as has already been mentioned, it may have been caused by environmental limits on the farming economy, what Sümegi and Kertész (1998, 156–157 in Kalicz *et al.* 1998) have called the “Central-European-Balkan agro-ecological barrier.” Either way, the long contact period between Mesolithic and Starčevo farming communities in Transdanubia and the Pannonian Plain may well account for the appearance of distinctive

localised groups in this region when a Neolithic lifestyle was adopted (Kalicz *et al.* 1998). It is also possible that these small cultural groups represent a degree of economic specialisation. Some evidence indicates that they may have been controlling access to mountain resources (such as the hard stone andesites and rhyolites in the Bükk Mountains and obsidian in the Zemplén Mountains) and trading them with plains groups who concentrated on raising animals (Sherratt 1982, 298). Obsidian from a source at Tokaj has been discovered 400km to the south on Vinča sites.

Agricultural techniques were adapted to better suit the local conditions (for example, cattle replaced sheep as the dominant domesticate (Sherratt 1997)) and in the Middle Neolithic there was an emergence of village-like settlements as it became possible to sustain larger conglomerations of people (Raczky 1995, 77). This increasing nucleation and decrease in frequency of settlements occurred both in the Szakálhát period on the Pannonian Plain and also in Transdanubia during the contemporaneous Lengyel period. In the Szakálhát area the first phases of tell settlements were established (Parkinson and Gyucha 2012).

5.5.2 Eastern region

Our understanding of what was going on during this period in the eastern region is less clear, partially due to a relative lack of research (Andreescu and Mirea 2008, 28). Researchers in this region often consider that there is no distinctive ‘Middle Neolithic’ phase, and that the continuity with the preceding period makes such a division redundant (Todorova 1995; Raluca Kogălniceanu pers. comm.).

The Vinča culture extended into the western regions of Romania (Banat, Oltenia and Transylvania) where distinctive regional variations, which within the Romanian literature are considered sub-groups, emerged; the Banatului in the Banat region on the modern border with Serbia, the Rast in western Muntenia, and Turdaş in Transylvania (Ursulescu 2002). Also in Transylvania, the Petreşti culture emerged contemporaneously with Vinča C (c. 4750

cal BC.), with a distinct form of painted pottery and a manufacture process differing from other groups with closer associations to Vinča ceramics (Draşovean 2004). Some evidence points to an origin for this type in the Banat cultural group known as the Feoni (Draşovean 2004; 1997).

Most Romanian researchers have tended to prefer an immigration origin for the Vinča and the contemporaneous Dudeşti farther to the east in Muntenia, Oltenia and the Bucharest region (Dumitrescu 1980; Ursulescu 2002). Combined with a further incursion from the west by Linear Pottery culture groups these population movements are thought to have caused political or ethnic tensions, possibly evidenced by the first fortifications around settlements (Ursulescu 2002). Very few settlements have been found relating to the Dudeşti. Those found were located on river terraces (Schuster *et al.* 2008). Burials from this period are even rarer, although it has been proposed that the cemetery at Cernica dates to this period, due to the nearby Dudeşti settlement remains (Comşa and Cantacuzino 2001). This is, however, controversial, and other scholars do not consider this theory very convincing (Ursulescu and Kogălniceanu 2007; Kogălniceanu 2009b). The only securely phased Dudeşti burials are single intermural inhumations at the settlements of Dudeşti and Cernica, and five cremated individuals in an oven at Cârcea-Viaduct (Schuster *et al.* 2008).

5.6 LATE NEOLITHIC

During the Late Neolithic the increasing cultural diversification and fragmentation seen at the end of the AVK and Vinča cultures continued across south-eastern Europe.

5.6.1 The eastern region (c. 4900–4550 cal BC)

A western expansion of the Linear Pottery culture, which had arrived in the region from the area of Poland to the north, pushed Dudeşti populations westwards into Oltenia. Here we see the final Dudeşti phase, Vădastra, which shows strong Vinča influences, as well as some

from the Linear Pottery cultures. From these diverse influences the region's cultural-historians (e.g., Comşa 1974) recognise the emergence of a new cultural entity, the Boian culture, which is found in southern Romania and eastern Transylvania. It is also found in Bulgaria, where it is known as Karanovo IV and V, and the Marița culture. In Romania it is split into five sub-phases, Bolintineanu, Giulești, Vidra, Spanțov and Tangâru.

Although this phasing is based primarily on changes to pottery styles, at this time there are also clear changes to settlement structure. Boian settlements demonstrate southern influences, being the first tell-like settlements in the Lower Danube region (Andreescu and Mirea 2008). Some Gumelnița (Copper Age) tells seem to have been established in the Boian period. The Southern Romanian Archaeology Project (SRAP), a geomorphological survey of the Teleorman Valley in southern Romania, found that in the early Boian, prior to the establishment of tell settlements, Boian communities occupied sandy islands within what was probably a wetland network (Howard *et al.* 2003). The placement of settlements in defensible locations, along with what appears to be evidence of fortification, has led to suggestions that conflict increased in this period (Comşa 1974, in Schuster *et al.* 2008, 27).

The coastal region of Dobrudja (which today is divided between Romania and Bulgaria) differs from the rest of south-east Europe in that in many places there is no evidence for the presence of neolithised populations prior to the Late Neolithic. The reason for this lack of evidence is debatable. While some scholars believe that it represents a real absence of human occupation in the Early Neolithic, others have suggested that these regions were populated but that environmental changes have obscured the evidence, creating “false” areas of inactivity (Carozza *et al.* 2010, 1). Palaeogeography indicates that there was a dramatic flooding event c. 7000 cal. BC, caused by a marine invasion from the Mediterranean during a period of global sea level rise (Ryan *et al.* 2003). The speed of this event is debated (Ryan *et al.* 2003), but it is estimated that around 200 km of the continental platform may have been

flooded along the western coast of the Black Sea (Carozza *et al.* 2010). Any Early Neolithic settlement spreading along the coast would therefore be underwater (Carozza *et al.* 2010; Kogălniceanu 2009a).

With this taken into consideration, it remains the case that no evidence of Early Neolithic settlement has so far been identified in Dobrudja. The region appears to have been first settled in the Neolithic by a cultural entity of uncertain origin, known as the Hamangia (Ursulescu 2002; Schuster *et al.* 2008). It is contemporaneous with the Boian culture, its neighbour to the west. The origin of the Hamangia culture has been variously suggested as southern or coastal migration, or local development (Ursulescu 2002). Settlements were situated on river terraces and hill slopes and were small and unfortified (Schuster *et al.* 2008).

The large-scale cemeteries of Cernavodă and Durankulak first came into use in the Hamangia period. It is a matter of debate, until both cemeteries can be absolutely dated, which was the earliest large-scale cemetery in the region. Either way, it is clear that the creation of large-scale extramural cemeteries was some of the earliest Neolithic activity in this area. The scale of these cemeteries, with over 700 Hamangia period burials at Durankulak (Todorova 2002), and their separation from contemporary settlement, made them a dramatically new phenomenon for the region.

The Late Neolithic cemeteries of the Boian and Hamangia (Cernavodă, Cernica and Iclod) are also distinctive for the use of the extended burial position. In the rest of south-east Europe Early Neolithic burials were crouched (Lichter 2001), a burial position that was previously unused in Mesolithic Europe and that is thought to have Near Eastern roots. The use of the extended burial position as opposed to crouched, combined with the lack of evidence for previous Neolithic occupation has led some researchers to suggest that the extended position was a Mesolithic trait retained by recently neolithised local groups (Borić 2015a and references within). Animal bones are also commonly associated with burials in the

first phases of these cemeteries, such as Cernavodă (Kogălniceanu 2009a) and Durankulak (Todorova 2002; Stratton and Borić 2012), again something that is considered a Mesolithic tradition (e.g., Borić 2015a).

The majority of Hamangia and Boian burials contained grave goods. Items included copper and shell jewellery, ceramic vessels and stone tools. At Durankulak some of these artefacts seem to have had associations with expressing gendered identities, with children included in this gendered scheme (Stratton and Borić 2012). However, the same has not been noticed at Cernavodă or Cernica (Kogălniceanu 2009a). While sharing certain overarching characteristics each cemetery had its own traditions. There was no unified burial practice across the Boian and Hamangia.

The Cucuteni-Tripolye culture is found in northern Romania (Moldavia), Moldova and the Ukraine (Schuster *et al.* 2008, 34). Cucuteni settlements were large, open permanent settlements, most commonly covering between 10–15 hectares, but settlements covering over 100 hectares are known (Chapman 2010). These ‘megasites’ were often built around a central space, creating a layout of concentric circles. Examples of house clusters, possibly for extended families, separated by open space from other clusters, are also known. The zoological identification of bones from the same roebuck individual in different houses within one cluster at Drăgușeni may indicate the sharing of food (Popovici 2010).

Houses of Cucuteni-Tripolye type were rectangular, post-built wattle and daub structures of one or two rooms, with an associated garden area. The burial practices of these communities are not well understood. No cemeteries are known. The find of 111 human bones from a minimum of 33 individuals in House 9 at Scânteia has been interpreted as an ossuary (Chapman 2010). Disarticulated human bones have also been found in houses, pits and occupation layers from a number of settlements (Popovici 2010).

5.6.2 The western region (c. 5100–4500 cal BC)

The emergence of the Late Neolithic Tisza-Herpály-Csószhalom cultures (fig. 2) c. 4800 BC on the Pannonian Plain appears to have been a mixture of local and southern influences (Hertelendi *et al.* 1995; Salisbury 2010, 52). Southern influences are particularly visible in settlements, with the appearance of tells on the southern part of the Plain. Settlements aggregated, with fewer, larger settlements replacing the smaller frequent settlements of the preceding period (Raczky and Anders 2006, 18).

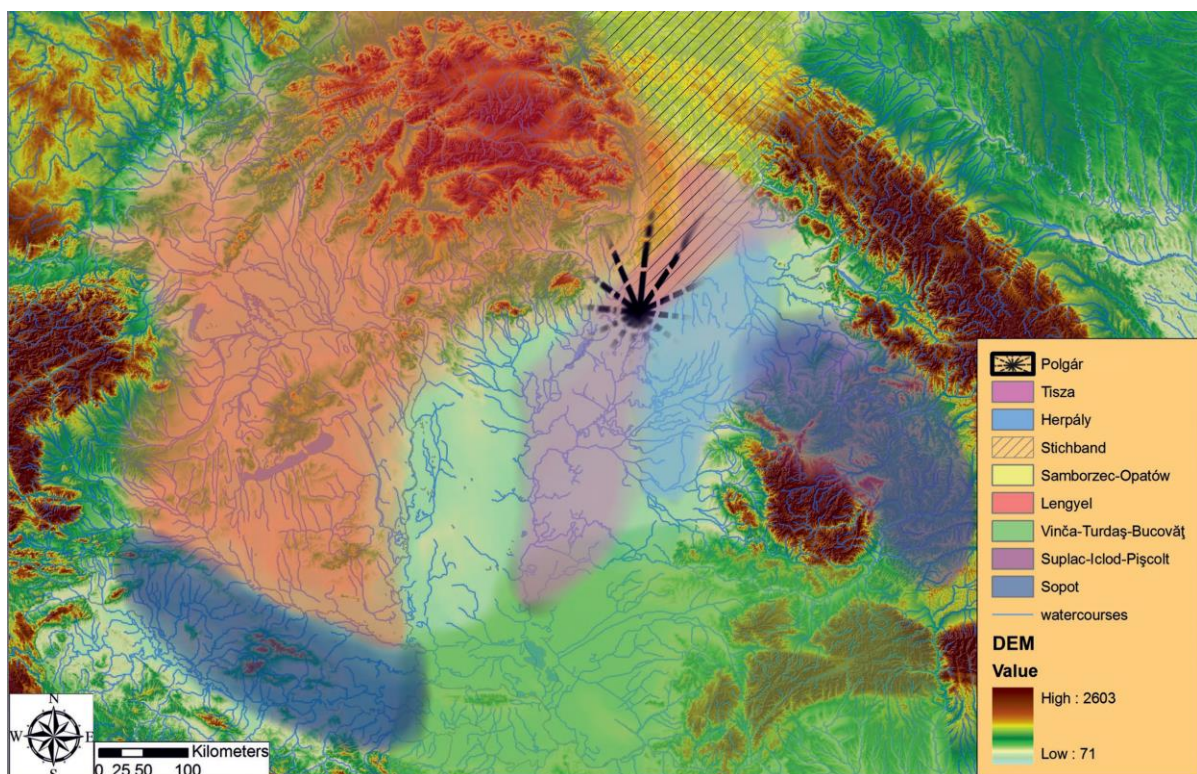


Figure 2: Distributions of Late Neolithic ceramic styles in the Carpathian Basin (Raczky *et al.* 2014, 321)

The first tell settlements were established on the Pannonian Plain c. 4800 BC (Chapman 1997b, 148), with the earliest dates for the first phases of Öcsöd-Kováshalom at 5181-4931 cal BC (Hertelendi *et al.* 1998). Southern Tisza sites, such as Čoka, demonstrate strong Vinča influences, including large quantities of Vinča ceramics (Raczky 1995, 77). However, locally produced finewares have incised textile-like patterns that display similarities with the

preceding Szakálhát and indicate continuity (Sherratt 1982, 298). Kalicz and Raczky (1984) have argued that the Tisza culture emerged first in the Tisza valley, and from this the Herpály and Csőszhalom cultures emerged, rather than each developing independently from local Middle Neolithic groups. The Herpály-Csőszhalom superseded the Esztár culture and the other smaller groups in the north of the Plain.

The visible Vinča influence does not extend north beyond the Körös-Berettyó river complex, with no Vinča ceramics or tell settlements found, apart from the exceptional site of Polgár-Csőszhalom, approximately 100km north of the most northerly tell site (Bánffy and Bognár-Kutzián 2007; Anders *et al.* 2010). Elsewhere in the Upper Tisza region the Csőszhalom group settlements have thin occupation deposits that rarely develop beyond a metre in depth (Raczky 1995, 78). In the southern part of the Plain, the Tisza culture shows most similarity with the neighbouring Vinča, with few flat sites attributed to the Tisza culture, and those existing north of the Körös valley (Raczky *et al.* 1994). Moving north, the Herpály culture is the most northerly example of the tell phenomenon. In both the Tisza and Herpály distribution area single layer sites are also found, with an apparent pattern of central tells being surrounded by smaller single layer settlements (Anders *et al.* 2010). Contact with the Lengyel culture of Transdanubia is also evident in ceramics found on some Tisza-Herpály-Csőszhalom sites such as Aszód (Raczky *et al.* 1994), Pusztataskony-Ledence (Sebők 2012) and Polgár-Csőszhalom (Raczky *et al.* 1997).

The Tisza, Herpály and Csőszhalom cultures have traditionally been interpreted as three separate cultural groups with specific local traditions, which certainly shared influences. However, the degree of overlap between the Tisza, Herpály and Csőszhalom cultures, including the apparent co-existence of different populations on individual settlements (Raczky *et al.* 1994), means that their distinctiveness can be questioned. Evidence of possible flat sites surrounding tells, such as at Berettyóújfalu-Herpály (Kalicz and Raczky 1984),

indicate that the simplistic division between flat and tell settlements does not reflect the real situation.

Although on the Pannonian Plain burial remained intramural, unlike in the eastern region where we see the first large scale extramural cemeteries in this period, there was a shift in burial practice. The tradition of burying children under house floors remained on some settlements, for example Berettyóújfalu-Herpály (Kalicz and Raczky 1984; Kalicz and Raczky 1987b), but there was a general change from single burials to burial in small groups, in what appear to have been small dedicated cemetery areas within unused parts of settlements (Horváth 1987; Raczky 1987).

The Vinča culture continued until c. 4600 BC, when it was succeeded by the Salcuța-Krivodol and Bubanj-Hum Copper Age cultures. Late Neolithic occupation continued on tells founded in the earlier phases, along with some new settlements. The clustering of sites founded at different periods indicated that newer settlements were founded by individuals from other already established sites nearby (Ristić-Opačić 2005). Similarly to the Tisza-Herpály-Csőszhalom settlements, in the later Vinča period dedicated cemetery areas appeared within Vinča settlements, such as at Gomolava (Borić 1996; 2015a). Clearly these areas did not serve the entire population, and other funerary practices must have occurred, including the previous tradition of burial within or between houses.

The Lengyel culture emerged in south-west Slovakia and Transdanubia. Its origins appear to lie in the Linear Pottery culture (Pavúk 2007). Despite its later phases pushing beyond 4500 BC, roughly the beginning of the Copper Age in the surrounding region, the Lengyel remains Neolithic until its end and the appearance of the Baden culture (Regenye 2007). Lengyel settlements are flat open sites of large clusters of houses, usually enclosed by a boundary ditch. The house architecture, like the LBK before, was wooden post built, with wattle and daub walls, but unlike LBK houses Lengyel buildings had no internal posts; the

walls bore the entire weight of the structure (Osztás *et al.* 2012, 386). On a number of sites there is evidence of houses being rebuilt on the same spot.

Lengyel burials were intramural. They are found as single interments or clusters. At the site of Alsónyék-Bátaszek over 2300 burials were discovered in clusters ranging from 25 to 100 individuals. Some single burials were found in abandoned houses, but the majority were found in small burial areas within the settlement (Osztás *et al.* 2012). Lengyel burials were flexed and laid on either side, with a noticeable pattern of burials strongly crouched on their left in the southern Lengyel distribution while in the north they tended to be lightly flexed on their rights (Borić 2015a; Lichter 2001). Most of the burials are in specially cut grave pits, but evidence from Alsónyék indicates that some burials were placed in some kind of wooden funerary structure (Osztás *et al.* 2012). Around 100 burials were accompanied by a lavish array of grave goods, including jewellery, ceramics and tools, which marked them out as a possible elite group according to the excavators (Osztás *et al.* 2012). The use of cremation as a form of funerary treatment is also seen in a small proportion of cases on Lengyel cemeteries (Osztás *et al.* 2012; Siklósi 2007; Borić 2015a).

The relationship between the Lengyel and the earlier Sopot culture is unclear. During its middle phase, c. 5000-4800 cal BC, the Sopot culture spread north of its original area into Transdanubia, where evidence of it has been found on former Linear Pottery culture settlements (Regenye 2002). Initially, it was thought that the similarities between the Sopot and Lengyel were evidence for the Sopot being a direct predecessor of the Lengyel. However, elsewhere there is clear continuity between Linear Pottery culture and the early Lengyel. Furthermore, the few radiocarbon dates available indicate that Sopot and Lengyel communities may have been at least partially coeval (Barna 2007), as does the relative chronology (Regenye 2002). Rather than seeing them as being genetically linked, Regenye (2002) argues that the Sopot, as a small cultural entity that emerged between two larger

entities (Linear Pottery to the north, Vinča to the south), had strong regional variations in border areas. Therefore its many similarities to the Lengyel were a result of shared rather than inherited cultural features (Regenye 2002).

Although it was not on the scale of the large cemeteries in the Lower Danube and Dobrudja, there was a striking shift towards the use of funerary practice to express identities in the Late Neolithic in the Pannonian Plain, both by the positioning of the body and the artefacts buried with it. It is in this period that we see the first clear signs of the gender differentiation that was to become increasingly stressed in the Copper Age cemeteries, with males and females placed on different sides at Hódmezővásárhely-Gorzsa (Horváth 1987), apparently exclusively male burials at Gomolova (Borić 1996; Stefanović 2008), and differing placement of males and females within various mortuary spaces at Aszód (Siklósi 2007). The occurrence of grave goods also increased, although not at this stage with any clear associations between age or gender, they may have been indicators of other types of social identity (Siklósi 2007; Borić 1996). The possible nature of such identities will form the basis of discussion in following chapters.

Some authors have recognised a final Neolithic phase on the Pannonian Plain, known as Proto-Tiszapolgár, which is found in the final levels on Late Neolithic tell settlements, such as Hódmezővásárhely-Gorzsa, Berettyóújfalu-Herpály and Polgár-Bosnyákdomb (e.g., Horváth 1987; Kalicz and Raczky 1987a; b). The phase represents a transition that led to the emergence of the Copper Age Tiszapolgár culture across the area covered by the Tisza-Herpály-Csőszhalom complex, marking a changing trend from Late Neolithic regionalisation to Copper Age homogenisation (Link 2006; Parkinson 2006; Yerkes *et al.* 2009). However, the phase is currently poorly defined, and has not been recognised on all Late Neolithic tell settlements (Parkinson 2006, 50–51). The Proto-Tiszapolgár, with its mixture of Tisza-Herpály-Csőszhalom subsistence practices and Early Copper Age burial practices and

ceramics support a local origin for the following Early Copper Age Tiszapolgár culture (Horváth and Virág 2003, 126; Parkinson 2006, 50–51).

5.7 COPPER AGE

A sharp increase in the use of copper for making tools, such as axes, and an increase in copper finds as hoards indicates it was not until the Late Copper Age that copper really established itself as an everyday material. In the Early Copper Age it was more commonly found as grave goods in burials, and used to make personal ornaments rather than tools (Manzura 2003).

The widespread abandonment of tell settlements in the western region at the end of the Late Neolithic in favour of dispersed flat settlements (Link 2006) means that the deeply stratified sites that provide the opportunity to develop relative chronologies for the Neolithic period are not available there. Likewise, long radiocarbon series reliant on deep stratigraphy do not exist, therefore Copper Age sequences are less well dated and understood than those of the Late Neolithic (Forenbaher 1993).

The terminology of the Copper Age, more so than any other period in the region, is confused. Some call it the Eneolithic, due to the strong similarities of Copper Age cultures with the Neolithic. The Copper Age may be divided into an Early, Middle and Late, or Early and ‘Developed’ in Romanian terminology. Terms are applied differently in different regions and different cultural groups are placed in different categories by different researchers (Manzura 2003). As radiocarbon dates increasingly imply that what were once considered sequential cultural groups in many cases overlapped (Forenbaher 1993), I will not subdivide this discussion of the Copper Age.

5.7.1 The eastern region (c. 4650–3000 cal. BC)

The Gumelnița culture emerged in the former region of the Boian culture, in Muntenia and Dobrudja (Ștefan 2010). It is also found in Bulgaria, where it is known as Karanovo VI-Kodjadermen-Varna (Nikolova 2005). The composite term, Karanovo-Gumelnița-Varna complex, is also used. It appears to have been a local development, with continuity being noted between the material culture of the late Hamangia and the Varna periods at the cemetery of Durankulak (Todorova 2002). Furthermore, during the early phases, AI and AII, Gumelnița occupation utilised Boian settlement sites. Later, in the BI phase, new Gumelnița settlements were founded on new sites (Ștefan 2010).

The majority of known settlements are long-lived tells, of 5-6m high (Morintz 2007), but flat sites and cave sites are also known from the period (Popovici 2009, 324; Ștefan 2010, 53). A micro-regional study, the Southern Romania Archaeology Project (SRAP), found that in western Muntenia, tells were preferentially situated on floodplains close to river terraces or on terrace edges (Andreescu and Mirea 2008). Not only did this location provide a variety of subsistence opportunities (hunting and fishing was important to the Gumelnița economy (Popovici 2010)), but it also allowed good views over the surrounding floodplains while simultaneously being difficult to observe (Andreescu and Mirea 2008). A number of excavated Gumelnița tells (Hârșova, Bordușani and Pietrele) demonstrate a linear arrangement of house structures (Popovici 2010). The tells investigated in SRAP were also found to have smaller and shorter-lived settlements in close association with larger long-term tell settlements (Andreescu and Mirea 2008). The relationships between these settlement types has interesting implications for group dynamics and community identity. Did those living on the satellite sites consider themselves a part of a single group encompassing the central tell settlement and other surrounding sites? Was there a difference in status or prestige among those living on the different sites? And were there differences in the identities expressed on the different sites, was it more important to demonstrate who

one was on the larger tell settlement than on the smaller settlements? Certainly, it seems likely that this change in settlement pattern also resulted in a change in the way people identified themselves and expressed this materially.

In Muntenia, where the Gumelnița emerged from the Boian culture, extramural cemeteries were on a much smaller scale than those of the coastal region of Dobrudja, with published sites ranging from 9 to 123 individuals (Schuster *et al.* 2008). Burial within or between houses is also known, mainly of children (Schuster *et al.* 2008). The quantity and frequency of grave goods was also lower than on the coastal cemeteries. It is on the Black Sea coast that the largest extramural cemeteries are found, attributed to the localised Gumelnița subgroup known as Varna. The cemetery of Varna itself contains the first known use of gold as a grave good, and it has drawn more attention than any other in south-east Europe due to the quantities buried (Renfrew 1978; 1986; Ivanov and Avramova 2000; Higham *et al.* 2007; Slavchev 2010). The burials show a striking degree of difference in the number of grave goods. This appears to demonstrate stratification within the society, but it is an inequality not visible in contemporary settlements.

The Sălcuța culture, part of the Sălcuța-Krivodol-Bubanj complex (Krivodol in Bulgaria and Bubanj in Serbia) is found in Oltenia in Romania. Similarities between Sălcuța and Gumelnița pottery styles and decoration has been used to demonstrate the development of the Sălcuța from the preceding Gumelnița (Pătroi 2010). Few sites are known from this period, but one cemetery containing 15 inhumations has been excavated at Gârlești-Ghercești. All the burials were in a crouched position, and were accompanied by grave goods of personal adornment (Schuster *et al.* 2008). It has been suggested that the graves were clustered in family groups, although this is not based on any scientific analysis of the skeletons (Schuster *et al.* 2008). Whether these burial clusters represent families, clans or a

social elite, the Sălcuța period cemeteries appear to be shrinking in comparison to the preceding Gumelnița.

Cernavodă I is found across much of south-east Romania, including Dobrudja and the Romanian Plain (Morintz 2007). Romanian researchers consider that it was an eastern migration from the lower Dnieper that pushed the Gumelnița communities into more marginal hilly areas to the west (Ursulescu 2002; Schuster *et al.* 2008). The earliest known settlement is that of Cernavodă itself, located on a hill and surrounded by a defensive ditch. No associated cemetery has been identified. Cernavodă III is considered contemporary with the Boleraz-Baden of Transdanubia and the Pannonian Plain on the basis of relative chronologies. However, recent work on absolute dating the Baden and its neighbours suggested that Cernavodă I was contemporary with the later classical Baden phase (Wild *et al.* 2001). The Cernavodă period is very poorly represented by radiocarbon dates. Ceramic evidence supports the contemporaneity of Cernavodă III with the Boleraz, but there is clearly potential for a rearrangement of our understanding of the Cernavodă ceramic phasing, possibly showing that the relative chronologies are faulty.

5.7.2 The western region (4500/4400–2600/2500 cal BC)

On the Pannonian Plain the regionally varied Tisza-Herpály-Csőszhalom cultural grouping was replaced by the more homogeneous Tiszapolgár (Yerkes *et al.* 2009). Continuity of the material culture indicates that this was an indigenous development (Horváth and Virág 2003, 126). However, a number of distinct changes can be seen from the end of the Late Neolithic to the beginning of the Copper Age in settlement size and distribution, layout, house form, burial practices, and this implies corresponding shifts in social organisation.

The majority of tell settlements and large-scale flat settlements were abandoned (Link 2006), and settlements were smaller but of higher density (chapters in Raczky 1987; Horváth and Virág 2003, 126; Yerkes *et al.* 2009). Yerkes *et al.* (2009, 1087) postulate from the stratigraphy

at a number of settlement sites that the same building and levelling activities that resulted in tell formation occurred in the Early Copper Age, but on a smaller scale over a shorter time-frame, therefore not resulting in tell formation. The dispersal to smaller settlements appears to have started before the final abandonment of tells at the end of the Late Neolithic (Yerkes *et al.* 2009, 1087).

The work of Yerkes *et al.* (2009) on the dating of the end of the Late Neolithic indicates that, at least in the micro-region of Vésztő (in the south-east of the Pannonian Plain) the phenomenon of large-scale extramural cemeteries came after the abandonment of tells and consequent changes in settlement organisation. This is an interesting development when thinking about the social significance of place. Tell settlements were obvious markers of permanent occupation in the landscape. With the abandonment of the tells it may be that this connection to place, previously demonstrated by the visible longevity of settlement, was replaced by the creation of permanent place for burial. The repeated use of cemeteries for burial of the dead, regularly returned to over time, may have performed a social function related to community identity established on the communities' past.

The largest known Tiszapolgár cemetery is Tiszapolgár-Basatanya, with 156 graves excavated (Bognár-Kutzián 1963). It is located only 2km from the Proto-Tiszapolgár tell-like settlement of Polgár-Bosnyákdomb (Raczky and Anders 2009). Tiszapolgár cemeteries are not as large or as lavishly furnished with grave goods as those on the Black Sea coast, but they display a similar variation in associated grave goods, some individuals being buried with nothing (at least nothing archaeologically visible), while others were buried with large amounts of copper jewellery, pottery, and stone tools (Sofaer Derevenski 1997a). This demonstrates some form of social inequality existed, which may have been to do with the accumulation of wealth or an increasing of hierarchisation of society. The burials also show a strong gendered division, with males buried almost exclusively on their right side and

females on their left. Certain types of grave good also appear to have had a gender association (Sofaer Derevenski 1997a), or represent significant life stages (Sofaer Derevenski 2000). It appears that in this period social differentiation was increasing, expressed at least in part by what people wore.

Radiocarbon dating indicates that the Bodrogkeresztúr culture, previously thought to follow the Tiszapolgár, may in fact have overlapped with its later phases (Forenbaier 1993). Bodrogkeresztúr settlements seem to have been short term, possibly due to a more mobile lifestyle relating to the importance of cattle herding to their economy (Popovici 2010). Large cemeteries were also used by these communities (Horváth and Virág 2003, 126), perhaps demonstrating an element of permanence, anchoring communities in the landscape within their mobility zones. The Hunyadihalom succeeded the Bodrogkeresztúr on the Pannonian Plain. This cultural group is considered to have its origins farther to the east and south-east. Few settlements are known from this period (Horváth and Virág 2003, 126).

From the Middle Neolithic the Carpathian Basin was divided culturally by the Danube, with different cultural groups on the Pannonian Plain in the east and Transdanubia in the west. This changed when the Baden culture, which originated in the Alpine region, possibly as a result of contact between the Hunyadihalom and the Transdanubian Stroke Ornamented Pottery culture, spread east to eventually cover the Pannonian Plain, reaching as far south as Slavonia and Bosnia (Horváth and Virág 2003, 127). The Baden culture is traditionally split into two main phases, Boleraz and classical, although there are subgroups within these two. What is sometimes considered as the earliest phase, the proto-Boleraz, from the modern area of Slovakia, falls within the date range for the Boleraz as a whole, 3630 to 3360 BC, and may therefore in fact represent a regional variation (Wild *et al.* 2001).

The view of the Baden culture as a single entity has been challenged (Furholt 2008). Furholt argues that while the pottery type may form a specific zone, other cultural practices and

material culture distributions do not fit the same area. Flint technologies, figurines, burial practices and subsistence economies all vary in zones that split the traditional 'Baden culture' area (Furholt 2008). There are even distinct regional variations in the so-called Baden style pottery, with many subgroups recognised (such as Kostolac). Furthermore, a number of neighbouring cultures (Cernavodă III, Funnel Beaker) are found with Baden ceramics. Furholt (2008) rejects the use of composite cultural groups, and suggests instead that it be considered as a pottery style. Razcky has suggested that Baden pottery had a "propagandistic role" (Razcky 2009, 478), which symbolised unity of ideology and values across an area of previously diverse cultural identities. Furholt (2008) suggests that while the fine wares display a broad regional unity, local differences can be seen in coarse ware that demonstrate that a homogenised population did not exist across the whole area traditionally considered the Baden cultural unit.

The dominant Baden mortuary rite was individual interment in an extramural cemetery. The largest so far known is that of Budakalász, near Budapest. In excavations from 1952–1961, 436 graves of the Baden culture were discovered (Bondár 2009). The majority, 312, were individual inhumations, but double and triple burials were also found, as were un-urned and scattered cremations, and graves containing no skeleton (Bondár 2009).

The Vučedol culture emerged in Croatia towards the latter part of the Late Copper Age, at the beginning of the 3rd millennium BC. From there it spread radially, until at its greatest extent in the Late Vučedol phase it reached to the Adriatic coast in the west, southern Germany in the north, and east to the Carpathian Mountains (Durman and Obelić 1989). It demonstrates clear associations with the ceramic styles of the Late Neolithic Sopot, and with the preceding or possibly overlapping Baden and Kostolac (Durman and Obelić 1989). Contemporaneous with the presence of Vučedol on the Pannonian Plain, the Bell Beaker-Csepel culture is known from Transdanubia. In some western Vučedol sites in the later

phases, such as Vinkovci, Bell Beaker pottery is found alongside Vučedol pottery (Durman and Obelić 1989).

5.8 DISCUSSION: THE REALITY OF CULTURAL (ID)ENTITIES

The clear-cut regional and chronological cultures are increasingly appearing much more mixed. There are fascinating examples of what we might today consider multiculturalism, which show the region was awash with moving people, objects and ideas. For example, the settlement of Bodrogsadány on the Hungarian Plain, which had Tiszadob, Bükk, Csőszhalom, Lengyel and Tisza ceramics on the settlement (Bánffy 2008),

The use of certain types of pottery and decorative styles over a region speaks of shared understandings and technical knowledge, yet would a shared pottery style be more important to concepts of identities than settlement organisation and social structure, or burial practices and ways of understanding death, or any other difference in material culture or world views? To what extent did people who lived on neighbouring settlements consider themselves similar to or the same as, their neighbours? Identities can be based on exclusion and inclusion, and the perception of cultural sameness was likely multi-scalar and relational. Even within individual settlements we can see differences. There was no one single mode of burial, different houses may have had different subsistence or craft specialisations (Müller *et al.* 2013; Parkinson *et al.* 2002–2004). The evidence speaks of a hierarchical multiplicity of identities, starting with the person, their family, their community and community ancestors, other nearby communities, and finally communities farther away, known only by exchange, rumour or even legend.

Construction of identities will be addressed to a greater extent in the next chapter, but it is worthwhile here to consider what it means in terms of the regional archaeological sequence. The use of the term ‘culture’ in archaeology is demonstrably an over-simplification of the

complexity of social and community identities that existed in the region. There are few areas where a sharp boundary can be identified between these so-called cultural units. Instead, we see chronological and spatial overlap (to the degree that our ability to date these sites allows). Consistencies in certain aspects, or many aspects, of material culture, pottery, flint technology, as well as practices such as house building and burial, speak of close ties and shared understandings which no doubt would have fostered a concept of similarity between communities. We can perhaps talk about shared values, with their origins in the Near East, which are the foundation of the underlying similarities that can be seen from the first Neolithic groups to the Copper Age.

The expansion of the agricultural communities into south-east Europe in the Early Neolithic was the foundation for these similarities. There was a remarkable, although not complete (Bánffy 2004), resemblance between many aspects of material culture in this time, which were new to this geographical region. There was the first pottery in Monochrome style, the new form of crouched burial, the construction of rectangular post-built houses, and of course the new form of agricultural subsistence. From this point the archaeology suggests that uniformity broke down into regional groups before converging into larger units, cyclically diverging and converging. This pattern is of course created from the ceramic typologies, but they certainly indicate that there were periods when a shared symbolic understanding was spread over wide areas, irrespective of other social differences (Furholt 2008).

One of the distinctive new practices which arrived in south-east Europe with the first Neolithic communities was burial in a crouched position. Whether or not this was actively considered a marker of social identity in opposition to Mesolithic communities, it certainly demonstrates a different understanding of death and how the dead should be treated. While changes occurred in other aspects of material culture, this practice of crouched burial, within

settlements, was maintained throughout the Early and Middle Neolithic. It is an overarching trend that unites the producers of differing pottery styles.

It is not until the Late Neolithic that we see significant changes to these attitudes towards burial. While ceramics are subject to variation and experiment, and subsistence and farming practices to adaption to local conditions, burial practice is a fundamental, a ritual which does not change because it is too integral to understandings of life and death. There was a 'right' way to bury people, and this did not stand for experimentation. The changes that started to appear in burial practices, initially in the eastern region, but not long after also on the Pannonian Plain, indicate a change in cultural understandings. It became important to express the various identities of the deceased individual through funerary practices, seen by the archaeologist as certain body positions, and the display of certain types of clothing/accessories and other (possibly personal) items. At the same time, it became important for people to be buried in specific, designated areas. Although this change occurred in varying trajectories in the eastern and western study areas, the existence of a wholesale change across south-east Europe demonstrates a shared belief or understanding regarding the afterlife and the significance of the dead to the community of the living. As in the Early and Middle Neolithic these practices crossed culture-history defined cultural boundaries, although local variability is noticeable in the Late Neolithic and Copper Age.

The main body of this thesis is concerned with the meaning of the shift towards cemetery burial, what localised differences in these practices mean, and how the emergent practice of including grave goods with the body expressed identities on social, community and personal scales.

5.9 SUMMARY

This chapter describes the cultural groups that have been recognised in south-east European archaeology, in order to situate the case studies of this thesis within the broader cultural historical complexities. The chapter started with a criticism of the dominance of culture historical thinking in south-east European archaeology. It also questioned the concept of the clear, bounded cultural units that this chapter outlines, and which characterises the way the archaeology of the region is thought about. It is clear that the spatial extent of these usually pottery defined cultures often do not coincide with other aspects of material culture or ways of living.

6 CASE STUDIES OF THE EASTERN REGION

“What a strange burden of titles cheerfully imposed on him, and how much wit must men have, in order thus to press the tomb into the service of vanity!”

- Victor Hugo, *Les Miserables*

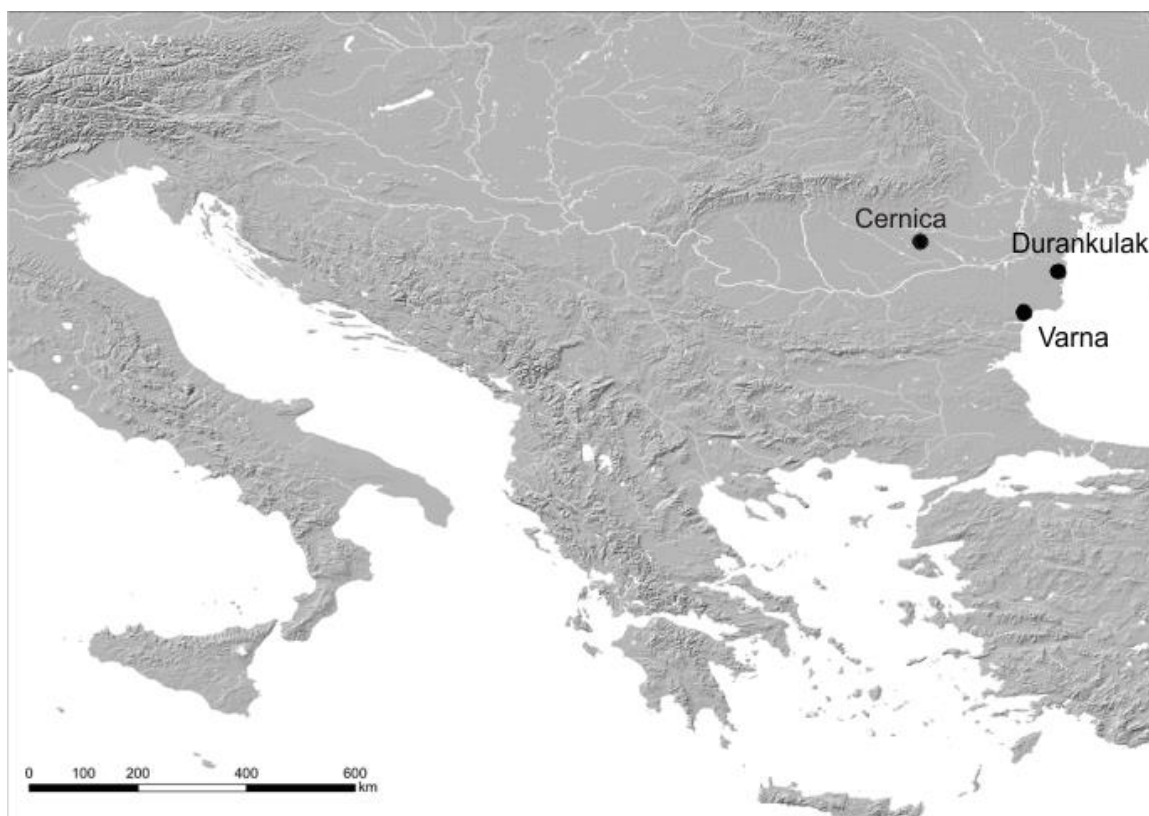


Figure 3: Topographic map of south-east Europe showing the location of the eastern case study sites

6.1 INTRODUCTION

The cemeteries found in the Eastern region of this study from the Late Neolithic (c. 4900–4550 cal BC) and Early Copper Age (c. 4550–4200 cal BC) include the spectacular site of Varna, containing the first known use of gold in the burial rite (Renfrew 1986; Ivanov and Avramova 2000; Slavchev 2010), Durankulak, with 1200 interments making it by far the largest in the region (Todorova 2002), and Cernica, previously thought to be one of the

earliest extramural cemeteries in south-east Europe, but now dated to later than Durankulak (Stratton *et al.* forthcoming). Each of these sites may be considered exceptional for those reasons, but they also represent a general trend among the societies of the period for the use of grave goods in the funerary ritual to express the deceased individual's personal and/or group roles and identities. These same artefacts may have been used in life as a way to create such identities and represent individual's roles.

Evidence of significant social stratification on settlements remains elusive, but in cemeteries we find displays of wealth that certainly point towards the existence of some kind of differentiation between individuals. Along with these expressions of wealth or status other identities are also likely to have been expressed: age, gender and other roles within the community. It is the aim of this chapter, and the following one on the western case study cemeteries, to use both univariate and multivariate analysis to understand a) how the burial rite and the items accompanying the deceased varied and b) what such differentiation may be expressing about the individual, c) how these may relate to them in life, and d) how such practices changed over time.

6.2 THE EARLY AND MIDDLE NEOLITHIC BURIAL RECORD

All known Early and Middle Neolithic (c. 6500–4900 cal BC) burials from the Lower Danube and Black Sea Coast region have been found in settlement contexts, either within houses or between them (Boyadžiev 2009; Bailey 2000; Lichter 2001; Kogălniceanu 2012). That this is a reflection of research patterns seems unlikely; while no systematic surveys have been carried out outside known settlements neither have there been any chance finds of extramural burials. A brief glance at the number of burials that have been discovered demonstrates that intramural burial cannot have been the sole, or even main, mode of disposal of the dead in this period. Only a few individuals were buried within any single settlement, while on some sites none have been found at all (Lichter 2001). Boyadžiev (2001,

in Kogălniceanu 2009b, 19) has suggested that the known burials represent only 1% of the living population, although such palaeodemographic estimations are fraught with issues. Irrespective of the statistics it seems indisputable that the majority of individuals were disposed of outside settlement areas in ways which have left no archaeological trace (Borić 2015a; Kogălniceanu 2009b; Lichter 2001). This seems most likely to have been a form of excarnation, such as has been proposed for a similar problem in LBK burials (van de Velde 1997).

On what basis those individuals who were buried within settlements were chosen is not clear. There appears to have been a general preference for the intramural burial of children and infants, and female intramural burials are more common than male (Borić 2015a; Lichter 2001). However, this is not a trend seen across all Early and Middle Neolithic settlements, and cannot be considered as an overarching regional tradition (Boyadžiev 2009). There may have been no common motivation for intramural burial, although various suggestions regarding foundation deposits, links to the past, sacrifice or protection of the deceased soul (particularly in the case of children) have been proposed (Borić and Stefanović 2004; Sîrbu 2008; Borić and Stefanović 2008; Taylor 2008; Tsaliki 2008). Alternatively, they may represent individuals who were outcast from society for some reason, although obvious disabilities or physical deformities that are commonly seen in such burials ethnographically and archaeologically (Tsaliki 2008; Ucko 1969; Weiss-Krejci 2008) are not noted in the skeletal material from intramural burials.

To consider such burials as in some way a deviant practice is to fail to acknowledge the possible diversity in the disposal of the dead that can be accommodated in an understanding of death and the afterlife (Huntington and Metcalf 1979). Similar issues have been raised over LBK burial practices, with settlement burials being referred to as *Sonderbestattungen*, translated as ‘special burials’, in comparison to the perceived norm of cemetery burial.

Hofmann (2009) and van der Velde (1997) suggest that cemetery burial is considered a normal practice because it is a form of mortuary practice that we recognise today. However, both argue that we should view variations in mortuary practices as being a part of a single, overarching conception of death. For Pechtl and Hofmann (2013) viewing any type of burial as 'normal' or 'irregular' is an unhelpful approach that fails to encompass the variety of circumstances that may affect treatment of the corpse.

Early Neolithic burials were placed in a crouched position in a simple pit, with infants sometimes also placed in a ceramic vessel before deposition (Lichter 2001; Boyadžiev 2009, 8). Burials were usually individual inhumations although there are cases of multiple burials, such as the burial of an adult and two children at Gradešnica, Bulgaria (Lichter 2001, 41). There are also cases of single human bones being found in pits, which may point to secondary practices or disarticulation (Boyadžiev 2009, 8). Individuals were placed on either their left or right sides, and both practices have been found to have occurred on the same sites. Orientation of the burials vary; we do not see the alignments that are found in later cemeteries (Lichter 2001), indicating either a lack of or a deliberate disregard of any significance of shared orientation.

Grave goods from the Early and Middle Neolithic are extremely rare (Bailey 2000; Lichter 2001). The lack of material culture accompanying burials indicates that the burial ritual was not a time when personal identities (as discussed in Chapter 3) were particularly emphasised. We do not know whether the dominant burial practice, whatever that may have been, also made little use of material symbols. It could be that this lack of burial with items was deliberate. Maybe something about the reason these individuals were chosen for this type of funerary rite also meant that their specific social roles or identities were not emphasised. It could be that burial without grave goods in an atypical funerary practice was a deliberate social forgetting of that individual (Borić 2010; Williams 2003).

However, some intramural burials have been discovered with a small number of artefacts, including pottery, stone and flint tools, bones tools, personal ornaments and food offerings. If it is the case that at least some of these individuals are found with grave goods it seems more likely that the expression of social identity through material culture was not dominant in Early and Middle Neolithic society in general, or possibly during the burial rite specifically.

6.2.1 Cemeteries: a break with tradition?

The adoption of cemetery burial in the Late Neolithic (4900–4550 cal BC) is generally considered to have been a distinct and dramatic break with local tradition. Bailey, for example, called it “a striking innovation in mortuary ceremony” (2000, 193). This perceived change from intramural burial during the Early and Middle Neolithic to extramural burial in the Late Neolithic has been used to emphasise concepts of separation of the dead from the living by their removal from the settlement (Bailey 2000; Chapman 2000b), among other hypotheses.

This intramural/extramural, living/dead dichotomy falls down on two counts. First, as has already been mentioned (chapter 5), the dominant burial practice during the Early and Middle Neolithic was not intramural. The archaeological visibility of this practice compared to our complete lack of knowledge about what was done with the majority of the dead has caused intramural burial to be thought of as ‘the’ method of burial. The opposite effect has occurred in the study of Late Neolithic burial. The appearance of large cemeteries, which was the most visible practice for disposal of the dead in the period, has overshadowed the continued small-scale use of intramural burial (for example, as seen on our case study site of Cernica), to the extent that such burials tend to be ignored by theories relating to the division of space between the living and the dead.

Boyadžiev (2009) has argued that in Bulgaria a tradition of using specific zones for burial can be traced to the Early Neolithic. Boyadžiev argues that the burials found on settlements from the Early Neolithic do not represent an intramural burial practice but rather small cemetery areas on the edges of settlements. These areas only appear to be intramural due to the way the settlements moved and grew over time, so that the burials were later built over and became part of the settlement, but they were not identified as cemeteries when excavated due to their proximity to houses. He cites the example of Malāk Preslavec, a tell settlement at which 20 known burials were found during partial excavation of the site. These burials were assigned by the excavators to the first stratigraphic layer, which related to the West Bulgarian Painted Pottery/Starčevo-Criș cultures (and was overlain by Dudești occupation material).

Boyadžiev believes that this cluster, located on the north-eastern periphery of the settlement, should be considered a designated cemetery area. In the case of one grave found under a house floor he argues that, as there is no clear evidence for the digging of the grave pit through the floor, the house is actually later and relates to an expansion of the settlement area (Boyadžiev 2009, 6). To support his argument Boyadžiev draws parallels with Lepenski Vir III, where burials were placed near houses on the settlement periphery, and which were proposed by Srejović (1969) to be a cemetery surrounding the settlement. However, Borić and Stefanović (2008) dispute this, arguing that evidence that the burials were dug through the house floors at Lepenski Vir is indisputable.

Similar problems elsewhere with recording and understanding of stratigraphy and a lack of robustly dated chronologies on tell settlements make Boyadžiev's theory difficult to prove or disprove, while the inevitably small sample area excavated on any one settlement and the lack of robust formal chronological modelling means a broader picture of diachronic changes in burial positioning is not currently possible. Nevertheless the majority of cases

seem to indicate occasional, unstructured burial within settlements, whatever the veracity of Boyadžiev's proposals.

6.3 THE FIRST EXTRAMURAL CEMETERIES OF THE LATE NEOLITHIC AND EARLY COPPER AGE

Setting aside Boyadžiev's view of Malāk Preslavec, cemeteries as distinct spaces for the disposal of the dead, removed from settlements, first appeared in south-east Europe in the Late Neolithic along the Black Sea coast and the Lower Danube region (the regions of Dobrudja and Muntenia). The largest and richest cemeteries are found along the Black Sea coast in the Early Copper Age (e.g., Varna and Durankulak), but according to culture historical chronologies the earliest appear to have been further inland, in the Lower Danube region. The cemeteries of Cernavodă, Cernica and Sultana-*Malu Roșu* are thought to have been in initial use in the Late Neolithic due to their material culture associations (Kogălniceanu 2009b; Lazăr *et al.* 2012). However, the radiocarbon dating of Cernica indicates it is not of such an early date, starting around 4770–4590 cal BC (*95% probability*) and ending in 4650–4460 cal BC (*95% probability*) (Stratton *et al.* in prep.), and Durankulak remains the earliest known absolutely dated cemetery in south-east Europe.

In Romanian and Bulgarian literature, with the exception of Boyadžiev's work, little focus has been put on the causes of or circumstances surrounding the commencement of cemetery burial (Kogălniceanu 2009b). The significance of this change in practice with regard to communities' worldviews is largely ignored, and studies tend to focus on material culture and/or its possibilities for analysing economic and hierarchical structures in the population using the cemetery. It is the aim of this study to address possible changes in worldview through the study not only of the material culture associations, but also the development of the cemeteries themselves.

The three sites chosen as case studies for this region have been selected for a variety of reasons. Most importantly in a region where the publication record is generally poor, all three have been reasonably well published. They also represent large samples sizes, both in terms of the number of burials and the accompanying grave goods. The choice of Cernica was also motivated by the possibility of conducting a radiocarbon dating project thanks to connections with the Romanian Academy and the Anthropological Institute in Iași, an opportunity to improve our understanding of the appearance and beginning of the cemetery phenomenon (Stratton *et al.* in prep.).

6.4 CERNICA

6.4.1 Location

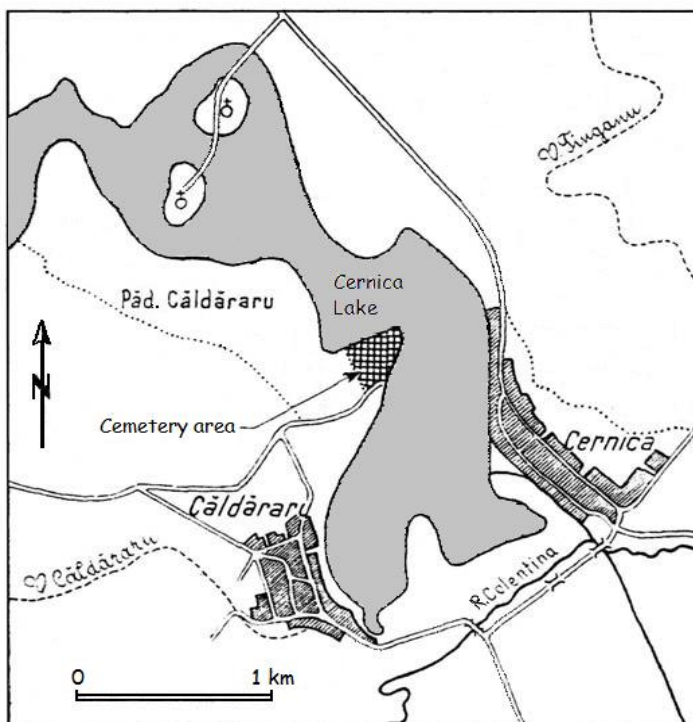


Figure 4: Map of the location of the Cernica cemetery (after Kogălniceanu 2009b)

The archaeological site of Cernica lies to the north of Căldăraru village in Cernica *comuna*, Ilfov county, 10km south-east of Bucharest. It is located on a former terrace of the River Colentina, which now forms a triangular-shaped headland projecting into Lake Cernica (Fig. 4). The lake was created by a river damming and rationalisation project on the Romanian Plain in the last century. The Romanian Plain is located between the Carpathian Mountains and their foothills to the north, and the River Danube to the south, in the modern regions of Muntenia and Oltenia. It is a flat, fertile region crossed by many rivers flowing into the Danube.

6.4.2 Excavation

The Late Neolithic cemetery at Cernica was found along with contemporaneous settlement remains during Gheorghe Cantacuzino's excavation of a 16th century monastery on the shores of Lake Cernica in 1961 (Kogălniceanu 2009b). Bronze Age and La Tène remains were also found on the site.

The excavation of the prehistoric archaeology was conducted by Sebastian Morintz between 1961 and 1974. During this time a minimum of 378 burials were excavated (Fig. 5). Biological anthropologists were present onsite throughout the excavation to aid in the recovery of the skeletal remains (Comşa and Cantacuzino 2001). A number of medieval burials associated with the monastery church were also uncovered from the same area; in a few cases these later burials had overlapped and cut into the prehistoric ones. The exact number of burials is uncertain due to discrepancies between the annual site records, excavators' reports, and the final publication. The total number of burials in the site monograph is stated to be 374 (Comşa and Cantacuzino 2001), yet the number of burials included in the publication is 378. Two further burials have been found when recently compiling the site plan (Kogălniceanu 2009b,

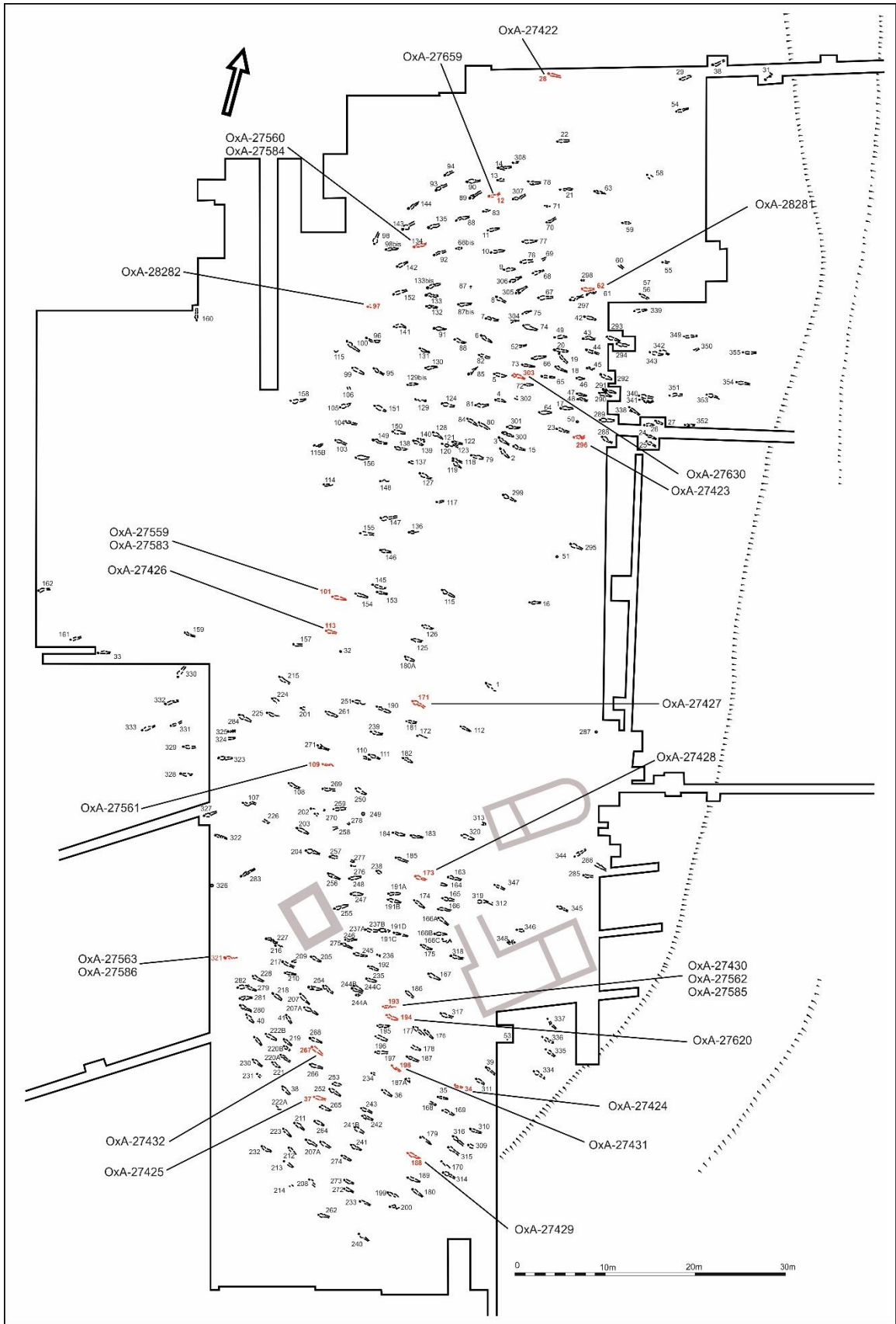


Figure 5: Plan of Cernica cemetery, with dated samples marked (redrawn after Comşa and Cantacuzino 2001, plate 37)

13). One of the burials recorded, 108bis¹, does not appear on the plan and there is no drawing of it. This total includes burial 356, which is the burial found on the settlement. Therefore, it is most likely that 378 individuals were buried in the cemetery (Kogălniceanu 2009b).

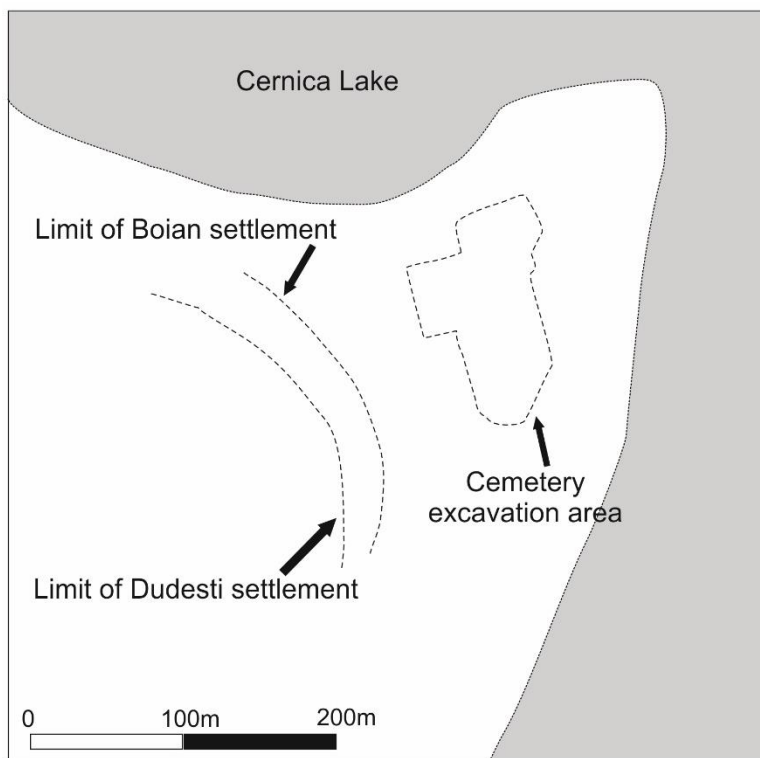


Figure 6: Location of Cernica cemetery in relation to the settlement area

Settlement remains were found when excavations were extended to the south-west of the cemetery area, around 50 m from the edge of the cemetery (Fig. 6). These belonged to a late phase of the Dudești culture, which was dubbed the Cernica phase, and the first phase of the succeeding Boian culture, Boian-Bolintineanu.

Although in initial reports Boian-Bolintineanu remains were described as more abundant (Comșa 1975; Kogălniceanu 2009b), by the final publication it was reported that Dudești houses and material culture dominated in the excavated area (Comșa and Cantacuzino 2001).

¹ “bis” was used when two separate burials were excavated at the same time and accidentally given the same number to distinguish the two. In cases of overlapping burials letters were used with the same number, as in the case of 141a, b, c and d.

A single burial was found on the settlement, possibly dating to the Dudești culture (Schuster *et al.* 2008).

Spatially the cemetery area is divided into two main clusters of burials, north and south, with occasional outliers and a more diffuse group in the centre (Fig. 5). Burials were individual primary inhumations. There was very little overlapping or intercutting of individuals. They followed roughly the same alignment, with heads towards the west (Comșa and Cantacuzino 2001). The majority of burials (84%) found were in an extended supine position, although there were also burials in an extended position on their left or right sides (Fig. 7). A much smaller group of burials (5%) were placed with their legs flexed on their left or right sides (Comșa and Cantacuzino 2001).

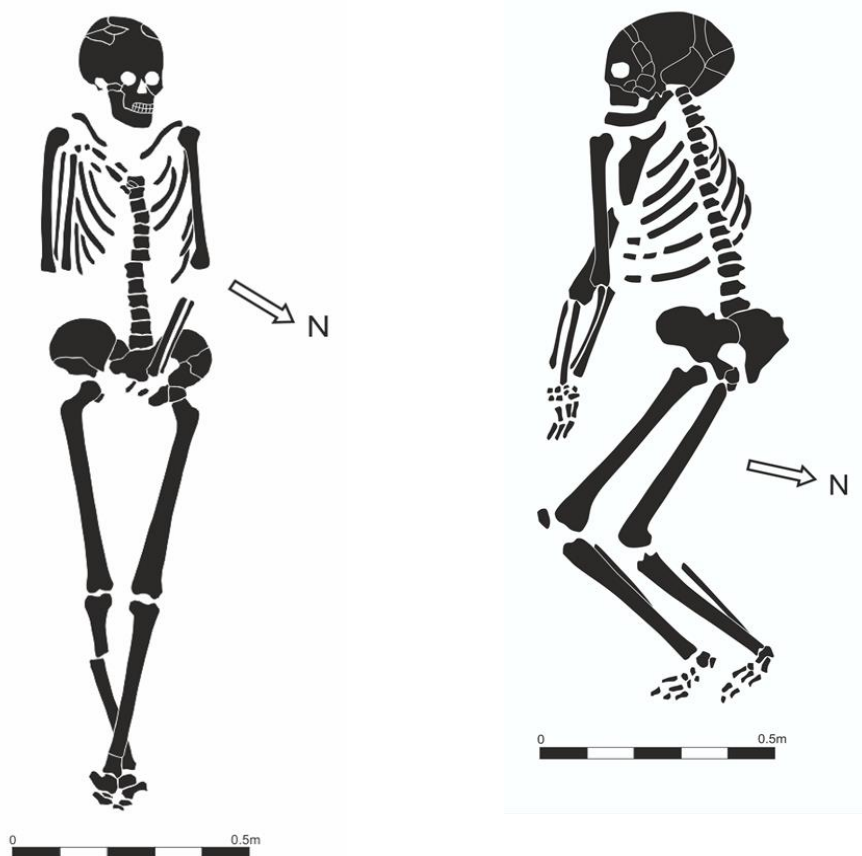


Figure 7: Examples of Cernica burials in an extended position (burial 28, left) and crouched on the right side (burial 296, right), redrawn after Comșa and Cantacuzino 2001, 214 and 241

6.4.3 The archive

Although the excavated material was given an unusually detailed amount of study, including anthropological assessment of the skeletal remains, it was not published, and then only partially, until 2001 (Comşa and Cantacuzino 2001). There are numerous inconsistencies in the site records, with the year of excavation of burials being recorded differently on plans and in the excavation notes, drawings of burials clearly being numbered incorrectly according to the notes, different burial numbers appearing on the individual burial drawings and the overall plan, and anthropological determinations contradicting site notes (Kogălniceanu 2009b). A large amount of work has recently been carried out by Raluca Kogălniceanu to reconcile the inconsistencies in the paper archive.

As well as the discrepancies found in the field archive there are now also problems with the physical archive. Movement of materials between different museum stores has resulted in the loss of a large number of artefacts and human remains. The collection is not kept together; the human skeletal remains from the cemetery are kept by the Institute of Anthropology, Iaşi, while the material from the settlement is at the Science Academy, Bucharest. The current whereabouts of the grave goods from the cemetery are unknown, meaning that analyses must rely on the field notes of the excavators and the drawings made of the finds before they went missing.

Around a quarter of the human skeletons were not subject to anthropological assessment, probably because they were already in a different location or lost (Raluca Kogălniceanu, pers comm.). It is therefore unlikely that this information is recoverable. It appears from recent visits to the archive in Iaşi by the author and colleagues that further remains have been lost. As well as those that were not analysed, a small number of skeletons were too poorly preserved for anthropological assessment.

Along with the recording problems already mentioned, further doubt is thrown on the quality of the excavation by general lack of contextual information. Burial 326, for example, was recorded as parts of the cranium. No contextual information to explain whether this was a disturbed burial or a deliberate deposition of a skull was given. This scenario is illustrative of the generally poor contextual understanding of the site. Ursulescu and Kogălniceanu (2007) identified a number of problems with Comşa's description of the stratigraphic relationship between overlapping burials.

6.4.4 Cemetery phasing

The cultural phasing of the cemetery has been controversial, not aided by the archival issues outlined above. An almost complete lack of any ceramic finds (only five graves contained ceramic fragments) make the usual cultural historical assignments difficult. Initially the excavators considered that settlement remains were principally Boian, and therefore that the majority of the burials, all those in an extended position, dated to the Boian-Bolintineanu, while the smaller number of crouched burials were from the later Boian-Giuleşti (Popescu 1962; Cantacuzino and Morintz 1963; Comşa 1975). However, in the later 2001 publication Eugen Comşa retracted this argument, and instead proposed that the earlier phase was Dudeşti and the later Boian-Bolintineanu, primarily based on a reassessment of the settlement remains (Comşa and Cantacuzino 2001). The Dudeşti settlement remains were now considered to be far greater and richer than the Boian. The wholesale shifting of the cemetery's use backwards in time is controversial, as it would make it the oldest extramural cemetery in the region by a significant margin, and was considered by other researchers to be unlikely (Ursulescu and Kogălniceanu 2007; Schuster *et al.* 2008, 27; Kogălniceanu 2009b).

Various other typological criteria for dating the site have been suggested. Comşa proposed that the presence of flint microliths in the graves was indicative of the Dudeşti culture, arguing that microliths were not present in the Boian period (Comşa and Cantacuzino 2001).

However, microliths are found, if rarely, in Boian contexts (Ursulescu and Kogălniceanu 2007). No specific work has been done on the Cernica flint, and the typologies are poorly understood. Reference to the publication images, although with little detail, indicates that these microliths are mostly small knapped blades and scrapers rather than those made using the microburin technique, the presence of which would indicate an earlier date.

Very few stratigraphic relationships are present on the site. The suggestion that the extended burials as a group predate the crouched was based on a few examples (47 and 48; 139 and 140; 153 and 145; 191C and 191D) where an extended burial was cut or overlain by an individual in a crouched position (Comşa and Cantacuzino 2001). However, the documentary evidence indicates that in fact, in the case of burials 139 and 140, the supine extended skeleton overlies the crouched (Kogălniceanu 2009b). There is therefore no clear evidence to suggest that the two types of burial were not in use contemporaneously. The distribution of crouched burials is even across the site.

The cemetery can be seen to be formed of two main groups or clusters, north and south, with some outliers (Fig. 5), although those between the northern and southern areas could perhaps be considered a separate group (Ursulescu and Kogălniceanu 2007). There is nothing to indicate any specific practice relating to either nucleus, or to tell us whether they were in use at the same time. It has been suggested that these burial nuclei represent some kind of kinship groups (Cantacuzino 1970). This raises the possibility that outliers from the main group, i.e. the middle group and those to east and west, belong to different clans/families, which meant they were not included in the main concentrations (Ursulescu and Kogălniceanu 2007).

6.4.4.1 Radiocarbon dating

23 samples were originally taken from human skeletal material from the Cernica cemetery. Four samples were also taken from animal bones from pits on the associated settlement

area, one of probable Dudești date, and three Boian. Four of the cemetery samples failed, all from the northern zone, and we were able to obtain two replacements. One sample also carried a health warning due to low collagen yield, so that the final number of reliable dated skeletons from the cemetery was 20. The samples were chosen to represent a range of age, sex, and burial position variations. As much as possible burials with specific material culture associations of potential typological/chronological significance were targeted. The samples were also well spaced through the cemetery, with the southern and northern zones and outliers all represented. This even sampling across a range of variables meant that we could identify any chronological changes to the burial population's appearance.

The results were modelled using Bayesian statistics, including using the FRUITS (Food Reconstruction Using Isotopic Transferred Signals) model for dietary reconstruction to estimate the impact of aquatic resources (Stratton *et al.* in prep.). This meant that possible marine and freshwater reservoir effects could be taken into account.

Parameter name	Posterior density estimate (95% probable)	Posterior density estimate (68% probable)
<i>Start Cernica cemetery (cal BC)</i>	4760–4600	4700–4620
<i>End Cernica cemetery (cal BC)</i>	4670–4510	4650–4560
<i>Duration Cernica cemetery (years)</i>	1–190	1–90
<i>FirstNorthernArea (cal BC)</i>	4740–4600	4690–4620
<i>FirstSouthernArea (cal BC)</i>	4740–4600	4700–4620
<i>Start settlement (cal BC)</i>	5510–5010	5230–5060
<i>End settlement (cal BC)</i>	5050–4560	5000–4830
<i>Duration settlement (years)</i>	20–300	80–220

Table 2: Posterior density estimates for modelled Cernica radiocarbon results

According to our preferred model (Table 2) the use of the cemetery probably began in 4700–4620 cal BC (68% probability) (Stratton *et al.* in prep.). There appears to have been no difference between the two main areas of the site, with the north area first used in 4690–4620 cal BC (68% probability) and the south area first in use probably in 4700–4620 cal BC

(68% probability). The two therefore came into use at roughly the same time. Burials stopped at Cernica probably in 4650–4560 cal BC (68% probability), and the cemetery was probably in use for quite a short time span, probably for 1–90 years (68% probability).

Only four samples were taken from settlement contexts, but they do provide us with an idea of the period of occupation. It is estimated that the settlement first came in to use in 5230–5060 cal BC (68% probability), and ended probably in 5000–4830 cal BC (68% probability). According to this model, therefore, the cemetery dates to the very end of or possibly after the settlement activity. However, the four samples are unlikely to be fully representative of the full use of the settlement site, and it is also possible that the reservoir effect has been over estimated (Stratton *et al.* in prep.)

There appears to be no difference in period of use between the north and south areas of the Cernica cemetery. If both zones were in use coevally then the spatial division of burials must have had a specific motivation of a different aspect. As the north and south zones contain roughly similar proportions of other variables (age, sex, burial position, grave goods) it seems reasonable to propose that this reflects some kind of horizontal division of the Cernica society, for example kin groups.

6.4.5 The burial data

6.4.5.1 Demography

The sex ratio of the sexed burials in the cemetery is roughly 50:50, with 121 females and 127 males. An even sex representation can be seen consistently through the age groups from the juvenile age category, the point at which skeletal sexing becomes possible.

The number of children is lower than we would expect to see in a typical crude death rate for a population if it were fully represented. Palaeodemographic modelling is fraught with

issues; estimations of birth and death rates are based on modern populations, or survivorship curves for prehistoric populations are based on archaeological excavations of cemeteries that themselves may not be representative (Buikstra 1981; White and Folkens 2005). Furthermore, survivorship curves are influenced by population growth caused by an increased birth rate (Chamberlain 1994). As the use of cemetery populations to extrapolate living populations is so problematic, it may be more useful to hypothesise, albeit based on what can only be estimations, how representative the burial population is of what may be considered a ‘normal’ population.

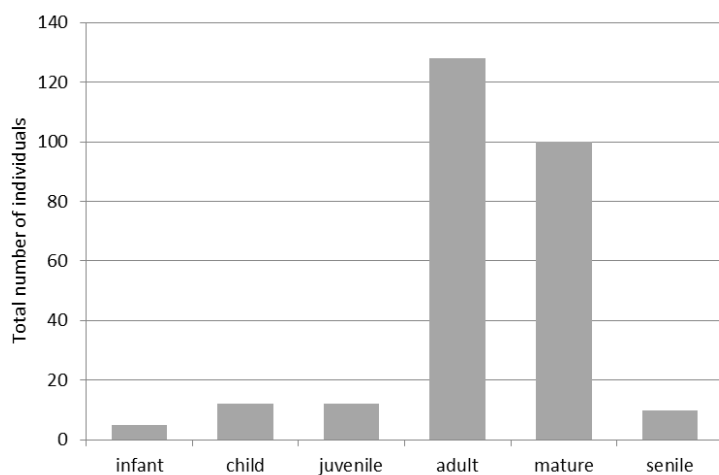


Figure 8: Age distribution of the Cernica burials.

Only 12 children and five infants were identified at Cernica (Fig. 8), and even if those which were noted during excavation as being children or infants but which were not assessed anthropologically as such are included in the overall count,

infants and children only make up 6% of the total cemetery population.

Comparison of the survivorship curve of a normal prehistoric population (Fig. 9) with the Cernica cemetery burials shows that children are definitely under-represented at Cernica in comparison to a normal population. We would expect to see a sharp drop in the first five years, but instead the curve remains fairly flat until 20 years of age (White and Folkens 2005). While there may be taphonomic reasons for this, as children’s skeletons, particularly those under the age of three, are less likely to survive than adults’ (Ubelaker 1978; Djurić *et al.* 2011), generally preservation at Cernica was good and it is more likely that few children

were given formal burial. The question is, therefore, what it was about these particular individuals that meant they were chosen for burial in the cemetery. Was such practice a reflection of inherited status, kinship links, or certain attributes of these particular children?

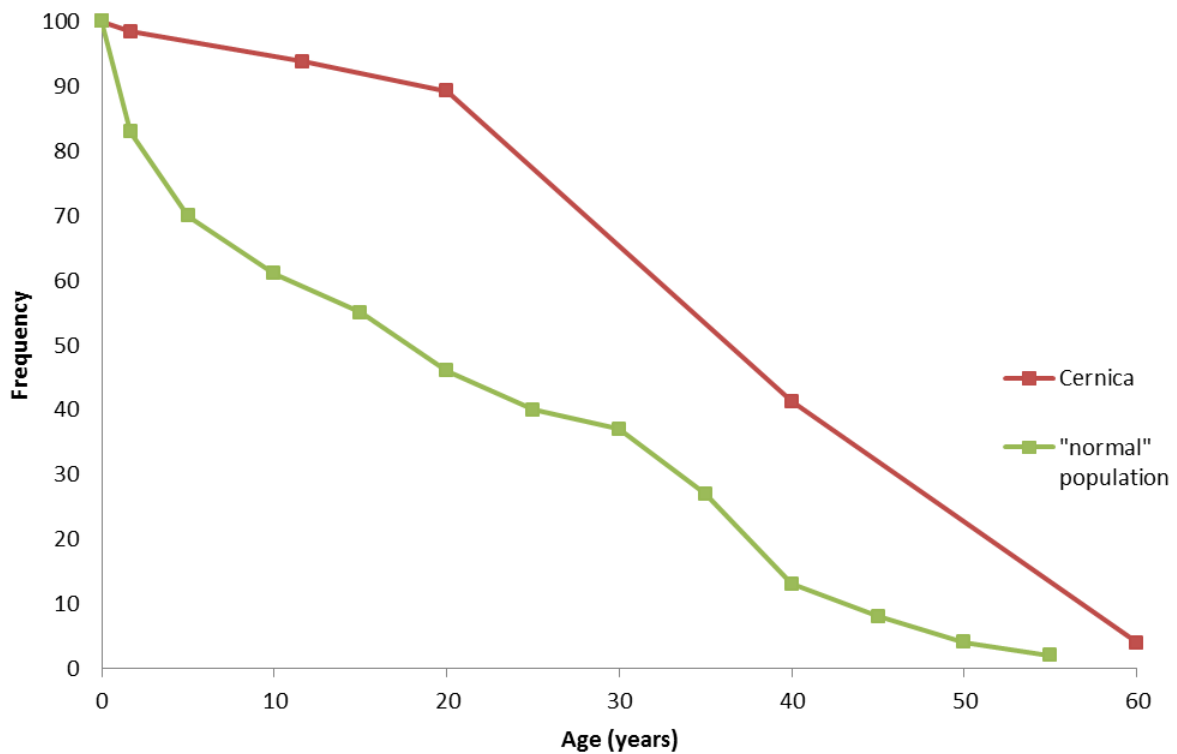


Figure 9: Survivorship rates of the Cernica population based on the burial data and a normal population based on data from White and Folkens (2005, 417).

The adult burials of the cemetery appear to be representative of a normal population. The curve declines more sharply after 20 years of age. From this it would appear that a life stage is reached at the end of puberty that qualifies individuals for formal burial. It is possible that this is a result of over-estimation of age (not an uncommon problem in osteoarchaeology: Chamberlain 1994), but also that the Cernica survivorship curve has been created using very coarse data with broad age groups, meaning subtleties may well be being overlooked.

6.4.5.2 Position

The dominant burial position was extended in a supine position on the back, constituting 84% of the 320 burials whose position was discernible (Fig. 10). The other positions of extended on the left or right side, and flexed on either side, made up roughly 5% each, and tightly crouched constituted less than 2%. Three burials were placed on their fronts (149, 237A and 318). While Comşa suggested that this was simply a mistake by the buriers (Comşa and Cantacuzino 2001), unless very little care was being taken over burial it seems more likely that this was a specific type of burial practice that had its own rationale. Interestingly, two of the three appear to have had their feet mutilated (Ursulescu and Kogălniceanu 2007).

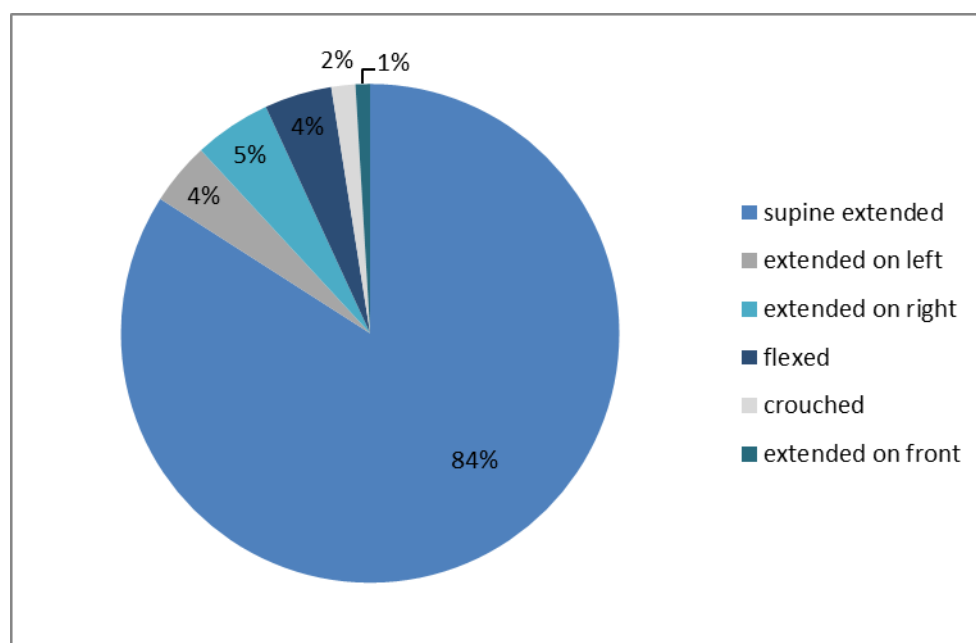


Figure 10: Body positions of the Cernica burials (n=320).

There is no apparent association between sex or age and the use of different burial positions (Fig. 11). Nor is there any spatial patterning in the cemetery to indicate particular groupings of their use if, for example, we took different areas to be used by different families, clans or other association. The suggestion by the excavators that the different positions represented two chronological phases of use is not supported by the AMS dates.

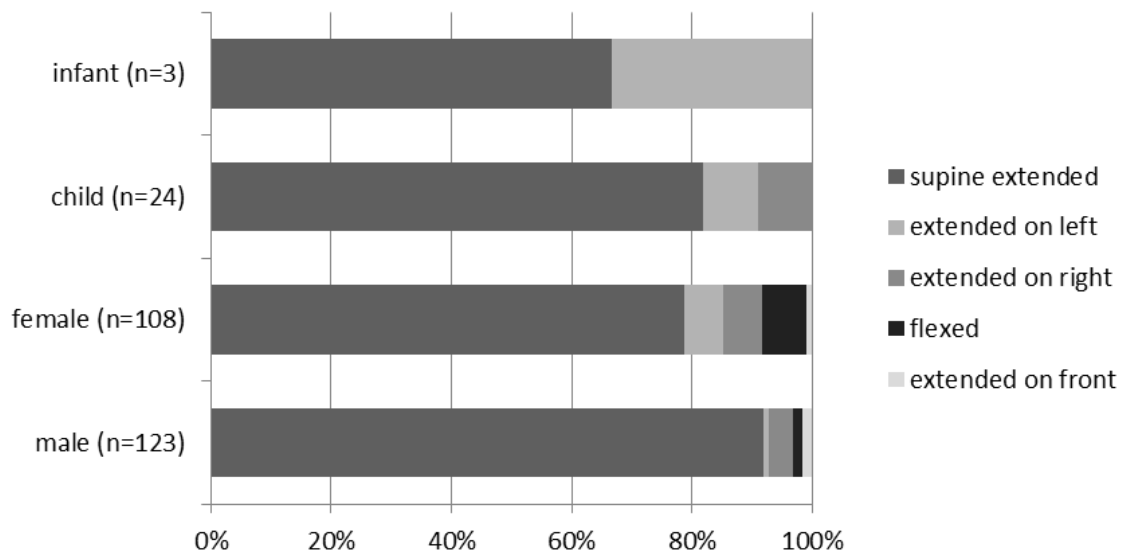


Figure 11: Burial position at Cernica by age and gender

6.4.5.3 Orientation

The burials at Cernica were predominantly oriented with their heads to the west (Fig. 12). No burials were oriented at greater than 45 degrees from west. This high degree of conformity demonstrates the importance of this orientation.

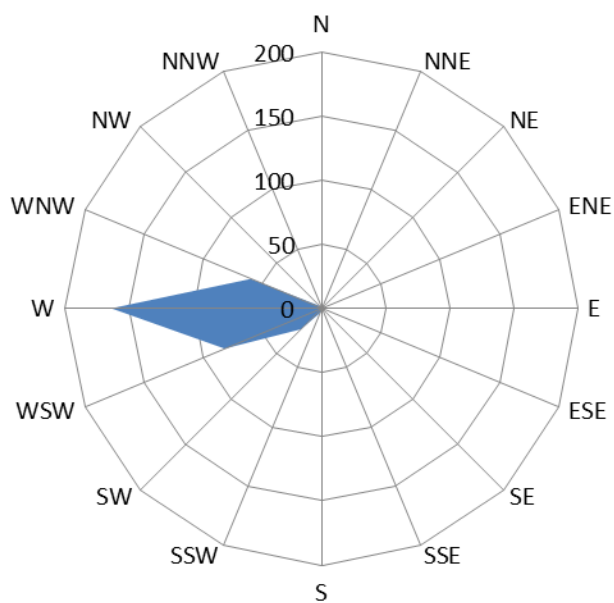


Figure 12: Orientation of the Cernica burials

6.4.6 Grave goods

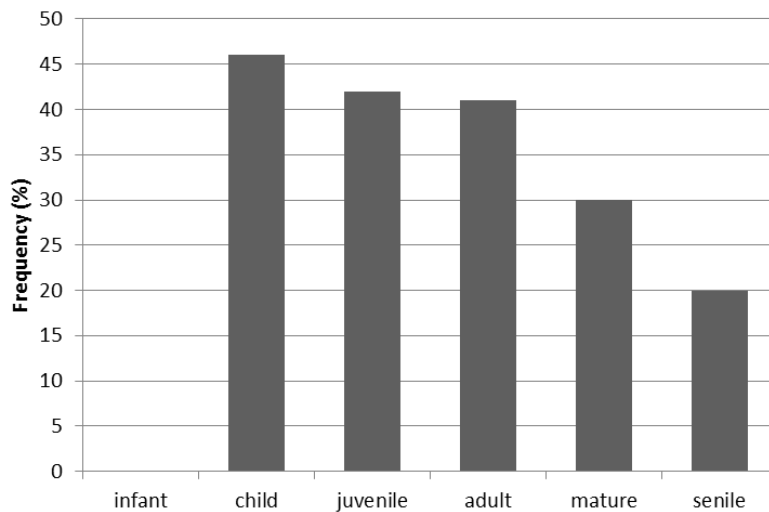


Figure 13: Frequency of burials accompanied by grave goods, as a percentage of their age group

When calculated as the frequency of occurrence of burials with grave goods, the age division shows a general decline from childhood, when 46% of the individuals were buried with artefacts, to the over 60 age group, where only

20% of the burials had grave goods buried with them (Fig. 13). This is different to what may be expected, with increase in social status, roles and various other identities as individuals advance through life. However, as mentioned above, very few children have been found in the Cernica cemetery. Clearly not all children have been buried here, and the possible reasons for choosing to bury these specific children in the cemetery mean that the sample is unlikely to be representative of the whole child population. The high frequency of child burials with grave goods may therefore be a result of a form of pre-selection; if it was considered that a certain child ought to be buried in the cemetery they may be children more likely to have associated artefacts. There are only five infant burials in the whole cemetery and of these none have any associated grave goods. What could have merited the inclusion of this tiny number of infants in the cemetery is hard to say, but as they are so young it is likely to be connected to their parent's roles or status, or family/clan, rather than anything specific about the individual.

There is a similarly low number of juveniles to children (Fig. 13), but the frequency of grave good inclusion in these burials is slightly lower (42%). Again, this leads to the problem of whether the high inclusion of artefacts in juvenile graves is due to choice of individuals who merited cemetery burial, or whether it is a true representation of the use of such artefacts by juveniles in Cernica society.

The adult burials (selected from a broader age range of 18–40 years) are much more numerous, with 128 individuals. The inclusion of grave goods is still high (Fig. 14), at 41%. Similarly, mature adults (40–60 years) were well represented, with 100 individuals in this age range. The frequency of grave goods drops in this group to 30%, indicating that the peak of use of material culture in expressing identity was in the younger adult group. Although the senile (60+) group is again represented by only a few individuals it concurs with a downward trend for grave good inclusion after young adulthood.

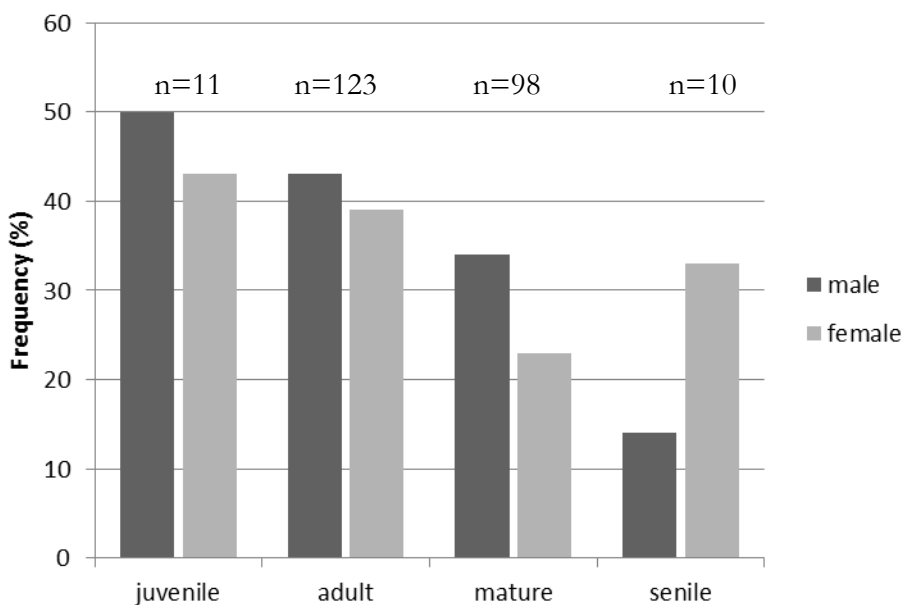


Figure 14: Frequency of burials accompanied by grave goods, by age and sex

Further subdivision of the burials by sex (Fig. 14) demonstrates a broadly similar frequency of occurrence of items with either sex, although from the juvenile through to mature age

group slightly more males were accompanied by grave goods. In the oldest age group it appears that females were quite strongly preferred, but it should be borne in mind that this age group (*senile*) is represented by a very small number of individuals.

6.4.6.1 Adornments

There appears to have been no particular gendered emphasis on the wearing of personal ornamentation overall at Cernica; univariate analysis demonstrates that males are as likely to be buried with items of adornment as females (Fig. 15). However, it also points to some possible gendered items. Bone rings seem to be largely female items. Bone and wild boar tusk plates are exclusively found with male individuals. These plates are generally perforated, and it is assumed they were adornments sewn on to clothing.

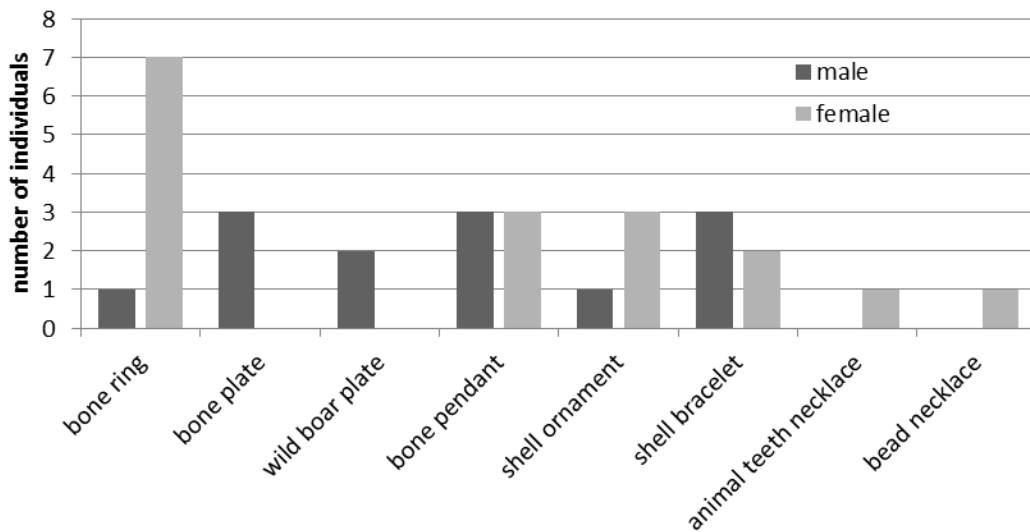


Figure 15: Burials including ornaments at Cernica, by sex

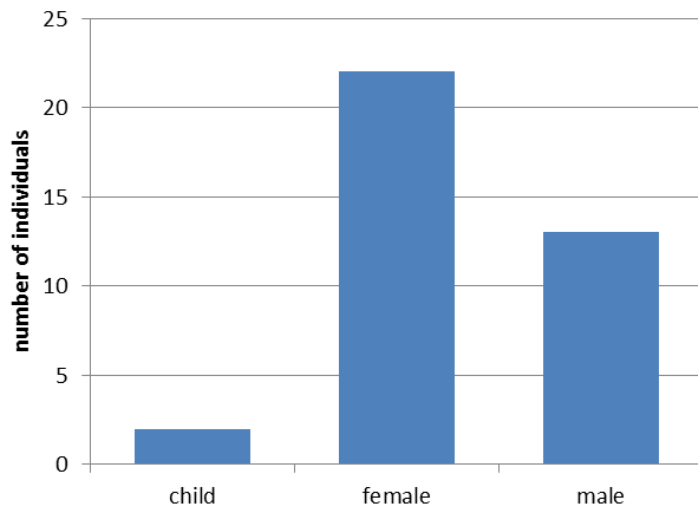


Figure 16: Number of graves containing beads at Cernica

Other ornaments, such as bracelets and necklaces, have a similar frequency between the two sexes, and are found in very small numbers. Although only two necklaces have been recorded, the large numbers of beads recorded are

probably representative of specific items, including necklaces, headbands and waist bands, that were made as a composite of these beads.

Both male and female burials included beads, found around the neck, head or waist, and probably representing strings of beads or attachments to clothing. Children were rarely buried with any items made from beads (Fig. 16). The inclusion of beads in female graves was almost twice as frequent as in males.

Beads were the most common type of grave good found at Cernica. They were made of stone, marble, shells, animal teeth, and copper. A number of beads are described as ‘greenish’, which may also mean copper or malachite (Cantacuzino 1969, 55) but it is not possible to verify this due to the loss of the material (Raluca Kogălniceanu pers. comm.). Any single burial may contain a combination of beads of various shapes and made from different types of material. Up to 43 beads were found in a single burial (Burial 44); this is just a fraction of the numbers of beads found in individual graves at Durankulak or Varna. This difference could be due to lack of sieving during the Cernica excavation meaning fewer small finds were discovered, or it may represent a genuine difference in the use of composite adornments.

6.4.6.2 Tools

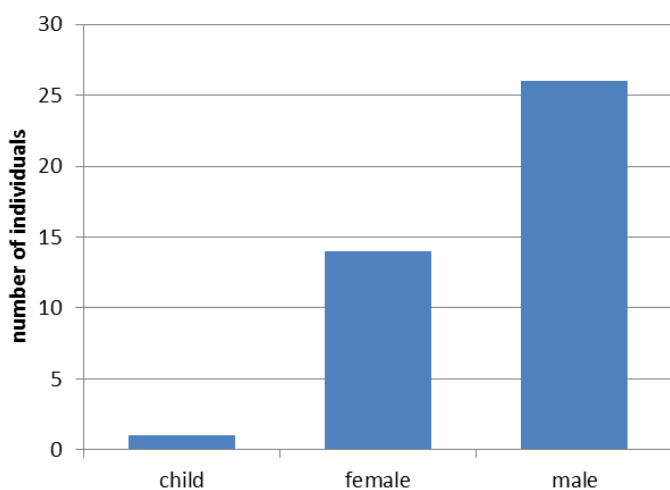


Figure 17: Graves containing tools at Cernica

Univariate analysis indicates a preference for the inclusion of tools in male burials, with males being twice as likely to have been buried with one or more tools, but they were certainly not exclusive to males (Fig. 17).

Female individuals were also buried with a variety of tools

including stone axes, chisels and various flint objects. Only a single child was buried with any tools, a bone needle in M. 13.

Some items (including stone axes and chisels) only appear singly in graves, while multiple examples of some of the smaller items occur, such as the ten microliths in M. 227. Microliths of course could have been part of a single composite tool.

While males were more likely to have been buried with tools, there is little evidence of either sex being exclusively associated with certain tool types (Fig. 18). If the inclusion of tools in burials was representative of life roles then this implies that there may not have been clear-cut binary sex-based gender roles. Flint flakes are only found in male burials. This could be a reference to the activity of knapping as being a male activity. It is also possible that flint blades and flakes may have been a part of a composite tool such as a sickle, but analysis of use-wear would be necessary to determine if this were the case.

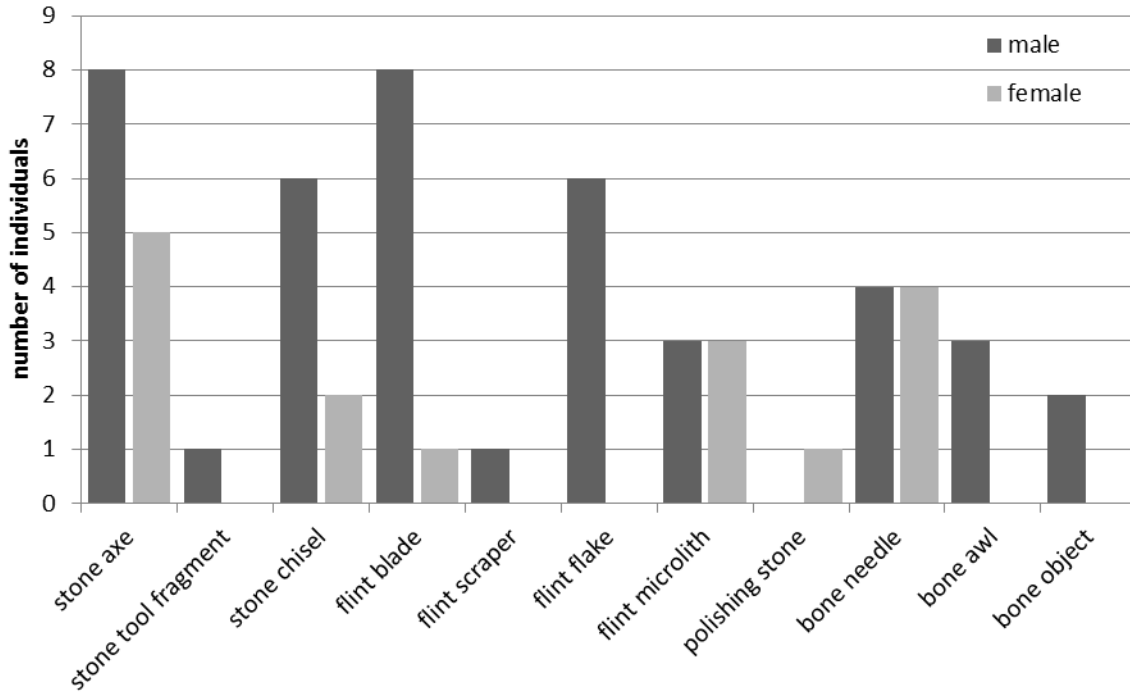


Figure 18: Number of tools in Cernica burials, by sex

6.4.6.3 'Offerings'

The final type of grave good deposited with the deceased at Cernica may be categorised as offerings, items placed in the grave presumably to provide for the deceased in the afterlife. This includes pottery, which may have been for food or drink, animal bones, again probably representing meat, and a single female figurine (Fig. 19).

Very few ceramic vessels were found at Cernica, which is unusual for the region. Ceramic fragments were buried with both male and female individuals. There is no evidence to demonstrate whether these vessels had ever been in use or contained anything at burial; no residue or macroscopic analysis has been carried out.

Although the numbers are small, it seems that males were more commonly provided with animal offerings. Very little information is provided about these bones in the publication, with just their presence being recorded in all but one case, which is possibly a bovine scapula

(Comşa and Cantacuzino 2001). Unfortunately, it is thought that the animal bones from the cemetery have been lost, so no further information will be available to shed light on what species they were, or whether these bones may have been joints of meat.

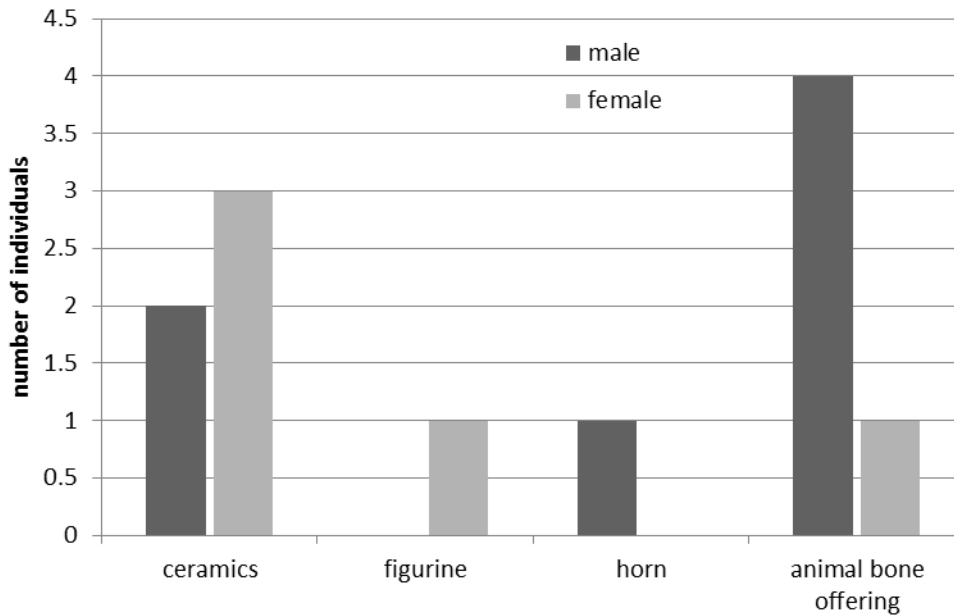


Figure 19: Burial offerings at Cernica by sex

6.4.7 Correspondence analysis

The Cernica graves are not particularly rich in terms of grave goods. This meant that after sorting the data to remove any burials associated with fewer than two grave goods only 46 graves remained suitable for use in correspondence analysis. This means data is quite sparse, but nevertheless there are indications of some interesting trends.

Burials containing animal bone offerings are clustering away from the main dataset (Fig. 20, within circle a). These three burials are all adult males, and other than the animal bones two contained a flint blade and the other a bone finger ring. There is, as is seen in figure 21, very little overlap between these burials and the rest of the dataset. The inclusion of animal bones in these graves may therefore be representing a specialist role that these men performed that

marked them out as being different. They were not wearing any of the beads or appliqués that were the most common artefact.

The female burials (b) cluster more closely than the males, although there are two outliers, the juvenile B.367 and the mature adult B.127. The implication of this is that there were fewer, or at least less varied, identities expressed by females through material culture. The low correspondence between B.367 and B.127 and the other female graves indicates that these two were members of a status or role group that transcended gendered divisions. The main grouping of females, made up of adults (18–40 years) and mature adults (40–60) is associated with shell bracelets, bone rings and pendants, and animal teeth beads (Figs. 21 and 22, b). These are items of ornamentation rather than items that would have been used within daily tasks.

Further sex-based division can be seen, perhaps most clearly on the plot of first and second principal axes (Fig. 21). There is a strong male association with tools of both flint and bone; flint blades and chisels, bone awls and bone plaques (thought to have been sewn on to clothes and were possibly protective). This is as expected from the univariate analysis (Fig. 18). Interestingly, the stone axe, an item that has been proposed as being connected with male identity regionally (Bánffy and Bognár-Kutzián 2007, 217; Borić 2015a), falls within a cluster of male burials that sits closer to the female cluster (b), and clusters with what has been considered a typically female burial item at Durankulak, the bone needle (Stratton and Borić 2012). This area (c) also contains the various bead types and shell ornaments, and the overlapping of male and female burials in this area demonstrates that the wearing of beads was not related to any sex-based gender construction. Perhaps both the wearing of beads and the possession a stone axe was expressive of social status.

The majority of the bead types correspond closely, and cluster in area (c). There is one bead type that is a clear outlier, copper beads. While the burials associated with the other bead

types (shell, stone and animal teeth) are adults, it is mature individuals that are found in area (d). While this may initially suggest an age-related symbolism for copper beads, a return to the main database to assess the individual graves shows that in fact these mature individuals are converging around the flint chisel. Copper beads are found in only two burials, the juvenile female B.367 and the mature adult female B.127. It is B.127, containing a flint blade and chisel and 10 copper beads, which has pulled copper beads into this area of the plot. The anomalous position of B.367, a juvenile corresponding with a group of mature adults, is explained by the presence of both copper and shell beads in this grave. Rather than copper beads being a marker of age in an individual's life course it seems that chisels were an exclusively mature adult item. Mature adults are found plotted in other areas of the graph, so not every adult of a certain age was associated with this artefact type.

The other end of the age/life course scale is poorly represented; the dataset contains only five sub-adults, a single child, B.92, and the juveniles B.118, B.200, B.154 and B.367. The lack of infants and children is a result of the generally low inclusion of children within the cemetery, and those children with grave goods having only one type of artefact (although they may have had several of these, in the case of beads) buried with them, meaning they had to be excluded from the correspondence analysis. The child more closely resembles the female burials. The low number of young individuals makes it difficult to draw firm conclusions regarding any possible gendering of children at a young age. It seems more likely that there were certain community-wide items of adornment that may have been taken on in youth. Or, if we interpret these items as related to social status then this is possibly a distinction of certain children taking on their parents' status, which ties in with the possibility that their inclusion in the cemetery was related to their parents' status or roles.

Of the juveniles, the two males, B. 118 and B.200, plot in the same place, in area (c) alongside adult males and females in an area that may relate to social status. The juvenile

female B.154 plots where we would expect to find other adult females. These individuals are all aged between 17 and 19 years, and there is a tentative indication of an accession into gendered adulthood as part of a formalised life course in late adolescence. B.367, a female juvenile between 14 and 18 years, as has already been mentioned, plots in an area of the graph away from the majority of females, and in an area (d) predominated by older, mature, burials due to the presence of copper beads. Only two burials have copper beads, and their rarity suggests that these too could be status or wealth related.

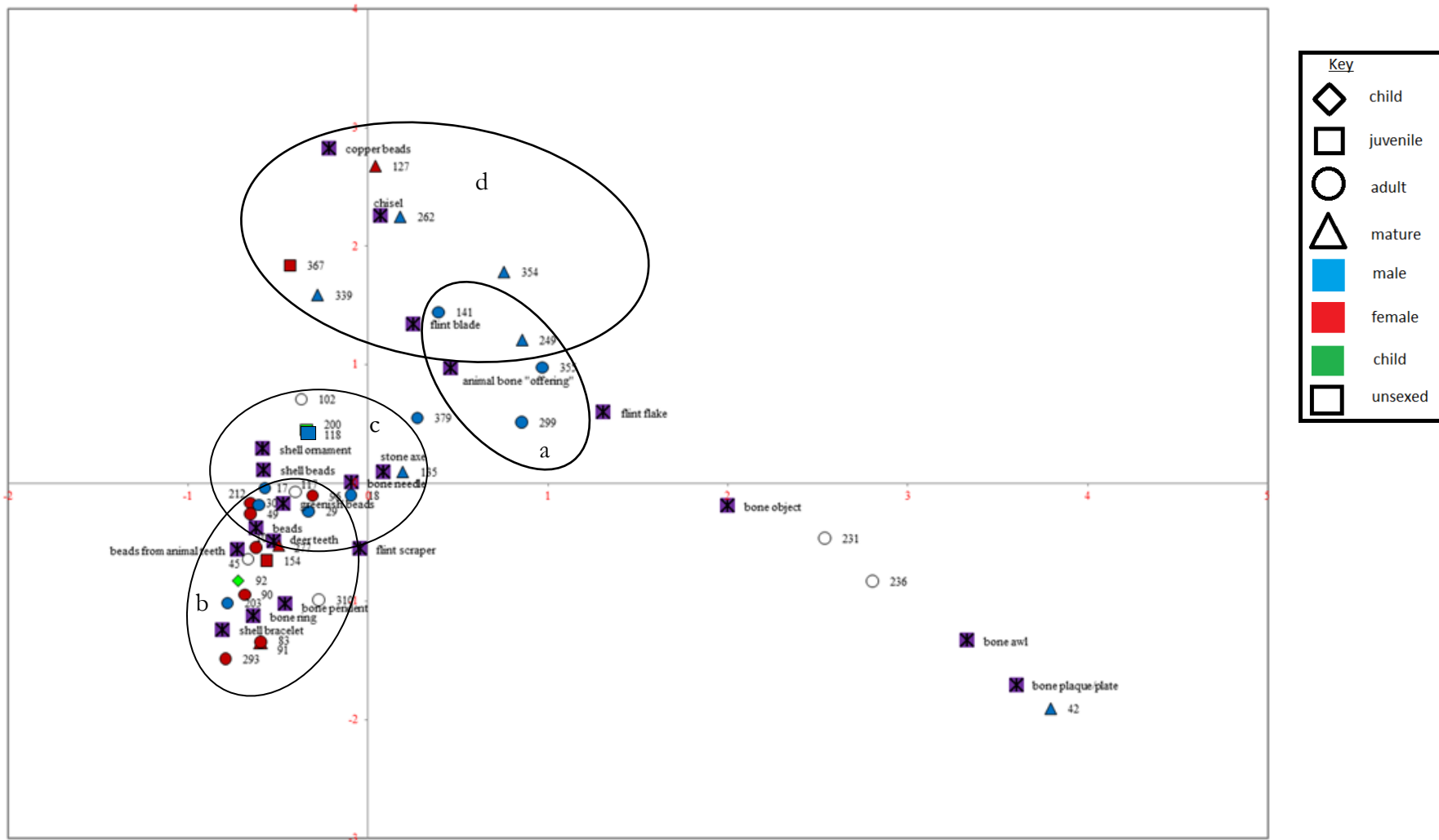


Figure 21: Plot of objects and variables on 1st and 2nd principal axes.

6.4.8 Burial and identity at Cernica

Although it is not as exaggerated as in other cemeteries in the region there is undeniably an inequality in the distribution of grave goods in burials at Cernica. Two-thirds of the burials were not found with any accompanying items, meaning that those who were buried with artefacts were in the (albeit substantial) minority. The use of personal adornment varied from one or two bone beads or a bone finger ring to tens of beads, sometimes of the same types, sometimes a variety, *Spondylus* armrings and bone finger rings. Their distribution (burials with more items were less common) indicates that they relate to social stratification, where the most lavish burials were of some kind of social elite who were conspicuously displaying their status in the burial of their members. This may be represented by the clustering of some adults with items of personal adornment in the correspondence analysis (Figs. 21 and 22 c). What this stratification was based on is not clear. It seems unlikely, based on the lack of differentiation in settlement structures, that it was wealth. It is more likely to be related to power or influence of secular or possibly religious nature. That such statuses may have been hereditary is indicated by the inclusion of numerous articles in a few child burials. M.88bis, for example, was the burial of a five to six-year-old child that included three *Spondylus* bracelets and a bone finger ring.

Unfortunately, the low representation of sub-adults limits interpretation of the life course. There were no young juveniles, in the earlier stages of puberty, to enable an estimation of when adult status was deemed to be achieved (assuming that this was a significant aspect of the life course). Those juveniles present in the dataset were older, between 17 and 19 years old, and they appear at this stage to be little different from other adults in the use of materials. The suggested association between mature individuals and chisels is intriguing. It seems that there was a role or activity involving the chisel that was a marker or privilege of senior member of Cernica society.

Another exciting possibility raised by correspondence analysis is that of specific roles being represented in the burials. Males in general were plotting showing greater divergence than females, perhaps indicative of there being more specific roles or activities taken part in by men. The clearest indicator of this is the small clustering of adult male burials relating to the inclusion of animal bone in the grave. This may be representative of these individuals holding a specialist role relating to animals, either hunters or herders. It is unlikely to be status- or wealth-related, as they are not also buried with ornaments or items made from rare materials. However, the poor dating provision for the cemetery means that the possibility that this pattern was not related to chronological changes cannot be discounted.

The correspondence analysis indicates that there was overlap between the inclusion of personal ornamentation and tools, particularly in female burials. For some males, however, only tools were included. Returning to the main dataset, of the 18 burials (male and female) in which axes were included, only three also had any type of personal adornments; M.28 (adult male) and M.111 (no anthropological information) were both buried with a stone axe and various types of bead and M. 127 (mature male) also contained a bone pendent. Another burial, M. 273 (adult male), also had other types of flint and bone tools. The use of the stone axe as a sole grave good in the majority of cases where it was included means that it is under represented in the correspondence analysis as burials containing only one item cannot be used in the analysis. It seems that, like the animal bones, the axe is related to a very specific role or activity.

6.4.9 Summary

The Cernica burials show a variety of inequalities. The small number of children buried in the cemetery indicates that children in general were not considered suitable for this type of burial. The majority of children were presumably disposed of using a different type of mortuary practice. Unfortunately, the age categories available for Cernica are broad, and do

not allow a thorough examination of potential life course related artefacts. However, the correspondence analysis does indicate that chisels may have been associated with older adults. Although there are some indications of potential gender differences the evidence does not indicate that gender was a strict defining factor in Cernica society.

6.5 DURANKULAK

6.5.1 Location

Durankulak is situated on the Bulgarian Black Sea coast, in the riparian zone between the Black Sea and the Danube. This zone contains numerous freshwater lakes and brackish lagoons. Durankulak lagoon, to the south-east of the modern town of Durankulak, is

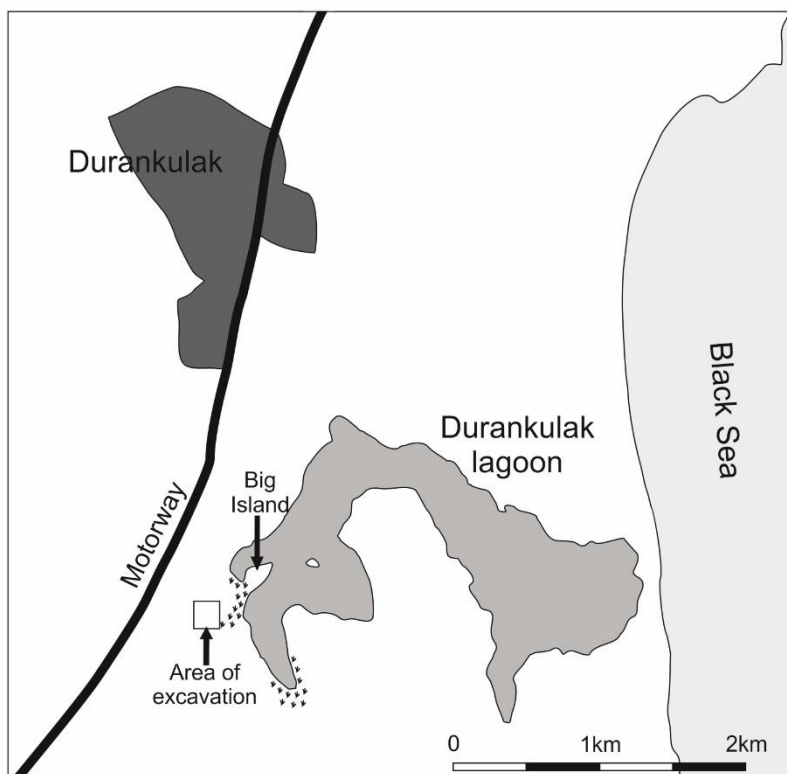


Figure 22: Location of Durankulak lagoon and excavation area in relation to the modern town of Durankulak

separated from the Black Sea by a narrow bank of sand dunes (Fig. 22). During the Neolithic and Copper Age the lagoon was probably tidal. The cemetery was on the western shore of the lagoon, opposite what is today an island (the Big Island), but which would have been connected to the mainland at low tide in the past (Todorova 2002).

In total 1200 burials were found during the excavation of the cemetery area, making it the largest known prehistoric cemetery in the region. The burials ranged from the early Hamangia period to the late Varna and included individuals of both sexes and all ages. The burials were almost exclusively individual inhumations. Bodies were mainly laid in an extended supine position or crouched on their left or right sides. Some graves, known as cenotaphs, contained no body.

6.5.2 Excavation

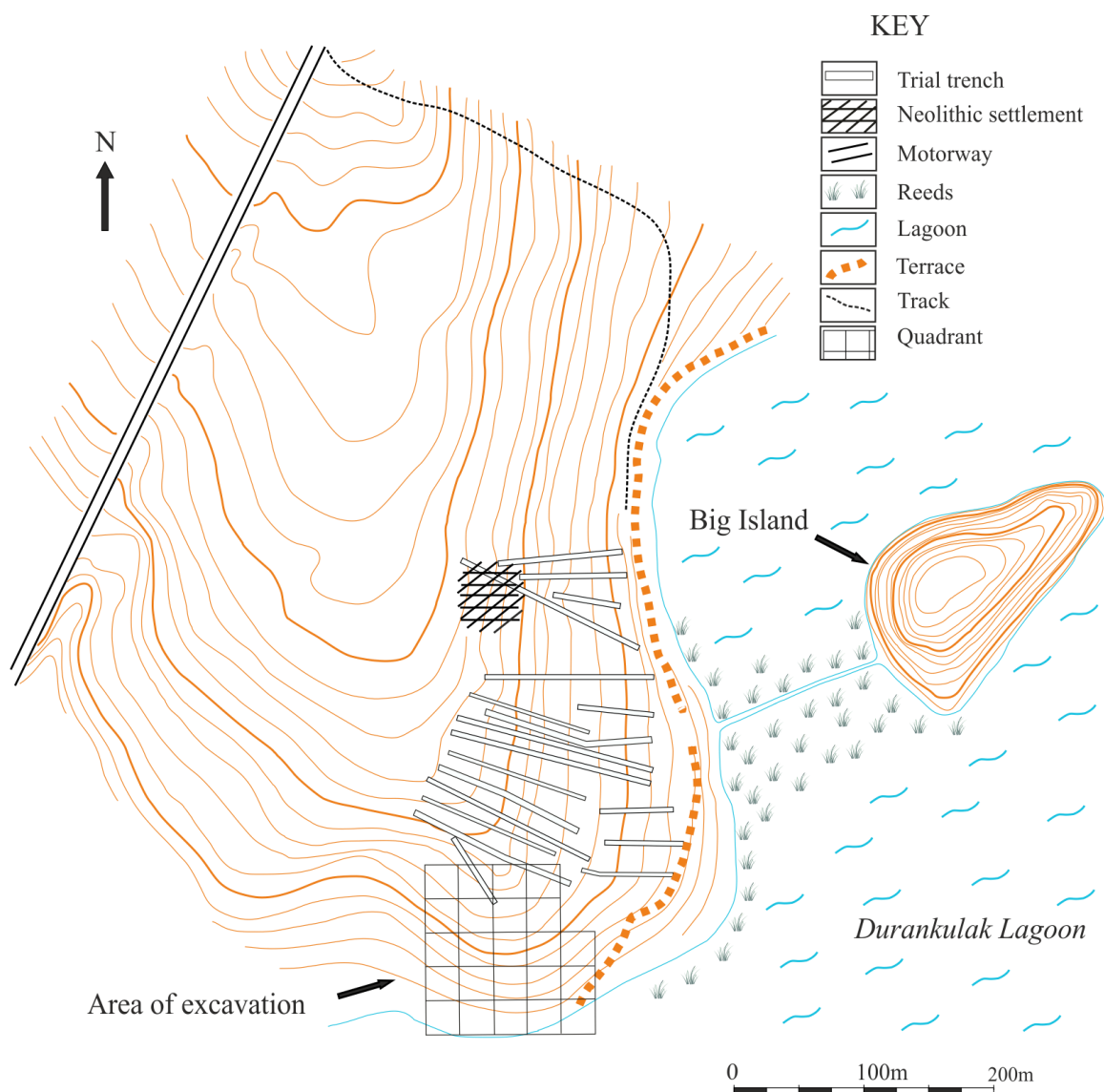


Figure 23: Location of the cemetery site in relation to the Big Island, showing trial trenching (redrawn after Todorova 2002)

Durankulak cemetery was discovered by trial trenching in the area surrounding Durankulak lagoon (Fig. 23) following the find of a Varna culture tell on the lagoon's Big Island in 1974 (Todorova 2002). Excavations at Durankulak continued from 1974 to 1997 under the direction of Henrieta Todorova. Further excavations on the mainland also uncovered evidence of earlier occupation associated with the Hamangia culture (c. 5300–4700 BC). The artefacts found with the burials demonstrated the development of the Copper Age Varna culture from the preceding Late Neolithic Hamangia phase.

6.5.3 Publication

The Durankulak cemetery excavations have been fully published by the excavator, Henrieta Todorova (Todorova 2002). The publication, which was produced promptly after the end of the excavation, included a full inventory, detailed plans, and analyses by biological anthropologists, archaeozoologists, and material culture specialists.

6.5.4 Cemetery phasing and development

Six radiocarbon samples were taken from the burials by Todorova for the initial publication (five from bone and one from charcoal), but only three returned dates (Boyadžiev 2002). The standard deviation of those samples covered the whole of the 5th millennium BC, and were thus of little use. The cemetery was therefore dated using relative typologies by comparison with artefacts from the nearby tell settlements of Goljamo Delčevo and Sava, and with imported objects from farther afield.

The use of the cemetery covered the Late Neolithic to Late Copper Age and contains two cultural phases; the Late Neolithic and Early Copper Age Hamangia culture and the Mid-Late Copper Age Varna period. The excavator further subdivided the Hamangia period into four phases (Hamangia I-IV) while the Varna period was subdivided into three phases (Varna I-III). The Late Neolithic-Copper Age use of the cemetery has been estimated to date to 5000–4200 BC by Todorova (2002).

A lack of reliable dates for Durankulak cemetery meant that the division of each major cultural phase into sub-phases was problematic (see also Bailey and Hofmann 2005, 221). With no definite proof otherwise, the possibility that these sub-phases were not genuine reflections of diachronic changes within this region remained. There was a risk that the expectations of what a phase looked like, such as the association of wild animal bones with earlier phasing, contributed to phasing schemes. Without absolute dating there is a risk that such phasing is self-fulfilling.

In 2013 Honch *et al.* published an AMS and isotopic study of Varna and Durankulak cemeteries, one of the aims of which was to test the validity of Todorova's site phasing. Honch *et al.* (2013) took 14 AMS samples from human bone at Durankulak. This is a very small number for such a large site, and as such it is questionable how representative of the entire cemetery these results are.

The results were analysed using Bayesian statistical modelling. The study concluded that the likely use of the cemetery spanned 470 to 650 years. There is a large variance on the start date, but the authors propose that the use of the cemetery started before 5000 cal BC and ended c. 4450 cal BC (Honch *et al.* 2013). This places it within the wider Bulgarian Late Neolithic to the start of the Late Copper Age.

Bayesian modelling of the dates within Todorova's framework produced a low agreement index (35.8%), suggesting the chronology was unreliable. However, this varied between the phases; Hamangia I and II and Varna I, II and III had a high agreement supporting Todorova's scheme for the early and late use of the site, but the middle phases of Hamangia III and IV appear to have been overlapping rather than distinct (Honch *et al.* 2013).

Todorova's phasing of the cemetery, bearing in mind the problems highlighted by Honch *et al.* (2013) for the middle phases, demonstrates a spatial development of the cemetery. The first burials (Hamangia I-II) occurred in a relatively concentrated area, marked on the plan

(Plate 1) as those burials in green to the north-west of the cemetery plan. During the next phase, Hamangia III, represented by dark blue, this area continued to be used, but burials were also placed more diffusely to the west of the original cluster. In the final Hamangia phase IV (light blue) and the first Varna phase (pink), the burials are spread to the south, while the later Varna III burials (red) can be seen to both the north and south, although some are also found in the central area where the first burials were placed.



6.5.5 The burial data

1191 burials were excavated in total. Of these 747 burials have been attributed to the Hamangia cultural phase, 439 to the Varna cultural phase, and one to the Late Copper Age Cernavodă culture. Twenty-four burials were uncertain or designated as 'both'. The majority of analysis will consider the two separate periods, rather than the sub-phases. This is partially because, as has been noted above, the sub-phases are not considered entirely reliable, and also because it would result in a large loss of data. Large numbers of burials, 566 of the Hamangia and 248 of the Varna period, have not been assigned to a specific sub-phase.



Figure 24: Site photographs showing the problems of a high water table (Todorova 2002)

The site had a high water table, which meant that the skeletal preservation was often poor (Fig. 24). This obviously has implications for the accuracy of anthropological analysis of the burials (Yordanov and Dimitrova 2002). Some 13% of the skeletons were not able to be sexed or aged. A further 25% were not confidently assigned. Forty of the graves had no

skeletal remains whatsoever. These could either be cenotaphs (symbolic burials) or child burials where the bone has not survived (Lichter 2001, 93).

Up to Hamangia III phase graves were simple pits. After this point a variety of stone linings and covers were used (Boyadžiev 2002) (Fig. 25). The excavators report that it was impossible to distinguish the grave cut in the natural loess soil. The shape of the grave pits without stone constructions is therefore impossible to recreate, but the bodies have been deliberately laid out, indicating that they were purposefully dug rather than being rushed or reused after some other purpose. The stone-lined graves indicate that at least some of the

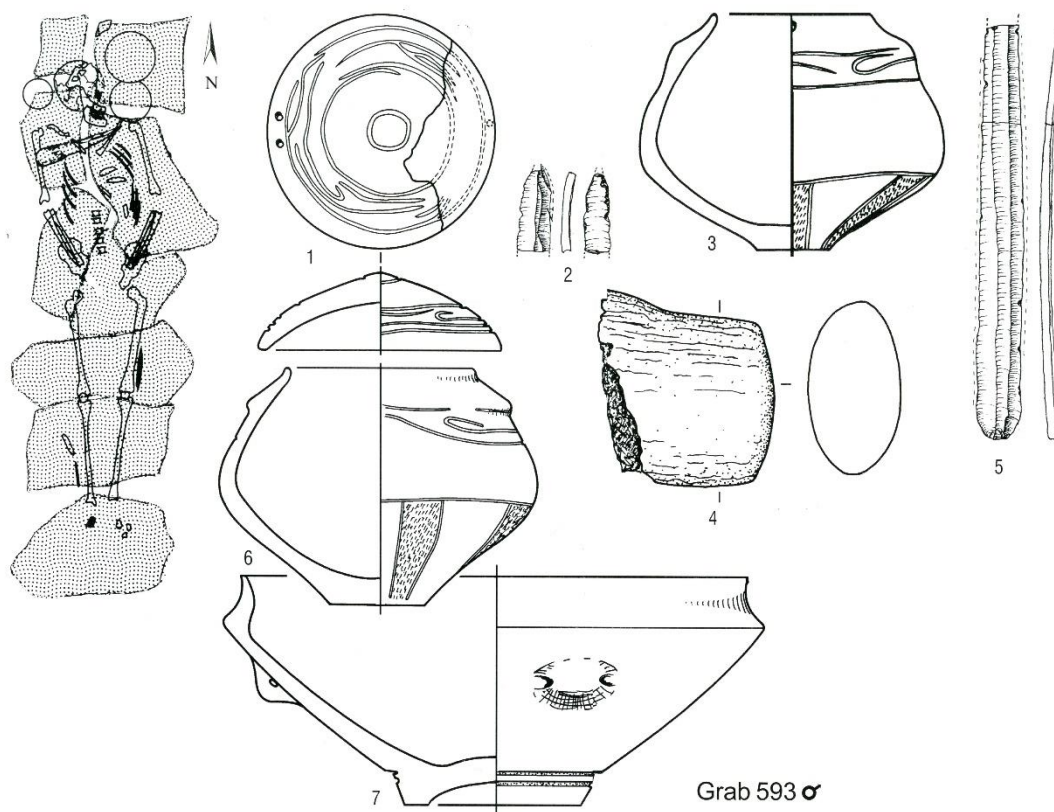


Figure 25: Example of a Durankulak grave covered by stones, with associated grave goods. Grave 593 (Todorova 2002, table 100)

graves were rectangular, although the excavators believe it likely that some graves, especially in the case of crouched burials, were oval or elliptical (Boyadžiev 2002).

Most of the Varna period graves containing grave goods were covered by stone slabs laid perpendicularly across the body along the longitudinal axis of the grave (Boyadžiev 2002). The largest number of slabs on a single grave was 15 (Lichter 2001, 89). In about one tenth of the cases vertical slabs were also found, although it was not clear whether these were to line the sides of the graves or if they had slipped (Lichter 2001, 89). The type of stone construction varied considerably, sometimes covering or partially covering the body; sometimes a slab was laid vertically at the feet, head and/or sides of the body. That they may have been supporting a stone cover over the body is supported by evidence in a number of graves of a void between the slabs and burial, while in other examples the stones have sunk in the middle of the grave. In graves covered by smaller stones earth is found between stones and body. Lichter (2001, 89) argues we cannot rule out that the initial burial was in the earth before later being covered by stones. From the stone covers Lichter has estimated the size of graves at Durankulak as generally 1.8 m long, although some were up to 2.5 m, and between 0.5 and 0.9 m wide.

6.5.5.1 Orientation

In both periods of use the main burial orientation in Durankulak cemetery was north (67% of Hamangia phase and 78% of Varna phase burials). Just over 1% of burials were orientated over 45 degrees away from north (Fig. 26).

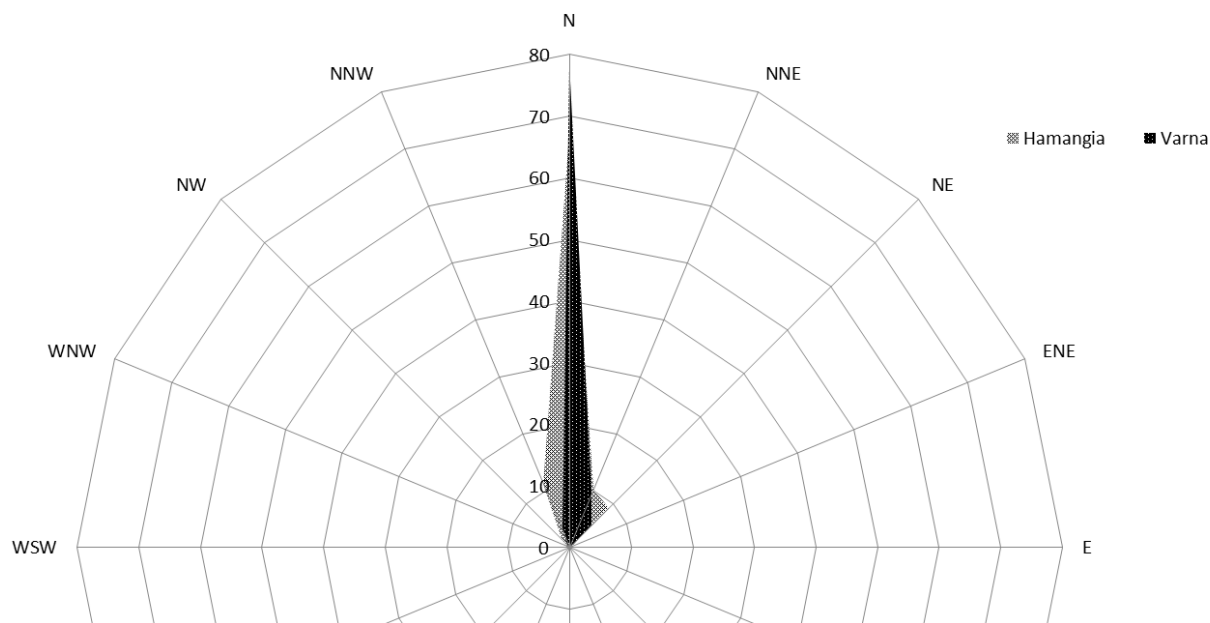


Figure 26: Orientation of Durankulak burials (by percentage of phase)

6.5.5.2 Sex and age

Analysis of the burial demographic is obviously made problematic by the poor preservation on-site, which meant that it was not possible to analyse a high proportion of the burials. However, there is nothing to suggest that the distribution of different sexes and ages was not relatively even.

As has been noted previously, biological sexing on the site was divided into confidently sexed and less confidently (what will be referred to as ‘possible’) sexed individuals. From Fig. 27 it can be seen that during the Hamangia phase males made up nearly two thirds of the burial population, while this trend was reversed in the Varna period.

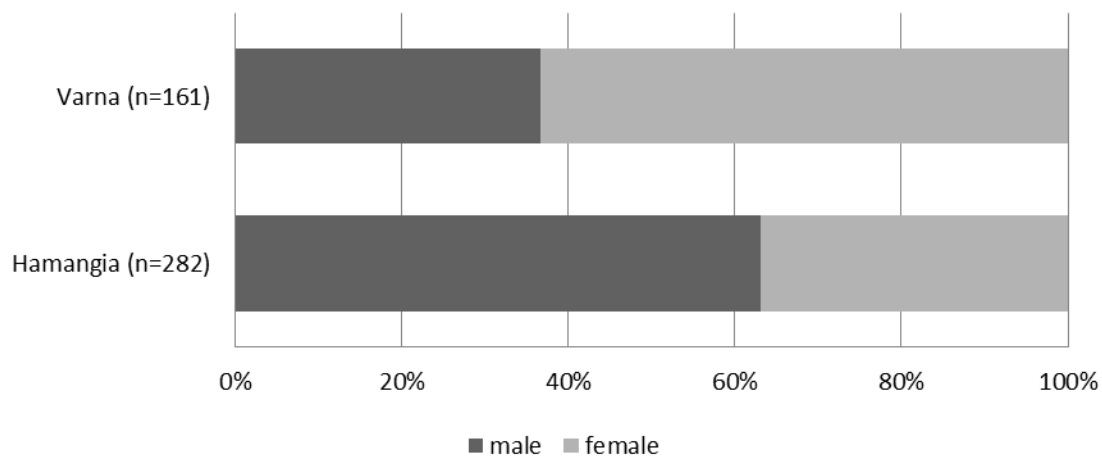


Figure 27: Sex demographic of Durankulak cemetery, according to confidently sexed individuals

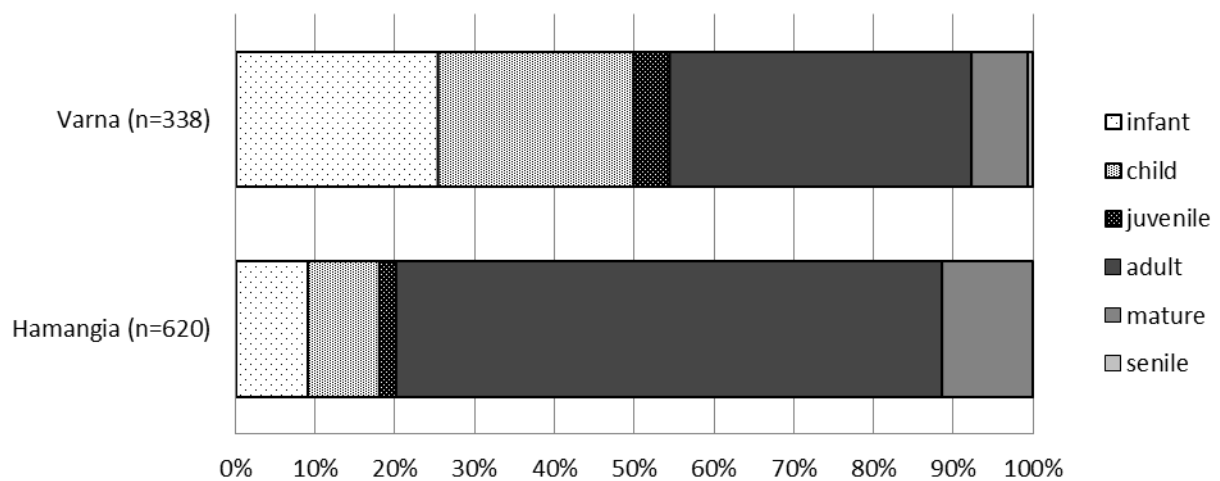


Figure 28: Age demographic of Durankulak cemetery

There is a significant difference when the age profiles of the Varna and Hamangia phases are compared (Fig. 28). In the Hamangia phase the burials are dominated by adult burials, with infant and child burials making up less than 10% each of the cemetery population. In the Varna period there is a much more even distribution, with infants and children making up about 25% each. This is much more likely to represent the real death rates, as there would probably have been a high death rate among infants and children in prehistoric populations

(White and Folkens 2005). It is not easy to estimate the palaeodemography of a population, and there may be demographic reasons for this change (for example a higher birth rate also leads to a higher death rate among infants (Chamberlain 1994)). There is also the problem that infant and young child burials are less likely to survive due to their smaller and less developed bones (Djurić *et al.* 2011). However, such a sharp difference between the two phases indicates that a social change occurred, in which the status of children changed so that their formal burial was more important.

6.5.5.3 Burial positions

The burials at Durankulak in both phases were almost exclusively individual inhumations, with the exception of three double burials of females with infants. The dominant burial position in the Hamangia phases was supine extended (Fig. 29). This varies through the subphases: in Hamangia I-II 80% of the identifiable burials were supine extended, and in Hamangia III it was 73%. In Hamangia IV there was a distinct change, and extended burials represented only 45% of the assignable burials, roughly equal with the number of crouched burials.

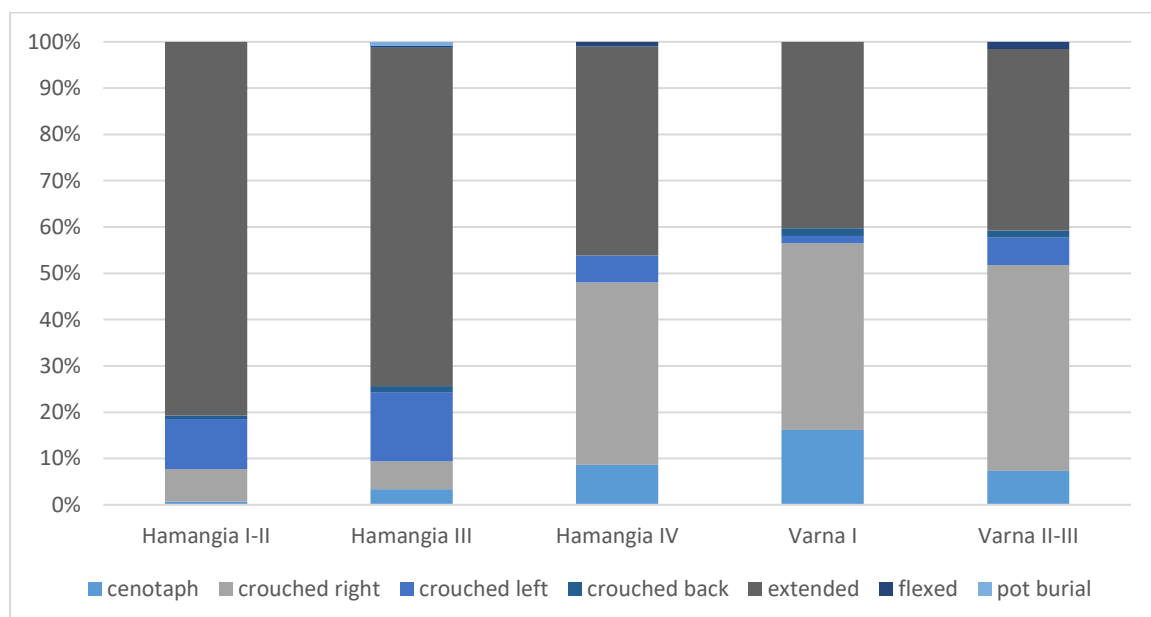


Figure 29: Burial positions at Durankulak by phase

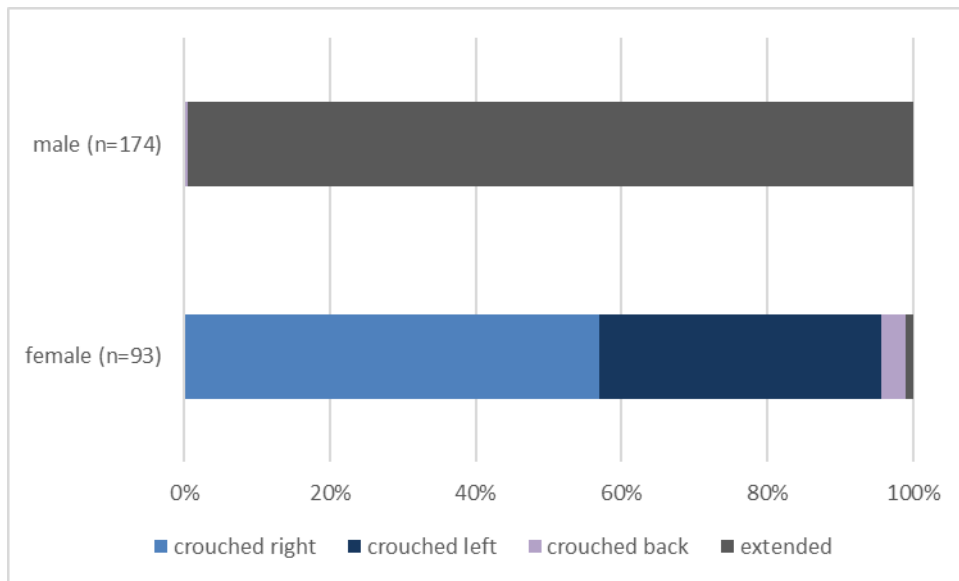


Figure 30: Burial positions by sex

Comparison of burial position to sex reveals a distinct pattern (Fig. 30). Males were exclusively buried in a supine extended position during the Hamangia period, and predominantly in the Varna phase, although a few individuals were laid on their backs with flexed lower limbs. Females were buried exclusively in a crouched position. During the Hamangia period there was a roughly equal split between those laid on their right sides and those on their left, but by the Varna period there was a clear preference for the right. This difference in treatment of the dead indicates a strong gender distinction between male and female individuals, based on sex. However, the clarity of this pattern breaks down when we include those individuals that had less certain assignments. The ‘possible females’ in both periods were almost exclusively in supine extended positions (97 individuals), while the ‘possible males’ were in crouched positions on either side (24 individuals). This discrepancy will be returned to later.

6.5.5.4 Grave goods

A wide variety of grave goods were found in Durankulak graves, from items of personal adornment on the body or attached to clothes, to tools and pottery laid by the body, and animal bones, presumably the remains of food offerings. There is some variation in the

number of grave goods buried with each individual, ranging from none to 362 in burial 609. In the Hamangia period 154 individuals (21%) were accompanied by no objects, and 101 (23%) were in the Varna period. Only two burials had more than 100 items, and these mostly consisted of beads (346 Dentalium beads in the case of burial 609), which were probably sewn on to articles of clothing or were part of another form of composite ornamentation.

6.5.5.4.1 Age associations

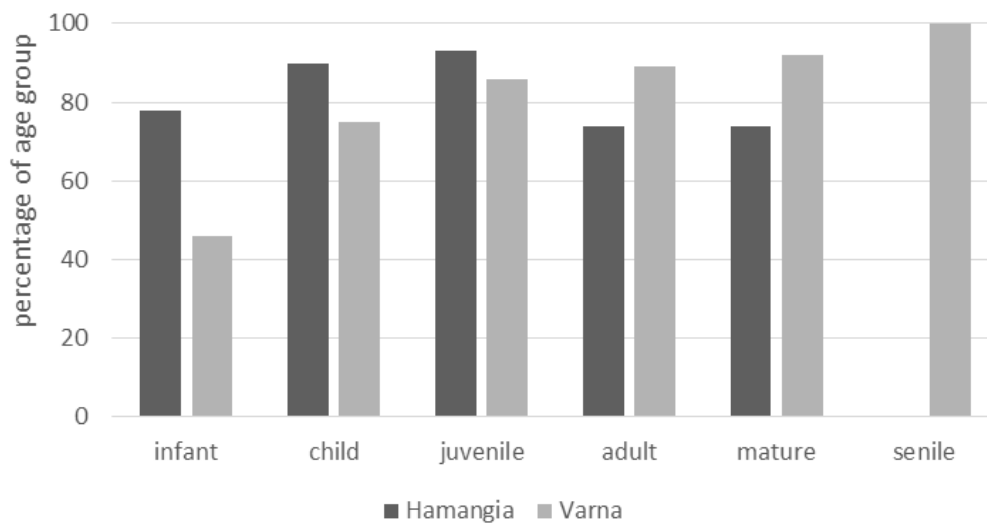


Figure 31: Relative frequency of burials with grave goods at Durankulak

Throughout both periods of use of the Durankulak cemetery children and infants were buried with grave goods. During the Hamangia phase the percentage of burials with grave goods remained fairly consistent through the age groups; between 70–90 % of all the burials contained some items, with slightly higher frequencies in the sub-adult groups (Fig. 31). This pattern changed in the Varna phase. Infants were less likely to have been buried with any items (46%), and children were much more commonly buried with items (75%), while 86%

of juveniles, 89% of adults, and 92% of mature individuals had grave goods. 100% of the senile category were accompanied by grave goods, but this represents only two individuals.

Are we seeing here a change in the status of children in society from the Late Neolithic/Early Copper Age to Late Copper Age, or a change in what is expressed in the burial rite? This could also be indicative of a change in the descent systems of the community. As already noted, there is a change in the total number of child burials, with children and infants making up 21% of the burial population in the Hamangia period and 40% in the Varna period (Fig. 31). Children were less frequently given a cemetery burial in the Late Neolithic/Early Copper Age than the later Copper Age, but those that were given this treatment were more likely to be accompanied by grave goods.

6.5.5.4.2 Sex associations

The strongest sex association with a specific type of grave good is between males and axes. This can be seen in both Hamangia and Varna periods (Fig. 32). Stone axes were found in 14% of the Hamangia male burials, and a smaller proportion contained antler picks (3%). No female burials were associated with any axes. In the Varna period antler picks are more common, being placed in 15% of the male graves, while stone axes are slightly less common (7% of male burials). Copper axes were placed in burials for the first time, in 7% of male burials. In the Varna period a single female burial broke the exclusively male association of this artefact type, but nevertheless it seems the axe was strongly related to male gender identity.

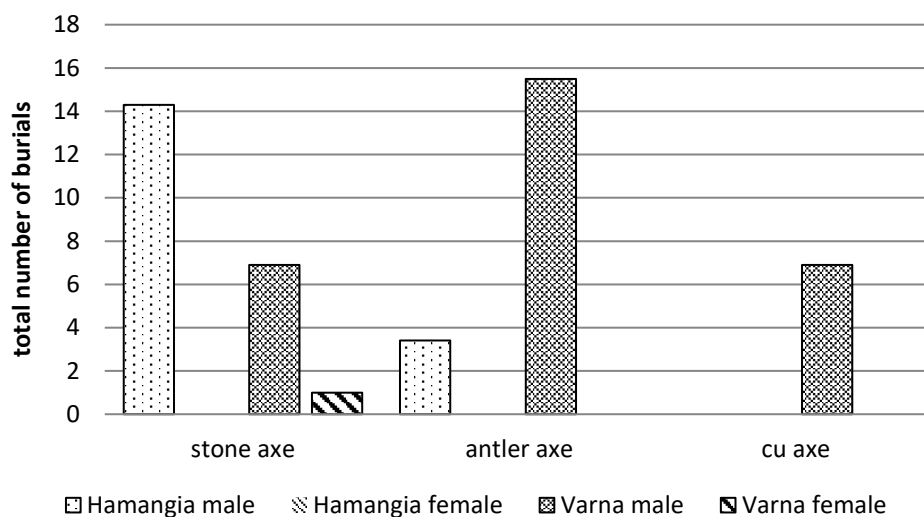


Figure 32: The deposition of axes in male and female graves at Durankulak

In the Hamangia period flint blades are also more common in male burials (in 32% of male and 7% of female burials), but in the Varna period, although they remain the most commonly occurring grave good, they are more evenly distributed among the sexes, in 40% of male and 27% of female burials. For female burials polishing stones are exclusive in both phases of the cemetery's use (Fig. 33). Other items are rarer, and clear associations are harder to distinguish using univariate analysis. Items of personal adornment occur with both sexes, although finger rings, of both bone and copper, are more prevalent in female burials. Ceramics are the most frequent grave good, and are generally evenly distributed, but pedestalled bowls are slightly more common in female burials in the Hamangia period (5% of female burials, 1% of male), and markedly more so in the Varna period (37% of female and 2% of male).

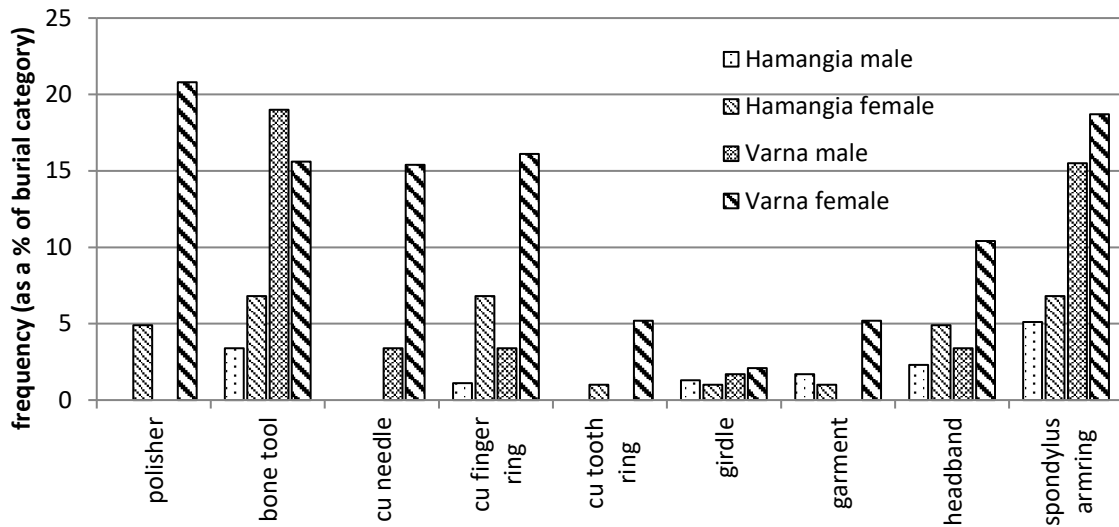


Figure 33: Frequency of items in Durankulak graves by sex and cultural phase

6.5.5.4.3 Use of copper

The two phases of Durankulak span the period when copper came into more common usage. By the Late Copper Age we see the use of copper for various tools which had previously been made from stone. In the Late Neolithic and Early Copper Age, copper, as a new material, was scarcer and appears in a much smaller number of graves (Fig. 34). Interestingly, in the Late Neolithic/Early Copper Age it was used exclusively for items of personal adornment, mainly arm rings and finger rings, but beads and tooth rings also occurred. Its use as a material for display on the body, along with the rarity of its inclusion (it appears in only 26 of the 727 Hamangia phase burials), indicates that it was used to demonstrate a very specific status, power over material resources, or material wealth, limited to a tiny fraction (3.5 %) of the population.

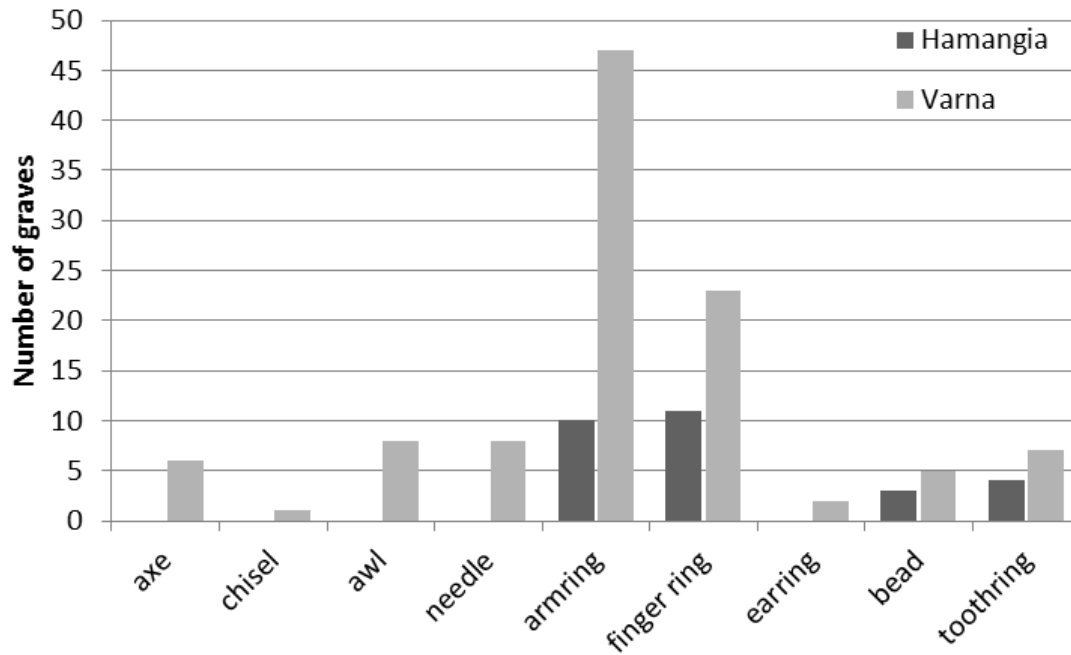


Figure 34: Number of graves including items made of copper in the Hamangia and Varna phases of Durankulak cemetery

There is a marked increase in the number of individuals buried with copper in the Varna period, with 88 burials of the total 439, or 20% of the burials having copper items. Some graves contain multiple copper items, such as Grave 514, which had two arm rings, six finger rings and two tooth rings. While combinations of items of adornment are found, there are no instances of adornments and copper tools being placed in the same burial. There was apparently a divide between those who used copper for display and those who displayed tools made from it.

6.5.6 Unconfident sexing and challenging idealised gender roles

The univariate data analyses discussed so far have suggested some clear binary gender divisions based on sex, materialised in the burial rite by the inclusion of objects used in activities considered to have been gendered, as well as being represented in the choice of burial position. However, while these patterns hold true for those individuals who have been

assigned a ‘confident’ sex anthropologically, consideration of the ‘unconfidently’ sexed individuals creates a murkier picture.

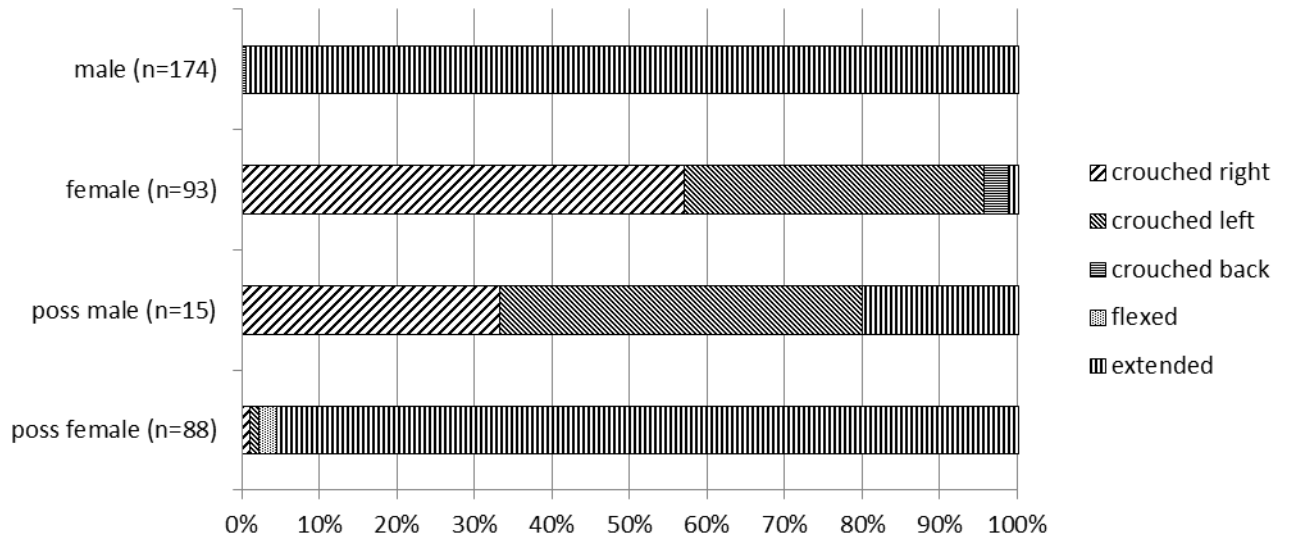


Figure 35: Burial positions by anthropological sex, including the less confidently assigned individuals

The most striking discrepancy is that of the burial positions. As Fig. 35 demonstrates, the supposed use of the extended position for males and the crouched for females is almost completely reversed when these individuals are considered. There is a similar story in terms of ‘gendered’ grave goods (Fig. 36). The axe, proposed as a symbol of idealised male identity, is found with, albeit in relatively small numbers, ‘possible females’.

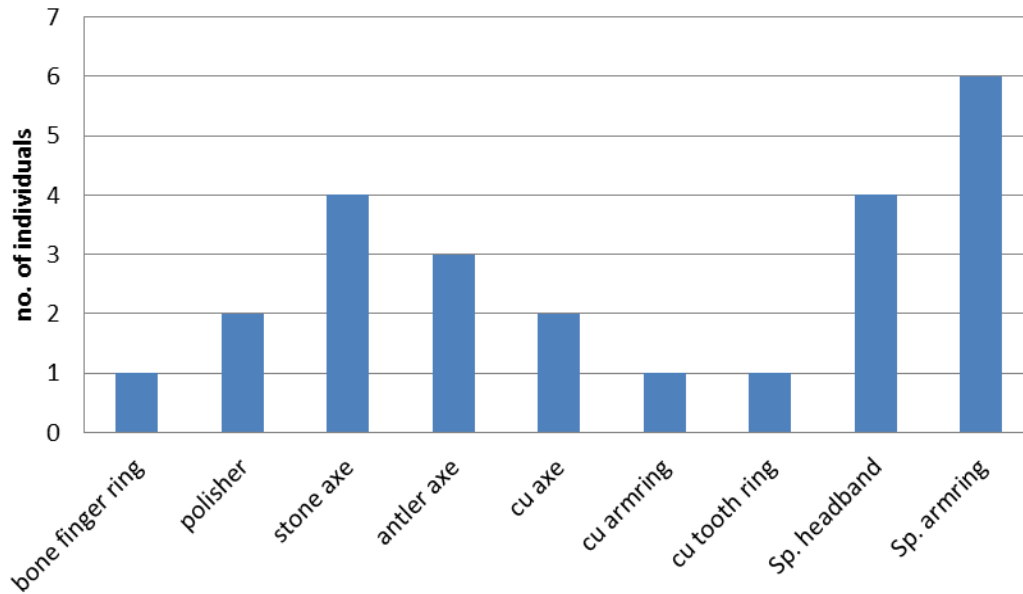


Figure 36: Grave goods found with possible females

These contradictions lead to some uncomfortable suggestions. It is highly unlikely that all those individuals confidently designated female would be in one position and those which have been less confidently assigned in another. Therefore we must assume that the positions themselves have had some influence on the anthropologists working on this material. It has already been noted above that the preservation of the skeletons at Durankulak was very poor. The pelvis was not preserved well enough in a single case to allow reconstruction for use in sex determination. Identification was based mainly on the massiveness and size of various bones, especially long bones, and in some cases the skull was well enough preserved to be used (Yordanov and Dimitrova 2002).

Comparison of the sex determinations made according to anthropological analysis versus those made according to archaeological associations demonstrates that only 7% of those marked as possible females were thought female according to their archaeological determination (Fig. 37). 70% had “male” grave goods or were in a “male” (extended) burial position. The remainder were not sexed archaeologically. In the case of the possible males it

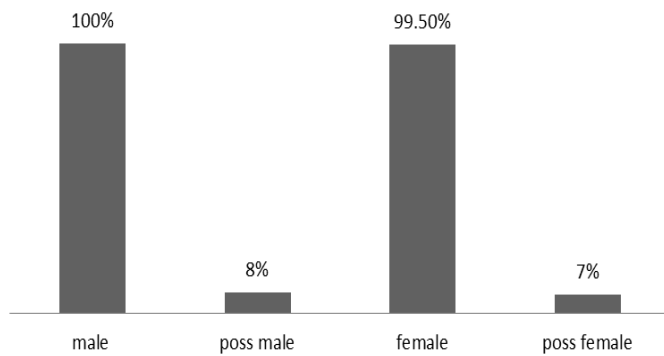


Figure 37: Agreement between anthropological and archaeological (ie. based on body position and grave goods) sexing.

is less stark, with 43% being designated female according to archaeological factors. A greater majority of the possible males were not given an archaeological sex, so that only 8% were considered archaeologically male.

Todorova (2002) noted the importance of sex determination of the skeletons in understanding gender-specific burial practices. She stated that overall the discrepancies between the archaeological and anthropological sexing are under 30%, which would be the expected error when sexing without pelvises (Todorova 2002). Yet, as has been demonstrated, this overall figure does not hold when the uncertainly anthropologically sexed individuals are considered separately. In contrast, there is 100% agreement between the archaeological and anthropological determinations of ‘confidently’ sexed individuals (Fig. 37). This can lead to only one conclusion: that the anthropological determination of the human remains was influenced by their archaeological associations. In particular, the use of an extended burial position for males and crouched for females was expected due to previous finds of a similar date at Varna and Devnja. As Todorova wrote, “[t]his observation confirmed what was already known from the cemeteries of Varna I and Devnya, that at the time of the Varna culture, in contrast to the Gumelnița culture, the sexes were buried bi-ritually (men in an extended position, women crouched on the right, all with heads to the north, with some deviations)” (Todorova 2002, 53; my translation). The justification of gendered burial rituals at Durankulak therefore seems to be based on a circular argument.

Without a reassessment of the skeletal material, preferably using DNA for more robust sexing, it seems that any assessment of gender in burial ritual based on sex is likely to be

problematic. The initial assumption that there were clear binary sex-based gender boundaries, expressed through burial position and grave goods (Todorova 2002; Stratton and Borić 2012) is contradicted by the inclusion of the uncertainly sexed individuals. It seems the best approach to adopt is to include both confident and possible sex determinations, as the confidence only comes from agreement with archaeological assumptions. When doing so a more complex picture appears, where clear-cut binary gender categories are blurred, indicating a greater variety of identities and roles was present (Stratton forthcoming).

6.5.7 Correspondence analysis

The Durankulak burial data provided an opposite problem to that of Cernica for correspondence analysis; there is a mass of available burials for analysis, 1200 burials were excavated and about 80% had grave goods. To deal with this preponderance of data it was necessary to subdivide the dataset. While the Cernica data did not contain enough material to satisfactorily investigate separate sex, age, or tool types, the number of Durankulak burials enabled this approach. Initially the burials were sorted so that only burials that had been confidently phased were used. This was primarily a way of reducing the data input into the correspondence analysis calculations, but it also allowed for a cursory comparison of the graves by Todorova's cultural phases.

This first, somewhat speculative, run is presented below (Fig. 38), with the artefacts presented separately for clarity (Fig. 39). The first noticeable patterning is the division of Hamangia and Varna burials (although there is some overlap). The Hamangia phase burials are spread in a rather diffuse parabola across the y-axis (Fig. 38). This denotes a degree of interdependence/continuity between the Hamangia burials that may be related to internal phasing or some other form of continuous differentiation. The Varna burials, in contrast, are quite closely grouped.

There is a cluster of Hamangia female burials, along with possible females and cenotaphs considered by Todorova to be female based on material culture (a). These burials are associated with bone finger rings, clay idols, and *Spondylus* amulets (Fig. 39). Other than this grouping the majority of female burials from both Hamangia and Varna phases cluster within the circled area (b). This area is not exclusively female, adult male and child burials are also found there. The artefacts grouping in this area are not therefore all exclusively female, but the clustering of females from all the cemetery phases indicates that there was little diachronic variation in the material expression of female identities. The density of points in this area meant that for clarity the point size was diminished and labels were removed; the need for further subdivision of the dataset is clear.

Males from both phases are more widely distributed than the females, and, like the Cernica burials, may indicate a greater diversity of male roles/male artefacts. The area within circle (c) contains a dense clustering of adult male burials and cenotaphs containing 'male' grave goods. There seems to be an association between male burials with antler axes, chalcedony beads, footed and pedestalled bowls, and stone (Fig. 39 c). Chalcedony may have been a material linked exclusively with males; however, only four burials contain beads made from it, and it may equally be the case that it was an unusual or infrequently used material. Footed and pedestalled bowls, which are variations of a shallow bowl placed on a high, pedestal base, are much more common, occurring in 44 and 59 burials in this dataset respectively.

As has been noted, the Hamangia data form a parabola on the y-axis, with a number of female associated artefacts plotting high on the x-axis (Fig. 38). At the opposite end of the arc, plotting low on both axes, lies a single artefact type, a ceramic jar (Fig. 39). It is mainly male burials that plot in this area of the graph, and a tentative interpretation is that the parabola represents a sex-based gender association of grave goods within which there is a high degree of overlap with ideal examples at either extreme.

Within cluster (d) is a group of Varna phase burials associated with copper tools: copper needles, axes and awls (Fig. 39 d). This is unsurprising; an increased use of copper for a greater variety of artefacts defines the later Copper Age.

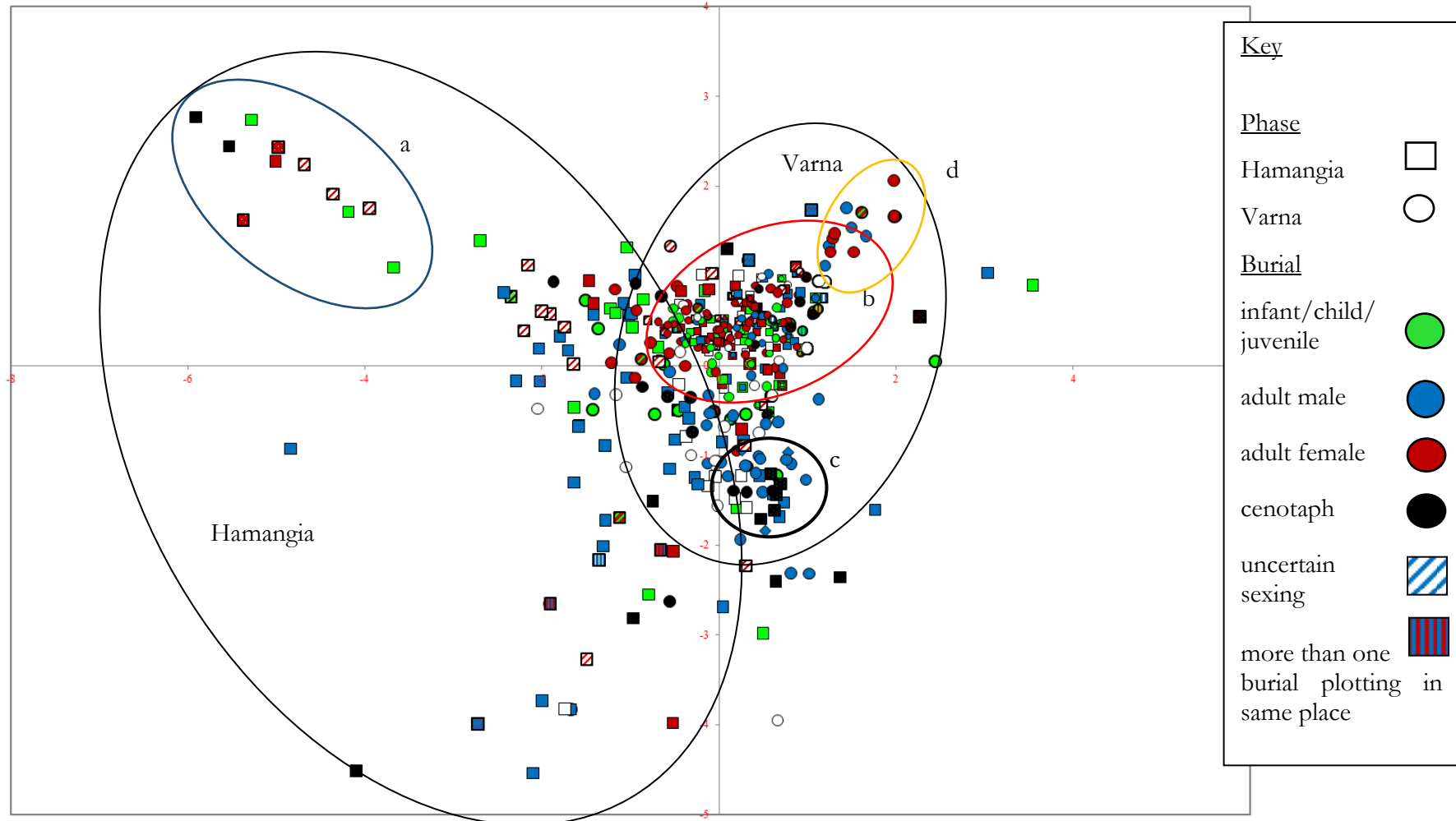


Figure 38: Object (burials) plot on 2nd and 3rd principal axes, of confidently phased burials at Durankulak

The first subdivision of the dataset was by sex. Both the univariate and correspondence analysis indicated that there were sex-based differences in the chosen grave goods. By dividing and having separate runs for males and females possible differences in treatment within these groups could be more easily identified. Figures 40 and 41 show the object and variable plots for male burials on the first and second principal axes, again plotted separately to limit problems with overlapping text. Figure 42 shows the female plot on the first and second principal axes of both objects and variables, as this is a smaller dataset. The data points are coloured by phase using Todorova's phasing scheme to investigate the temporal trends that suggested themselves from the division of data into Hamangia and Varna in Figure 38.

The most immediately striking pattern in the male object plot (Fig. 40) is the broad distribution of Hamangia phases I-II and III along the y-axis while the later phases, Hamangia IV and Varna I and II-III cluster much more closely. There is some overlap, with some earlier phase burials falling within the area where the later burials plot, but there is a clear distinction indicating that certain items that appear in the earlier phase burials fall out of use later. The variable plot for the same run (Fig. 41) indicates that these are the bones of both domesticated and wild animals. The inclusion of animal bones in a burial has been considered indicative of earlier burials in this region (Borić 2015a), linking with Mesolithic practices regarding the significance of hunting. Figure 40 shows a marked drop-off in the inclusion of animal bones from the Hamangia III to IV periods.

Male burials from the Hamangia IV and Varna phases cluster closer together, and the degree of overlap indicates that artefacts used in male burials were largely unchanging through this time period (Fig. 40). However, there is evidence of the introduction of new artefact types over time. The clustering of Varna I burials below the y-axis seems to be related to the

presence of copper ornaments (arm rings and finger rings), while the Varna II-III burials plotting above the y-axis can be more confidently associated with copper tools (axe and needle) which are plotting high on the x-axis (Fig. 38). These patterns are nothing that was not already indicated from the univariate analysis, and there is otherwise a frustrating lack of clear clusters of either burials or grave goods that might indicate the presence of specific artefact assemblages or social differences.

The plot of the female dataset (Fig. 42) is even less clear. This may partially be due to the smaller number of burials included in the analysis (68 females as opposed to 123 males), and in particular fewer female burials from the earlier Hamangia phases. A similar pattern to that seen in the males of an association with domestic and wild animal bones in the earliest phases is visible. Indeed, there is less overlap between the Hamangia III burials and all of the later phases than is seen in the male data (Fig. 40). The post-Hamangia III phases are largely overlapping, but some tentative clustering can be suggested. A number of Varna I burials are clustering centrally, apparently around malachite and *Spondylus* beads.

6.5.8 Summary

While the excavators of Durankulak have argued for a strongly gendered society with burial treatment varying on the basis of sex the inclusion of their uncertainly sexed individuals indicates matters were not so clear cut. Burial treatment did not rely completely on the sex of the individual. However, there do seem to be some sex-based gender associations. Male graves are more widely distributed in both the Hamangia and Varna phase correspondence analysis. This shows that males were buried with a greater variety of artefact types, which may in turn indicate a greater variety of male roles. Females in both phases are more tightly clustered, showing fewer artefact types used in their burials. This may be a result of fewer roles available to females, or roles may have been expressed in different ways.

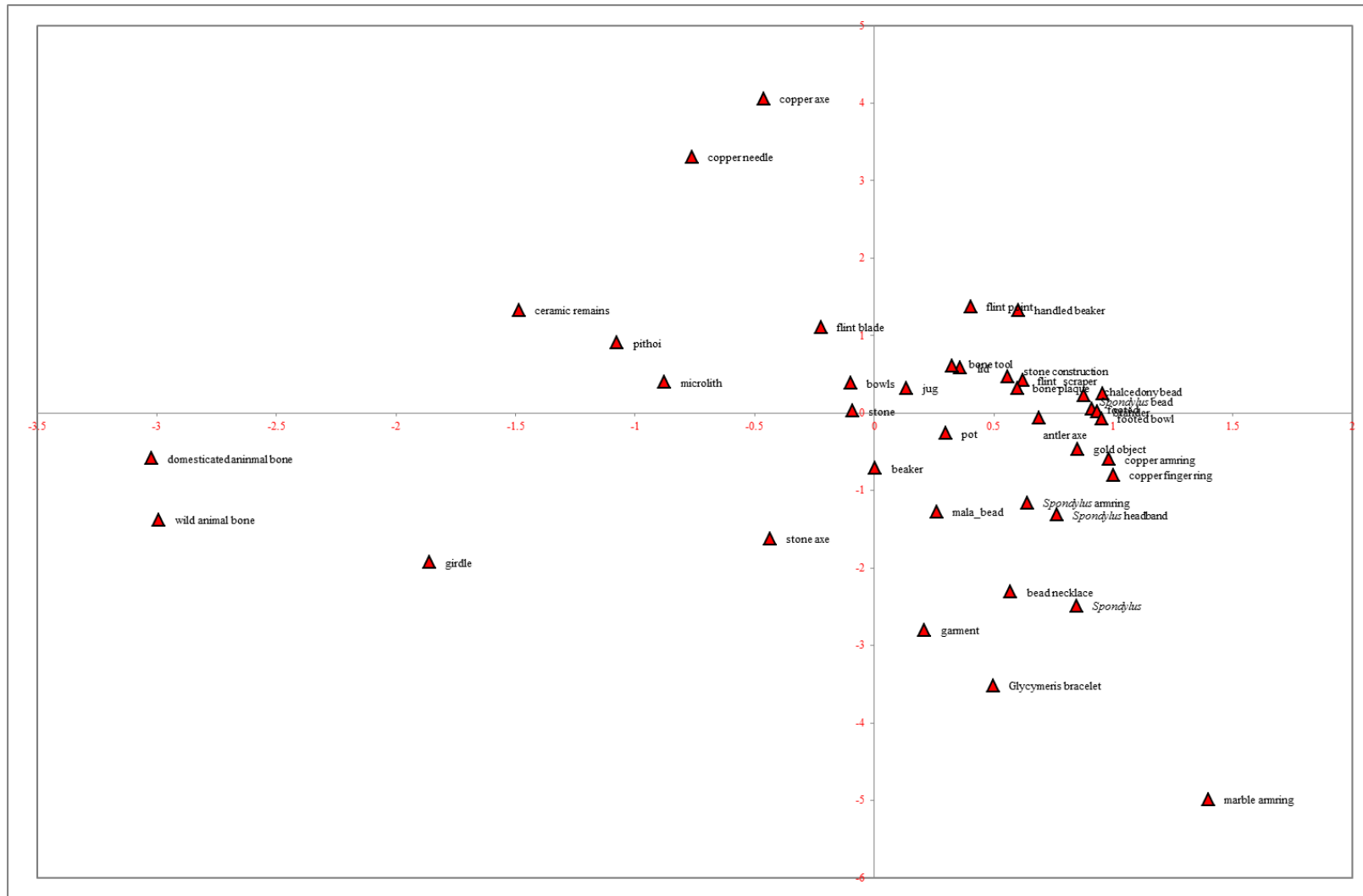


Figure 41: Variable plot on 1st and 2nd principal axes, of artefacts from confidently phased male graves

6.6 VARNA

6.6.1 Location

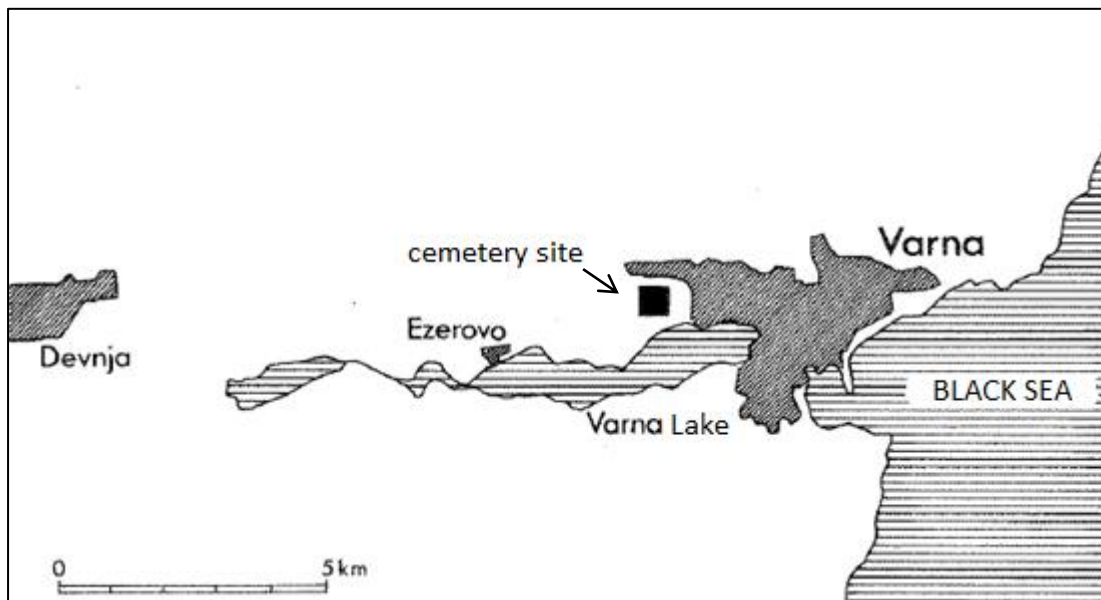


Figure 43: Location of Varna cemetery site (after Ivanov 1988).

The city of Varna is located on the Bulgarian Black Sea coast, 100 km to the south of Durankulak. The cemetery site is 500 m to the north of Lake Varna (Fig. 43), now a brackish lake due to the construction of a canal to the sea in 1972, but previously fresh water. The lake was probably a bay during the Copper Age, and the cemetery was situated on a gently sloping terrace on what was then the edge of the bay (Ivanov 1988). Even before the discovery of Varna the area was known for prehistoric finds: in 1921-22 Copper Age pile dwellings were found in the Varna lakes, and further settlement areas with Copper Age artefacts were found in the late 1960s during the development of new port facilities (Ivanov 1988; Sherratt 2004). A Copper Age settlement and cemetery were discovered at Devnya at the western end of the Varna lakes, 25 km west of Varna. However, no settlement has been found directly associated with the Varna cemetery. There have been suggestions that the

cemetery did not serve a single community but rather was a regional cemetery serving a number of settlements, used particularly for wealthy or powerful individuals (Ivanov 1988; Renfrew 1986).

6.6.2 Excavation

The cemetery site was discovered by workmen during the excavation of a cable trench in 1972. Archaeological excavations continued from 1972 into the 1990s, conducted by Ivan Ivanov from the Varna Museum. A total area of 7500 m² was excavated. An initial investigation into the extent of the cemetery was carried out using trial trenching before full excavation, during which 294 graves were excavated (Ivanov 1988; Higham *et al.* 2007).

The excavators found that the cemetery contained three main types of burial; those with the body in a supine extended position, a crouched position, and the so-called cenotaph graves that contained no body (Ivanov 1988). Bone preservation was generally poor due to the acidity of the soil, while about 25% of the graves were severely disturbed by later activity (Ivanov 1988; Higham *et al.* 2007). The frequency of grave goods was exceptional. Less than 10% of the graves contained no artefacts at all. The vast majority (about 80%) had between one and ten items, while in the final 'rich' 10%, grave goods could number in their hundreds (Ivanov 1988).

Due to the nature of the soil, visibility of the grave cuts was poor, with only 10% of the grave cuts being recorded as visible. They were almost exclusively rectangular with rounded corners, irrespective of burial type (Fig. 44). Supine, crouched and cenotaph graves were all recorded as having similar cuts (Ivanov 1988). There were a few cases which deviated from this pattern; the cuts of Graves 38 and 261 were oval, and grave 14 was trapezoidal (Lichter 2001, 88). The sides of the grave pit were not vertical but slightly sloped, and the bases were flat or concave. There was a hint of a possible coffin or wooden frame in burial 15, but unlike at Durankulak there were no stone constructions.

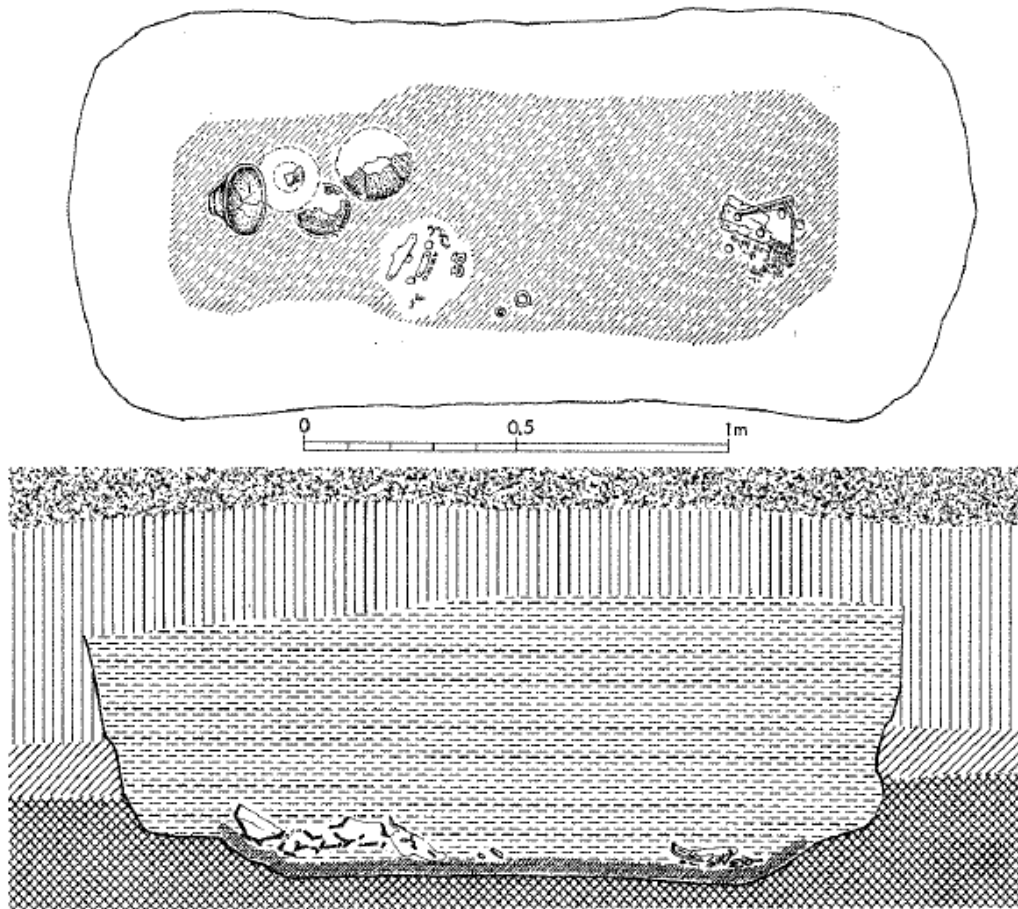


Figure 44: An example of a Varna grave cut. Plan and section drawing of Grave 2, a cenotaph burial with clay mask (from Ivanov 1988)

6.6.3 Publication

Despite the huge interest generated, in the most part, by the discovery of large numbers of gold artefacts at Varna and the numerous studies and papers written about it from its discovery (e.g., Renfrew 1978; 1986; Chapman 1991; Ivanov and Avramova 2000; Chapman *et al.* 2006; Higham *et al.* 2007) the site has never been fully published. Two short catalogues of what are considered significant graves are available, one in the publication which accompanied the international tour of the Varna gold (Fol and Lichardus 1988), and another in a 1991 volume on the Copper Age (Lichardus 1991). These present only a selection of the

entire number of burials excavated from the cemetery (36 out of the total 294), frustrating attempts to study the full significance of the cemetery. There is necessarily a strong reliance on the discussions of the cemetery found in these two publications, both of which were published before the excavations came to a complete end. A full catalogue is now being worked on, and its publication is immanent (Raiko Krauß, pers. comm.).

6.6.4 Cemetery phasing and development

Unlike Durankulak, the Varna cemetery has not been subject to detailed typological phasing. This means there is no proposed spatial development for its use. However, while typological phasing may be missing the site has been AMS dated (Higham *et al.* 2007). Higham *et al.*'s dating project took samples from human bone from 16 burials, three of which were paired with dates taken from animal bones from the same context to investigate possible reservoir effects. The burials chosen represented a relatively even spread across the cemetery site, and included graves with varying frequencies of artefacts, from none to the 'rich' graves (Higham *et al.* 2007). This approach was designed to assess the chronological development of the cemetery spatially, and to determine whether there was a chronological pattern in the distribution of 'rich' and 'poor' graves.

The results of the project indicate that there was probably not an initial central zone of use from which later burials spread, unlike what has been proposed for Durankulak (Higham *et al.* 2007). Rather, it appears that all areas of the cemetery were receiving burials from the first period of use, c. 4560 cal BC, until its end c. 4450 cal BC (Higham *et al.* 2007). Higham *et al.* have proposed that the cemetery was being used by different groups who placed their dead in separate areas, and that the use of the cemetery continued to develop simultaneously in various clusters that were related to regional origins or kinship relationships (Higham *et al.* 2007).

Modelling of the graves containing high and low numbers of grave goods indicated that 'richer' graves occurred earlier and continued for longer than the 'poorer' graves, which all dated after 4500 cal BC (Higham *et al.* 2007). The most richly furnished graves were almost exclusively cenotaphs, meaning they had no skeletal material to date. Therefore, only a single date was obtained from one of these burials, that of the adult male Grave 43, which fell within the range of the earlier, richer group of burials. The AMS dates seem to suggest that there was a greater use of grave goods in burials in the early use of the cemetery, while later in its use more graves appear with fewer grave goods. However, it must be borne in mind for both the spatial and grave good chronologies that the sample size of this project was small, representing 5% of the excavated burials, and that these patterns are tentatively suggested (Higham *et al.* 2007).

6.6.5 Burials

The burials were almost exclusively single inhumations, with the exception of Graves 28 and 29, in which the burials of adults in a supine position were found accompanied by the bones of juvenile males (Lichter 2001, 91). Due to the poor preservation and high degree of later disturbance in 25% of the graves it was not possible to discern the burial position of the skeleton. Of the remaining graves 32% (90 burials) were in an extended supine position, and 23% (65 graves) were crouched (Ivanov 1988). The majority of the crouched burials were laid on their right sides, with only four laid on their left sides and three on their chests.

A large number (47%) were cenotaph burials where no body was found (Fig. 45). Four types of cenotaph have been identified at Varna; 1, with a gold sceptre; 2, with a clay mask; 3, simple cenotaphs without either of those markers; and 4, cenotaphs with bone fragments².

² It is not clear from the available material whether these bone fragments represent the poorly preserved remains of an individual or some kind of secondary burial.

In many of the cenotaphs grave goods have been arranged as if around a body, suggesting that a symbolic burial took place without a body (Lichter 2001, 94). Such a practice may indicate the burial of individuals whose bodies were unable to be recovered, or the symbolic burial of an entity, such as, for example, a god, ancestor, house, clan or descent group. Ivanov (1988) noted that the cenotaph burials appeared to edge the cemetery to the south, forming a kind of southern boundary along the edge of the terrace (Fig. 46). There are few cenotaph burials in the central and northern areas, but a mix of extended and crouched burials occurs.



Figure 45: Cenotaph grave 4 from Varna (Ivanov 1988, 54)

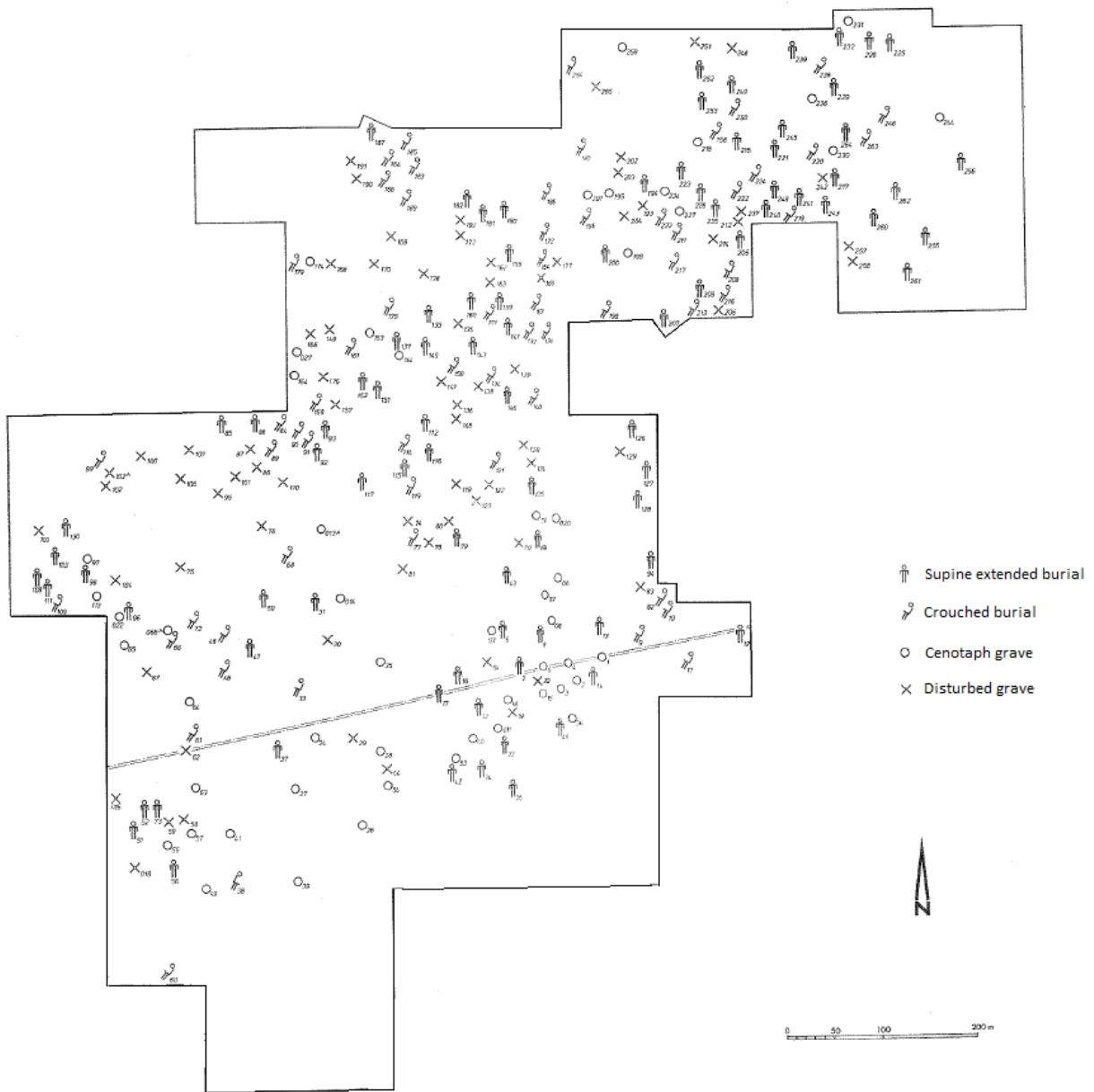


Figure 46: Plan of the Varna cemetery excavations (Fol and Lichardus 1988, Fig. 222).

The suggestions of what cenotaph burials represent are many and varied. The hypothesis that they are graves for leaders who died away from home seems unlikely – it would point to a very large number of individuals going away and getting lost or dying in warfare. Furthermore, the cenotaph graves contain on average more artefacts than graves with bodies. It would be a strange coincidence for all those with the greatest status to consistently

die away from home. The implication is that the cenotaph burials are burials of representatives or concepts: maybe they represent an ancestor, spiritual being or household.

The Varna graves were orientated to the north-west. Only 11 burials on the site deviated from this, and it would appear that none of them were Varna culture burials. Two of them were orientated east, the usual position for Gumelnița culture burials, and are considered to be of Gumelnița individuals (Slavchev 2010, 200). The remainder, orientated to the south-west and north-west are dated to the Bronze Age, with a final two being un-datable due to lack of grave goods.

6.6.5.1 Grave goods

The discovery of Varna caused a stir among the European archaeological community because of the extraordinary richness of the grave goods included in many of the graves (e.g. burial 43, fig. 47), and its status as the earliest example of worked gold from a burial context in the world (Slavchev 2010). In total about 2000 gold items were discovered associated with the Varna burials. These consisted mostly of items of personal adornment; shaped appliquéés that would have been sewn onto clothing, bracelets, and necklaces.

Nearly a fifth of graves contained traces of ochre (Lichter 2001, 91). This varies from red marks on individual bones or areas of the body to fragments of ochre in dense collections at the base of the grave pit (Lichter 2001, 91). It appears that ochre was used both before and/or during the burial on the body itself, and also in the backfilling (Lichter 2001, 91). Ceramic fragments are also commonly found in the grave fill (Lichter 2001, 91). Although no organic material has survived, fabric residues on copper items in graves 4, 5 and 40 indicate that items were wrapped, and the presence of ornaments that were obviously sewn on clothes indicates the individuals were clothed on burial (Lichter 2001, 91).

6.6.5.2 *The published data*



Figure 47: Reconstruction of burial 43 (Ivanov 1988)

Currently only 36 of the total 294 burials have been published, so it is not possible to conduct a full analysis of the cemetery. Those burials that have been published mostly represent the richest graves in terms of grave goods. The majority (16 graves) are cenotaph burials, containing no body. Seven have been identified as biologically male, three as possibly male and two as female. Only a single child is included in the currently published data while two of the individuals were juveniles, and the rest (11 individuals) were adults in the adult to mature age range.

6.6.5.2.1 *Pottery*

Pottery is the most common artefact type in the Varna published graves, with all but five of the graves containing some form of ceramic. The most frequently found type, with 30 burials containing at least one item, are vase-type vessels (Fig. 48). Other pottery types are less frequent, with bowls and lidded vessels occurring in 10 and nine graves respectively. A few forms are represented by a single item; a beaker, a rhyton (a type of pouring vessel often attributed as having ‘cultic’ functions: Biagi 2003), and a clay ‘cult’ table model. Such models

are common in south-east European Neolithic/Copper Age archaeology, but their function is uncertain. They are often associated with cultic/religious activities, and sometimes described as altars (e.g., Bánffy 1997).

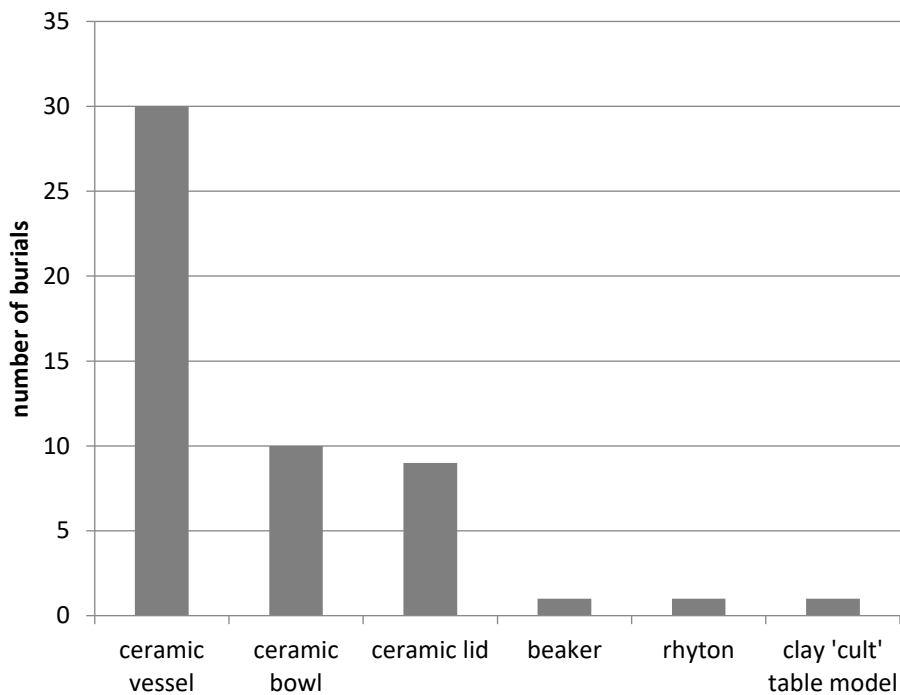


Figure 48: Graph showing the frequency of pottery in Varna graves

The majority of the vessels point to the idea of provisioning the deceased individual with food and drink in the afterlife. Any connection to feasting at the grave side during the funerary ritual seems to be contradicted by the low number of pots, although of course they could represent only the deceased's share of the event. The largest number of vessels in a burial is eight, in Grave 97, which is a cenotaph grave.

6.6.5.2.2 Adornments

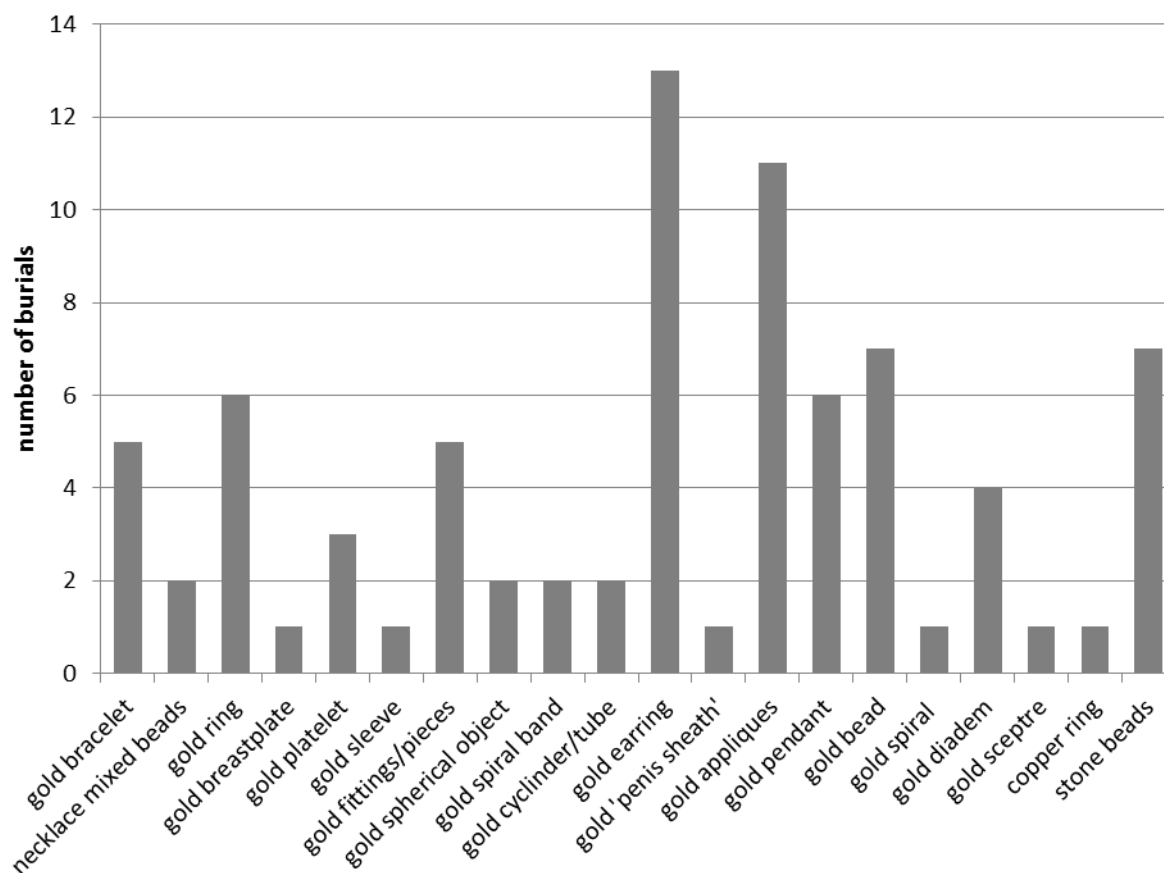


Figure 49: Inclusion of items of ornamentation in Varna graves.

The most common form of ornament placed in Varna graves was the gold earring, which were found in 13 of the 36 published burials (Fig. 49). This includes eight cenotaph burials, two of which contained clay masks with the earrings placed on the ears of the depicted face (Fig. 50). The number of earrings in burials varied from one to 16. Sixteen were found in two graves, 36 – a cenotaph with no human remains – and 43 – an adult male.



Figure 51: Clay mask from grave 2, (Ivanov 1988, Fig. 1)

Gold appliques are also common, found in 11 graves. These were thin plates of gold, some flat others convex, cut into various shapes and perforated apparently so they could be sewn onto clothing. By far the most common style was the disk or circular style, usually convex with two pairs of holes pierced in the edges

on opposite sides. This form accounts for 80% of the appliques, and is found in nine of the graves (Fig. 51). The so-called 'bull horn' appliques are found in only one burial, the

cenotaph grave 36.

They appear to represent the horns of an animal

(maybe bulls, but

also possibly sheep or goats), and have

two pierced holes in the centre.

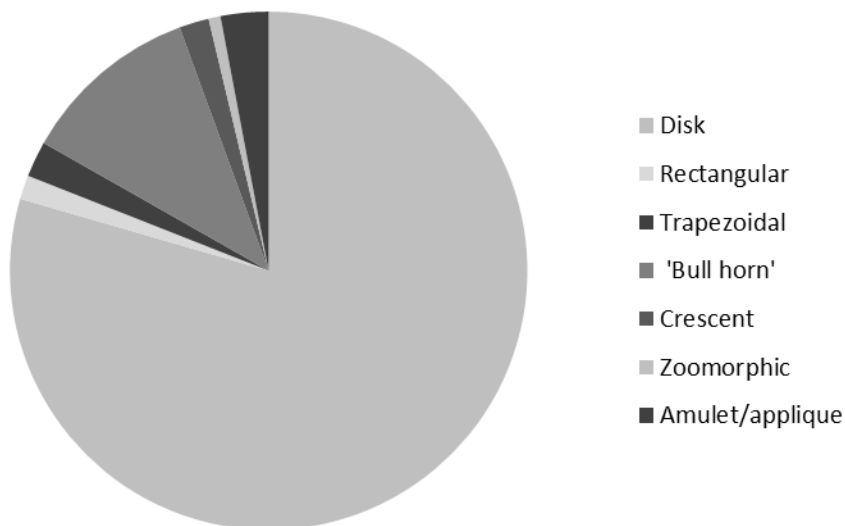


Figure 50: Types of applique in the pubisbea graves (total number of items 208)

The number of appliqués in individual graves varies from one to 74 (Fig. 52). With the exception of grave 43 the greatest number are found in cenotaph graves (Graves 1, 4 and 36).

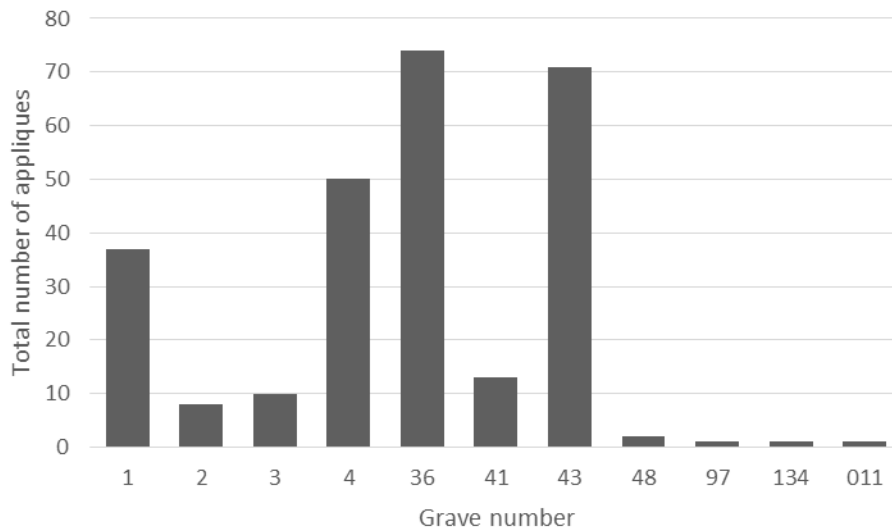


Figure 52: Total number of appliqués in graves where they occur

6.6.5.2.3 Tools

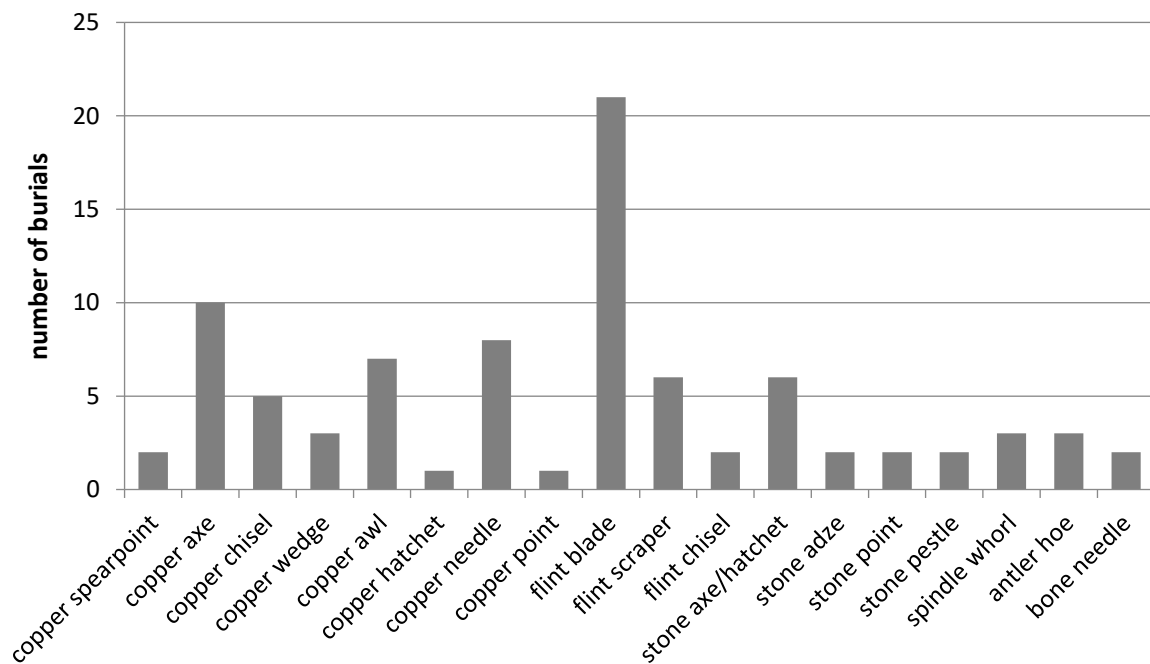


Figure 53: Occurrence of tools in Varna graves

A wide variety of tool types were placed in the Varna graves (Fig. 53). The most common was the flint blade. Other stone tools included chisel, points, axes and adzes. Copper versions of these artefacts, other than the blades, occur more commonly than the stone. This is likely due to the choice of graves published, as copper could be considered to demonstrate a greater wealth than stone. It would be interesting, upon the full publication of the cemetery, to see how the ratio of copper to stone tools varies.

6.6.5.3 Cenotaphs and inhumations

To interpret what the role of cenotaph burials was we need to understand whether they were essentially the same as graves with bodies, which would support the idea they were graves of individuals who died away, or whether they had different assemblages. As has already been noted, it is difficult to draw meaningful conclusions from the published data, as it represents only a fraction of the total burials. It is, however, a sample that has been selected on the basis of perceived wealth, based on modern standards of the significance of gold. To some extent we can assume that the same bias has influenced the selection of all the graves – what we are looking at are the ‘richest’ inhumation burials and the ‘richest’ cenotaphs. While from the available published material it would seem that cenotaph graves generally contained greater numbers of artefacts than inhumations, we can still compare the inclusion of artefacts types.

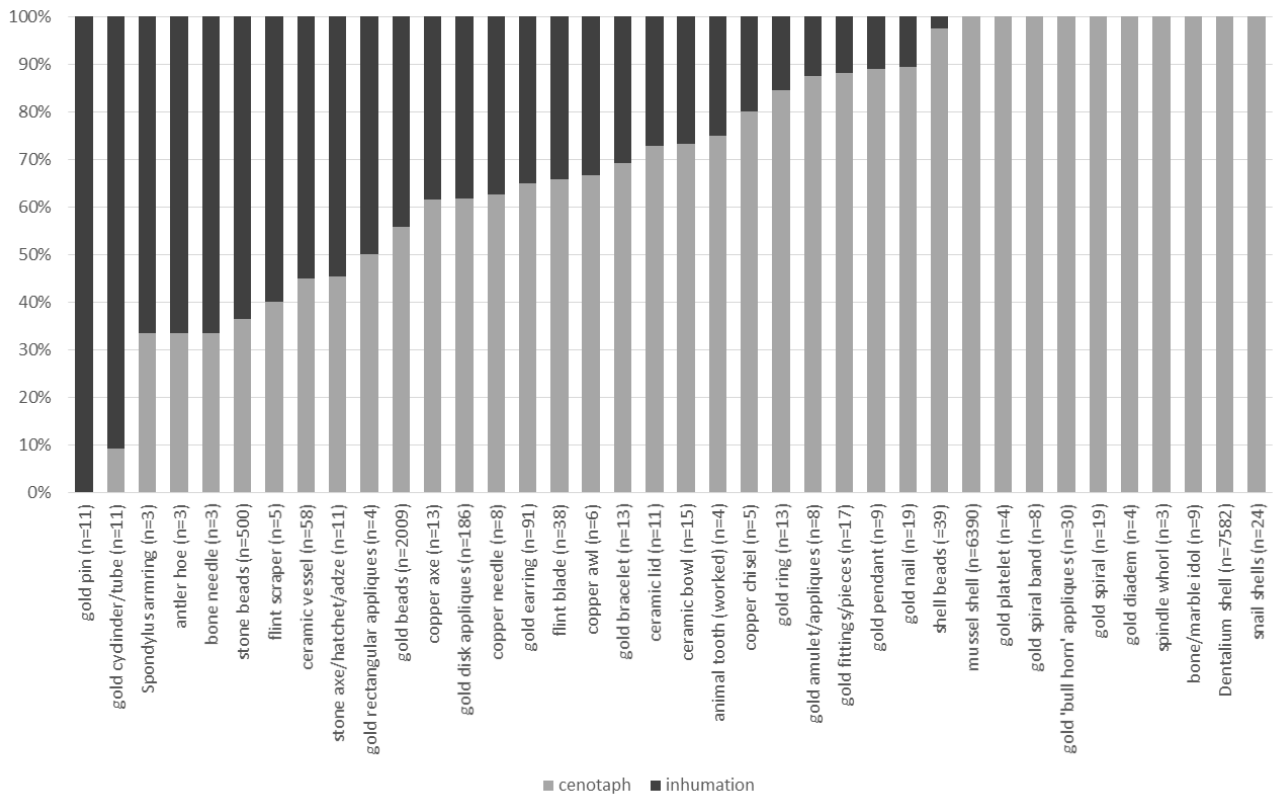


Figure 54: Items found in Varna inhumation graves in comparison to cenotaphs

Figure 54 shows artefact types as percentages (of the total number of items) found in cenotaph graves and inhumations. There is a very broad difference in total numbers. Artefact types that were only represented by one or two items were discounted. Obviously those artefact types represented by small numbers are less likely to be representative of a real pattern than higher numbers. Bearing this in mind, there are some noticeable differences.

There is only one item found exclusively with inhumations, the gold pin. However, all eleven pins come from the same individual grave (grave 25). This seems therefore to be specific to the treatment of this individual, and not bodies in general. Other artefacts occur more frequently in inhumation burials than cenotaphs, including tools (antler hoe, bone needle, flint scraper, stone axe) and types of ornament (gold cylinder, *Spondylus* arming, stone beads).

What is more interesting are the artefact types found exclusively in the cenotaph graves. These include large quantities of mussel (6390 pieces) and *Dentalium* (7582 pieces) shell, as well as much smaller quantities of snail shell.

Figurines, described as idols, are found in nine of 16 the cenotaph graves. The majority are made from bone, but one, from Grave 3, is made from marble. Only one is found per grave, however differently furnished the graves may be in other respects. What are these figurines? What do they represent? Are they a literal substitute for an absent body, or a symbol of an ancestor, god, or other entity?

It appears, from the artefact types that are placed within them, that cenotaph graves are treated in the same way as bodies. They include items of personal adornment worn on the body (finger rings, arm rings, strings of beads) and attached to clothing (appliqués), as well as tools (spindle whorls, chisels, flint blades, etc.). Taken together with the presence of the clay masks in Graves 2 and 3, also with jewellery placed on them like a human face, it seems that the ritual that took place in cenotaph graves mimicked the presence of a body. There are no items that mark inhumations as different from cenotaph graves (if we take the gold pins to be specific to a single burial).

6.6.5.4 Correspondence analysis

As has been previously mentioned, the small and deliberately selected sample provided by the published Varna burials makes analysis difficult. The selection of mostly elaborately furnished graves means that we are probably looking at a specific sub-set of the burial population. When considered alongside the small sample size, the potential of correspondence analysis did not seem promising. Nevertheless, the use of correspondence analysis in this thesis is intended to be exploratory, and some runs were made.

The variable (artefact) plot (Fig. 56) shows a high degree of overlap between the items. There are no discrete clusters, rather the artefacts form a slightly uneven parabola. This is

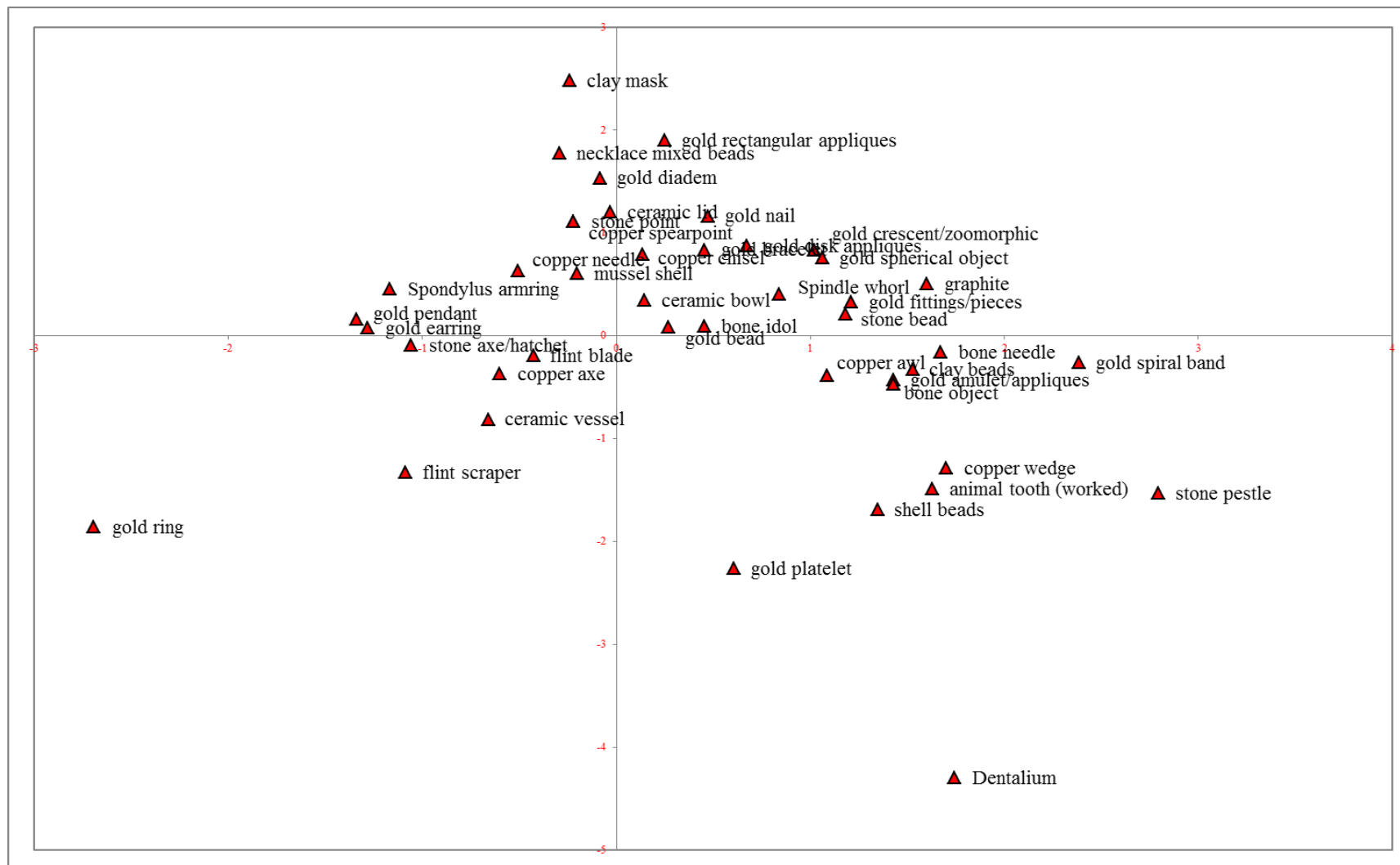
indicative of mixing between grave good assemblages, with the curve indicating that there is some sort of gradient that the inclusion of these artefacts relates to. Reference to the object (individual graves) plot (Fig. 55) leads to the tentative suggestion that this could be related to gender distinctions; males are plotting in the negatives on the y-axis, females in the positive. However, this is based on only two female and five male individuals. It seems something of a stretch of the imagination to label the area to the right (in the red dashed line) as a female area. However, the blue circle to left does contain a cluster of adult males. The cenotaph graves plot along the curve, with two outliers below, VAR40 and VAR07. These appear to be associated with the inclusion of *Dentalium* shell, an outlier on the variable plot. As has already been noted, *Dentalium* is only found in cenotaph graves. Its presence as an outlier in this plot, while other artefacts found exclusively in cenotaph graves, such as mussel shells, plot centrally, indicates there are other factors linking graves across the cenotaph/inhumation category. There is a lack of clear patterning to indicate which other artefacts are involved in these factors.

Further runs, excluding obvious outliers, have not revealed any more distinct patterns or clustering of objects that would denote the presence of standardised grave assemblages for certain individuals or identities.

6.6.6 Summary

Until Varna is fully published we cannot have a holistic understanding of the individuals buried in the cemetery or the burial population as a whole. However, those, mostly lavishly furnished, graves that have been published provide a large number of artefact types to analyse. Due to the nature of the published graves (the majority of which were either cenotaphs or unsexed adults) the usual interrogation of sex and age differences was not attempted. Instead, the key difference was between cenotaph and inhumation graves. Cenotaphs were generally much more lavishly furnished, with greater amounts of gold.

Interestingly, mussel and *Dentalium* shells, both found in large quantities, were only found in cenotaphs. The correspondence analysis, however, does not indicate a strong distinction between cenotaph and inhumation. Instead, in general artefact types could appear in either grave type, and may indicate that the cenotaphs were the symbolic burial of some kind of body.



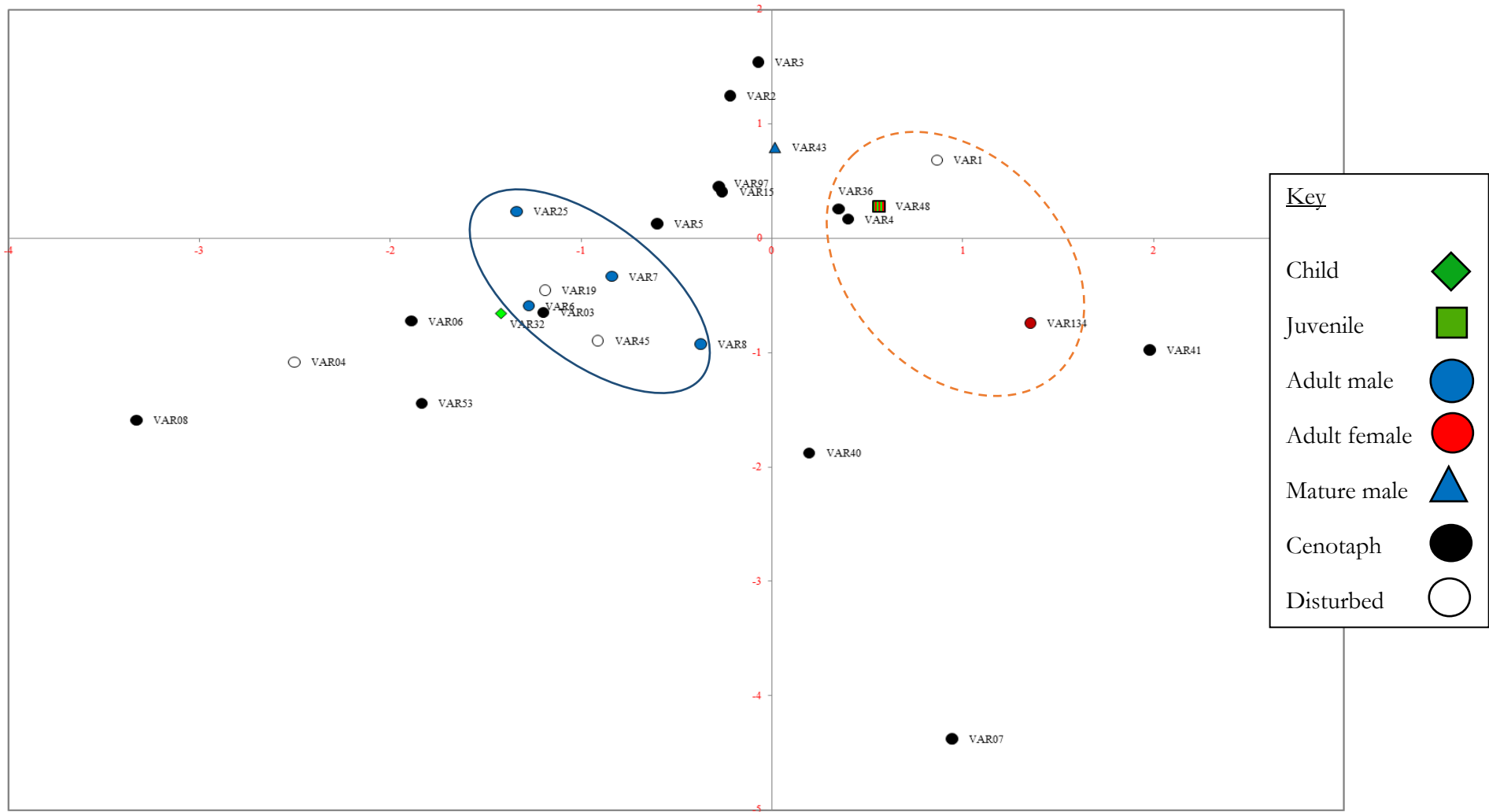


Figure 56: Object (graves) plot on 1st and 2nd principal axes

6.7 DISCUSSION: CEMETERIES IN THE EASTERN REGION AND THE CREATION OF PERSONAE THROUGH OBJECTS

The three cemeteries of Cernica, Durankulak and Varna represent a chronological spread from c. 5000–5200 cal BC to c. 4500–4400 cal BC, and the range of their use covers the first appearance of cemeteries, the appearance of and establishment of the use of copper, and the first use of worked gold in a burial context. Yet while each of the cemeteries reveals novel practices in the burial tradition of south-east Europe it is also possible to trace within them connections with the preceding periods which point to commonality of traditions and a shared mythical understanding.

Through the Late Neolithic and into the Copper Age burials become more elaborate and the number of grave goods placed in the grave increased. With new raw materials came increasing opportunities for material display. While often considered to be signifiers of status or wealth, I argue that objects could also have represented roles or positions that an individual occupied in society (chapter 3). What was expressed and how was specific to each community, but similarities can be identified.

6.7.1 Murkiness

The correspondence analysis of Cernica and Durankulak indicated that there were some forms of burial treatment, in terms of inclusion of specific types of grave good, which related to aspects of social identity. For example, at Cernica there was a small group of adult males with animal bones in their graves that were quite distinct, possibly representing a specific male role or social position (Chapter 6.4.8). At Durankulak, the correspondence analysis

revealed clustering of male and female graves around specific grave goods. For example, a small group of female graves were associated with bone finger rings (Chapter 6.5.7).

However, despite these and other examples of apparent trends demonstrated in the correspondence analysis the data do not show strong patterning. Other than the small cluster of adult males associated with animal bones in the Cernica plots, there is a large degree of overlap of both sexes and age ranges (Figs. 19 and 20). Neither age nor sex, therefore, were dominant factors in the choice of grave good these people were buried with. At Durankulak too, although there were parts of the plot containing no male or no female burials (unsexed juveniles and cenotaphs were also present in the noted male and female clusters), for the majority of the graves, males and females were overlapping (Fig. 37).

While these correspondence analyses do not make the case for strongly sex-based gendered associations within burial practices, they are nevertheless revealing about the communities burying the dead at these two sites. It demonstrates that at both sites gender and age were not dominant aspects of social identity. The inclusion of the same kinds of grave goods, especially tools, in a variety of graves indicates that social roles were not exclusively divided on gender or age grounds. In the case of Durankulak these findings directly contradict the claims of the excavators that the community had a strong sex-based gender divide.

It appears that gender was more fluid, with many activities not being strictly defined by gender or age. Furthermore, there is little indication for differentiation of status by use of grave goods, other than in the total number of items within the grave. The group of females associated with bone finger rings from the Hamangia phase (a, Fig. 37) and the group of males and females associated with copper artefacts from the Varna phase (d, Fig. 37) at Durankulak could be status related, but otherwise there is little clustering around individual artefacts or artefact types. The picture that the correspondence analysis paints is that while

grave goods may have played an important role in the expression of a variety of aspects of the deceased's identity, they were not part a distinct categorisation of individuals into specific social roles. The murkiness of the results, rather than being inconclusive indicates that individual identities consisted of many aspects, of which included but was rarely dominated by gender and age.

6.7.2 Burial position and the deep past

All three cemeteries contain primary inhumation burials. There is no evidence of other forms of burial (cremation, exhumation, secondary burials) on these sites, although the possibility other forms of funerary practice were used by the communities should not be excluded. Certainly, at Cernavodă, believed to be roughly contemporary with Cernica, there is evidence of secondary burial practices in some areas (Kogălniceanu 2009b). Positioning of the body varied, in each cemetery there were a mixture of extended and crouched or flexed burials. Crouched burials are largely absent from Mesolithic Europe and the practice probably originated in the Near East and spread into Europe as part of the

'Neolithic package'. Crouched burial was the norm for Early and Middle Neolithic cultures across south-east Europe, and the reappearance of the use of the extended burial position in the Late Neolithic is curious.

Attention has been drawn to the apparent correlation between the re-emergence of extended supine burials in the Late Neolithic and the

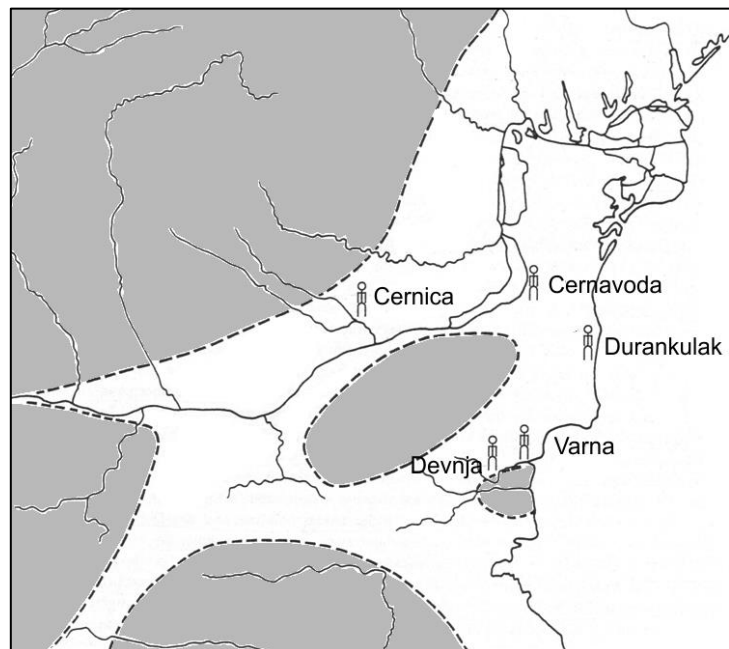


Figure 57: Distribution of cemeteries with extended burial position in comparison to areas of known Early/Middle Neolithic activity (grey) (after Lichter 2001, 71)

Neolithisation of new areas containing no Early or Middle Neolithic finds, including the Black Sea coast (Lichter 2001) (Fig. 57). It has been suggested that the use of extended burials in the Black Sea coast and Lower Danube regions at the start of the Late Neolithic represents newly Neolithised communities containing local, previously hunter-gatherer populations who retained some aspects of their preceding cultural repertoires (Lichter 2001; cf. Borić 2015a). The origin and meaning of burying an individual in a crouched position was rooted in a different mythical vocabulary to that found in Mesolithic Europe (Borić 2015a).

In this scenario the predominance of extended burials at Cernica (84% of the burials were in an extended supine position, while a further 9% were extended but on their left or right sides) is interesting. The cemetery had been thought to represent some of the earliest Neolithic activity in the region, but our dating project has indicated that it may belong to a later phase. The preference for extended burial points to the maintenance of preceding local worldviews, while the occasional crouched burial may indicate individuals from a different community or who have adopted new ways of thinking about death.

At Durankulak both body positions are also used. The ratios change from the early Hamangia phases (I-II) which is predominantly extended (46% extended, 14% crouched, 2.5% cenotaph, remainder undeterminable) to the final Hamangia phase (IV) and Varna period when extended burials are still more common, but less significantly so (38% extended, 29% crouched, 7% cenotaph, remainder undeterminable). The community/ies burying their dead at Durankulak used two different ways of treating the dead body, showing that cultural differences in the understanding of death were being negotiated by the community.

Other cultural elements that might have related to pre-Neolithic identities at Durankulak include the use of red deer canines and wild animal skulls in burials (Todorova 2002, 46-47) (Fig. 58).

There was a marked decline in burying individuals with animal bones in the Varna period.

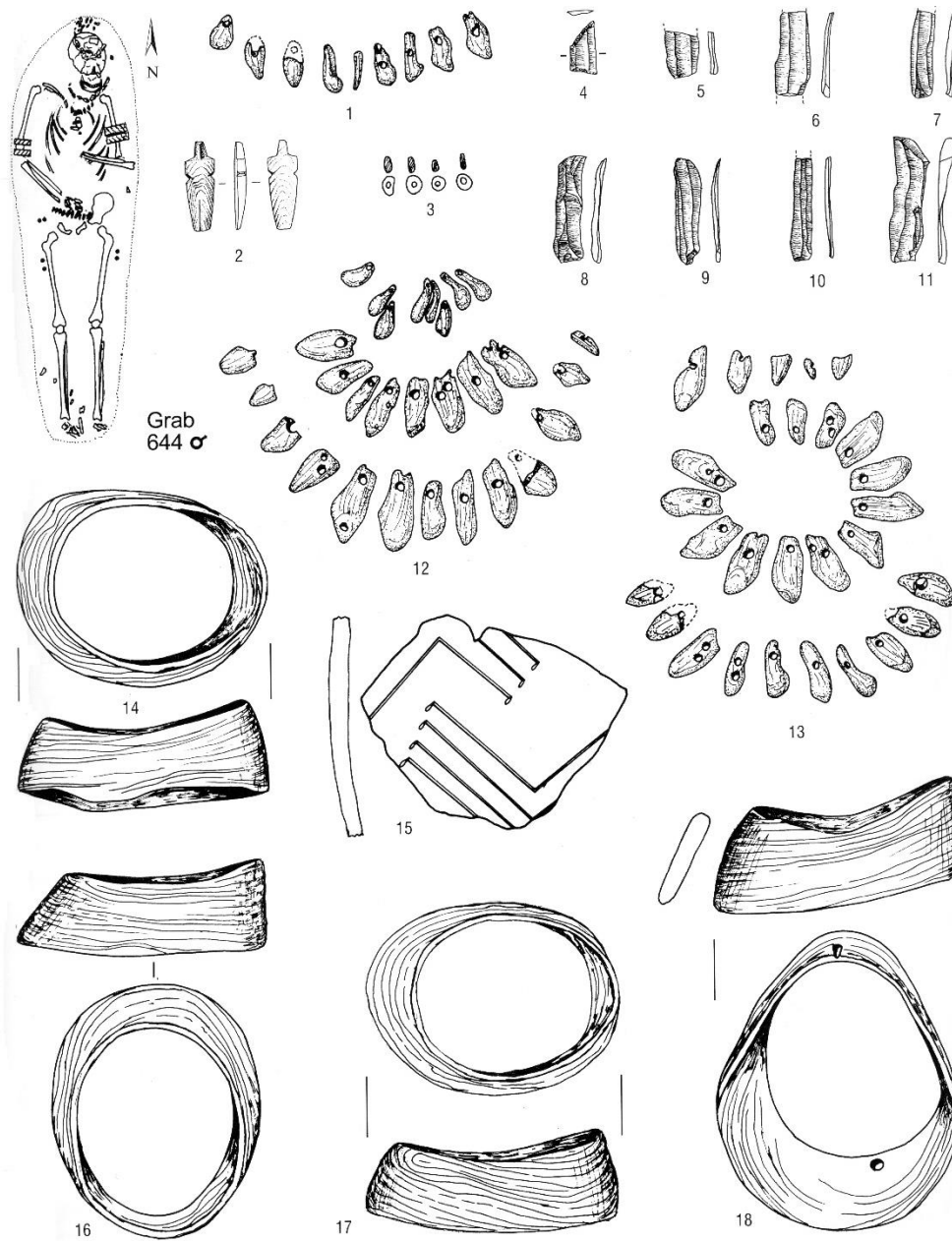


Figure 58: Example of an extended burial from Durankulak, grave 644, with perforated red deer canines (Todorova 2002, plate 111)

During the Hamangia period 20% of males were accompanied by wild animal remains, mostly of the wild ass (*Equus hydruntinus*). By the Varna phase only five individuals, just over 1%, were buried with wild animal bones, while a further seven had bones of domesticates.

At Varna cemetery there is a similar ratio to the Varna phase at Durankulak. 32% are in an extended position, 23% crouched (although the proportion of cenotaph burials is much higher at 47%). This is not surprising; the two are considered to belong to the same cultural entity, and we would expect to see similarities in ritual practices such as funerary rites as well as in material culture. Elements of the burial practices in the Lower Danube and Black Sea coast region are harking back to two distinct preceding traditions. The inclusion of both traditions in a single cemetery shows that the community was integrating different ideas and reconciling contradictions in worldviews.

6.7.3 Orientations and long term cohesion

All three of the cemeteries have a dominant burial orientation (Cernica west, Durankulak north and Varna to the north-west) with little deviation. A north-western orientation appears to have been a tradition among Varna period cemeteries on the Black Sea coast, but is anomalous in comparison with contemporaneous cemeteries in other parts of south-east Europe (Lichter 2001). 60% of Iclod culture burials, in the Carpathian hills (Transylvania), were orientated west, however, in comparison neighbouring Late Neolithic Gumelnița culture cemeteries favoured an eastern orientation (Lichter 2001). While the orientation of burials does not therefore represent a tradition shared regionally, on an individual site basis it demonstrates a clear need for repetition of practice over long time periods. There was a 'right' direction to bury the dead.

Alongside this agreement in burial direction there is also very little intercutting of burials on any of the sites, despite the cemeteries being in use for at least several generations. We have to assume that graves were marked in some way on the surface. Were these markers simply about practicality? It seems likely that they would also have had a mnemonic value which allowed the

community to remember individuals or mourners to return. Whether these memories were actively retained or whether they quickly faded into the grave of just another ancestor is difficult to say.

6.8 SUMMARY

This chapter discusses three cemeteries, Cernica, Durankulak and Varna, from the Lower Danube and Black Sea coast region. Between them activity at these cemeteries covers the period from the Late Neolithic, c. 5000 BC, to the end of the Copper Age, c. 4300 BC. The graves of each cemetery were analysed using univariate and multivariate techniques to draw out patterns and trends relating to types of grave good and burial position. The possible statuses, roles and identities that these may represent was discussed.

The Hamangia phase at Durankulak, dating to before 5000 cal BC, is some of the earliest known Neolithic activity in the Lower Danube region. The use of two separate burial positions with different cultural associations (extended burial with local pre-Neolithic hunter-gatherer populations, crouched burial with new farming groups from the Early Neolithic onwards in south-east Europe) suggests that the communities using Durankulak and Cernica to bury their dead were assimilating new traditions, which involved reconciling two different worldviews and understandings of death. The burials also feature a new practice for south-east Europe; the inclusion of multiple grave goods. These are in much smaller number than are found in later cemeteries, and display only weak associations with possible identities.

In the late Varna phase at Durankulak we continue to see a combination of crouched and extended burials. Perhaps now the different understandings of death have been reconciled, and what we see is burials that are part of the same tradition but with different meanings. The average number of grave goods placed in a burial increased, and along with this overall increase

there is also a greater use of artefact types to display identities which the deceased had. Tools used in daily activities and jewellery used to display social statuses were placed in the grave.

The Varna burials represent a peak in the trend seen through these case studies for an increase in numbers of grave goods over time. The items placed in the graves at Varna were signifiers of the deceased's roles and identities. The lack of clear grave good assemblages (within the available dataset) suggests that society was not strictly stratified or divided. Rather, social roles and statuses were fluid, and dependent on individual's actions through life. Cenotaph graves were something different; there were artefact types found in cenotaphs that could not be placed in inhumations. The implication of this is that these graves are not simply graves for those whose bodies were never found, as they were not treated as other individuals. Instead, cenotaphs, often including figurines or clay depictions of human faces, stand for something greater than an individual, whether that be ancestors, clans, houses, or something else.

7 CASE STUDIES OF THE WESTERN REGION

“The dead are celebrated. The dead are loved. They give something to the living. Once you have put something in the ground, Doctor, you always know where to find it.”

- Tea Obreht, *The Tiger’s Wife*

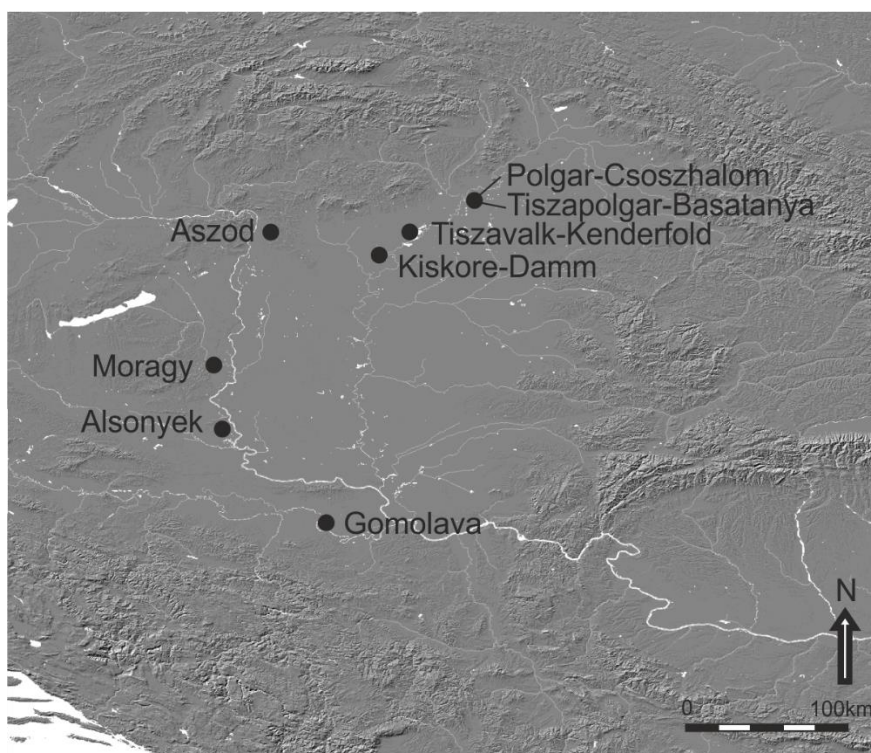


Figure 59: Topographical map of the western region showing case study sites

7.1 INTRODUCTION

The region that forms the second case study of this thesis largely equates to the area covered by the Pannonian Plain and Transdanubia, and is separated from the eastern region by the southern extent of the Carpathian Mountains, commonly known as Transylvania. The emergence of the cemetery phenomenon in this region appears to have taken a different trajectory to that of the Lower Danube and Black Sea coast. During the Late Neolithic (c. 5100–4500 BC), burial continued to be on settlements, although in larger numbers than in earlier phases, and generally

in small clusters of graves. The increase in the inclusion of grave goods, seen at this period in the eastern region, also occurred with these settlement burials, indicating a similar process of increasing expression of identity through personal adornment. It was not until the Early Copper Age (c. 4500 – 4000 BC) that fully extramural cemeteries appeared, and they were generally much smaller than those found in the Lower Danube and Black Sea coast.

Much excavation has been carried out in Hungary (which contains the majority of the case study area) over the last twenty years, due to numerous infrastructure developments (Raczky *et al.* 1997). A number of extraordinary sites have been discovered, which have advanced our understanding of the Late Neolithic and Copper Age in this region. Many of these are as yet only published in preliminary stages. However, it would be impossible to ignore them in the writing of this chapter. Other notable sites, excavated in the mid-twentieth century, also remain only partially published. Therefore, this chapter will take a slightly different format to Chapter 6, with less emphasis on a few large, detailed case studies, and greater use of partially available information. Even so, it is not possible to assess all of the known burial sites from the area in the detailed approach this study calls for, and a number of well-known sites are necessarily excluded (for example, the tell site of Öcsöd-Kováshalom and the flat site Zengővarkony).

7.2 GEOGRAPHY

The western region case study area falls within the Carpathian Basin, and comprises of the geographical areas of the Pannonian Plain, Transdanubia, and the western Balkans (Fig. 59).

The Pannonian Plain is bounded by the Carpathian Mountains to the north and east, the Balkan Mountains to the south and the Danube to the west. It is a vast, flat low-lying area crossed by numerous meandering rivers and streams flowing from the Carpathians into the Danube. The majority of the Plain lies in Hungary (where it is known as the Great Hungarian Plain or *Nagy Alföld*), but which also extends into western Romania and northern Serbia.

Transdanubia is the region of Hungary to the west of the Danube, extending to the foothills of the Alps, bounded to the south by the Drava and Mura rivers. Topologically it is a mixture of plains, hills and valleys.

The western Balkans consists of the mountainous regions of the countries of the former Yugoslavia, south of the Pannonian Plain. The main mountain range, the Dinaric Alps, extends from Slovenia through Croatia and Bosnia and Herzegovina to Montenegro. These mountains extend down to the Adriatic coast.

There is a sharp distinction between the frequency of known burials from the Pannonian Plain and Transdanubia, and the western Balkans (Lichter 2001). On the Plain and Transdanubia burials are frequently encountered from the Early Neolithic onwards, but south of the Sava they are rare. This may partially be to do with research bias; the mountainous regions of the western Balkans (central Serbia, Bosnia and Herzegovina, and Croatia) make the identification of archaeological sites more difficult. However, it is also likely to be related to real population differences in the past. Some Neolithic communities seem to have preferred the fertile riverine environments to hilly and mountainous zones.

7.3 EARLY AND MIDDLE NEOLITHIC BURIAL RECORD

The Early Neolithic in the western case study region, c. 6500–5500 BC, is represented by the Starčevo-Körös-Criş cultural complex (see chapter 5.4). The Adriatic coast is not included within the case study, as it appears to originate from a different strand of Neolithisation via the Mediterranean (Robb 2007). There were certainly some interactions between the Early Neolithic Impresso culture of the coast and Starčevo in Central Bosnia (Lichter 2001, 165), but by and large the coastal region's influence on the Pannonian Plain seems to have been limited by the barrier formed by the Dinaric Alps.

As was the case for the eastern region (Chapter 6), burials from the Early and Middle Neolithic (5500–5100 BC) in the western study region are almost exclusively from settlement contexts.



Figure 60: Burial inside an oven, from Alsónyék-Bátaszék (Bánffy et al. 2010, 42)

This includes burials made under house floors (e.g., Topole-Bač, Serbia), alongside house structures (e.g., Divostin, Serbia) (Lichter 2001, 168), associated with or in oven structures (e.g., Alsónyék-Bátaszék (Fig. 60) Bánffy et al. 2010, 42) and burial in what appear to be general refuse pits.

This is the most common find context for Early Neolithic burials (Lichter 2001, 169). Contextual information indicates that these burials were made during the period of occupation of the settlements, and not after their abandonment (Lichter 2001, 170). However, there are problems with site stratigraphies in general and identification of grave cuts in particular. Alongside a lack of association with grave goods and a poor understanding of relationships with datable artefacts, this means that most of the known burials from the Early and Middle Neolithic are not confidently phased (Lichter 2001, 165).

The majority of burials were single primary inhumations, with some differentiation between regions. Double and multiple burials were far more common in the Starčevo contexts, while few are known from Körös and Criș sites (Lichter 2001, 171-173). At the site of Obre I, Bosnia and Herzegovina, finds of single or groups of unarticulated human bones indicate a practice of secondary burial, which appears to be unique in the Early Neolithic record (Lichter 2001, 169).

Publication of Early Neolithic burials is generally scanty. Information on the age and sex of the burials is available for only two-thirds of the known finds. A high proportion (40% based on

Lichter's 2001 work) of these burials were of children, while less than 5% were juveniles (Lichter 2001, 170). 55% were adults. Female burials are more common than males, with females making up 68% of the adults that were sexed, and males making up 32%. These profiles are similar across the different groups of the Starčevo-Körös-Criş complex.

The most common burial position is crouched, with burials on either their right or left sides. The position of a third of the burials from the Early Neolithic is undetermined; human remains are present but it is unclear whether they have been disturbed or are partial or secondary burials (Lichter 2001, 174).

7.4 LATE NEOLITHIC SETTLEMENT BURIALS

Unlike in the eastern region of this study, the sharp increase in grave goods did not occur simultaneously with the adoption of extramural cemeteries in the Carpathian Basin. Instead, an increase in the number of grave goods associated with burials is seen on Late Neolithic (5100–4500 BC) settlements, where burials were still taking place intramurally (Osztás *et al.* 2016; Siklósi 2013).

Although the spatial relationship between the living and the dead did not change so drastically as in the Lower Danube and Black Sea coast there were still differences in the locations used for burial from the preceding period, which indicates a shift in thinking about the dead. While during the Early and Middle Neolithic burials were commonly found within settlement features, including refuse pits and under house floors (Oross and Marton 2012; Lichter 2001; Borić 2015a), these Late Neolithic burials were being placed in what appear to have been burial zones, or clusters. Generally, disused areas of the settlements were used for burial (e.g., Aszód – Kalicz 1985; Öcsöd-Kováshalom – Raczky 1987, 80), with evidence for these areas shifting as areas where housing was built also moved. On some sites there does not seem to be any patterning to the placement of burials beyond this use of 'empty' space, but at others burials seem to be

associated with a specific house (see Kisköre-Damm 1.4.3). Burial rows can also be identified at some sites, demonstrating a deliberate continuity of placement (e.g., Kisköre-Damm).

A change in attitudes towards the dead or death can be seen not only from the spatial change in burial placement, but also in the graves themselves. Bodies were placed in purpose-dug, usually regular grave cuts, rather than the previous tendency for them to be placed in already dug, and indeed in-use, refuse pits (Borić 2015a; Lichter 2001, Siklósi 2013). In some cases, such as at Alsónyék-Bátaszék (Zalai-Gaál 2008, 51; Zalai-Gaál and Osztás 2009), Hodmezővasarhely-Kokenydomb and Hodmezővasarhely-Gorzsa (Horváth 1989) there is evidence for some kind of wooden grave construction. Such elaboration of the grave has been connected by Istvan Zalai-Gaál (2008) to high status individuals.

The use of the extended burial position appeared in north-east Hungary in the Late Neolithic. It is known from Polgár-Csőszhalom tell and flat settlements (Bánffy and Bognár-Kutzián 2007, 195–205; Raczky and Anders 2006, 28–29), and was almost exclusively used at Kisköre-Damm (Korek 1989). Adoption of this practice was limited. In the central Tisza area, for example at Vésztő-Mágor (Hegedűs and Makkay 1987, 91), Szegvár-Tűzköves (Korek 1987, 58) and Öcsöd-Kováshalom (Raczky 1987, 80), burials were placed in a crouched position on either their right or left sides, as they were to the south of the Plain at Gomolava (Borić 1996; Bruckner 1988). In Transdanubia the Lengyel burials remained almost exclusively crouched (Lichter 2001, 242).

Lengyel influence is known to have spread across the Pannonian Plain based on the existence of Lengyel type pottery on a number of sites. The site of Pusztaköny-Ledence is a settlement on the Great Hungarian Plain attributed to the Tisza culture. Excavation in advance of a river regulation scheme in 2011 uncovered a flat settlement site of 2.5 hectares (Sebők 2012). The site had 10-15 houses with associated settlement features, and 14 graves distributed in no particular pattern around the settlement. Although in some respects the funerary practice appears to be typically Tisza, with rectangular graves, bodies laid in a supine extended position, and women

and children being buried with a bead girdle, other aspects are not typical. In particular, the number of pottery vessels placed in the grave is much higher than is usual for Tisza burials, which normally only have one (Sebők 2012). Although the site has not yet been fully published the preliminary report states an average of four vessels from the Pusztatakony-Ledence burials, with the most in a single grave being seven, in burial 1–36. This is sharply different to normal Tisza burials, when we consider that from the rest of the Tisza area only two burials are known to contain three vessels, and none have been found with more than three.

The cemeteries discussed below cover the range of the Carpathian Basin's geographical areas and culture-historical groups (as outlined in Chapter 5). They have been sub-divided into two regions, the Pannonian Plain (section 7.5), with Kisköre-Damm and Polgár-Csőszhalom to the north and Gomolava in the south of the Plain, and the Lengyel sites (section 7.6) of Alsónyék-Bátaszék and Mórágý-Tűzkődomb in Transdanubia and Aszód to the northeast of Budapest.

There is considerable disparity between the sites in terms of the excavation standards and publication status, making a simple single-methodology cross-comparison unworkable. A full inventory of the burials found and their associated graves goods is unavailable for Alsónyék-Bátaszék, Polgár-Csőszhalom and Gomolava. Consideration of these sites will necessarily be more discursive, but each of them has an interesting aspect which led to their inclusion. Alsónyék-Bátaszék has been extremely well excavated, and is now part of *The Times of Their Lives* (ToTL) European-wide dating project, meaning that it will be the best understood site in terms of chronology. Polgár-Csőszhalom is a tell settlement surrounded by a flat site, both of which were used for intramural burial. As such, it provides an interesting comparison for treatment of burials on the two types of settlement. It too has been the subject of a radiocarbon project, and a new chronology has been created for the whole site (Raczky *et al.* 2015). Gomolava is particularly interesting in terms of identity and gender, because it appears to have been used exclusively for burial of males, a practice seen nowhere else in this period. The remaining sites, Kisköre-Damm,

Aszód and Mórágý-Tűzkődomb have been published in more detail, and will be approached in a way similar to that used for the eastern case study region (Chapter 6).

7.5 ON THE PANNONIAN PLAIN

7.5.1 Kisköre-Damm

The Hungarian town of Kisköre is located to the north of the Pannonian Plain, on the western bank of the Tisza. During the construction of a dam on the Tisza in 1962 a local school teacher reported the presence of burials. This prompted archaeological work to be carried out ahead of the construction of a power plant on the adjacent site between 1963 and 1966 (Korek 1989, 23). Unfortunately, part of the site had already been destroyed by 19th-century flood defence earthworks, but a total of about 3500 m² was excavated. The excavations have been well published, with detailed trench descriptions and a catalogue of the burials and grave goods, as part of a regional synthesis by the excavator, József Korek (*Der Theiß-Kultur in der mittleren und nördlichen Theißgegend*, 1989), which also included an osteological analysis of the skeletons by Imre Lengyel.

The excavation uncovered three phases of settlement on the site, from the Middle Neolithic AVK, Late Neolithic Tisza and Early Copper Age Tiszapolgár. Four burials were found from the AVK period, with a possible fifth that cannot be securely dated (Korek 1989). The Late Neolithic settlement evidence was most extensive, with six houses identified and 31 burials found (Fig. 61). The excavated area covers only a part of what was a flat settlement of unknown proportions.

7.5.1.1 *The burials*

The Late Neolithic burials at Kisköre-Damm are a roughly even mixture of males (nine burials), females (11), and children (11). Although children are well-represented, there are no infant

burials or children under the age of two and a half. These individuals are certainly missing from the burial record.



Figure 61: Plan of the Kisköre-Damm excavation, adapted after Korek 1989 and Chapman 2000a. The AVK burials are shaded red, the identified houses are shaded grey

All of the Tisza phase burials at Kisköre-Damm are buried in an extended supine position, although one adult male (burial 15) has its legs slightly flexed to the left. Extended burial is considered typical for the Late Neolithic on the Pannonian Plain (Chapman 2000a). However, it is worth bearing in mind that body position was used to phase the burials, and in the graves with no artefacts exclusively so.

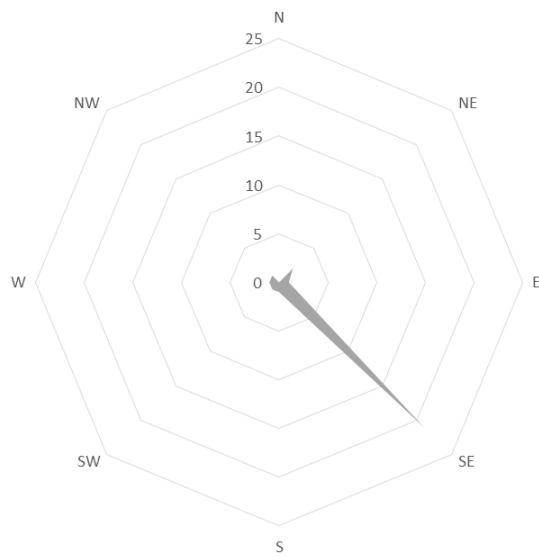


Figure 62: Orientation of burials at Kisköre-Damm (by total number of burials)

The burials are orientated predominantly with their heads towards the south-east (Fig. 62), demonstrating a strong community tradition. A few individuals deviate from this. Most notably burial 24, a 10-year-old child, is buried with the head towards the south-west, the orientation of the LBK burials from the site. In the site publication it is noted that the orientation is unusual, but that the grave goods accompanying the burial make it unquestionably of the Tisza culture date.

7.5.1.2 Grave goods

14 (47%) of the 31 Tisza phase burials contained no grave goods. Of these, burial 2 was very badly disturbed, and burial 31 had also been disturbed, so it is possible both originally contained grave goods. If we discount these two, then almost half of these burials were children (five individuals), another five were adult males, and three were adult females.

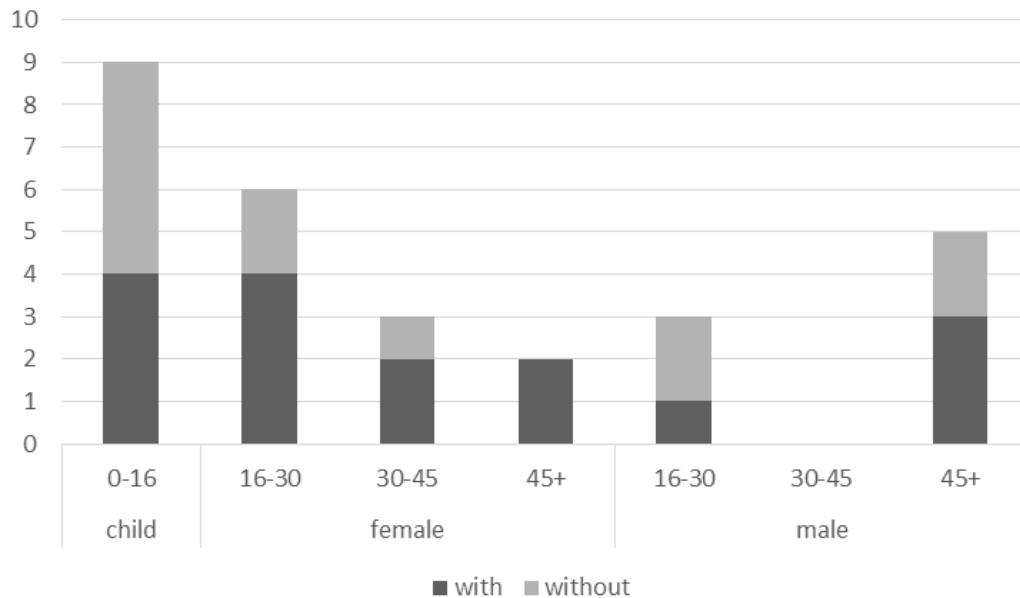


Figure 63: Burials with and without grave goods, broken down into age and sex categories

The anthropological assessment of the burials allows for further sub-division of age categories. As has already been noted, there are no infants, but there are nine, un-sexed, children between the ages of 3 and 16 years (Fig. 63). The adults have been sub-divided into three age groups: 16-30, 30-45, and over 45. The use of these groups, rather than the usual anthropological sub-divisions, was necessitated by the age ranges provided for the burials; they are the smallest sensible sub-divisions that the majority of the burials fit into. Burials which could not be aged or sexed are omitted. No male burials were present in the 30-45 age group.

While the overall number of female burials reduces as age increases, the proportion of burials provided with some form of grave good increases for the older women, from two-thirds having grave goods in the ages from 16-45, to all having grave goods in the oldest category (Fig. 63). For the males it is a similar story, although the overall number of burials increases; only one-third (33%) have grave goods in the 16-30 age group, while 60% have them in the over 45 age group.

This pattern of an increase in grave goods with age is certainly plausible, and is seen in other burial populations in the region. However, it is important to bear in mind that these figures are based on very small numbers of burials, and so we should be wary of extrapolating too much from them. Certainly, within the age/sex groups themselves there is a good deal of variety in the number of grave goods placed in a grave. For example, of the male burials over 45 years, one, B. 32, contained only limestone beads, while another, B. 36, had a limestone bead and animal tooth necklace, two *Spondylus* armrings, a limestone bead bracelet, various shell beads, a vase, and a flint blade. Furthermore, while less than half of the child burials contained grave goods, one of them, B. 4 of a 2.5–3 year-old child, was as richly ornamented as many of the adults, being buried with two limestone bead necklaces, one also with perforated deer teeth, a *Spondylus* armband, as well as a bowl. These variations demonstrate that while age may have been a factor in the number of grave goods an individual was buried with, it was not the only factor. There was clearly another social factor involved in this inequality, and what is more this seems to be inherited, possibly relating to status, wealth, or hereditary roles, as young children are among the ‘wealthier’ burials.

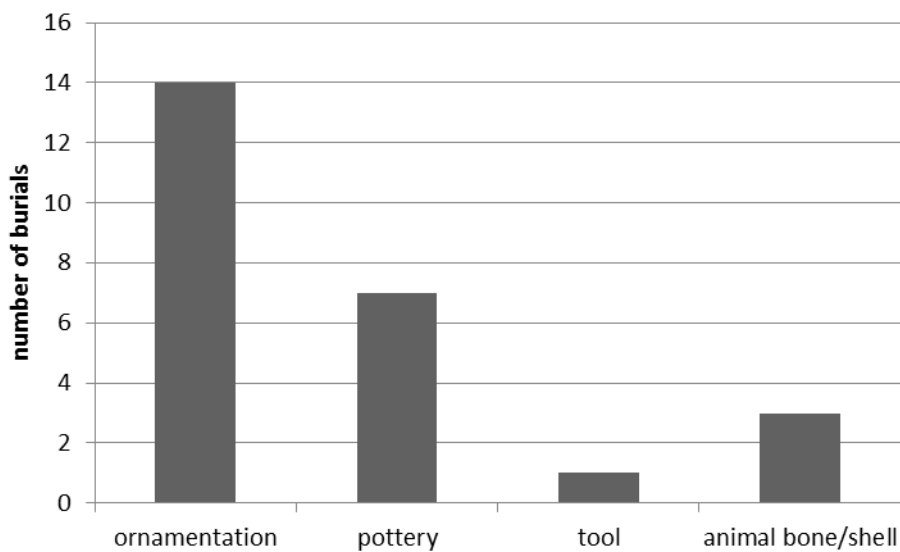


Figure 64: Number of graves containing different artefact types

The artefacts placed in the Kisköre-Damm burials are predominantly items of adornment (Fig. 64). This includes 16 composite items, made of a variety of types of bead (limestone, clay, shell and deer tooth) whose find location on the body lead them to be interpreted as headdresses, girdles, necklaces and bracelets (Fig. 65). There are eight *Spondylus* armrings, with two appearing in three burials (adult female burials 1 and 21, and adult male burial 36).

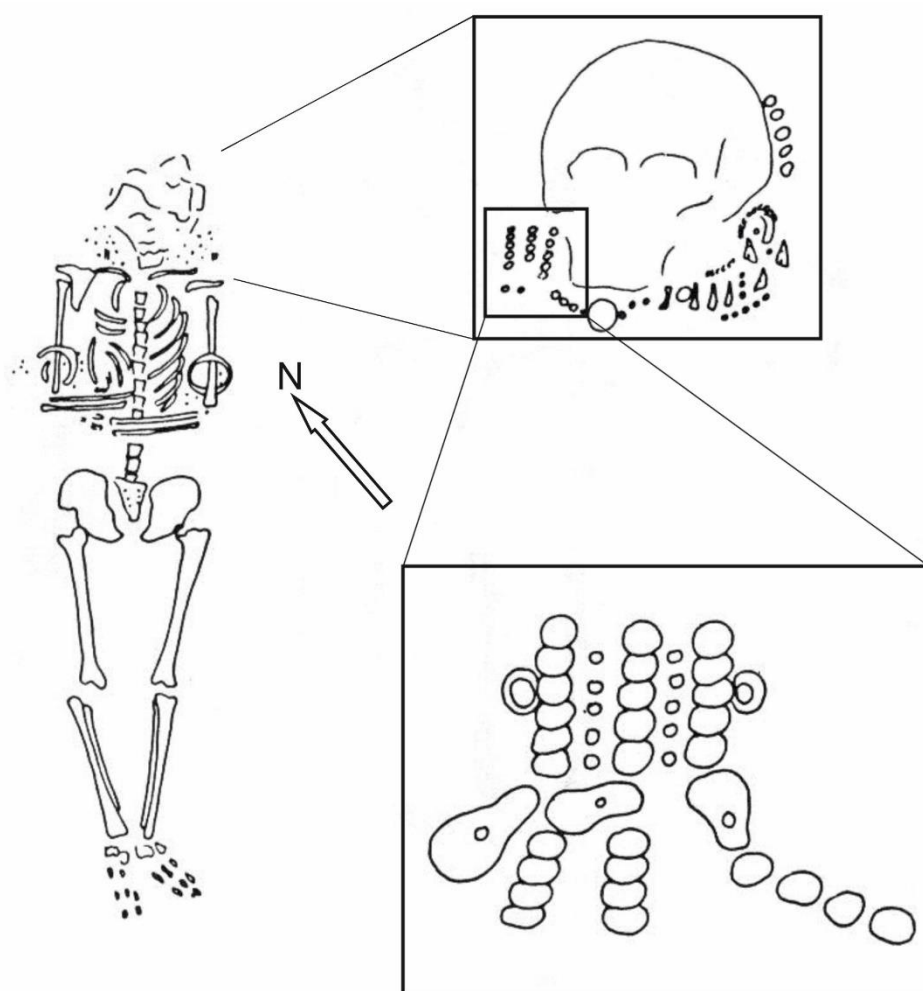


Figure 65: Burial 21, showing the detail of beads found around the skull (Patay 1978, 109)

Pottery is rare, occurring in seven burials. There are four burials containing a type of vase-shaped pot (burials 5, 6, 16 and 36), one instance of a handled beaker in burial 1, a bowl in burial 4 and

unidentified ceramic fragments in burial 3. These may have held food offerings, or been a part of a funerary practice around eating. The presence of animal bones, from cattle and pig, in burials 7 and 34 respectively, may indicate meat was placed in the grave. There is, however, no information on the parts of the animal represented or whether they were articulated, which could help to indicate the nature of these animal inclusions.

Only a single item that could be categorised as a tool was found, a flint blade in burial 36. The interest in representing life activities, seen later in the region (below), does not seem to exist at Kisköre. Rather, it is bodily decoration, which may have been worn in life, or which may have been chosen especially as burial costume, which is focused on.

The Kisköre graves have been the subject of a case study as part of John Chapman's book on the micro-analysis of funerary practices, *Tensions at funerals* (2000a). In Chapman's assessment of Kisköre he identified a series of costume sets which he compared to age and gender. Chapman (2000a, 49) noted that very few costume categories were present in more than one sex and age group. However, as most of these 'costumes' are represented by one, at most two, burials, it is hard to agree that these can be extrapolated to universal rules for the burial of the dead on the site. Certain items may well have been related to or expressive of specific identities, and as such their combination into 'costumes' could have contained meaning about the individual's persona.

sex	child	female			male		
age	0-16	16-30	30-45	45+	16-30	30-45	45+
limestone bead & deer tooth headdress			1				
limestone bead necklace	1						
limestone bead & deer tooth necklace	2		1	1			2
limestone and clay bead necklace			1				
limestone and clay bead girdle/belt		1					
limestone beads	1	1	1				
bead girdle/belt							2
limestone bead bracelet					1		1
<i>Spondylus</i> armring	1	1	1				2
<i>Spondylus</i> pendant			1				
shell bead bracelet					1		
deer tooth beads			1				
shell bead							1
clay beads		1					
furs (?)	1		1				
ochre	1		1		1		2
handled beaker		1					
bowl	1						
vase		1	1	1			1
ceramic fragments		1					
flint blade							1
cattle bones			1				
pig bones				1			
mussel shell			1				
<i>Spondylus</i> shell	1						
shell (unidentified)				1			

Table 3: Grave goods found in Kisköre-Damm burials, by age and sex

Breakdown of the individual artefact types by age and sex shows little obvious patterning (Table 3). Although various items of adornment based on limestone beads, including headdresses, necklaces and girdles/belts, seem to be more common among females they are certainly not exclusive, and this may simply be the result of the lower number of male burials overall. Aside from the headdress, which only occurs once, the different ornament types occur in child, adult female and adult male burials.

Correspondence analysis was carried out, but only small numbers of artefact types and burials could be included, even with the combination of similar items (all pottery, for instance, have

been included as a single artefact type). The plot (Fig. 66) shows little that was not recognisable from the table of grave goods (Table 3). Perhaps the only real item of interest is ochre. In four of the graves without grave goods (two adult males, B. 8 and B. 19, an adult female B.17, and a three-year-old child B.29) parts of the body were covered with ochre. Two of the burials with grave goods also contained ochre. These were adult male burials 32 and 35. Interestingly, in the correspondence analysis (plot of first and second principal axes: Fig. 66) these two burials plot apart from the main cluster of burials. It appears that the inclusion of ochre in a grave was based on a variable distinct to other choices of grave goods. Of course, it is worth emphasising that the correspondence analysis in this case is based on a very small sample number, but the lack of correspondence between ochre covered burials and those without is interesting, both in terms of those with grave goods and without.

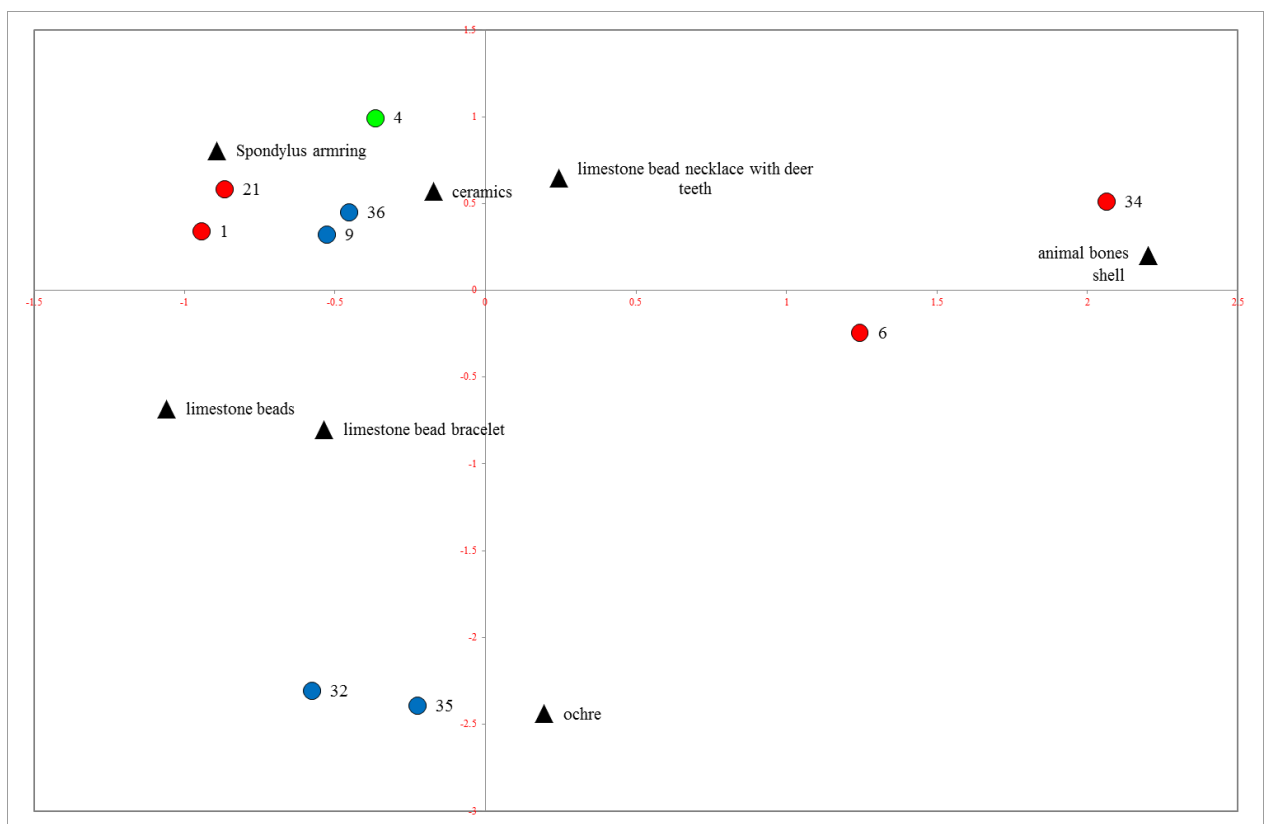


Figure 66: Correspondence analysis plot of Kisköre-Damm burials, on 1. and 2. principal axes. Green = child, red = adult female, blue = adult male

7.5.1.3 Remembering and repeating? The spatial relationship with the AVK burials

There is evidence for occupation on the Kisköre-Damm site from the AVK through to the Copper Age. Whether or not this occupation was continuous is uncertain, and no radiocarbon dating has been done to create a secure chronology of the site. Nevertheless, it seems that the site maintained a status as a significant place in the landscape, which even if not continuously occupied was repeatedly returned to.

Four AVK burials were found during the excavations (Fig. 61). None of the later burials or features, cut or disturbed the AVK burials in any way. Was there a memory of these being placed here? John Chapman (2000a) believes so, citing the unusual orientation of burials 24, 29 and 30 as evidence of “strategic acts of reverence towards the long dead” (Chapman 2000a, 46). This is certainly an interesting point. These three Tisza burials, situated close to the AVK graves, are orientated differently to the usual Tisza orientation of north-west–south-east. Instead, they are orientated north-east–south-west, the same as the AVK burials. While, as is seen in other examples in this thesis, it is not uncommon for burials to vary up to about 45 degrees from the main burial orientation the rotation of the burials by 90 degrees is unusual, and surely shows a conscious choice. Here we have bodies buried in the orientation of the preceding community (W-E), while having the burial position of their contemporaries (extended rather than crouched).

If it is the case that these graves were orientated specifically to reference the preceding burials, then presumably the graves must have carried some kind of marker. Either that, or the ancestral “reverence” as Chapman describes it, meant that there was a long community memory for these past burials. Either is, of course, perfectly possible. Why, however, is it only three of the Tisza graves that have this orientation? Why did only a small number of the Tisza community want to reference the past practices? The answer may lie in the apparent association of different grave groups of the Tisza graves with different houses. The Tisza house (House B) was built directly to

the north-east of the AVK graves, while the unusually orientated Tisza graves are located to the south-west of them. It appears this is an attempt by a particular family or household to lay claim to a deep ancestry on the site. Both the clustering of graves by house structures, and the occurrence of some grave lines, indicates a concern among the Tisza community for a spatial relationship between the dead and the living.

Of course, without an accurate site chronology we cannot be certain of the relationship between the houses and the burials. It is assumed that the burials were made while the houses were in use, and thus formed an extension of that household into an ancestral aspect. A refined chronology may demonstrate otherwise.

7.5.2 Polgár-Csőszhalom

The small Hungarian town of Polgár lies to the north of the Pannonian Plain, on the banks of the River Tisza. Although now a region of flat, dry agricultural land, before the extensive drainage works of the early/mid-twentieth century the area was liable to flooding, and during the Neolithic and Copper Age the slight rise on which Polgár sits was probably an island.

The Polgár island is rich in archaeological remains from prehistory. Not only is another of the case studies in the chapter situated there (Tiszapolgár-Basatanya, 7.7.2), but several other Late Neolithic tell-like settlements have been identified (see Fig. 67). These settlements lay on the island's edge, and may well have been situated to take advantage of wetland and dryland resources.

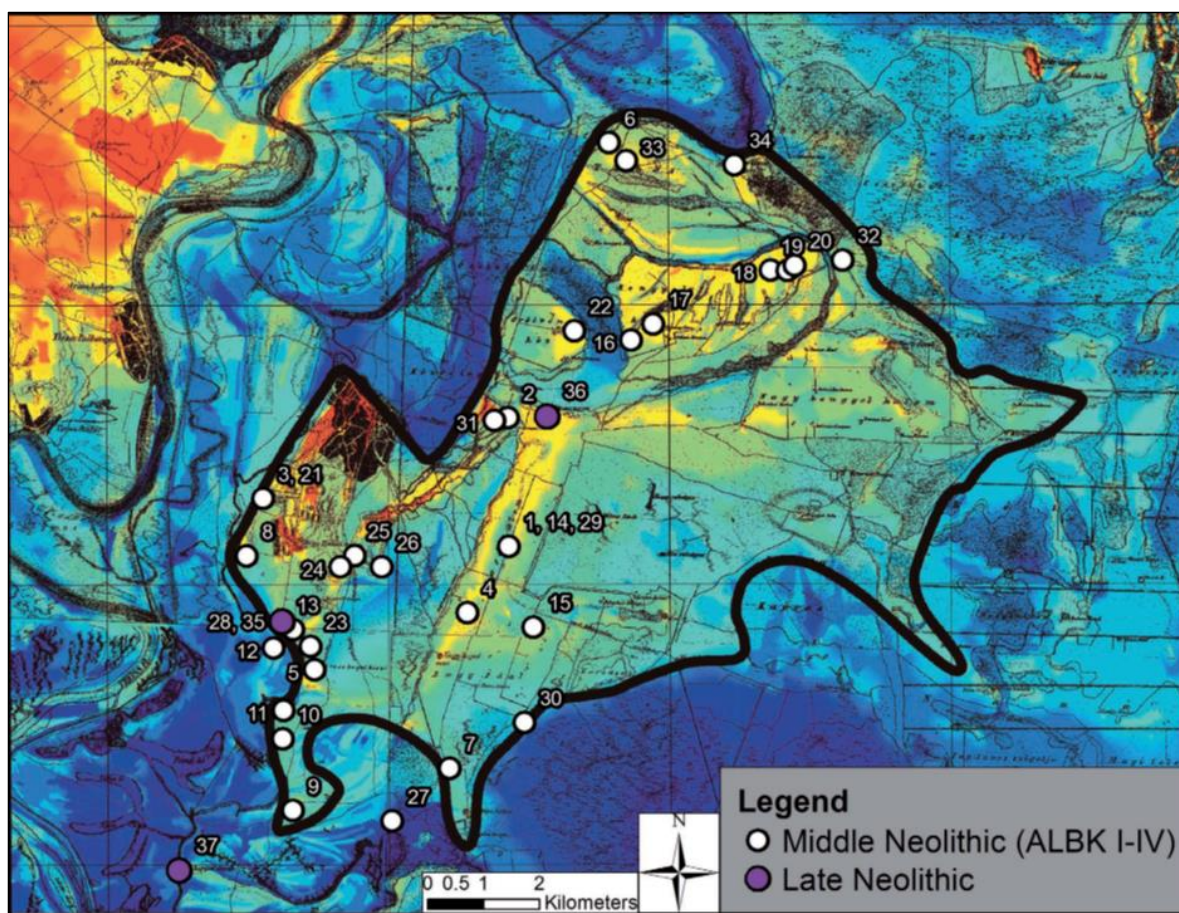


Figure 67: Map showing the concentration of Neolithic sites on Polgár island. 1, 14, 29: Polgár–Ferenci-hát; 2: Polgár–Kenderföldek; 3, 21: Polgár–Király-Érpart; 4: Polgár–Piócási-dűlő; 5: Polgár–Rózsa-tanya híd; 6: Újtikos–Köztemető; 7: Folyás-Papp-tanya; 8: Polgár–Ásotthalom; 9: Polgár–Basatanya; 10: Polgár–Basatanya-Hatöles-part, 11: Polgár–Basatanya–Kőkereszt (Polgár–Pása-tó); 12, 35: Polgár–Cibó-hát; 13: Polgár–Cikeledi-dűlő; 15, 30: Polgár–Kása halmi-dűlő; 16, 17, 18, 19, 20: Polgár–Kengyel-köz; 22: Polgár–Lengyel-žug; 23: Polgár–Rózsa-tanya; 24, 33: Újtikos–Demeterkút; 25: Polgár–Varga-halmidűlő; 26: Polgár–Varga-halmi-dűlő; 27: Folyás–Szilveg; 28: Polgár–Bosnyákdomb; 31: Polgár–Kenderföld–Majoros-tanya; 32: Polgár–Nagy-Kasziba; 34: Újtikos–Tikos domb; 36: Polgár–Csőszhalom; 37: Polgár–Kígyós-domb (from Raczkó et al. 2014, 322)

7.5.2.1 Excavation

The tell settlement at Polgár-Csőszhalom has been known since the start of the twentieth century. The large mound covered with pottery and stone tools caught the attention of Béla Bender in 1910. Bender carried out trial excavations, which discovered three burials (two adults and an infant) at the bottom of the deposits (Bánffy and Bognár-Kutzián 2007, 10). Bender's discoveries were later published by Ferenc Tompa in his 1929 overview of Hungarian prehistoric sites. Unfortunately, the dates of these burials are uncertain due to lack of stratigraphic and contextual evidence (Bánffy and Bognár-Kutzián 2007, 10).

Since this early work there have been two major campaigns of excavation at Polgár-Csőszhalom. The first was led by Ida Bognár-Kutzián, a student of Tompa's, in 1957. At this point the surrounding flat settlement had not been discovered, and excavation again took place only on the tell. The three week excavation opened a trench, 2m wide and 12m long, north-south from slightly to the east of the centre of the mound to the south (Bánffy and Bognár-Kutzián 2007, 11). The excavation identified 18 levels of occupation, with the remains of six houses from various levels and seven burials, all except one from the lowest level, as well as numerous associated pits and post holes (see Fig. 68).

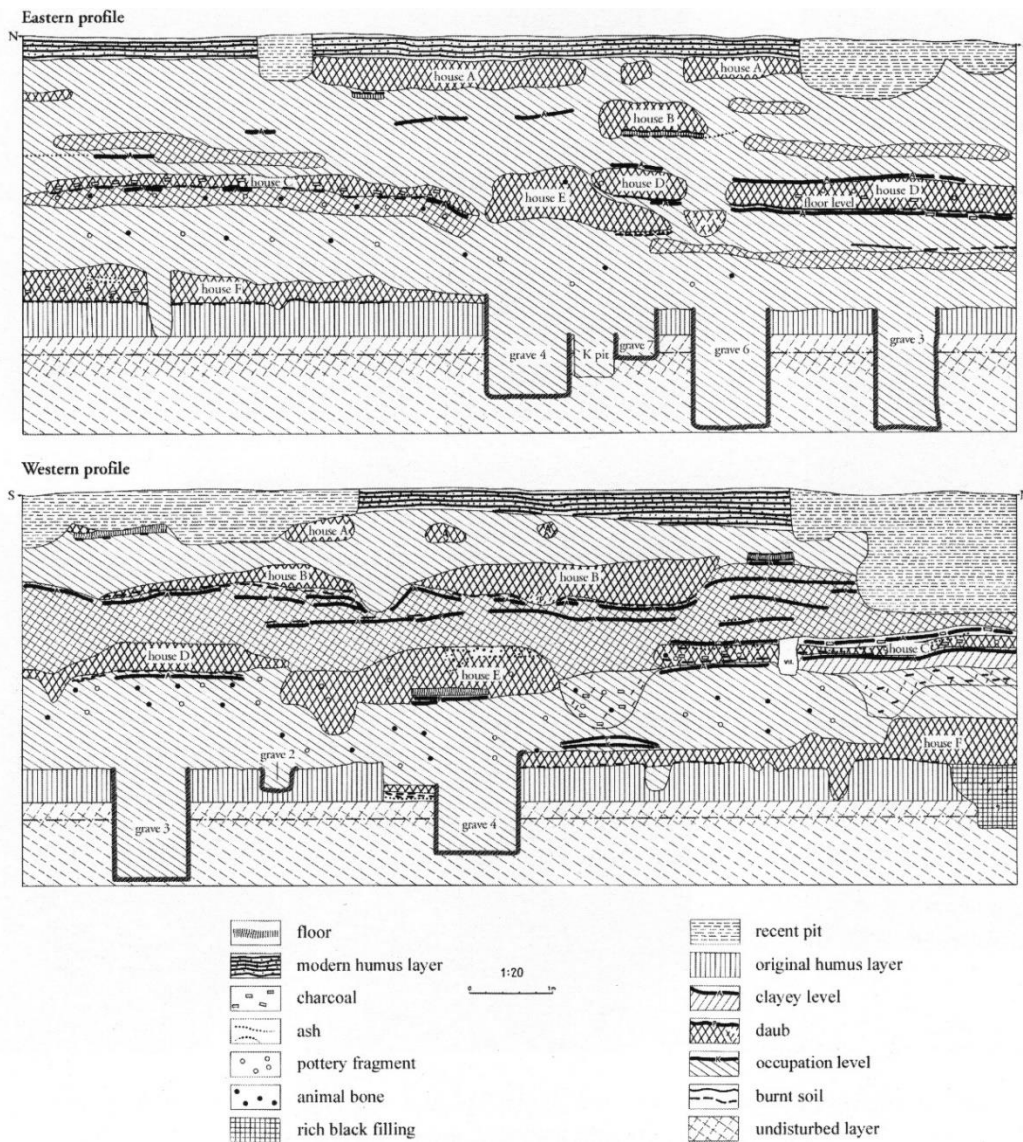


Figure 68: Section drawings of the 1957 excavation, showing the stratigraphic position of the burials (Bánffy and Bognár-Kutzián 2007, 15)

The 1957 excavation was not published until 2007. The manuscript was compiled by Eszter Bánffy, initially aided by a very unwell Ida Bognár-Kutzián, who sadly died early in the project in 2001. Although it no doubt suffers from the loss of the original excavator, the long period of time between excavation and write-up, with some finds now missing, and the discontinuation and subsequent loss of the archaeozoological, botanical, geophysical and soil analyses, the monograph contains detailed information about the excavation. It combines Bognár-Kutzián's field notes with Bánffy's later meticulous identification of finds based on photographs and drawings, as well as benefiting from the knowledge of the accompanying flat site for understanding the site's regional importance (Bánffy and Bognár-Kutzián 2007).

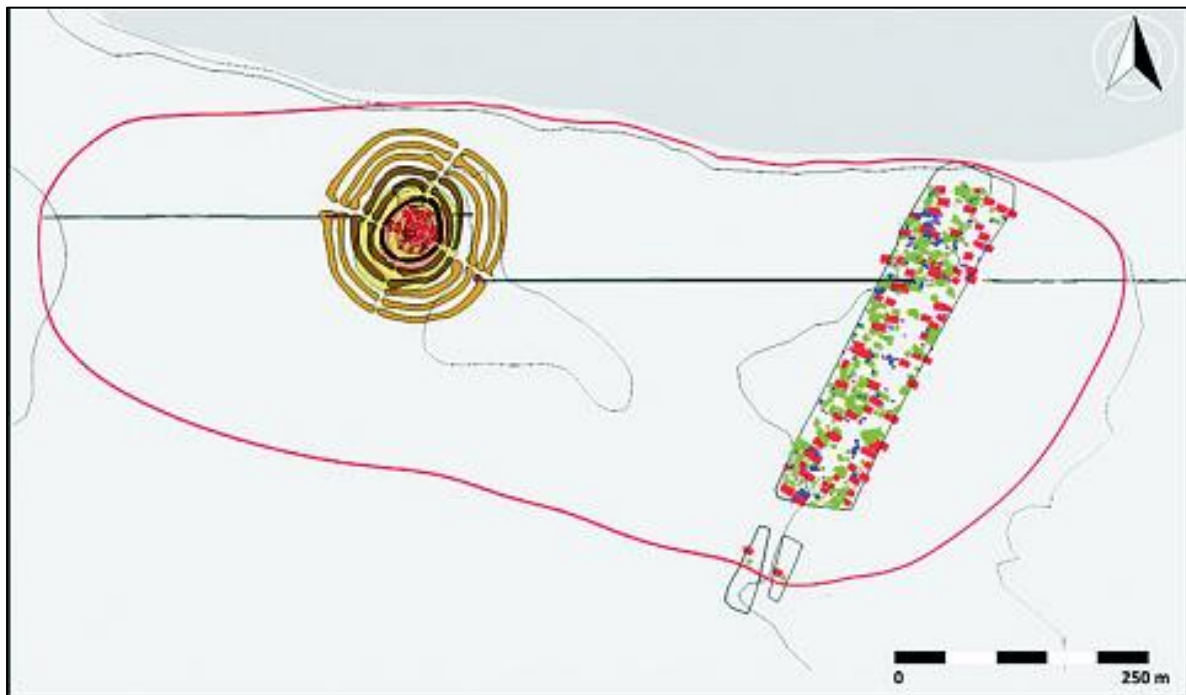


Figure 69: Tell and flat settlement, based on excavation and geophysical and field survey (Raczky et al. 2015)

The second major campaign of excavation took place between 1995 and 2004. Geophysical survey of the area surrounding the tell ahead of the construction of the M3 motorway revealed the existence of an accompanying flat settlement (Raczky *et al.* 1997). Based on the survey this settlement was a massive 24 hectares, and the conditions of the rescue excavation meant that

large areas were able to be stripped (Raczky and Anders 2006). In total 35,000 m² was excavated (Fig. 69), around 10% of the predicted total area, a big contrast to the more constrained 1957 excavation. 80 houses were identified, as well as associated pits and wells, with the intercutting of features demonstrating more than one phase of occupation (Raczky *et al.* 2015, 39). 123 burials were found across the site, either as individual burials or small groups, apparently associated with houses (Anders and Nagy 2007).

The settlement of Polgár-Csőszhalom is therefore something of an anomaly. It is the northernmost tell settlement on the Pannonian Plain, and as such has strong similarities with the southern Tisza and Herpály tell settlements such as Hódmezővásárhely-Kökénydomb, Vésztő-Mágor, Szegvár-Tűzköves and Berettyóújfalu–Herpály, rather than other Csőszhalom settlements. Like these more southerly sites, Polgár-Csőszhalom is also surrounded by a series of ditches, which may be related to competition between settlements (Raczky and Anders 2006, Chapman 1997b). Yet the vast, 24 hectare flat settlement of Polgár-Csőszhalom displays strong influences from the Transdanubian Lengyel culture, and has a lot in common with Aszód (incidentally, pottery of the Tisza-Herpály-Csőszhalom style was found during excavations at Aszód (Kalicz 1970)). The pottery on the site also displays mixed influences, with motifs and styles of the Lengyel, Tisza-Herpály-Csőszhalom and even Vinča present; Polgár-Csozshalom appears to have been a melting-pot of different regional groups.

7.5.2.2 *Dating and phasing*

The tell settlement had 60 samples taken on charcoal for radiocarbon dating in the late 1990s. These dates, potentially problematic due to the old-wood effect and uncertain contexts, dated the tell settlement to between 4890–4853 cal BC and 4525–4476 cal BC. More recently, 19 samples have been taken on animal bone from secure contexts related to features, which was then modelled using Bayesian analysis (Raczky *et al.* 2015, 41). According to the excavators’

model, the first occupation of the tell occurred between 4920–4785 cal BC, slightly earlier than the earliest activity dated on the flat site. The final phases of the tell date to 4505–4405 cal BC.

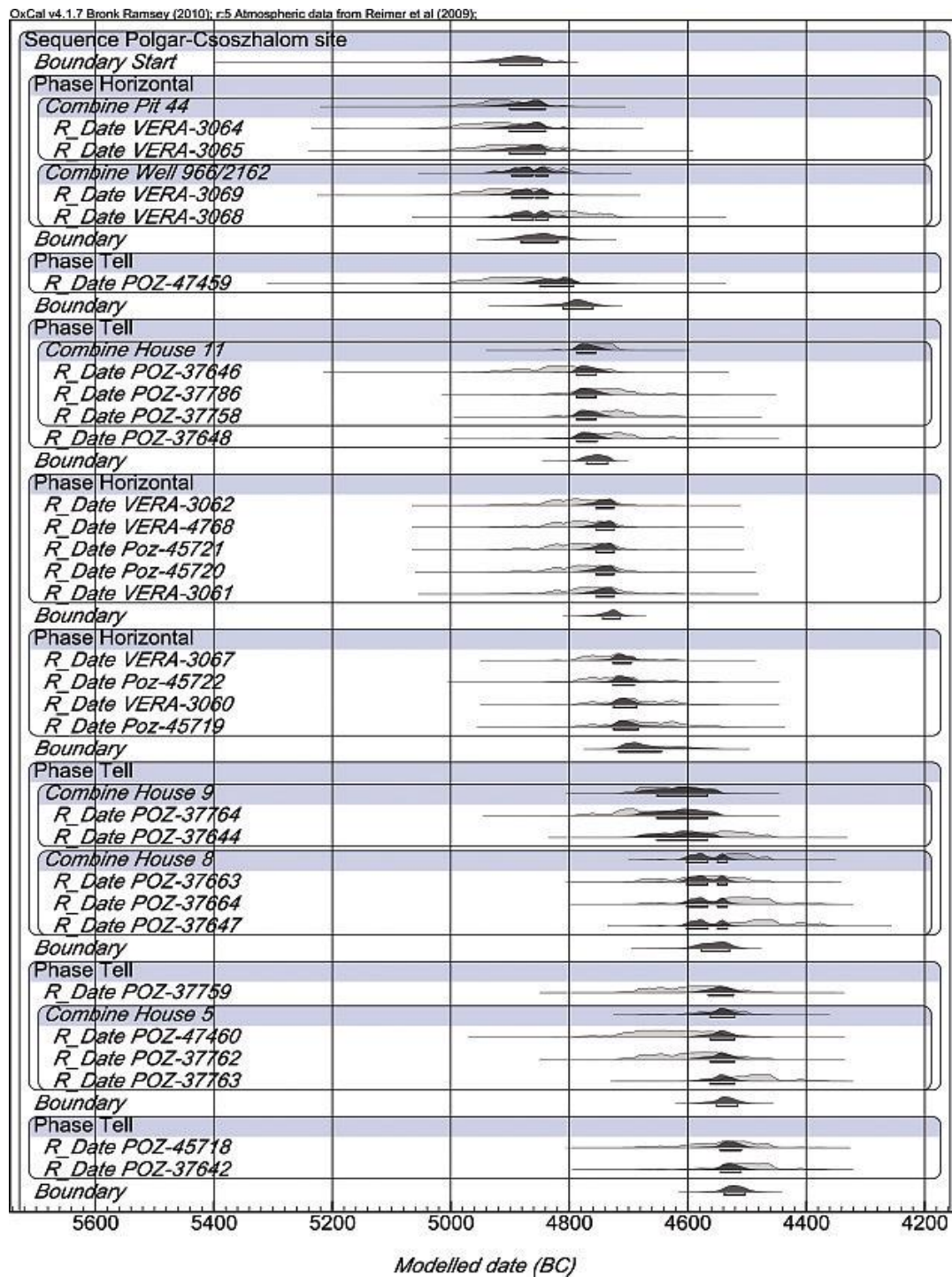


Figure 70: Modelled dates for Polgár-Csőszhalom tell and horizontal sites, from Raczky et al. 2015

13 radiocarbon samples have recently been taken from the flat settlement for AMS dating. The use of the flat settlement is dated between 4890–4805 and 4740–4665 cal BC, with the excavators suggesting that three distinct phases can be identified within that, as part of a shifting pattern of occupation (Raczky *et al.* 2015, 40). Across the area excavated, the earliest area of occupation was in the north, close to the Tisza river, with the settlement expanding southwards over time. The northern area was not completely abandoned, however, as Grave 226 in the northern area had a date spanning what is the excavators' latest phase, Phase III.

Using Bayesian modelling, the results from the two areas were combined, in an attempt to understand the chronological relationship between the two parts of the site (Fig. 70). Stratigraphically there is no relationship between the two, so the model was “strongly experimental” (Raczky *et al.* 2015, 43). As the authors note, there are numerous potential problems with combining the two sets of data. For a start, due to the nature of the two areas the samples come from very different types of feature; on the tell they are mainly from burnt structures, such as houses, while on the flat settlement, where burning was less common, the samples are from burials. This means the model is constructed from two different types of activity, which may have had their own individual timescales. Furthermore, the lack of stratigraphy between the two means there is nothing to constrain the model. If, as seems to be indicated by the flat settlement results, the settlement area was shifting, we probably only have a very fragmented picture of activity on the whole site.

Nevertheless, this combination of radiocarbon dates into a single model is probably the most effective way currently available to deal with this problem. The model indicates that the entire site was in use for about 400 years, between 4920–4845 cal BC and 4515–4460 cal BC (Raczky *et al.* 2015, 43). Raczky *et al.* (2015, 43) contend that the two parts of the site had their own temporal rhythms, which together formed the site's “macro-rhythm.” According to the model, occupation began on both parts of the site roughly simultaneously, and despite the potential

sampling problems, which may be responsible for apparent hiatuses, it can be seen that occupation continued contemporaneously on both areas. However, there is no evidence for activity on the flat settlement during the period of the upper layers of the tell, from 4665 to 4460 cal BC. It is likely, as suggested by Raczky *et al.* (2015, 44), that due to the shifting nature of occupation on the flat site these phases have not yet been excavated. It is of course possible, however, that the flat settlement ended earlier than the tell.

7.5.2.3 *Tell settlement burials*

Seven burials were found on the tell in the 1957 excavation. The relationship of one of them (Grave 1) to the settlement is uncertain – it was found in an upper layer with no grave goods – but the other six were all associated with the primary layer of settlement activity (Bánffy and Bognár-Kutzián 2007). Based on Raczky *et al.*'s (2015, 41) model this puts them around 4920–4785 cal BC. The graves were all clustered together in the southern half of the trench (Fig. 71). They are all aligned east-west. Aside from Grave 5, whose relationship is unclear, the grave cuts do not disturb each other. It seems that this was a small intramural cemetery area within the tell settlement, which dated to the earliest, foundational, layers of the tell. Except for Grave 5 the grave pit cuts were all clearly visible, and cut into the natural subsoil (Fig. 68). The graves had vertical sides, and were rectangular or trapezoidal in shape. Due to the narrowness of the trench, none of the graves were fully excavated.

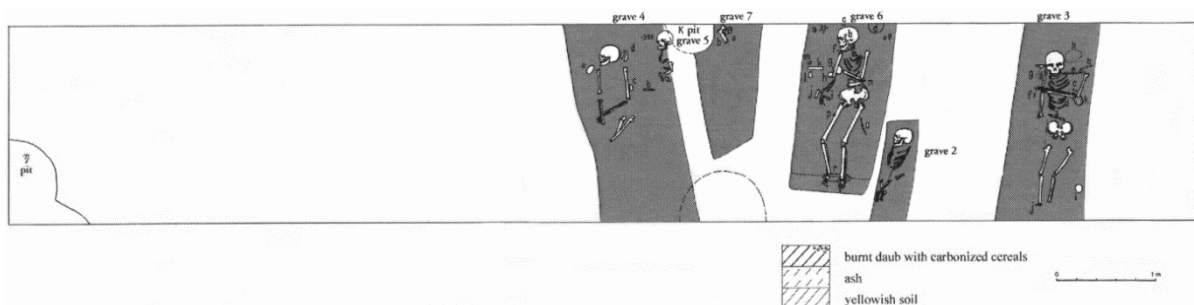


Figure 71: Burials found on the tell in the 1957 excavation (from Bánffy and Bognár-Kutzián 2007, 15)

Of the six burials, two were children, three were adult males (based on osteological assessment) and one, Grave 7, was a symbolic or cenotaph grave. Preservation of the skeletal material varied, and was particularly poor in Graves 4 and 5. Where ascertainable, the burial position was extended, with the legs very slightly flexed at the knees. The individual in Grave 3 was laid on its back, while Graves 4, 5, 6 and 2 were on their right sides. The skeleton in Grave 3 was also missing both its right hand and foot. With no evidence of disturbance of the burial post-deposition this seems to have been a deliberate act of mutilation, a practice known from the Lengyel (Bánffy and Bognár-Kutzián 2007, 216).

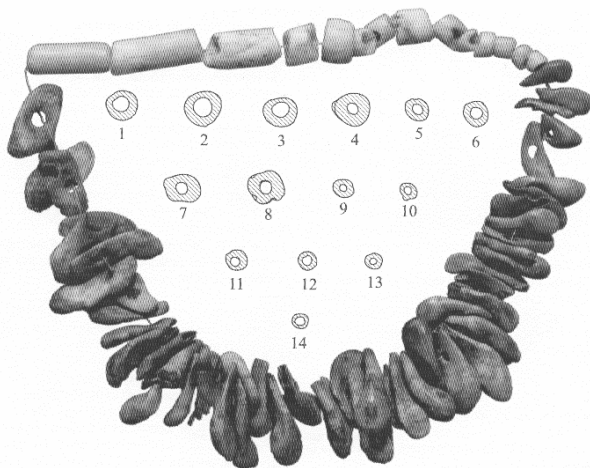


Figure 72: Deer tooth and bone bead necklace from Grave 2 (Bánffy and Bognár-Kutzián 2007, 198)

The amount of grave goods within each burial varied from none (Grave 5) to four (Grave 3). When considering the number of grave goods it must be borne in mind that none of the grave pits were fully excavated, so it is likely that more grave goods were actually accompanying these burials. Furthermore, as the case of Grave 5 shows, bone preservation was variable,

and although no remains are found in Grave 5, it is possible that items from animal bone could have degraded (Bánffy and Bognár-Kutzián 2007, 216).

The majority of the grave goods from the tell burials were beads, made of perforated animal teeth, *Spondylus* shell, and bone. Other than the animal teeth, the beads were either formed into flat disk shapes, or cylindrical, barrel shapes.

Grave 2, the burial of a young child, contained the largest number of individual beads, with 66 animal tooth beads, some of which were stained green, most probably from copper, and 14 cylindrical bone beads. The beads were probably all from a single string and worn as a necklace (see Fig. 72). This impressive composite item was the only grave good placed in Grave 2, but it is unusually lavish, especially for a child.

Grave 3 contained 19 *Spondylus* beads, of both cylindrical and disk shapes. Some of the beads were found around the skull, and it is suggested that these were worn sewn onto a cap (Bánffy and Bognár-Kutzián 2007, 217). Grave 3 also contained two large shaft-hole axes made of some type of black rock, unusual for the region (Fig. 73).

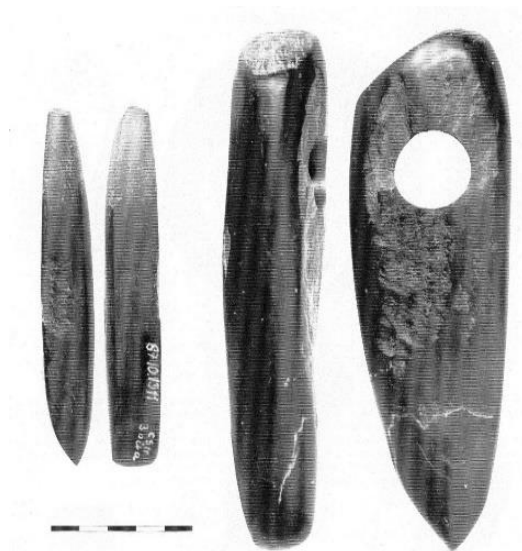


Figure 73: The two shaft-hole axes from Grave 3 (Bánffy and Bognár-Kutzián 2007, 203)

Grave 4 contained the fewest grave goods. In contrast to the other three burials the body was not adorned with beads of any kind. The only grave goods were four



Figure 74: Carnivore teeth and boar tusks from grave 4 (Bánffy and Bognár-Kutzián 2007, 205)

un-perforated teeth of a carnivore, and a boar mandible placed in front of the face (Fig. 74). This is a very different assemblage from the other three, and there are two possible reasons for this. The first is that, as this skeleton was the least well preserved, only visible as soil staining in places, something about the conditions in the grave meant artefacts made of shell and animal

bone did not survive. This is possible, especially as these are very small artefacts. On the other hand, it may indicate that the adult male buried in Grave 4 had a different role within the community. Certainly, it is not simply that this grave contains fewer items, they are also completely different – none of the other graves had carnivore teeth. Of course, with only six burials to go by, it is very hard to say what may have been a ‘norm’ and what is unusual.

Grave 6 contained six barrel-shaped *Spondylus* beads, 17 disk-shaped bones beads, and 11 animal tooth beads. The location of these beads indicates that they came from a necklace and some kind of head-gear. This grave also contained two axes, one shaft-hole and one trapezoidal.

The final grave discovered during the 1957 excavation, Grave 7, contained no body, and is interpreted as a symbolic, or cenotaph, burial (Bánffy and Bognár-Kutzián 2007, 217). It is noted that the grave pit seems to have been less carefully dug in this case, with a more trapezoidal shape rather than rectangular, and an uneven base. The grave contained a boar mandible and a shaft-hole axe.

7.5.2.4 Flat settlement burials

123 graves were excavated from the flat settlement, generally as single graves or small groups, apparently associated with houses (Fig. 75) (Anders and Nagy 2007). The burials have yet to be fully published, but an interesting study based on the original material has been carried out by Anders and Nagy (2007). This discusses the burial rites on the flat site, including the inclusion of grave goods, and age and gender related practices. It is on this study that this analysis is based.



Figure 75: Some examples of graves associated with houses from the flat settlement (from Anders and Nagy 2007, 85)

21 of the burials were disturbed too badly by later activity for them to be included in any analysis (Anders and Nagy 2007, 83). The majority of the burials (83.9%) were orientated north-east–south-west. It is presumed that this means that these burials all had their heads towards the north-east. The amount of deviation of the remaining burials is not reported.

The grave pits varied considerably. A few were placed in already dug clay extraction pits, while two young children were buried in post holes. However, most of the graves were purpose dug pits of regular proportions, between 80-100 cm wide and 170-220 cm long. They were rectangular, sometimes with very rounded corners that may be considered more oval. In two cases, a thin strip of soil discolouration around the pit sides indicates there was originally a wooden structure, possibly a coffin, within the grave (Anders and Nagy 2007, 84). As Anders

and Nagy (2007, 88) note, such wooden linings are also known from a number of other Tisza culture sites.

Burial position was exclusively crouched, on either the left or the right side. The lower limbs varied from slightly flexed to tightly bent (Anders and Nagy 2007, 84). Anders and Nagy report that, “with the exception of a few cases” (2007, 84) females were placed on their left sides and males on their rights. The number of exceptions is unfortunately not specified, and it would be interesting to be able to compare side of burial with the apparently gendered grave goods.

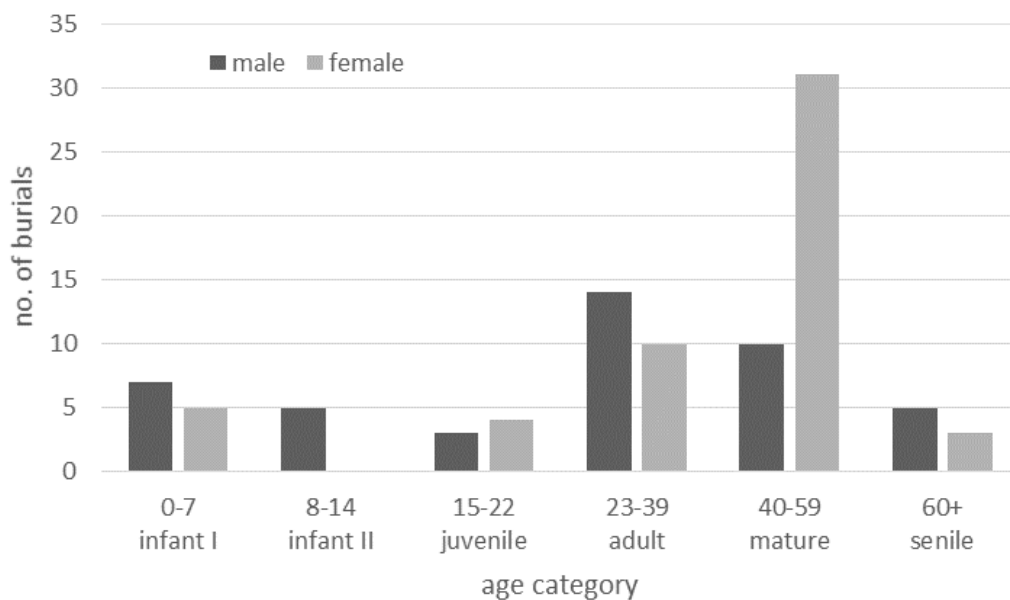


Figure 76: Age and sex distribution of flat settlement burials

Children are under-represented within the burial population, making up only 17% of the total, rather than the expected 40% (White and Folkens 2005). Clearly, however, the stand-out statistic from the burial population demographic is the number of mature women (Fig. 76). While in the other age categories the ratio of male to female is roughly the same, with in general slightly more males throughout, in the mature category there are three times as many females as males. Not

only this, but within the female population the mature age group represents 60% of the burials; models of a normal population would expect the mature age group to represent more like 15% (White and Folkens 2005).

7.5.2.5 Gendered grave goods

One of Anders and Nagy's (2007) main focuses is the gender differentiation they consider to be expressed in the graves, based on both burial position and different inclusions of grave goods. They pinpoint a number of artefact and raw material types which were exclusive to male or female (based on osteological analysis of the skeletons) graves.

Strings of beads of either marble or *Spondylus* were only found in female graves. These were usually worn around the waist, but smaller bead strings are also found around the neck and head. Waist bead strings, or belts, were present in under a third (29%) of female graves (Anders and Nagy 2007, Fig. 2.1 errata). While these belts may have been exclusively worn by females, apparently not all females were suitable to wear them.

Other 'female' artefacts that Anders and Nagy identify are bone rings. These have been found in only three instances, but they are found only in a specific group, that of the *maturus* age group. This may well be a reflection of sample size, as the *maturus* group is larger than all the other female groups combined, rather than an age-related artefact. The artefact type which Anders and Nagy attributed to males was polished stone tools, including chisels, blades and axes. The placement of the stone tool was consistent, placed high on the chest to one side or the other, sometimes as if at the shoulder (Fig. 77). These were placed in two-thirds (62%) of the male graves. Apparently, the inclusion of stone tools was more 'normal' in biologically male graves than the belt in female, but they were still not ubiquitous. Again, we need to ask the question, why were some men buried with tools and others not? Was this simply a case of wealth – some people could not 'afford' to be buried with tools? Or, conversely, were those individuals buried

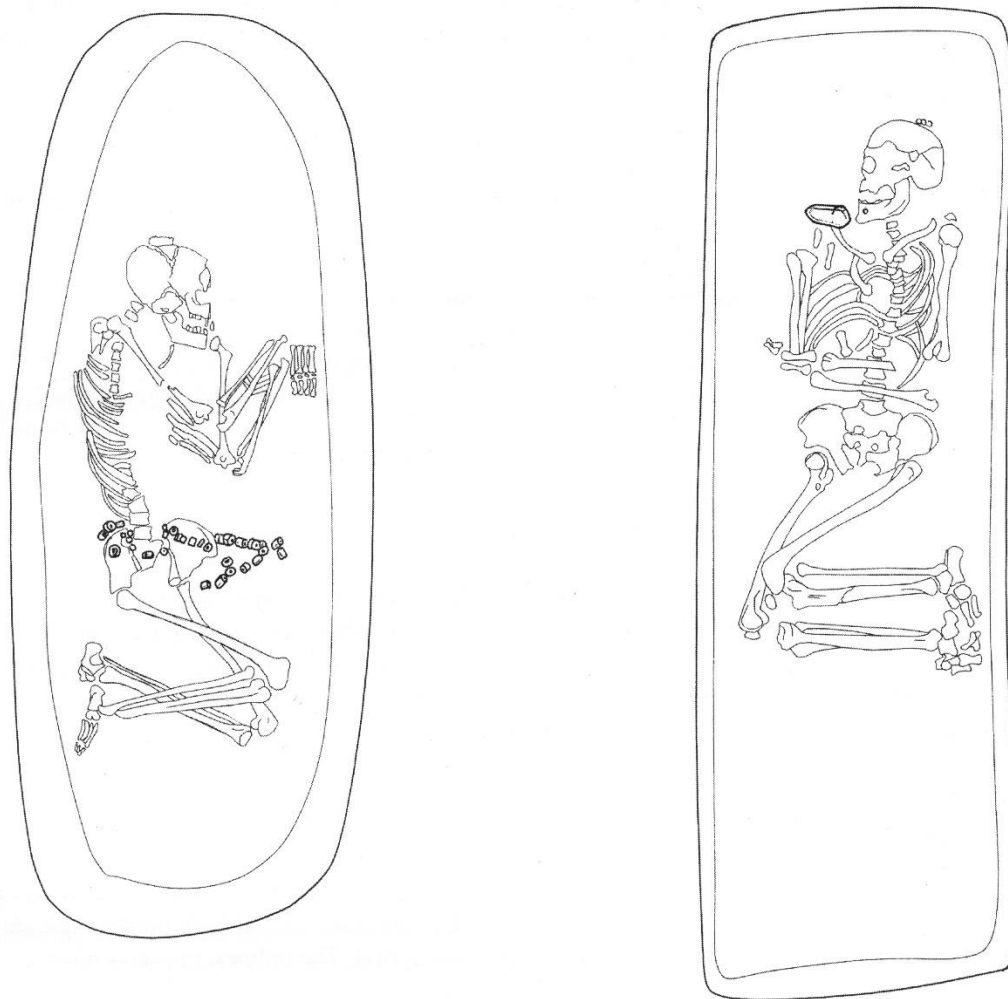


Figure 77: Illustrations of typical graves for females (left, feature 913) and males (right, feature 936) (Anders and Nagy 2007, Fig. 2.1)

without tools of a higher status, men who did not need to work with these implements. As with the women, they may be representative of some other social division within the community which cut across or was more important than gender identities. It would be interesting to compare these two exclusive artefacts with the other grave good assemblages. Were these individuals also buried with other usual items; were they particularly rich or poor in other artefacts? This is something which correspondence analysis would be particularly useful for, but until the site is fully published such analysis is not possible.

Anders and Nagy (2007) provide examples of what they consider to be typical female and male graves (Fig. 77). Females are laid crouched on their left sides, with stone belts around their waists, while males are laid on their right sides with a stone tool at their right shoulder. Anders and Nagy consider that this binary treatment can be seen in children, and on this basis have “sexed” the pre-adolescent individuals from the cemetery based on burial position. While both a binary gender categorisation and the gendering of children from a young age are not unlikely, being seen elsewhere in the region (for example at Tiszapolgár-Basatanya: Sofaer Derevenski 1997a), these assumptions are problematic, not least because as the authors admit, there are variations from the rule visible within the adult population.

7.5.2.6 *Space and status*

Since the discovery of the flat settlement at Polgár-Csőszhalom there have been questions surrounding the relationship between it and the tell (Raczky and Anders 2006; Bánffy and Bognár-Kutzián 2007). Both pottery typologies and radiocarbon dating indicates that the two were occupied at the same time, although according to the modelled radiocarbon dates the first occupation on the location of the tell came slightly earlier than dates for the flat settlement (Raczky *et al.* 2015). Was the tell the initial location of settlement, which the flat settlement developed around?

Whatever the chronology of the site’s development it is certain that the two parts of the site would have been home to very different lived experiences. The tell settlement was more compacted, and surrounded by a ditch system, cutting it off from the flat settlement. The houses on the tell were arranged concentrically, while on the flat site they were aligned north-west–south-east and arranged linearly. Houses on the tell were commonly burnt down, with their successor being built directly on top, while on the flat settlement no houses were burnt, and although there is evidence for more than one phase of house building, new houses were not erected on the same house plan as the old (Raczky and Anders 2006). The animal bone

assemblage also shows some interesting differences between the two areas; wild animals dominated on the tell, domesticates on the flat site (Raczky *et al.* 2002). A specific type of red and white painted pottery is also found mainly on the tell, while copper artefacts are exclusively from there. As Raczky and Anders (2006, 22) argue, the two areas “played different roles in the life of the Neolithic populations living there, and that fundamentally different rules must have been observed in these two areas.”

In terms of the burials, on the basis of only a small sample from the tell, burial practice appears to have been quite different. To start with, while the flat settlement contains a full demographic spread, including men and women of all ages, as well as children, on the tell only males and children have been found. On this basis, Siklósi (2013, 424) has argued that “the right or opportunity to be buried on a tell itself was culturally regulated.” The burial positions used were also different. On the tell, burials were placed in an extended supine position, while on the flat settlement they were crouched to either side. This is an interesting distinction, which indicates a different rationale behind the burials on the two areas.

7.5.3 Gomolava

The tell settlement at Gomolava was first recognised at the end of the nineteenth century, and the first small excavations were carried out in the first decade of the twentieth century (Bottema and Ottaway 1982, 222). The site is situated near the village of Hrtkovci in the region of Srem, northern Serbia. Srem is a flat, fertile region between the Danube and Sava rivers, a southern part of the Pannonian Plain. The tell lies on the left bank of the Sava, which is slowly eroding it as it shifts course eastwards. Three main phases of excavation have been carried out at Gomolava: 1953–1957, 1965–1969 and 1969–1985. As well as the Late Neolithic Vinča establishment of the tell, it was also occupied during the Copper Age, with Baden, Kostolac and Vučedol layers. Unfortunately, the site has never been fully published and the best information on the burials comes from studies by Dušan Borić (1996; 2015b) and Sofija Stefanović (2008).

Despite this Gomolava is worthy of mention here, not only because it is an example of a defined cemetery zone in a tell settlement, but because it has an unusual burial demographic; DNA analysis indicates all the burials were males (Čuljković 2000, in Stefanović 2008).

There is evidence for occupation of the site during the Vinča-Tordos phase, but the major phase of tell development came in the following Vinča-Pločnik period (Bottema and Ottaway 1982). The first two Vinča burials were found in the 1973 season (Zoffmann 1973). By 1977 27 burials had been excavated from an area of the settlement that was apparently at this point specifically used as a cemetery (Stefanović 2008). In previous phases it had been used for occupation; a number of burials cut the remains of earlier houses (Borić 2015b, 170).

Four of the burials have been AMS dated, and as expected they indicate that the burials were made in the final phases of the settlement, between 4680 and 4580 cal. BC (68.2% probability). These dates put the cemetery at the end of the Vinča period in this region (Borić 2015b, 170). They also suggest that the cemetery area was in use for a short period of time, between 0 and 70 years (68.2% probability).

7.5.3.1 The burials

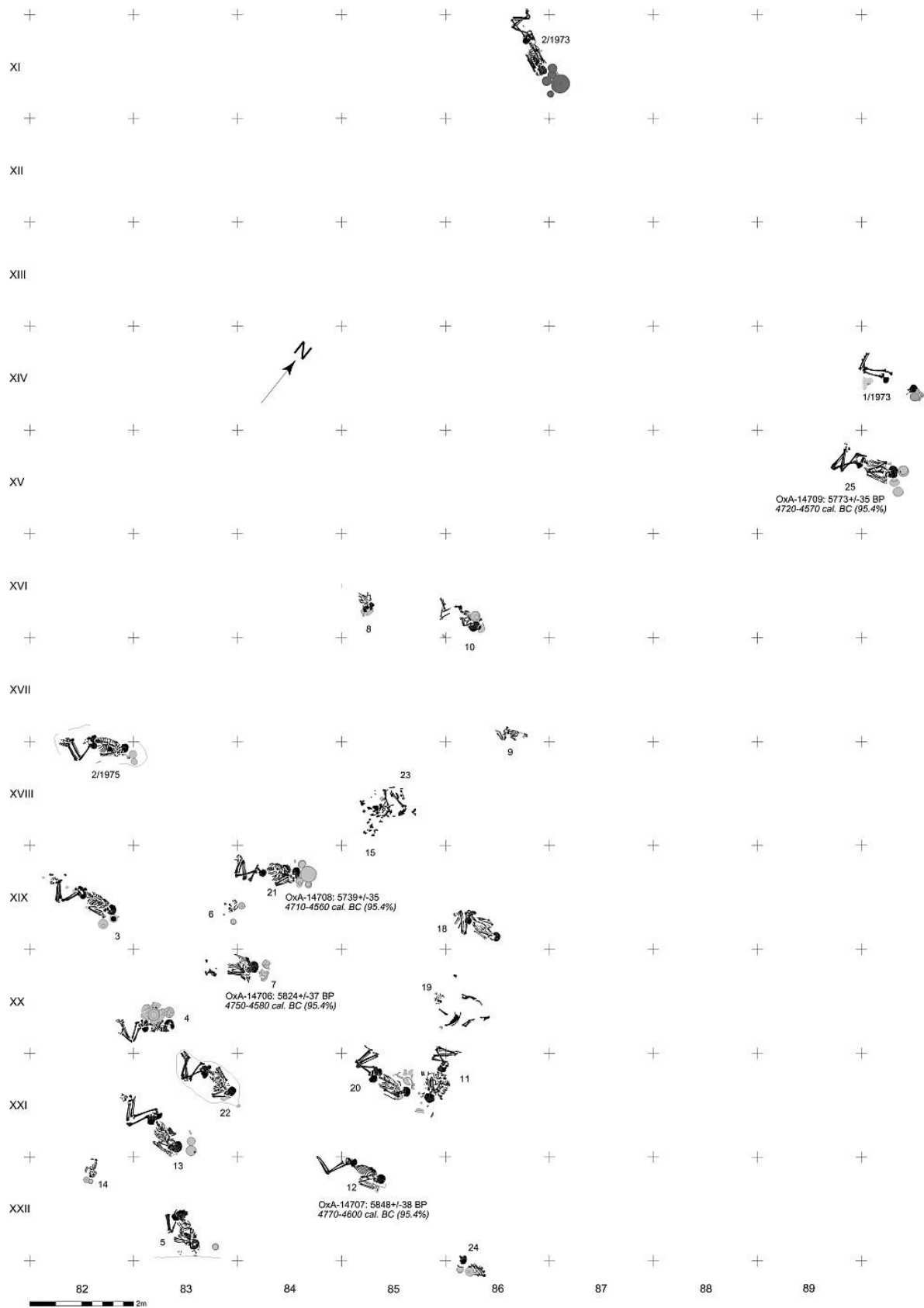


Figure 78: Plan of Gomolava cemetery area (Borić 2015b, 171, Fig. 12)

Burial position, in the cases it was possible to make out, was exclusively crouched on the left side (Fig. 78) (Borić 1996; 2015b). Generally the legs were flexed at a 90° angle, but in some cases, such as burials 5 and 18, the legs were tightly bent and brought up towards the chest. This is a very strong degree of conformity; other cemeteries studied in this thesis have some variation in burial position or side. It is possible that this is related to the very specific burial demographic of the cemetery. This strong conformity does not extend to the burial orientation, with graves varying between east and north-east (Fig. 78). One individual (2/1973) which is slightly separate from the main group, lies with the head to the south-east.



Figure 79: Gomolava excavation (Boric 2015b, Fig. 13)

DNA analysis of the Gomolava human remains has indicated that only male individuals were buried in this cemetery area. The use of ancient DNA analysis enables the sexing of subadults not possible using osteological techniques. One adult burial (No. 12) was not available for sampling, as was one newborn (No. 3/75), but the other 25 burials were all sexed as biologically male (Stefanović 2008, 96).

While the sex of the burials was carefully selected, there appears to have been no age criterion for burial in this area. The ages of the individuals range from newborn to c. 60 years. The implication of this is that gender identity was very closely linked with sex at Gomolava. Newborns could not have engaged in gendered tasks or roles; it was their physical sex which marked them for inclusion in this cemetery.

Beyond maleness, were there other criteria required for burial in this area, such as membership of a lineage or clan? DNA analysis, focusing on haplotypes of the Y chromosome, which follows

the male line, on three of the Gomolava burials indicates that these individuals shared a common ancestor (Stefanović 2008, 97). While further work on this is clearly necessary, the result supports the possibility of this being the burial site for one lineage.

Full information on the grave goods accompanying the Gomolava burials is not available. However, details of the items from the child burials are available (Brukner 1988; Borić 1996; 2009). Although there are only seven of them they do have some interesting implications for understanding identity. The three newborns had no grave goods. In contrast, the two one-year-olds were buried with pottery and items of adornment – beads made of bone and copper. The 3-year-old also had no artefacts interred with him. The 7-year-old had pottery and a possible clay amulet.

The presence of very young children with grave goods lends support to the idea that descent was an important part of identity. Young children would not have acquired these items through their own activities, so any artefacts accompanying them were provided by other members of the community. Stefanović (2008, 97) suggests the boys are being treated as ‘future adults’, allowing for their inclusion in the cemetery. However, the spatial arrangement of the burials indicates that there may have been some association between age and social status or prestige; almost all the sub-adult burials (except No. 6) were located on the outskirts of the cemetery area, with the adults in central positions (Stefanović 2008).

7.6 IN THE LENGYEL REGION

7.6.1 Alsónyék-Bátaszék

The multi-period settlement site of Alsónyék-Bátaszék was discovered during archaeological work in advance of the M6 motorway construction. It is located in the south-east of Transdanubia, to the north and east of the town of Bátaszék and the neighbouring village of Alsónyék, from which it takes its names. It is roughly 10 km west of the Danube, on the edge of

the Danube's alluvial plain, sitting between the Transdanubian Hills and the Pannonian Plain, and their associated archaeological cultures.

Excavations were carried out between 2006 and 2009 over a total of 250,000 m², by a number of different teams on separate areas (Osztás *et al.* 2012). Neolithic remains on the site covered all phases, from the Early Neolithic Starčevo, to the Middle Neolithic LBK and Sopot, and finally the Late Neolithic and Copper Age Lengyel, in what appears to have been intermittent rather than continuous occupation (Osztás *et al.* 2012). The Lengyel phase of the site is particularly extraordinary, because 2300 (the exact number may change after post-excavation analysis: Osztás *et al.* 2016) burials were found from this period, as well as at least 118 buildings. Before Alsónyék, the highest number of graves from a single Lengyel site was at Zengővárkony, with 368 burials (Dombay 1960). The houses show evidence of renewal, demonstrating a number of occupation phases (Osztás *et al.* 2012).

The material from Alsónyék-Bátaszék is still in the post-excavation analysis stage, and therefore detailed evidence about the burials is not available. However, the site has been radiocarbon dated as part of the ToTL project, a Europe-wide project aiming to create an improved chronology of the Neolithic using Bayesian analysis. Over 200 radiocarbon dates from the site for the Lengyel phases alone mean that the timings of the settlement and burials at Alsónyék-Bátaszék are now much better understood. It is this refined chronology that is the reason Alsónyék-Bátaszék has been included in this study, despite details of the burials being unavailable.

7.6.1.1 The burials

The Lengyel period burials were generally found in clusters of between 25 and 100 burials. The excavators have identified 92 grave groups across the various sub-sites (Osztás *et al.* 2016). Some of these are clearly spatially defined while others are more diffuse. Some groups appear to have been associated with specific house structures. Grave rows are also evident in some cases. Less

common were isolated single graves, sometimes buried within houses or pits, apparently buried after the house went out of use (Osztás *et al.* 2012).

For the graves within grave groups, burial position was consistent, crouched on either the left or right side and orientated to the east or west, but always with the face towards the south (Osztás *et al.* 2012). Some of the isolated burials did not conform to this pattern (Osztás *et al.* 2016). Burial with the head towards the east is most common, but some grave groups deviate from it.

The grave cuts, where recognised, were usually oval or rounded rectangular pits. However, about 100 of the graves are reported to have shown evidence of wooden post structures. Measuring about 2 x 2 m these graves were larger and deeper than the other graves, rectangular, with a large posthole in each corner. The excavators propose that this was for a wooden funerary structure over the burial (Osztás *et al.* 2012). The provision of this structure seems to correlate with a greater number of grave goods, prompting suggestions that this was evidence of social hierarchy (Osztás *et al.* 2012).

The number of grave goods found in a single burial varies from none to large numbers of a variety of artefacts including pottery, tools and items of personal adornment. As noted above, the graves with a wooden post structure were generally the most lavishly furnished, but some graves without the structure had comparable amounts (Osztás *et al.* 2016). The exact figures are unavailable, but what is clear is that some form of differentiation, possibly to do with social hierarchy, was in existence. It is not yet possible to compare spatially across the different grave groups, but some variations have already been noted by the excavators. The frequency of post structure graves is lower on sub-site 11 than 10B, and there seems to be a corresponding decrease in grave goods (Osztás *et al.* 2016). It will be fascinating to see if there are differences in the assemblages between the various grave groups, which may be indicative of neighbourhood or household specialisms, or temporal variations.

7.6.1.2 *Places for the living and the dead across time*

Over 200 radiocarbon dates have been obtained as part of the ToTL project on Lengyel period features alone at Alsónyék. These dates were made on both burial and settlement evidence. Specific burial groups were targeted, in order to get a better understanding of the way that these groups related both to each other and the settlement activity on the site. There are three main subsites of Lengyel period activity, 5603, 11, and 10B, and all three were investigated.

The first activity on the site appears to have been mortuary; it is *97.5% probable* that Lengyel burial began before the first settlement activity (Osztas *et al.* 2016). The earliest activity was burial on subsite 10B, which probably began in *4715–4690 cal BC (68% probability)*. Settlement activity on 10B started in *4720–4700 cal BC (68% probability)*. Burial activity began on subsite 5603 in *4790–4740 cal BC (68% probability)*, and on subsite 11 in *4795–4745 cal BC (68% probability)*. Settlement on these sites started at *4745–4665 cal BC* and *4745–4690 cal BC (68% probability)* respectively.

Both settlement and burial activity quickly intensified, with the majority of activity taking place in a short period around 4700 cal BC. On subsite 10B burial probably took place in a very short period, with 92% of the burials falling within a probable period of use of *1–40 years (68% probability)*. The other subsites have longer probable phases of burial use, *240–315 years (68% probability)* for 5603 and *175–270 years (68% probability)* for 11.

Osztás *et al.* (2016) argue that such a rapid and large settlement aggregation could only have occurred if a number of separate communities came together. They suggest that the evidence that burial took place first on the site, before any settlement activity, could indicate that Alsónyék was a place of renown in the landscape whose significance drew people to it.

What is particularly interesting in terms of this study is that grave groups with different burial practices were in use at the same time. Osztás *et al* (2016) think that this may be a result of separate communities coming together on this one large settlement site. These different groups may be attributable to individual communities, each maintaining their own particular mortuary rituals. It would be fascinating to see whether other sites with grave groups, such as Aszód or Polgár-Csőszhalom, yield similar results.

7.6.2 Aszód

Aszód is a small town about 30 km to the north-east of Budapest. In 1959, I. Asztalos, the director of the local Petőfi Museum, discovered evidence of Lengyel occupation on a hillside to the north of the town (Kalicz 1985, 96). Situated to the east of the Danube, the site is outside of what was traditionally considered Lengyel territory, and its discovery extended the known region occupied by this group eastwards. A series of excavations was carried out by Nándor Kalicz between 1960 and 1987, which in total covered 5000 m². Kalicz estimates that this represents only 2% of the entire Lengyel settlement (Kalicz 1985, 96).

The settlement, as is typical for the Lengyel, is a flat site. However, the house construction method, with post-built clay walls, is more typical of the Tisza-Herpály-Csőszhalom group, the majority of which are tells (Kalicz 1985, 97). A number of possible workshops were identified, including a house with a large concentration of loom-weights, and an external area where antler working had clearly been carried out, with raw material and partially finished items (Kalicz 1985, 98). This suggests that some forms of specialisation in production were in place, and which in turn raises the likelihood of specific roles or activity-related identities.

220 burials were found in the excavated area, spread throughout the settlement. Unfortunately, only a portion of the burials have been published in detail. These 31 burials, published in the site publication (Kalicz 1985), form grave group A, a cluster of burials to the east of the site. The remainder of the burials have not been fully published.

In 2007, Zsuzsanna Siklósi published a study into the sex and age difference in the burial practices at Aszód, in which the sex, burial position and orientation of all the burials from the main excavation area is provided. This study shows another 40 metres of excavated area to the east, beyond what was on the plan published by Kalicz. These burials also form clusters, which I have labelled D, E and F, continuing from Kalicz's A, B and C (Fig. 80). There are a number of burials which do not appear to be associated with these groups, which may be outliers, or part of grave clusters which extend beyond the excavation area and have not been fully excavated. The total number of burials published in Siklósi's study is 180. The remaining 40 burials from Aszód were excavated outside this main excavation area, and have not yet been published.

7.6.2.1 The burials

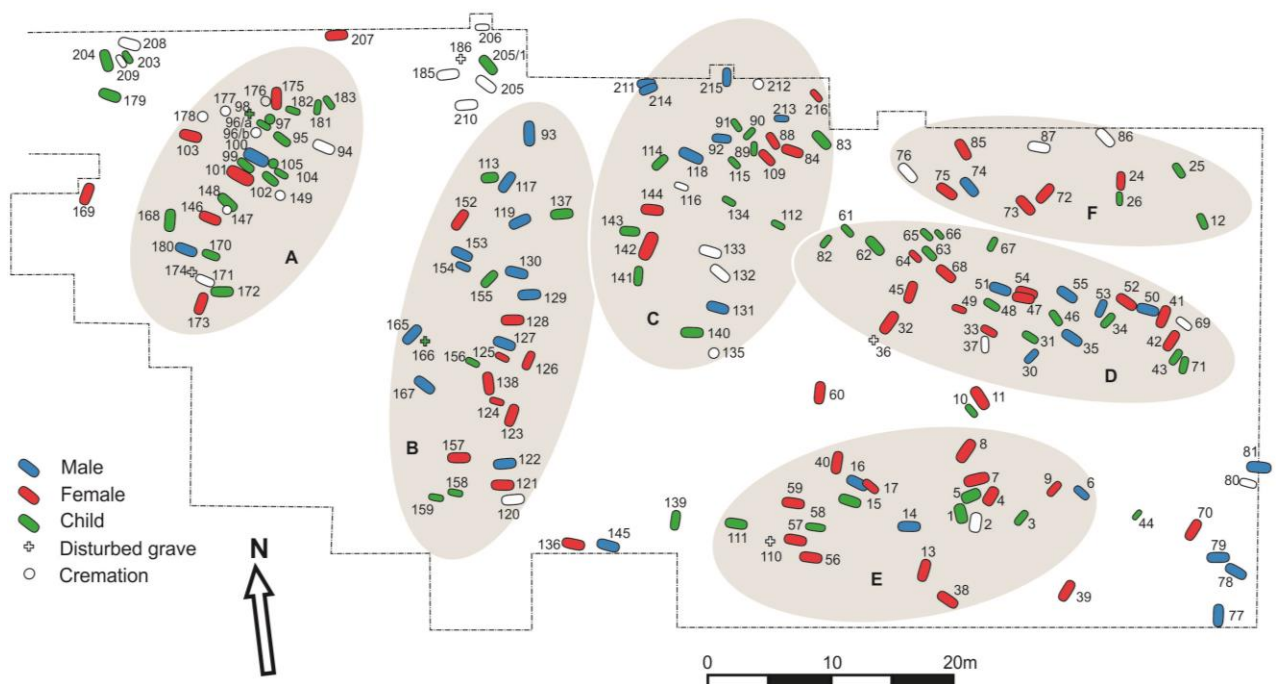


Figure 80: Site plan of the burials at Aszód, showing distribution of burials by sex (after Siklósi 2007, Fig. 4)

The grave cuts were rectangular with rounded corners (Kalicz 1985). They were not particularly regular in their dimensions, but generally they varied according to the size and positioning of the body. This was, however, not always the case, and some graves have inexplicably large areas around the body, which may have been for placing grave goods that have perished.

Siklósi's study provides data for the sex, burial type and orientation of each grave. It is therefore possible to compare these across the grave clusters. The burial orientation was varied (Fig. 81). Overall, the most common orientation was SE-NW, which accounts for 31% of the burials, and with the head at the opposite end, NW-SE, with 27%. 21% were orientated SW-NE, while only 10% were NE-SW. The remaining 16% of the burials were too disturbed to ascertain the direction. Burial group B stands out from the general pattern, with the SE-NW burials making up only 10% of the group. Instead the dominant burial orientation is the opposite, NW-SE, which 60% of the group B burials were buried in.

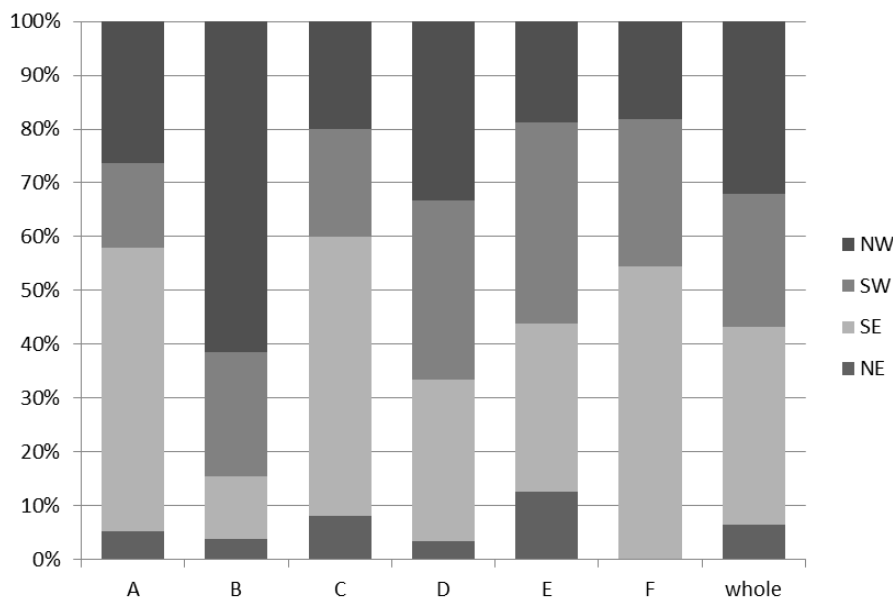


Figure 81: Orientation of burials at Aszód, including by grave clusters

Inhumation in a crouched position on the right side was the dominant practice for the treatment of the deceased (Fig. 82). For the site overall it was used in 80% of cases. While there was some variation between grave groups it was consistently the most common, the lowest percentage was 65%, the greatest over 90%. Use of the crouched position on the left side occurred across the whole site, but in small numbers, making up between 4 and 15%.

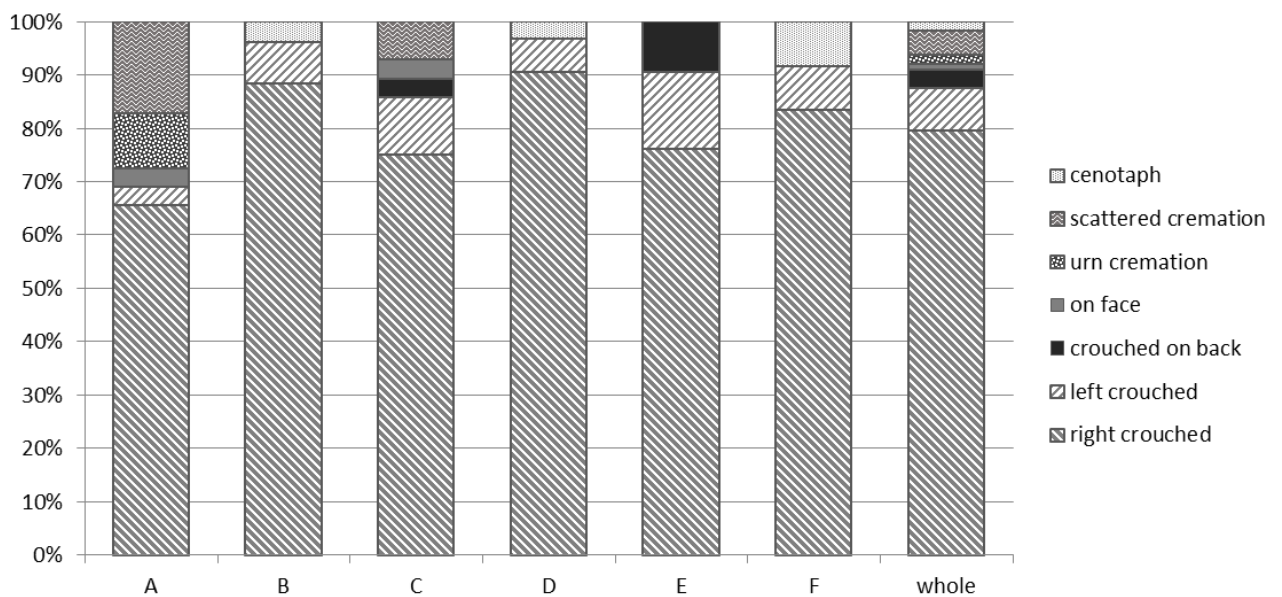


Figure 82: Burial practices used at Aszód, including by grave clusters

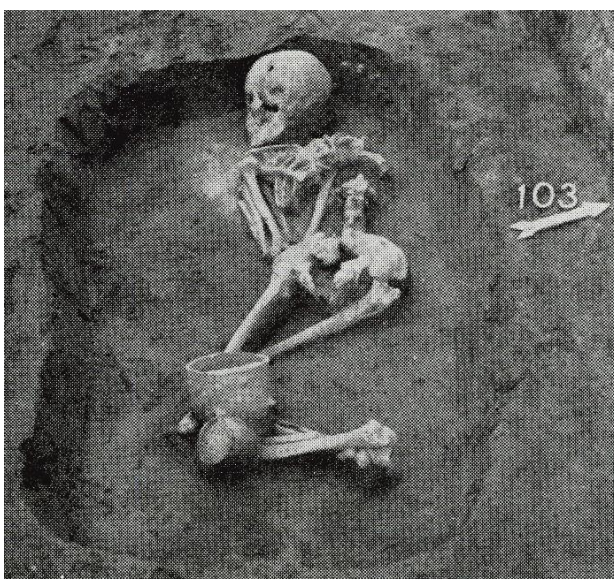
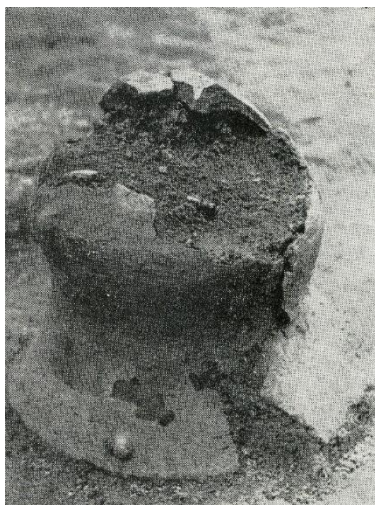


Figure 83: Burial 103, described as on its face (Kalicz 1985)

Although present in very small numbers, it is in the more unusual body treatment that spatial differences can be noticed. Overall, treatment other than placing the body crouched on the right or left accounts for only 13% of burials. Other types of inhumation occur very rarely. There is no use of an extended supine burial position. Three

burials (one in group C, two in group E) were on their backs with the lower limbs bent up to one side. It is difficult to say from the available information whether these graves represent a separate practice, or are a result of the body shifting in the grave after burial. The same may be said for the two burials described as on their fronts (one in group A, one in group C). Certainly, the burial in group A, for which a photograph is available, appears to have collapsed onto the front from its side (Fig. 83).



The other types of burial can unambiguously be considered different to a crouched inhumation. Cremation, either placed in an urn or not, was used in 11 of the published cases, 8% of the total burials. There certainly seems to be a spatial/burial group pattern here; cremations are found only in group A and C. Two burials from group C are cremations, without urns, which is 7% of this burial group. Group A is markedly different, with cremations making up 27% of the graves (3 in urns and 5 not).

Figure 84: Cremation burial 177 (Kalicz 1985)

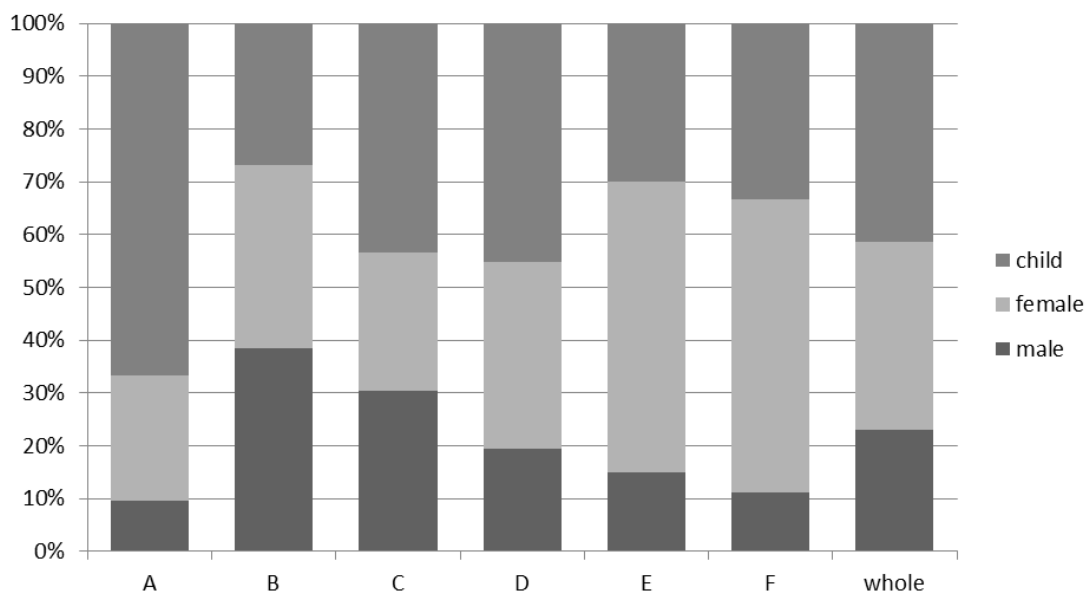


Figure 85: Sex distribution at Aszód, including by burial cluster

The final aspect of burial practices that can be analysed on a site-wide scale is the sex distribution of the individuals buried (Fig. 85). What is immediately striking is that across the whole site males are under-represented, making up 23% of the identifiable burials, while females make up 35%. In a normal population distribution we would expect to see a roughly even ratio of males to females. In some of the clusters, A and F, males make up as little as 10% of the burials. Groups B (males 38%, females 35%) and C (males 30%, females 26%) are the only clusters where the sex ratio is roughly equal. In groups E and F there are four times as many females as males.

Within pre-industrial societies a normal burial population would be expected to be around 40% children (White and Folkens 2005, 417). Site-wide at Aszód children represent just over 40% of the burials. Even if an adjustment is made for the apparent under-representation of males children still make up 37%, meaning that children are present in the ratio expected from a normal death distribution. Once again there are strong differences between grave clusters, with grave group A standing out as having a large proportion (over 60%) of children. Groups E and F, if adjusted for the under-representation of males, also show under-representation of children, at 21% and 23%. In other words, adult females dominate these two clusters.

What is immediately striking about the above breakdowns is that group A has both the highest frequency of children and the highest frequency of cremation. Any attempt to extrapolate a relationship between children and the use of cremation is frustrated by the low rate of success in identifying the cremations. Only two cremations were identified as children, and no information is presented regarding the rest of the cremations. There seems to have been no particular association between sex or age and the type of burial used (Fig. 86)

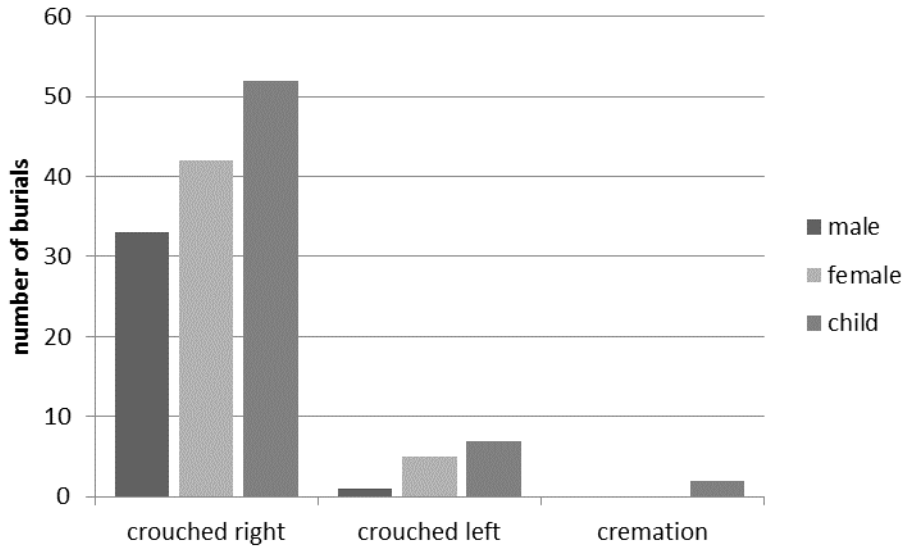


Figure 86: Burial practice in comparison to sex, for the whole site (by total number of burials)

7.6.2.2 The grave goods – Group A

Only a small number of the Aszód burials have been fully published. These are the burials from Group A, which has in other respects already been demonstrated to be the group least similar to the overall site averages. Even so, analysis of the grave good distribution may prove instructive about the site as a whole, and about the micro-traditions in this particular burial group community.

All but three of the graves in the group contained some kind of artefact along with the body. Of these, 94 and 96a were both badly disturbed by later activity, meaning it cannot be certain whether or not they originally had any items. There is no evidence to show that burial 183 had been disturbed; it seems that this child burial was indeed originally without grave goods. A further two graves, 176 and 177, were cremations placed in urns, and in both cases the urns were the only item in the grave. In such a case, one might argue, these urns are performing a different function from a typical grave good.

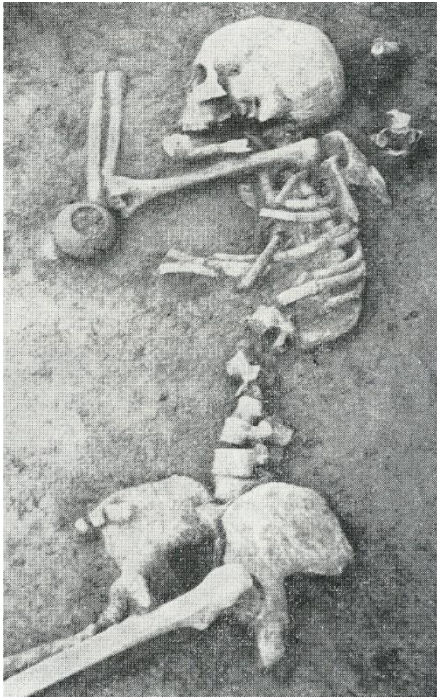


Figure 87: Burial 175, with a cup by the left elbow (Kalić 1985)

Aside from these examples, every burial in group A had at least one item accompanying the burial. Pottery is the predominant type of grave good; other than the above mentioned exceptions, all bar two of the group A burials contained some form of pottery (the exceptions are burial 181, another disturbed grave, and burial 171, which appears to be a secondary burial). Cups are the most common item (Fig. 87), occurring in 71% of the burials (percentages are of the entire grave group, including the exceptions already mentioned). The number of cups per burial varies from one to four.

The most common item of jewellery are beads made from *Spondylus* shell. 11 of the burials in group A contain beads, ranging from a single bead in burial 170, to what appears to have been a necklace consisting of about 150 various sized shell beads in burial 174, also with red deer

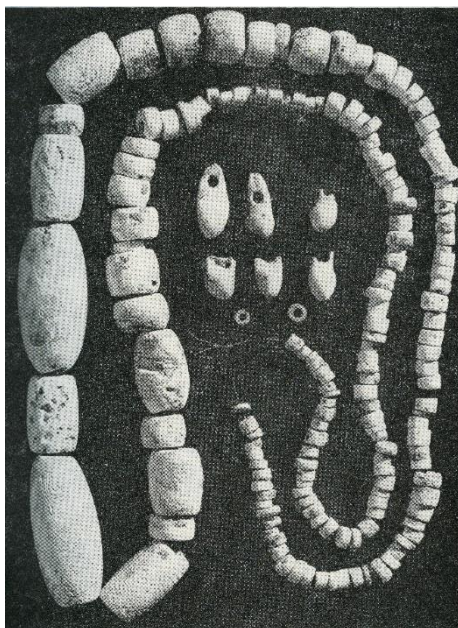


Figure 88: Beads made from *Spondylus* and deer canines, from burial 174 (Kalić 1985)

canines (Fig. 88). The locations of the beads indicate they were worn in strings around the neck, waist, skull and lower leg. In six of the graves beads were also found scattered through the grave fill. This could be due to post-depositional activity, or beads may have been attached to various items of clothing. In one grave, burial 149, beads were placed in a cup. *Spondylus* was also used in one burial, 101, to make single-piece bracelets.

These items of jewellery are found in female and child

burials. However, their absence from male burials may be coincidental; only two male burials are present in group A. They are found in every female grave (of which there are six), as well as four child burials. It is certainly tempting to suggest that these items were female attire, possibly worn from a young age. Is this the beginning of a tradition seen later in the Pannonian Plain, at Tiszapolgár-Basatanya (see section 1.5.3)?

Artefacts that could be used as tools or weapons are less frequent than jewellery in group A graves. The most common item is the stone axe, found in seven graves, with two being found in burial 178, a scattered cremation. Flint blades are found only twice, in the adult male burial 100, and child burial 172. Flint debitage is also found only twice, in adult female burial 168 and child burial 95.

There is a single case of a marble mace head, which was placed in burial 100, that of an adult male. This grave had the most individual items (14 in total), and was also of note for containing two items made of wild boar tusk, and two boar mandibles. The only other occurrence of boar mandible is in burial 180, the other adult male grave. Unfortunately, with only two male burials in the selection, it would be premature to make any connection between wild boar and maleness, but this is a theme which reoccurs in the region (see 1.7.1 Tiszavalk-Kenderföld and 1.7.2 Tiszapolgár-Basatanya).

Although the small sample size suggests caution, correspondence analysis does hint that there may be two main assemblage types (Fig. 89). With the removal of cups, which appear ubiquitously, the graves and artefacts group into two main clusters, with some outliers. To the left of the plot we see the stone axe, boar jaw and pedestal bowl clustering, with male burials 100 and 180, child burials 105 and 148, and unidentified cremation 149. On the right jars, shell beads and bowls are less tightly clustered. They are grouping with female burials 101, 146, 168, 171 and 173, and child burials 102 and 172. The implication here is that sex-based gendering shown through the wearing of certain objects or the participation in certain activities started in

childhood.

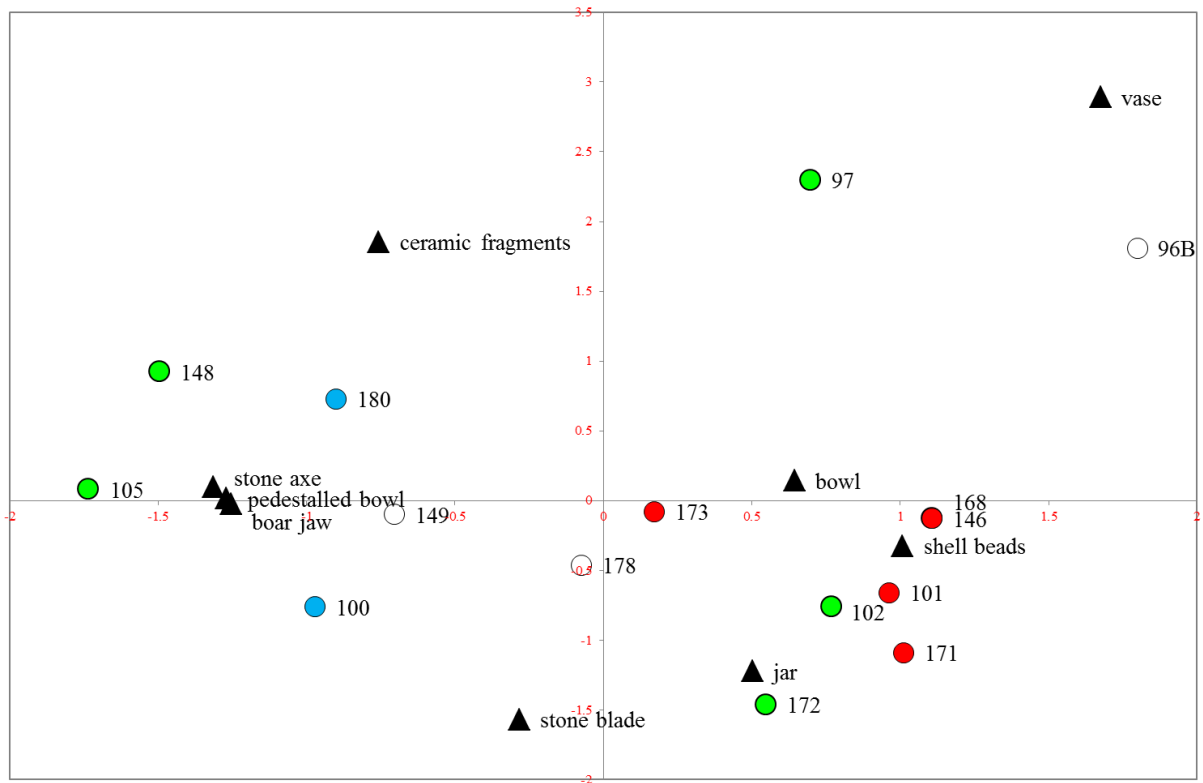


Figure 89: Correspondence analysis plot on 1. and 2. principal axes (blue = male, red = female, green = child)

7.6.2.3 Grave groups: Households, families or time period?

The spatial groupings of burials at Aszód display different patterns in burial practice, on the basis of orientation, sex and treatment of the body. Whether there were also differences in the artefacts placed in the graves is an intriguing topic for future study whenever the entire site is fully published.

It is not clear from Kalicz's publication what the spatial relationship between the house structures found at Aszód and the burial groups is. It is therefore not possible to analyse whether the groups may be 'attached' to certain houses in a similar way to that seen at Kisköre-Damm (1.5.1). Similarly, lack of absolute dating of the burials means that we cannot test whether these groups were chronological, with one empty space being used for burial before moving on to another, or whether they were all in use simultaneously by different groups. Each group is

certainly quite distinct in its burial practices, to an extent that we do not see elsewhere as a chronological difference. It seems more likely that these differences are the result of specific group practices, be these groups based on household, kinship, or clan, which carried their own traditions.

The identification of sex-based grave goods and possible gendered identities is similarly tentative. However, the patterns visible in the Aszód burials take on more significance when considered as potentially part of a diachronic development in gendered items, which can be seen later on the Pannonian Plain at Tiszapolgár-Basatanya (see section 1.5.3).

7.6.3 Mórágý-Tűzkődomb

The site of Mórágý-Tűzkődomb lies to the west of the village of Kismórágý, in Tolna County, south-east Transdanubia. It is roughly 8km north-west of Alsónyék-Bátaszék, and 20km west of the Danube, in the southern Transdanubian foothills of Szekszárd. It takes its name from the nearby town of Mórágý, and the local name for its location, Tűzkődomb, meaning hill or mound of flint. Historical maps indicate that the mound was previously surrounded on three sides by water and marshland, and this may well have been the case in the Neolithic (Zalai-Gaál 2002, 6).

7.6.3.1 Excavation

Mórágý-Tűzkődomb has a long history of archaeological investigation, being first written about by Mór Wosinsky (the first excavator of Lengyel) in 1896. Extensive surface finds on the south-west slope of the hill made by Gyula Mészáros in 1959 led him to suspect the presence of a Neolithic settlement. Further surface collection was conducted by György Csanády in the 1960s and 1970s, both on the hill itself and in the surrounding area. In 1970 construction work on the site uncovered a Lengyel period burial, and Csanády led a small rescue excavation, which discovered a crouched burial accompanied by pottery, flint artefacts, and copper beads (Zalai-Gaál 2002, 32).

The first research excavations on the site were carried out by István Zalai-Gaál. A test excavation of 100m² was opened in 1978. This area, Mórógy-Tűzkődomb-A, contained various Lengyel period settlement features, and a single grave. In 1980 excavation started on a second area, Mórógy-Tűzkődomb-B, about 150m to the west of area A. This area, in which excavations continued until 1990, contained 110 Lengyel period graves, in what Zalai-Gaál labelled as two grave groups, B₁ and B₂ (Fig. 90). In total an area of 2118m² was excavated at Mórógy-Tűzkődomb, which undoubtedly represents only a small portion of the entire site.

Detailed publications of the two grave groups have been produced by Zalai-Gaál (2001; 2002), including descriptions of the graves and their grave goods, and analysis of the findings. The burials have been subject to anthropological analysis by Zoffmann for aging and sexing, as well as biochemical analysis by K. Lengyel. The biochemical analysis has the advantage that it is able to sex children who are too young to be sexed osteologically. However, in some cases the anthropological age and the biochemical age vary widely, in which case the anthropological estimates have been used.

7.6.3.2 Phasing

The graves have been phased predominantly by ceramic typologies based on the pottery found as grave goods. All the graves belong to the Lengyel period. One-third could not be phased more precisely than this. Only four burials belong to the early Lengyel. These are all from the east of the excavated cemetery area, in B₂. The seven transitional graves are also found in the east of the cemetery, although two of them are in B₁, but still to the east.

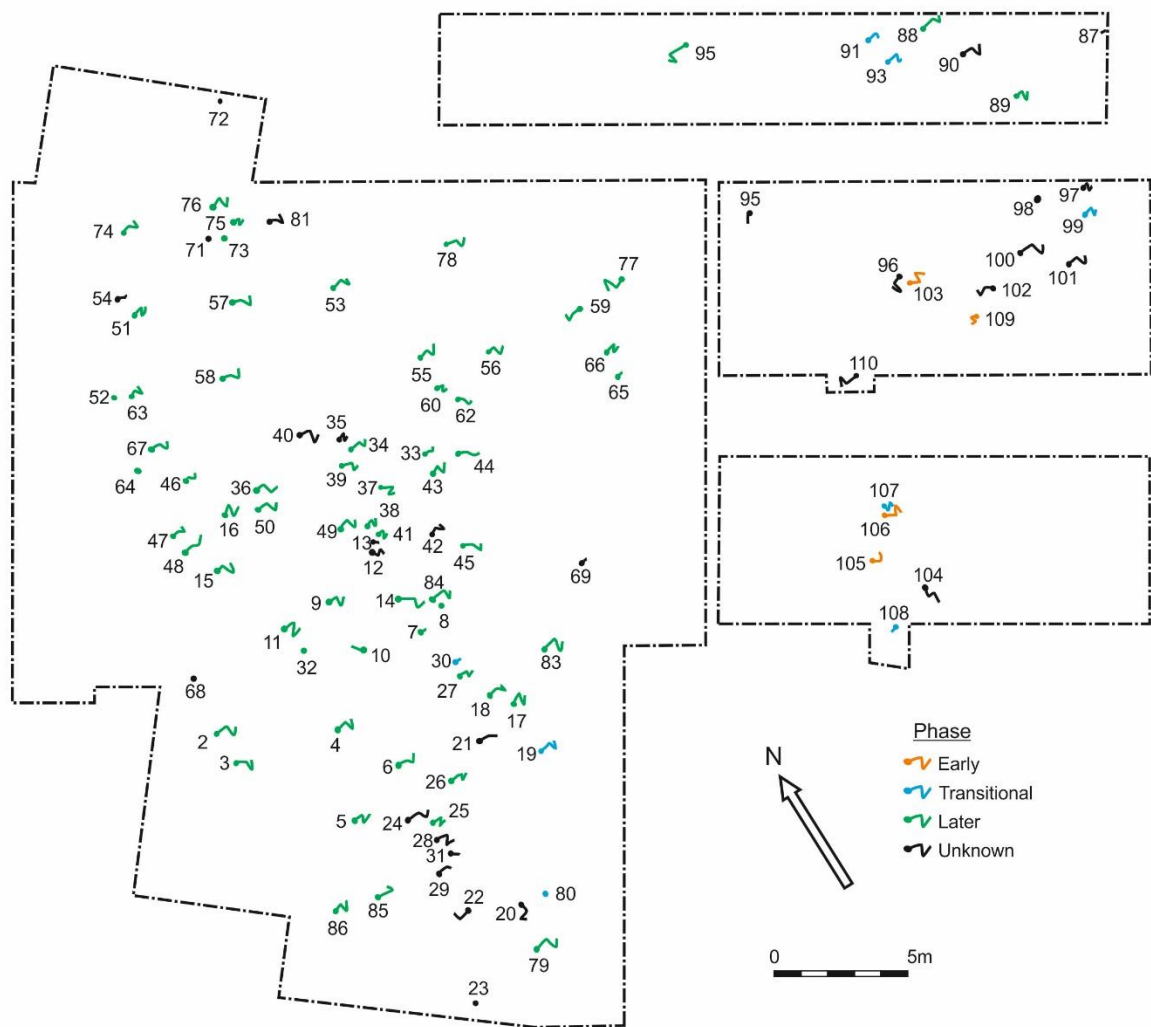


Figure 90: Plan of Mórógy-Tűzkődomb cemetery (redrawn after Zalai-Gaál 2001, 132)

The majority of the burials, 56%, date to the later Lengyel phase. These are mostly found in B₁, although there are three in the northern part of B₂. While it seems unlikely that the excavations have uncovered the full extent of the burial area, from the evidence available it does appear that there was a spatial development of the cemetery area's use, from the east in the early phase, expanding westwards.

7.6.3.3 *The burials*

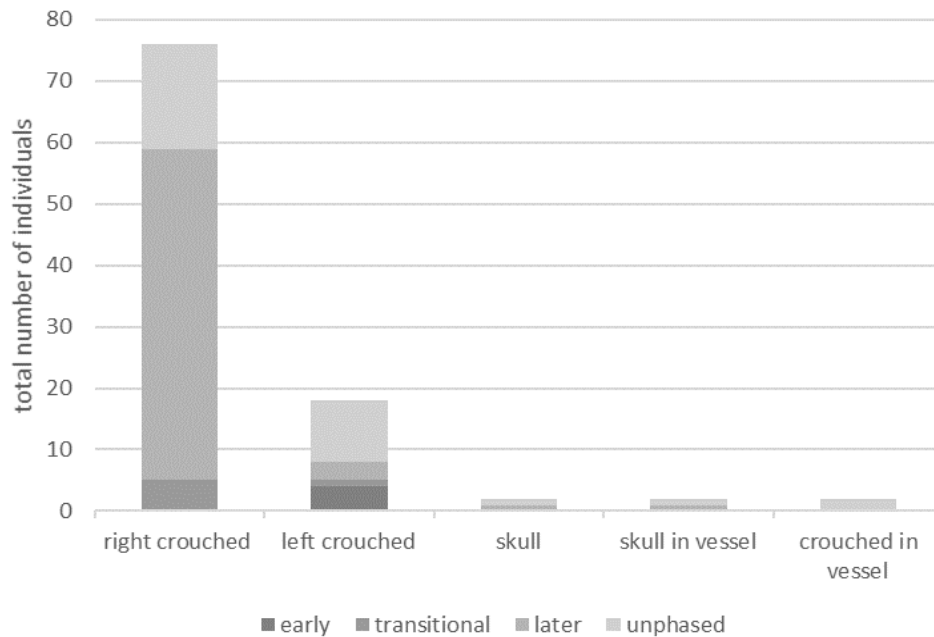


Figure 91: *Burial positions at Mórógy*

The burials at Mórógy are predominantly individual crouched inhumations, mainly placed on their right sides (Fig. 91). In total, 68% of the burials were placed crouched on the right side (these figures do not include the eight burials where the position of the body could not be made out due to later disturbance), 16% were on their left. The legs were generally bent at least at an angle of 90°, while in some cases they were tight against the chest. There is a single instance, burial 7, of a double inhumation, an adult female with an infant. Two infant burials, 68 and 97b, were placed in the usual crouched position inside bowls. Finally, there are four cases of the burial of only the skull. In the case of burials 32 and 64, also infants, the skulls were placed in pedestalled bowls. Burials 73, a male juvenile, and 82, an unsexed adult, were not buried in a vessel.

7.6.3.3.1 Orientation

Half of the total burials whose orientation was possible to identify (99 graves were assigned an orientation) were orientated west-east, with the head to the west (Fig. 92). 18% were orientated SW-NE, while 19% were orientated NW-SE. Their dominant burial orientation was clearly therefore west-east, although with some deviation, with the head towards the west. 11% of the burials contradicted this pattern, with four burials having their heads to the east, three to the north-east and four to the south-east.

When broken down into phases, although there are only a few early phase burials they are all orientated east. The other, unassigned, east-orientated burials are also from the western part of the cemetery, suggesting that they were also early phase. Both the transitional (again only in very small numbers) and the later phase burials were orientated westwards, between north-west and south-west (Fig. 92).

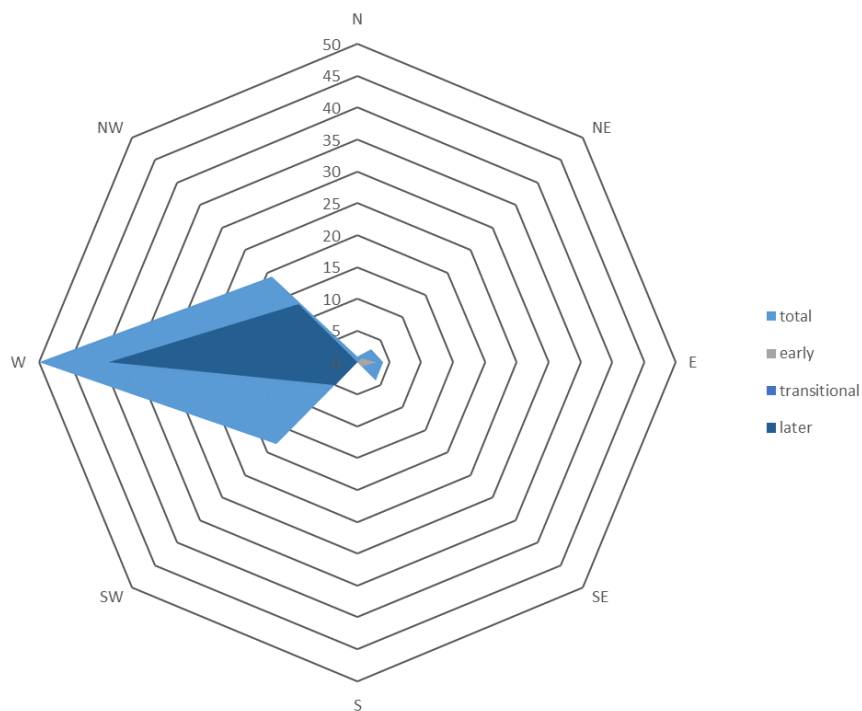


Figure 92: Orientation of Mórógy burials, as total number and by phase

7.6.3.3.2 Age and sex

Female burials outnumber male burials at Mórógy; 59 of the burials were female and 40 were male. The remainder (11 individuals), could not be sexed.

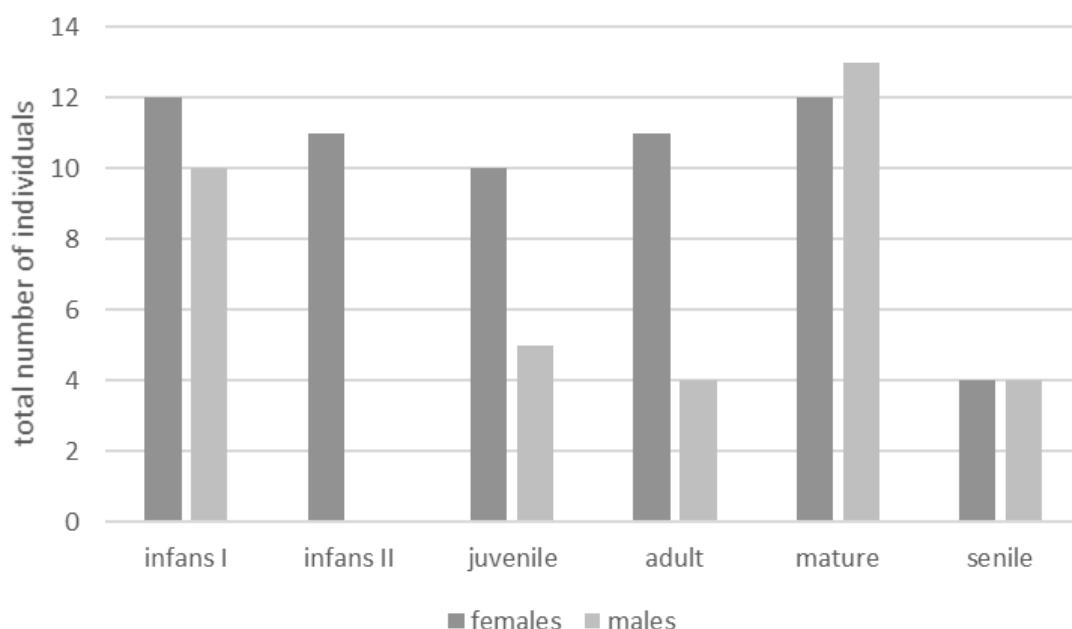


Figure 93: Breakdown of the burial population at Mórógy by age and sex

When broken down into age ranges (Fig. 93) we see two quite different profiles. The female burials maintain a steady rate, with between ten and 12 burials in each age group until the *senile* group which, as is expected for this age group is much lower. The proportion of children in the sub-adult groups is high, at 50% it is slightly higher than would be expected for a normal population. The males show a very different pattern, with a similar number of *infans I* burials, but no *infans II* age burials at all. There are half as many (five) males as females in the *juvenile* age group, and just over a third (four) in the *adult* age group. There is then a very sharp rise in the *mature* group, which with 13 individuals makes up 32% of the male population. In a normal population (White and Folkens 2005) this would be around 15%. We have here, then, a rather strange situation where the female burials are representing a relatively normal prehistoric death

population, while the males are over-represented by older adults. In the case of the subadults this could be attributed to problems with the sexing technique; it is particularly strange that there are no boys between the ages of seven and 14. However, if this is genuine then it could be explained as an age when boys are living away from the settlement, either due to some kind of initiation process, such as is seen in the Ok (Barth 1987), or because they had specific roles, possibly to do with herding.

7.6.3.4 Grave goods

Only 10% (11 burials) of the graves at Mórógy contained no grave goods whatsoever. Of these, 5 graves had been severely disturbed by later activity. The remainder represent a range of people, from young infants to adults in the *senile* age category, both males and females.

7.6.3.4.1 Pottery

It is rare for a grave to contain no type of pottery. In addition to the graves which contained no artefacts, only five graves contained no pottery at all. These were burials 12 and 13, two female children, burial 21, a juvenile female, burial 24, an adult female, and burial 71, which was too poorly preserved to be aged and sexed.

The most common vessel types were small beakers, bowls and vase type vessels. Beakers and vases were both present in 54% of the graves, while 32% contained bowls. Slightly less common were footed bowls, which appeared in 25% of the graves. Generally, where there is more than one pot per grave they are of different types, but the does not seem to be a set assemblage for the burial, nor is there any association between pot type and specific age or sex groups.

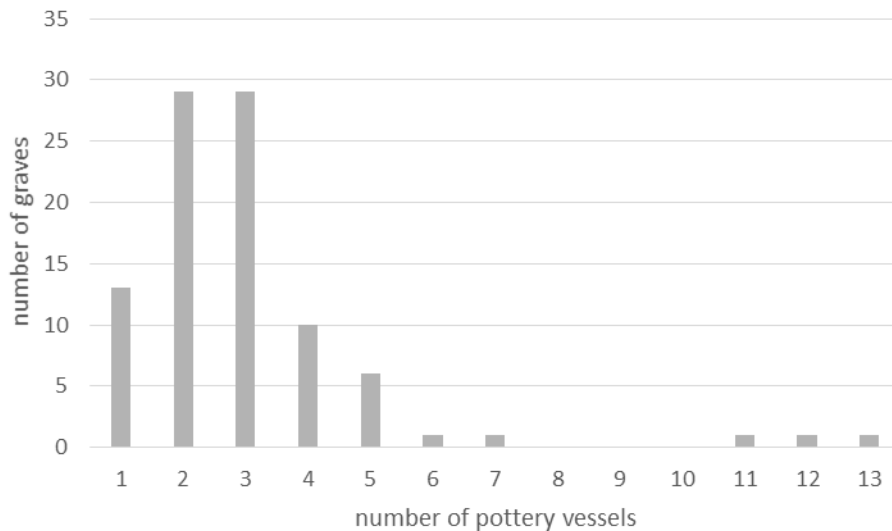


Figure 94: Occurrence of pottery in graves at Mórógy by total number

The average number of vessels per grave is three. Three burials stand out as having an unusual number of vessels (Fig. 94). Burial 109, of a seven to eight-year-old child, contained four beakers, three vases and five footed bowls. Burial 64, an infant's skull placed in a footed bowl, also included two bowls, nine vases and two footed bowls. Burial 55, a 22–28-year-old male, contained three beakers and eight vases. In other respects, these three graves are not lavishly furnished, burials 64 and 55 having in addition a few flint tools, and 109 having no other items at all.

7.6.3.4.2 Tools

Stone tools occur in just under half of the graves at Mórógy (48%). No copper tools were present. Flaked tools were made from flint, radiolarite and obsidian. The most common was flint, with a similar occurrence of obsidian and radiolarite. The material was not specified in the case of the ground stone tools.

The average number stone tools found in a grave was 2.5, with a range from one to seven individual items. One grave stands out, however, that is Burial 66, which included 21 separate stone artefacts, including eight flint blades.

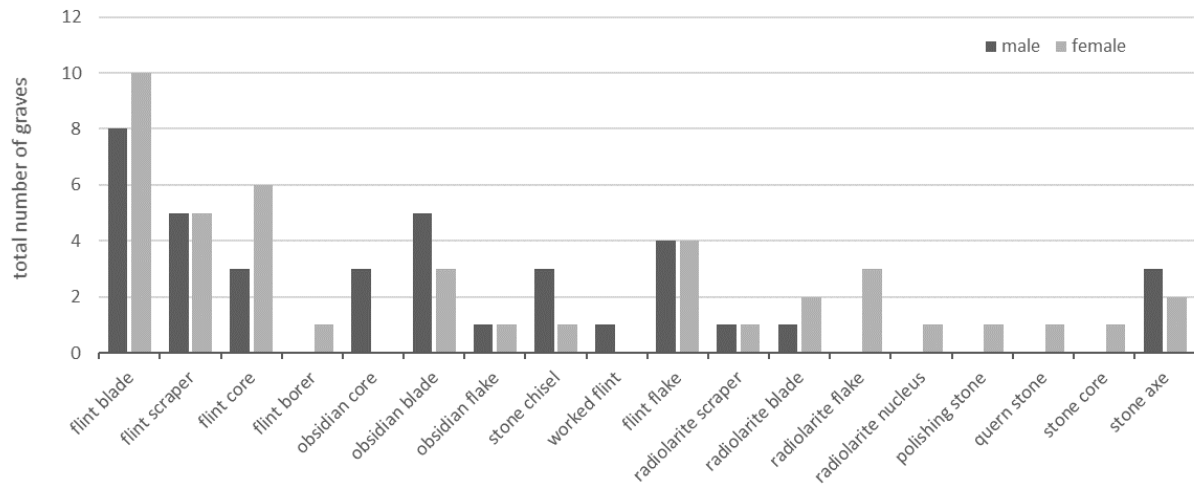


Figure 95: Distribution of stone tools at Mórógy, by sex

The most common artefact type is the blade, found in both male and female graves in roughly equal numbers (Fig. 95). Other types of knapped stone tool, scrapers and borers, are also present in the graves of both sexes. Interestingly, cores, particularly of flint, are as common as some tool types. These may have been included in the graves of individuals who were knappers, as items of their craft, or they could be seen as providing material for use in the afterlife.

Polished stone axes are rare, occurring in only five graves, three males and two females. No more than one stone axe is found in any one grave. They are not necessarily associated with the most lavish graves either; in the case of Burial 94, an adult male, only a single pot was also provided as a grave good. Polished axes, then, were not associated with wealth or any sex/gender related roles at Mórógy.

Tools made from bone were also found in Mórógy burials. These included single finds of a bone sickle, found in Burial 9, a four to five year old female, and a needle, found in Burial 14, a mature

male. Awls were found in three graves, Burial 40, a mature female, Burial 55 a young adult male, and five were found in burial 66, the adult male already noteworthy for the high number of stone tools he was buried with.

7.6.3.4.3 Adornments

Articles of body ornamentation are surprisingly rare. In the early and transitional phases they are not present at all. Overall, ornaments occur in 23 graves. The most common type is a bead necklace which is present in 16 burials.

7.6.3.4.4 Animal bones

Animal bones are present in just four of the burials. Wild boar tusks are found in burial 6, an adult male, and 9, a 4–5-year-old female child. As has already been mentioned, there are also two burials with plates carved from wild boar tusk, so it is possible that these should be considered as items of adornment rather than as some form of animal offering.

The two other graves both contain deer bones and teeth. These graves, 102 and 105, a juvenile female and an adult male, are both from the early Lengyel phase.

7.6.3.4.5 Correspondence analysis

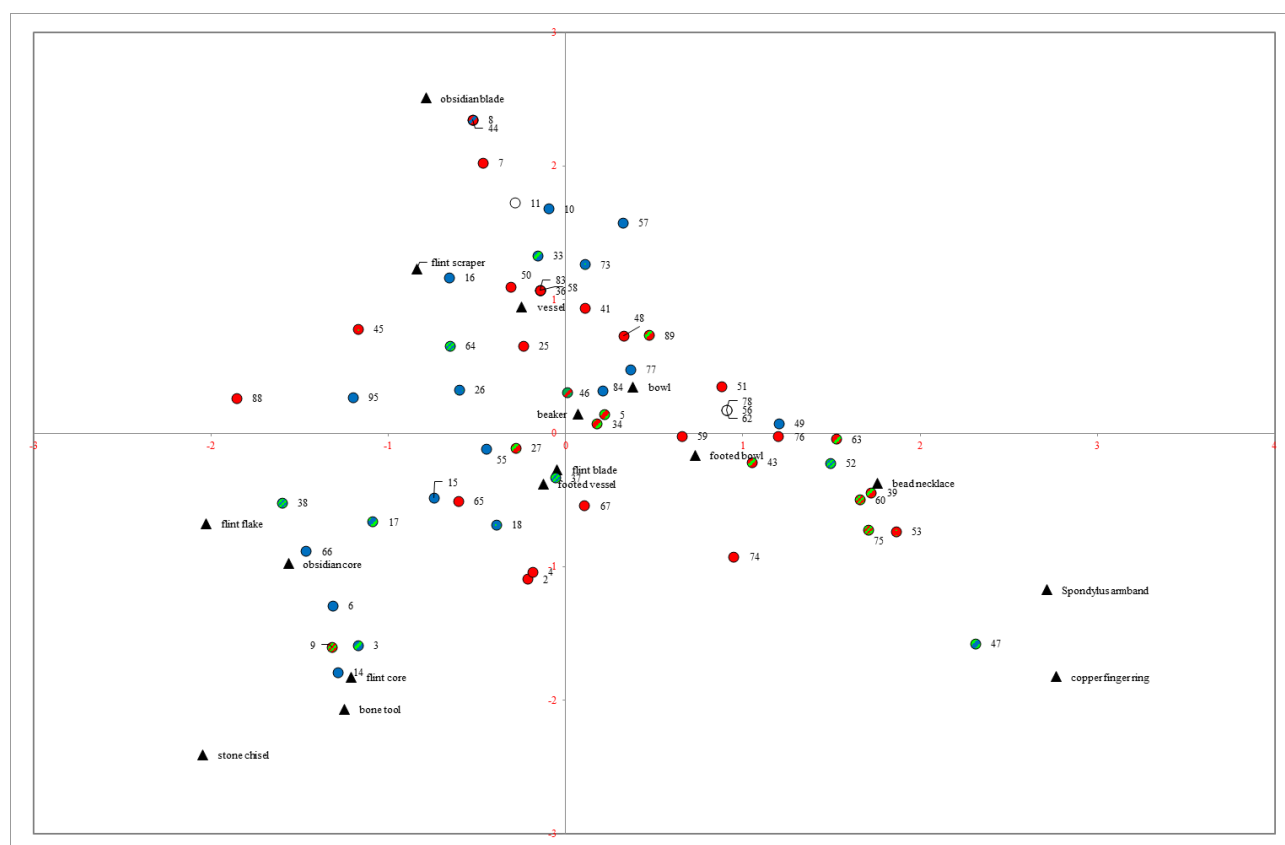


Figure 96: Correspondence analysis combined plot for Mórógy-Tűzkődomb on 1st and 3rd principal axes (blue = male, red = female, green = child)

The correspondence analysis only confirms what the univariate analysis has been suggesting. There appears to be no sex or age based associations with artefacts (Fig. 96). Furthermore, there is no clustering of burials that would point to any kind of specific burial assemblage that could be related to other identities.

7.7 THE FIRST EXTRAMURAL CEMETERIES

The first extramural cemeteries in the eastern region appear in the Early Copper Age, c. 4500 (Kovács and Váczi 2007). To the west, on the Great Hungarian Plain, this came hand in hand with other social changes. The large, multiphase settlements (both horizontal and tells) of the Late Neolithic were abandoned in favour of smaller settlements that were less disparate (Parkinson *et al.* 2002–2004, 102). There also appears to have been a change to the household,

with individual houses changing from large, multi-room structures to smaller single room ones. It appears that at the same time certain activities, such as cooking or storage, became communalised, taking place in communal areas rather than houses (Parkinson *et al.* 2002–2004, 104).

7.7.1 Tiszavalk-Kenderföld

The site of Tiszavalk-Kenderföld is one km south-west of the modern village of Tiszavalk on the Pannonian Plain, and approximately 30 km to the north-east of Kisköre (Patay 1978). It lies on a raised area, Kenderföld, from which the site takes its name, on the edge of the Tisza floodplain.

The first prehistoric remains were found in the 1950s when sand extraction works started in the area. A brief (two day!) rescue excavation in 1954 discovered Copper Age, as well as Sarmatian, settlement evidence. Further destruction occurred in 1966, when unusually heavy flooding meant more large-scale earth movement to reinforce the dam. The workers came across a number of Copper Age burials, which were destroyed, although finds were collected (Patay 1978). This prompted the Hungarian National Museum and The Herman Otto Museum in Miskolc to undertake further rescue excavation. The excavation of the cemetery was directed by Pál Patay, and took place in three short seasons in 1966 and 1967.

During the course of the excavations in 1966 and 1967, 54 burials attributed to the Bodrogkeresztúr culture were discovered. The excavations covered the remaining accessible cemetery area. It is thought that 20 burials were previously destroyed during the work on the dam project, and an unknown number were lost in the northern part of the site during the construction of a flood embankment in the 1930s, and an inaccessible area remains under the embankment itself. Therefore, it is not possible to say what percentage of the original cemetery is represented by the excavated material, although the excavators estimate it is about a half (Patay 1978, 8).

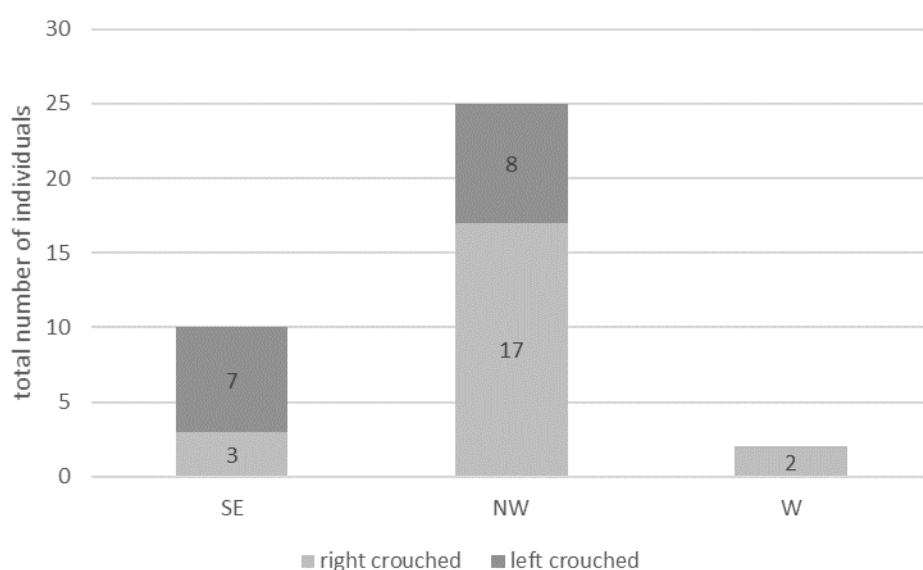
As well as the Copper Age cemetery there was a large amount of other archaeological activity on the site, with evidence of occupation in the Late Neolithic (Tisza period), Early Bronze Age pits, Sarmatian graves, and more pits from the Sarmatian and Arpad periods (Patay 1978, 8). Recent radiocarbon dates put the Copper Age cemetery use as dating to the last three centuries of the fifth millennium BC (Dušan Borić pers. comm.).

7.7.1.1 *The burials*

Of the 54 Bodrogkeresztúr graves excavated five were too badly disturbed by later activity to be able to say anything about their burial position or associated grave goods (burials 19, 20, 24, 34 and 36), and another was of uncertain date due to lack of datable artefacts (burial 15). A further ten were too disturbed to have their orientation discerned.

The dominant burial orientation was north-west – south-east, with 27 burials having their heads towards the north-west and ten towards the south-west. Two burials were slightly off from this orientation, buried east – west with their heads to the west (Fig. 97).

The burials were exclusively in a crouched position, on their right or left sides, and in two cases on their backs. This conformity is typical of Bodrogkeresztúr burial practice (Patay 1978) but it



does raise the question, what is the significance of placing the deceased's head in the opposite direction to

Figure 97: *Burial position and orientation*

another, and why were some placed on their left side and others on their right? Was there some significance in the direction the deceased was facing, or 'looking'? Figure 97 shows the burial orientation broken down by side of burial. 24 of the burials were positioned so they faced NE, while only 11 faced SW.

No osteological assessment has been conducted on the Tiszavalk-Kenderföld burials, therefore no sex information is available. There is only minimal age information, in the form of identifying children, presumably based on size. Therefore analysis of age or sex related patterns will not be possible, but potential artefact patterns may still be identified.

7.7.1.2 Grave goods

7.7.1.2.1 Pottery

Almost all the graves contained a large jar of a type known as a *Milchtopf* (milk jug). In nearly every case a small bowl, sometimes with a handle, was placed in the mouth of this jar. Even if the bowl was not found in the jar there was always an accompanying bowl in the grave. It seems clear that this represents an essential part of the funerary rite at Tiszavalk-Kenderföld; they are present in all cases, from graves with no other artefacts to those with tens of other items.

Only two graves (48 and 51), contained more than one *Milchtopf*, both containing two. Did these vessels contain drink, which was intended for the deceased? This seems likely, considering there were also articulated animal bones of legs and ribs which were presumably placed as meat in the grave. It seems that providing nourishment for the deceased in the afterlife was an important concern for this community. Animal bones of some kind occurred in 25 of the burials.

Four burials did not contain *Milchtopf*. Of these, one, burial 49, was partially destroyed by later activity and therefore may have originally contained one. Burial 17 (a child) does not have *Milchtopf* but does have a handled jar, which although much smaller than the *Milchtopf* may have performed a similar function in the child's funeral. The other two burials are more interesting.

Burial 47 has no *Milchtopf*, but it does contain a bowl, and burial 30 contains no pottery at all, only two flint artefacts. Neither burial has been disturbed post-deposition, so we can be certain that these were deliberate omissions. Both graves are also rather irregular in shape rather than the standard rectangular grave cut. Does this perhaps indicate a lack of effort given to the burial of these people?

Ceramics in general are by far the most common find in Tiszavalk-Kenderföld graves. There is an average of three vessels per grave, with the most vessels in a single grave being grave 28, with eight. Interestingly, in other respects grave 28 is poorly furnished: the only other grave goods are a grindstone, and a white pebble placed inside one of the pots. Comparison of the number of pottery items provided as grave goods to other artefacts types (Fig. 98) shows that there is not a relationship between them. The five graves with the most pots, between six and eight per burial, had only one or two other types of grave good. Burial 29, which overall had the most grave goods, had only the standard pottery items of *Milchtopf* and bowl. It is clear, therefore, that the overall number of graves goods was not a simple reflection of wealth or hierarchy. There is some other logic or reasoning behind the types of artefact placed with a person.

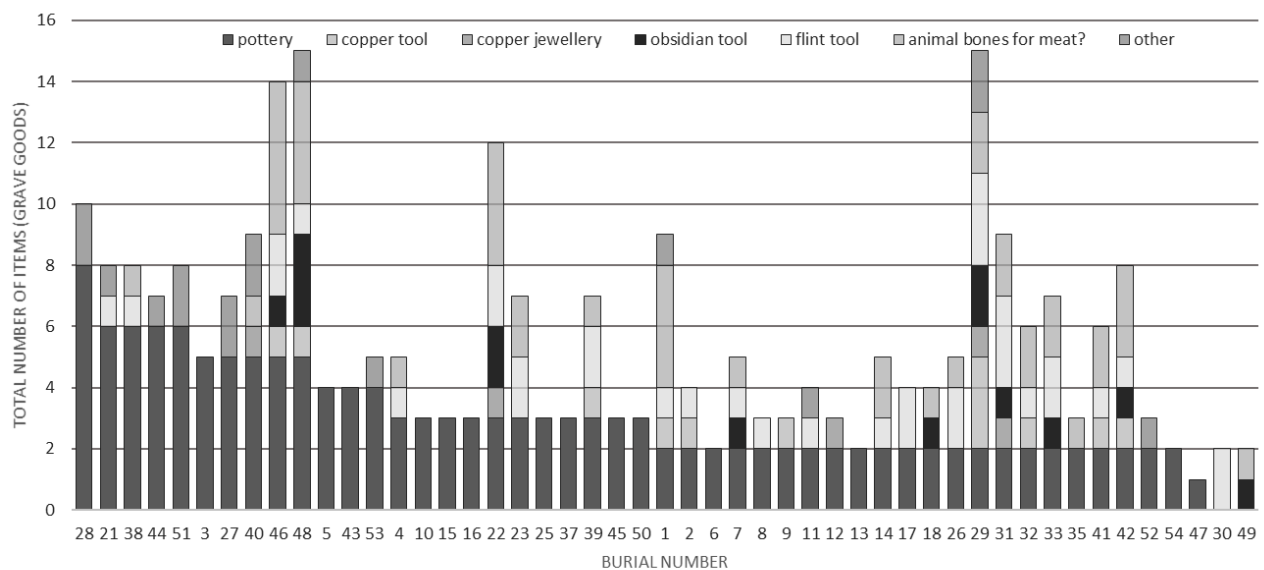


Figure 98: Occurrence of grave goods (by type) in each burial

7.7.1.2.2 *Tools and weapons*

Stone tools or weapons were the second most common type of grave good, with some kind of stone item present in 28 of the graves. Flint and obsidian were both used for smaller items, such as arrowheads, scrapers and blades, while unspecified but presumably harder wearing stones were used for larger items, such as hammer stones and grinding stones.

Flint blades were the most common artefact type, with 18 found in total from 15 burials, with three graves having two blades. There is a single case of an obsidian scraper. Stone blades could have been used for a variety of processing activities, including cutting plants, meat or hides. Their high occurrence in burials may be due to them being a useful all-round tool, or because they were used in a number of different specialisms by different people. Scrapers and borers may have more specific uses and are found in smaller numbers (one flint and one obsidian scraper, one flint borer). Arrowheads (eight obsidian and two flint) may have been used for hunting or as weapons. Interestingly, in only one burial (burial 48) was more than one arrowhead found. It seems unlikely that either a hunter or a warrior would head out with only a single arrow; an indication that in this respect grave goods did not represent the individual's attire in life. Unfortunately, the excavation evidence is not clear enough to exclude the possibility that these arrowheads were actually the cause of death.

A flint nucleus was found in burial 17, and an obsidian nucleus was found in burial 29. In both cases debitage was also present in the grave. While burial 29 contained the most stone artefacts of any burial (six individual items, including the only stone axehead), burial 17 contained only the core and debitage, and no other items aside from the ubiquitous jar and cup. Was the person buried in burial 17 a flint worker, buried with the tools of their trade? Another burial, burial 51, contained a hammer stone but no other stone artefacts. Finally, grinding stones, probably used for food preparation, were present in three burials.

Copper tools are less numerous than stone, with only 12 found in total. This may indicate copper was still a scarce resource, or that stone was simply better for performing certain functions, such as cutting. It is noteworthy that 10 of these copper items were the same artefact, a needle, while one other was also a pointed item, an awl. Copper is more easily worked into a long thin point than stone, and this may be why only these tool types were produced in it. The remaining copper tool is an axehead, from burial 29.

7.7.1.2.3 Adornments

Items of personal adornment were surprisingly rare, occurring in only five burials. The only gold item from the cemetery was a pendant in burial 40. The same burial also contained copper tubes which may have adorned hair or clothing, and marble beads. Burial 29, already noteworthy for containing the only copper and stone axe found, also had a copper bracelet and an amulet or pendant made of boar tusk. Three burials contained a copper wire ring, burials 12, 22, and 31.

7.7.1.2.4 Animal bones

Animal bones are common, and it seems that the inclusion of meat in the grave was an important part of the funerary ritual. The publication provides detail on not only the species included but also the body parts included. Cow, sheep/goat and pig are all present, usually represented by the hind limbs or ribs and often articulated. It seems likely that these were cuts of meat provided for the deceased. It is less likely that they were part of a graveside funerary feasting practice; there is no suggestion that the bones show any signs of cooking, and ribs in particular would not have remained articulated after consumption.

As well as the ungulates, small mammals, of unspecified species, were also present. They were represented by bones from their extremities (again, no more detail is provided). Patay (1978) has suggested that these may represent furs.

As well as the probable inclusion of meat and skins, there are five cases of jaw bones being included in the graves, two of a wild boar, and three of domestic pig. The inclusion of pig mandibles is also seen at Tiszapolgár-Basatanya where Bognár-Kutzián considered it to be related to male burials (Bognár-Kutzián 1963) (see Tiszapolgár-Basatanya 1.7.2.).

7.7.1.2.5 Correspondence analysis

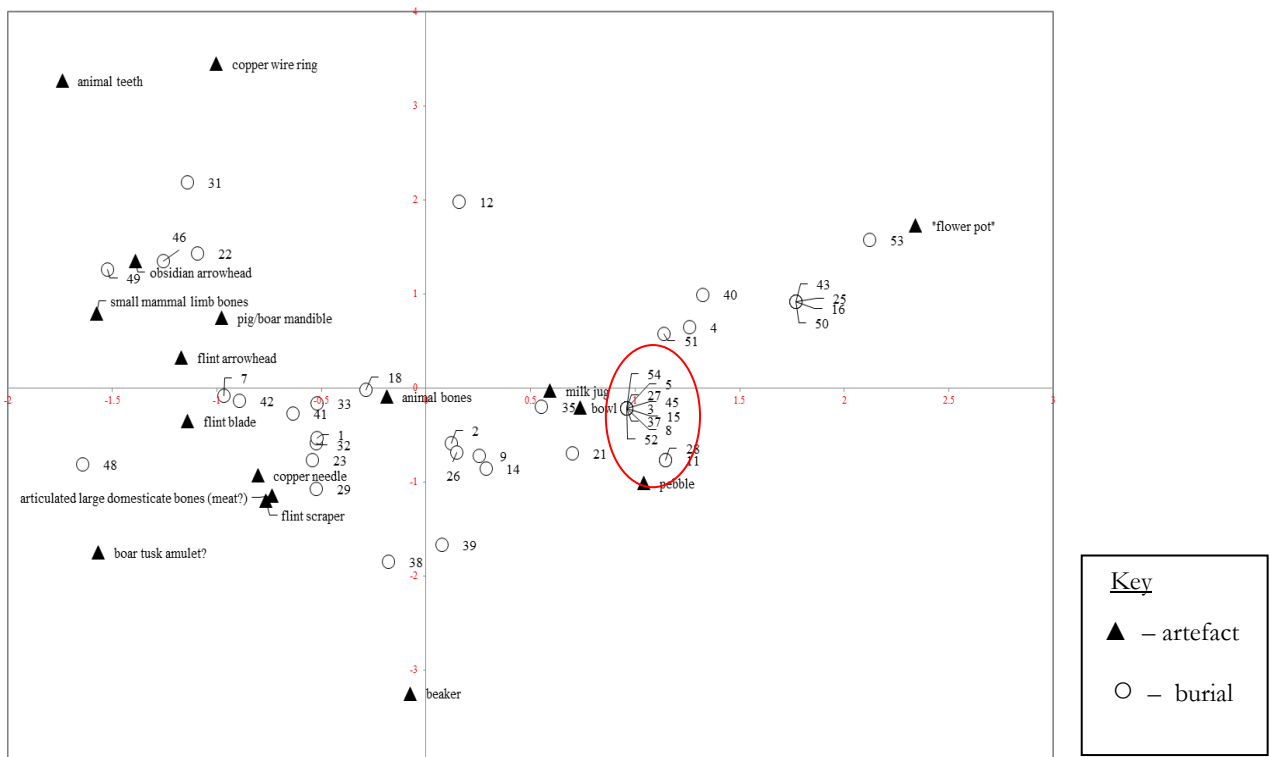


Figure 99: Correspondence analysis plot of Tiszavalk-Kenderföld on 1st and 3rd principle axes

Immediately noticeable on the correspondence analysis plot is a large cluster of graves plotting in the same place (circled in red), which is due to the near universal presence of the milk jug and bowl. The results describe a slightly uneven parabola, which is indicative of a series, for example overlapping chronological type artefacts. What the variability may be describing in this case is unclear. With no sexing or age information it is not possible to compare their distribution.

The interesting aspect of this plot is that there appear to be several small clusters of graves which indicate the same or similar assemblages were placed in several graves. This could be a result of specific roles or identities.

7.7.2 Tiszapolgár-Basatanya

7.7.2.1 Location

Tiszapolgár-Basatanya (henceforth Basatanya) is located on the same former low island as Polgár-Csőszhalom (section 1.5.2). The site also takes its name from the village of Polgár, which was formerly known as Tiszapolgár, and the field in which it was found, locally known as Basatanya. The area is rich in prehistoric finds; other sites in the vicinity include the Middle Neolithic Polgár-Király-érszék, Polgár-Nagy Kasziba, Polgár-Ferenci-hát, and the Late Neolithic Polgár-Basnyakdomb (Raczky and Anders 2012). It is also only 30km to the north-east of Tiszavalk-Kenderföld.

7.7.2.2 Excavation

The presence of prehistoric remains at Basatanya had been recognised by local enthusiasts in the early 1900s from surface collections and finds during various digging activities. Such activities included, in 1928, the digging of an irrigation canal, during which around 30 Tiszapolgár period graves are thought to have been destroyed. The first archaeological excavations at the Basatanya cemetery took place in 1929, conducted by Ferenc Tompa and financed by Cambridge University (Bognár-Kutzián 1963, 17). These excavations placed a series of interconnected trenches in two areas, both to the north of the canal. Eleven burials were found, but as there are no plans of the excavations they cannot be located with certainty in relation to the later burials. However, Bognár-Kutzián has suggested some relationships between disturbed burials excavated in the 1950s and those partially excavated in 1929 (Bognár-Kutzián 1963, 23). There are also some discrepancies in the records that mean that the grave goods from the 1929 excavations cannot be reliably assigned (Bognár-Kutzián 1963, 23).

No further work was done at the site until 1950, when the site was targeted as part of a campaign to fill in what had been identified by the Hungarian Academy of Sciences as a gap in understanding of Hungarian prehistory in the Copper Age (Bognár-Kutzián 1963, 18). The excavations were continued, in summer digging seasons, in 1952 and 1953, and finished in 1954. During the course of these excavations 156 graves were uncovered, which included 165 skeletons (Bognár-Kutzián 1963, 352) from an area of approximately 3000m². Evidence for preceding Late Neolithic settlement activity was also found in the form of pits containing pottery of various Late Neolithic styles, including Szilmege, Bükk, Linear Pottery and Herpály (Bognár-Kutzián 1963, 521). A single Late Neolithic burial, grave 84, was also found. There was also limited evidence for Late Copper Age Baden activity, again in the form of a few pits.

7.7.2.3 Publication

The 1950s excavations have been excellently published in an extensive publication by Ida Bognár-Kutzián in 1963. It includes detailed descriptions of the graves, the position of the skeleton and the grave goods, as well as drawings and photographs of the grave goods.

Furthermore, due to its excellent initial publication Basatanya has been used for a variety of studies, including the typological and spatial work of Marita Meisenheimer (1989), Joanna Sofaer Derevenski on gender and age (1997a; 2000), and John Chapman's on burial lineages (2000a), all of which have been influential for this thesis.

7.7.2.4 Phasing and cemetery development

The traditional interpretation of the cemetery is that it has two main phases, the Early Copper Age Tiszapolgár (with 55 graves) and the Middle Copper Age Bodrogkeresztúr (80 graves). There are seven graves that are considered to represent a transitional period (Bognár-Kutzián 1963) (Fig. 100). The earlier graves are to the east of the site with the cemetery spreading westwards. This phasing is based on ceramics and burial position, and the regionally accepted culture history chronology of Tiszapolgár preceding Bodrogkeresztúr. The regional chronology

itself was largely established on the basis of the ceramic typologies from Basatanya (Raczky and Siklósi 2013).

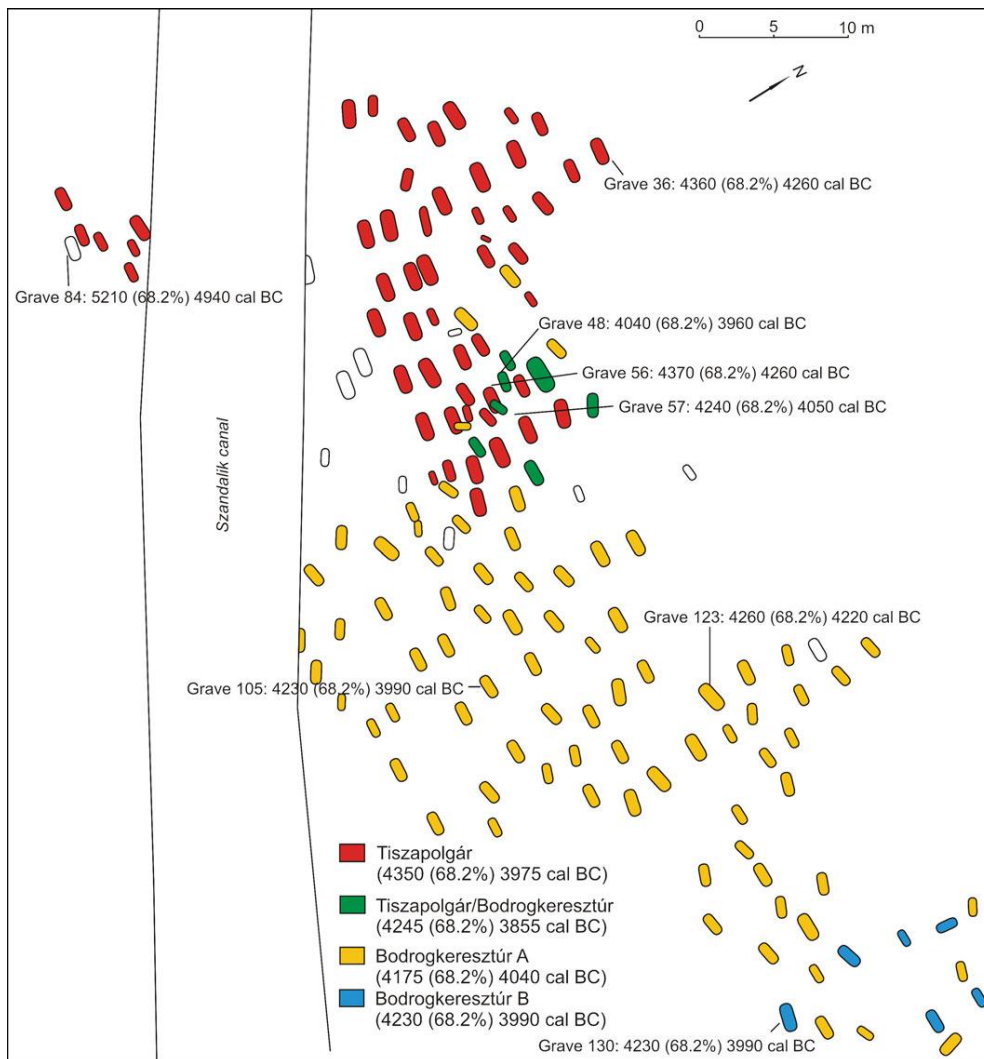


Figure 100: Stylised plan of Basatanya cemetery, showing the phased burials and their absolute dates (Raczky and Siklósi 2013, Fig. 2)

Tiszapolgár-Basatanya was the first Copper Age site on the Pannonian Plain in Hungary to be radiocarbon dated, in the 1980s. Seven dates were obtained, five from Tiszapolgár and two from Bodrogkeresztúr phase burials (Bankoff and Winter 1990). These placed the Tiszapolgár phase burials between 3920 and 3765 cal BC, extending the Early Copper Age back earlier than had previously been assumed. The two Bodrogkeresztúr burials dated later, 3830-3645 cal BC and

3795-3485 cal BC. However, a series of 15 thermoluminescence dates on ceramics from Basatanya were less supportive of the two phases being consecutive (Benkő *et al.* 1989, 1002).

More recently, dates from Basatanya formed part of a project modelling the Copper Age cultures of the Pannonian Plain - Tiszapolgár, Bodrogkeresztúr and Hunyadhalom - by Raczky and Siklósi (2013). Raczky and Siklósi's project used 7 samples from the Basatanya Copper Age cemetery, as well as the one Late Neolithic burial. The samples came from two Tiszapolgár burials, two from the transitional phase, two Bodrogkeresztúr and one Late Bodrogkeresztúr grave, utilising the small number of samples to date the extent of the cemetery activity. The project also used samples from five other sites: Pusztataskony-Ledence Site 1, Tiszalúc-Sarkadpuszta, Füzesabony-Pusztaszikszó, Hajdúböszörmény-Ficsori-tó-dűlő and Rákóczifalva-Bagi-föld.

Raczky and Siklósi's models of the new data call into question the traditional chronology, suggesting that there was in fact overlap between Tiszapolgár and Bodrogkeresztúr burials, both on a regional basis, and specifically at Basatanya (Fig. 101). This of course raises bigger questions about what the traditional archaeological cultures actually represent (cf. Borić 2015b). Certainly, as will be seen below, there are very striking differences between what is traditionally thought of as ECA and MCA. While it is possible that this is the result of two separate burial traditions operating at the same time, it seems more likely that the apparent overlap is the result of the long standard deviations of the dates. However, it is entirely possible that there was more overlap than previously thought in terms of the cultural developments on the regional level.

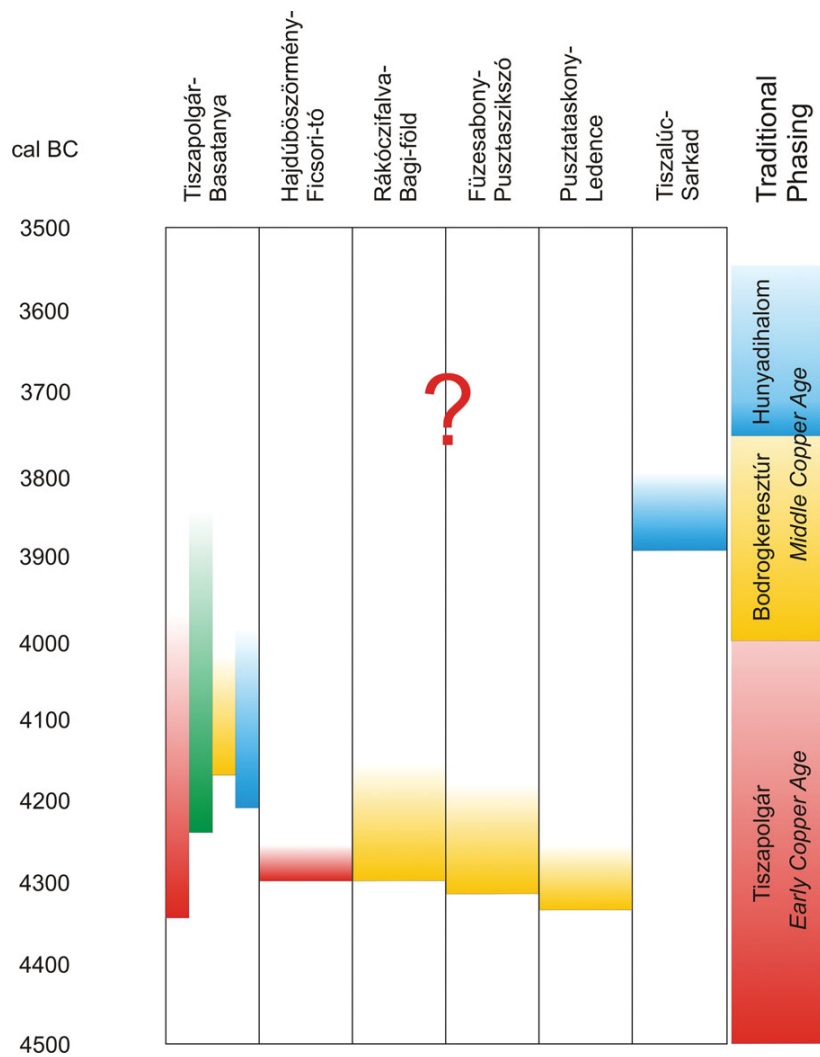


Figure 101: Dating of the Copper Age according to Raczký and Siklósi 2013 (Fig. 7)

According to Raczký and Siklósi's modelling, the new dates for the cemetery use at Basatanya are that burials started at 4420–4280 cal BC and they ended 4040–3910 cal BC. The estimated use-life of the cemetery is between 300–510 years, although they note that this long period may be a result of a plateau in the radiocarbon curve causing large standard deviations on the calibrated results (Raczký and Siklósi 2013, 556). Other estimates for the length of use of the cemetery vary from 200 years (Bognár-Kutzián 1963, based on typo-chronology) to 900 years (Forenbaher 1993, based on radiocarbon dates on charcoal).

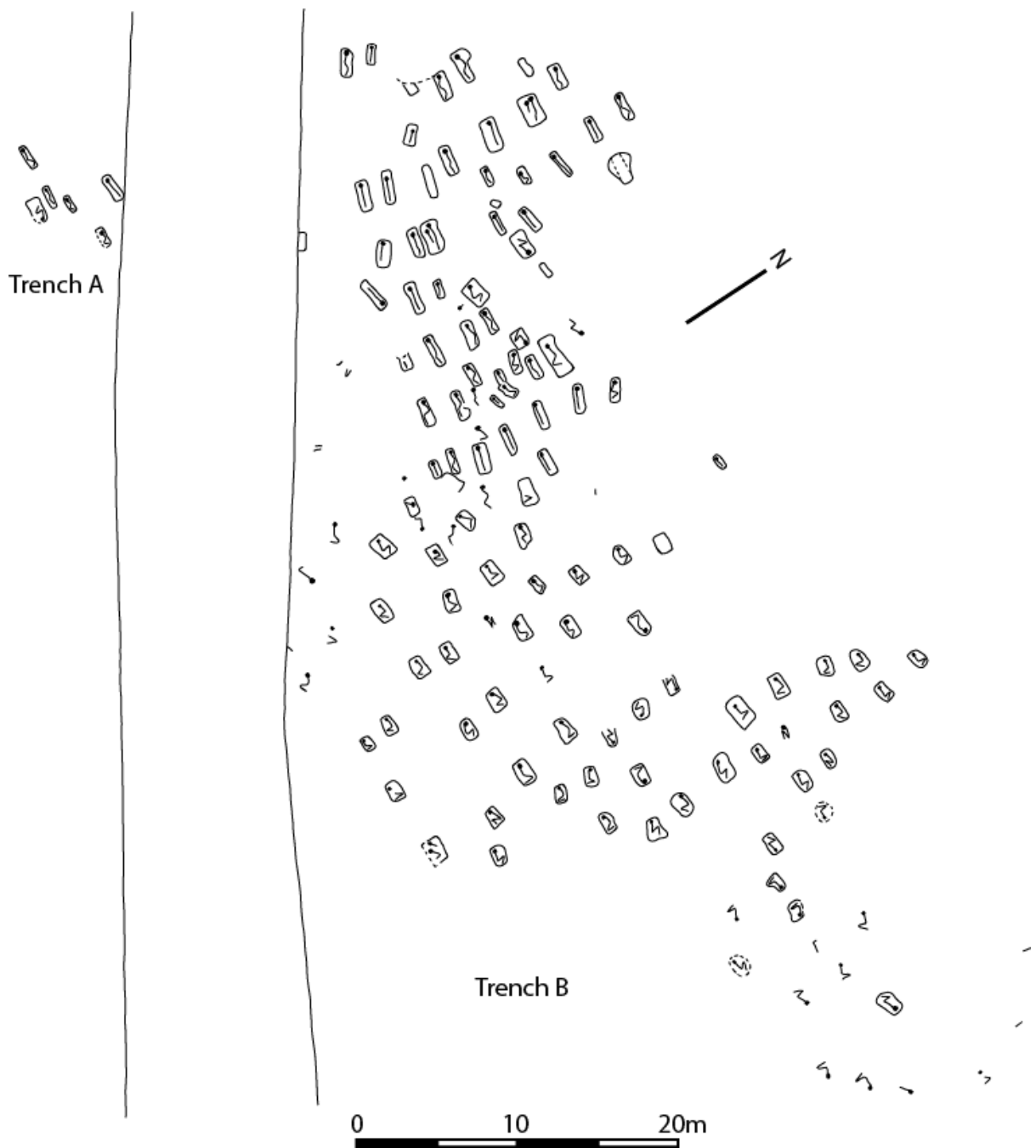


Figure 102: Stylised plan of Tiszapolgar-Basatanya cemetery, showing burial position (redrawn after Chapman 2000a, 77)

7.7.2.5 The burials

A total of 156 graves were excavated in the 1950-54 campaign. Eleven graves were excavated during the 1929 excavation. It is suggested by Bognár-Kutzián (1963, 23) that graves A, D and E from Tompa's excavations may equate to graves 22, 47 and 19 from the later excavation. The

exact number of graves cannot therefore be settled on, and this assessment will only utilise the graves excavated by Bognár-Kutzián, which have been published in a high degree of detail.

The majority of the graves were single inhumations, but there were also four double and two triple burials; Grave 13, an adult male and child, Grave 35, an adult male and two children, Grave 101, an adult male, adult female and an infant, Graves 107 and 130, two graves with an adult female with a child, and Grave 143, an adult male and female. Only two graves could be identified as probable cenotaph or symbolic burials; 11 and 29, which had no traces of human bone but were undisturbed and contained animal bones, meaning it is unlikely that the absence of human bone is due to lack of preservation. Twenty graves were poorly preserved due to shallow burial or disturbed by later activity, but in all these cases some human skeletal remains could be identified (Bognár-Kutzián 1963). In general skeletal preservation was very good, so that the burial position and the age and sex of the skeleton could be ascertained in the majority of cases (less than 10% could not be).

The grave cuts were not always clearly recognised during excavation. They were mostly rectangular with rounded corners, vertically sided and flat-bottomed. The sides were mostly straight, but in some cases they were rounded or irregular (Bognár-Kutzián 1963). The grave consisted of a simple dug pit in both phases; there were no stone constructions, nor do there appear to have been mounds over the burials, yet it seems highly likely that the graves were marked in some way on the surface. There is only one instance across the cemetery of any intercutting graves.

Both Bognár-Kutzián (1963) and Chapman (2000a) consider that the graves are arranged in rows of roughly even distances apart, although certainly not without outliers and unevenness in places (Bognár-Kutzián 1963, 350). In Bognár-Kutzián's (1963) view the cemetery developed row by row, with one row being completed before moving on to the next. Chapman (2000a) prefers the idea that several rows were in use simultaneously, perhaps relating to certain social units.

Although widely accepted, some of these ‘rows’ are dubious at best, and may be the result of repeated burial utilising the same orientation, rather than the deliberate construction of group or family rows.

The age profiles of the ECA and MCA phases are markedly different (Fig. 103). In the ECA there is a more even distribution of burials through the age ranges, with relatively high numbers of infants and children, as might be expected from the mortality rate of a prehistoric population, and a slight fluctuation in the adult burials before dropping off over 60, no doubt due to the very small number of individuals who lived to this age.

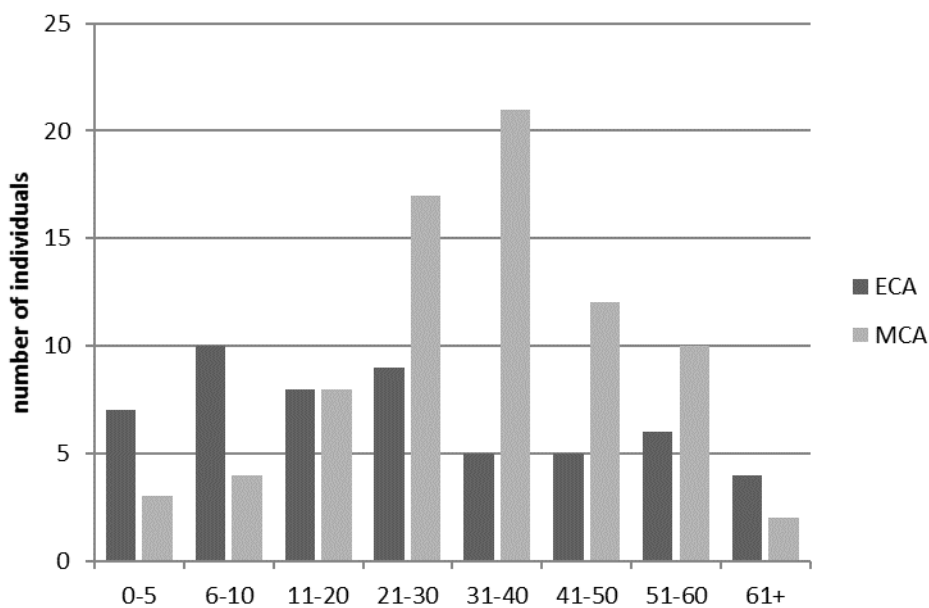


Figure 103: Age profile of Tiszapolgár-Basatanya burials by phase (total number of individuals)

In the MCA, by comparison, the trend is towards a much higher number of burials for individuals in the prime of life, between 21 and 40 (Fig. 103). There are fewer infants and children in relation to the adults in comparison to the ECA (bear in mind that there are only 58 individuals in total from the ECA, 85 from the MCA, so the ECA children not only represent a higher number in absolute terms, but also as a percentage of the burial population). There are no

individual infant burials, all three infants are accompanying adult burials. It seems likely, therefore, that infants were not considered worthy of burial, possibly because socially they were not considered full people. The inclusion of a few children with adult burials may be related to circumstances of death, with these individuals dying at the same time. It is likely there is also a close emotional, possibly familial, bond to account for the decision for their inclusion. The children from the MCA are all from individual burials, and were therefore considered to merit burial in their own right.

When broken down by sex the age profiles show some interesting differences (Fig. 104). In the ECA there are more male burials between the age ranges of 11-30. Bearing in mind that the 11-20 age group would include children pre-puberty who it would not be possible to sex, the actual number of young male burials may even be higher. In contrast the female burials are mainly from the 31-40 age group, with very few younger individuals. Comparison of the males and females from the MCA shows a converse situation. Again, female burials are rare before the age of 20, but unlike the ECA the largest number of burials is in the 21-30 age group. The male burials peak in the 31-40 age group, rather than the younger ages seen in the ECA.

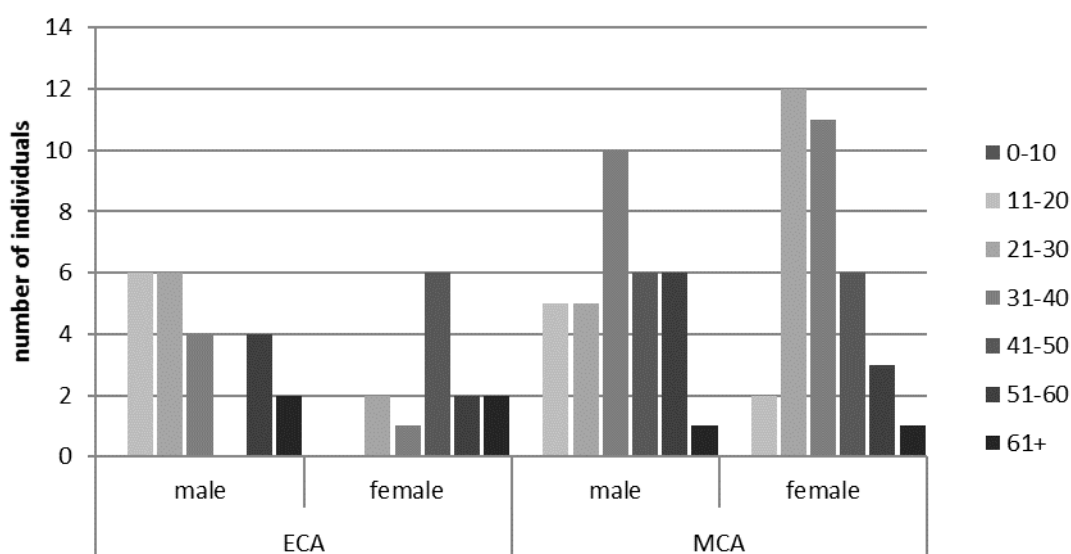


Figure 104: Age profiles by sex in the ECA and MCA (total number of individuals)

7.7.2.5.1 Burial position

The positioning of the body changes from the ECA to MCA (Fig. 105). In the ECA burial positions were either extended on the back or flexed, with the legs bent, to one side. There is a clear sex-based divide in terms of body placement; males are placed on their right sides, females on their left. In the MCA the dominant mode of burial is crouched, where the lower limbs are drawn up towards the chest, while a few (3%) are flexed. Although the bodies are being placed in a more contracted position in the MCA, the pattern of sex-based placement on the side continues from the ECA. There are some contradictions; 17% of males were placed on their lefts, and 6% of females were placed on their rights. What is the meaning of this apparent contradiction of a social rule? It is of course possible that some of these represent a sexing error.

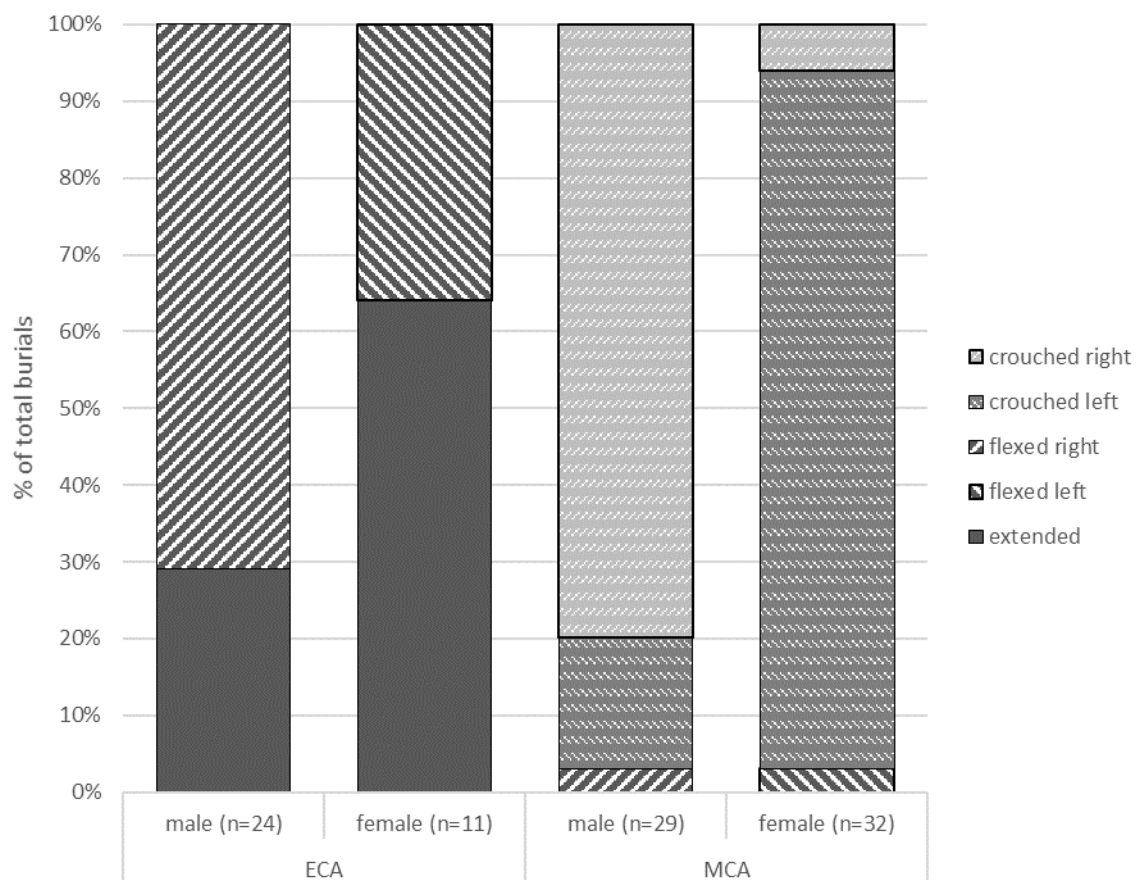


Figure 105: Burial position in relation to sex during the ECA and MCA at Tiszapolgár-Basatanya

7.7.2.5.2 Orientation

In the ECA the graves show a remarkable concordance; only two graves (4%) do not have the heads pointing west. These are: burial 38 to the east, and burial 32 to WNW. It could be argued that burial 32 was simply misaligned and that it was intended to be buried in the same way as the others. However, burial 38 is a direct contradiction, facing the opposite direction to the rest of the community, and this placement must have been deliberate.

The orientation of the MCA burials is not so consistent. While the majority (71%) still have their heads towards the west, 15 individuals (21%) are in the opposite direction, to the east, while one is to ESE, possibly again a misalignment meant to be to the east. Two individuals have their heads to the north-east and three to the south-west. Whether these are mistakes or deliberate is harder to speculate over. Even so, there is clearly a difference in understanding of the importance of burial orientation in the two phases, or there was an increase in individuals who merited, under whatever criteria it may be, burial in the opposite direction to the majority of the community.

7.7.2.6 The grave goods

The presence of grave goods in Tiszapolgár-Basatanya burials is almost universal. There is a single example of a grave without any artefacts, that of grave 82, the burial of a child of one to two years old from the ECA. In six cases disturbance of the burial meant that the association between grave and artefacts was not certain, and in a further six cases only undiagnostic ceramic sherds were present. All other graves contained at least one identifiable artefact.

When the number of artefacts per grave is plotted by phase the two exhibit very different trends (Fig. 106). In the ECA there is a similar number of graves containing from one to 10 items, from 10 to 20 it varies between one and four graves. A few graves contained over 20 artefacts, with the most, 34, being found in two graves (12 and 60, both mature males). By comparison, in the

MCA the largest number of items in any grave was 16, of which there are three examples, and it is far more common to find graves with two to four artefacts. The average number of items per grave in the ECA is 11, for the MCA it is five.

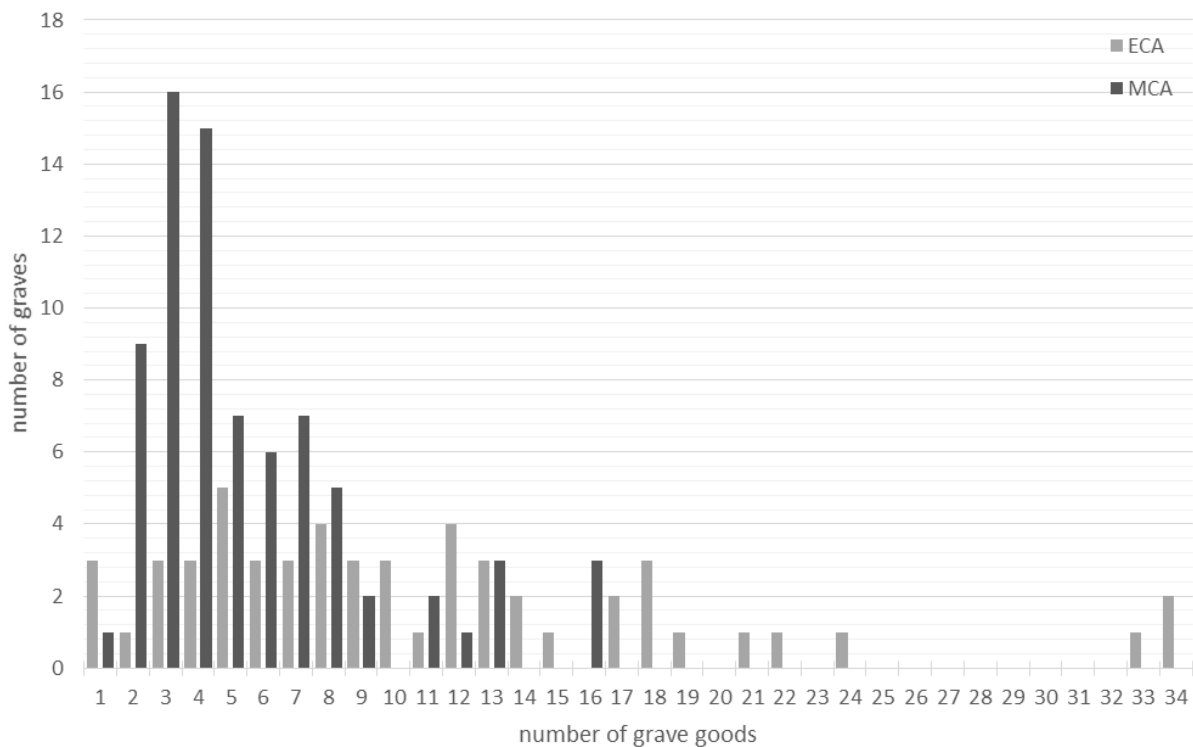


Figure 106: Number of grave goods per grave

7.7.2.6.1 Pottery

The most common type of grave good is pottery. Ceramic items are found in 95% of the graves, while the most in any one grave is in burial 23 with 13 vessels. The phasing of the cemetery is based on the pottery typology, therefore it is unsurprising that some items are exclusive to one phase. The so-called milk jug and the pyxis-like vessel are both found only in the MCA, while the mug is only found the ECA (Fig. 107). This is more likely to be a change in pottery styles than a change in the rationale behind the inclusion of item types.

All of these pottery types are probably for the serving and to a lesser extent storing of food and drink. Whether they were part of a funerary ritual involving the mourners eating and drinking at

the grave, or whether they were placed in the grave for the deceased's use in the afterlife is open to debate, but I would argue that as many of the graves only have a few items they were for the use of the deceased. The presence of some form of pottery in almost every grave indicates that food and drink were an integral part of mortuary practice in both phases of the Basatanya cemetery.

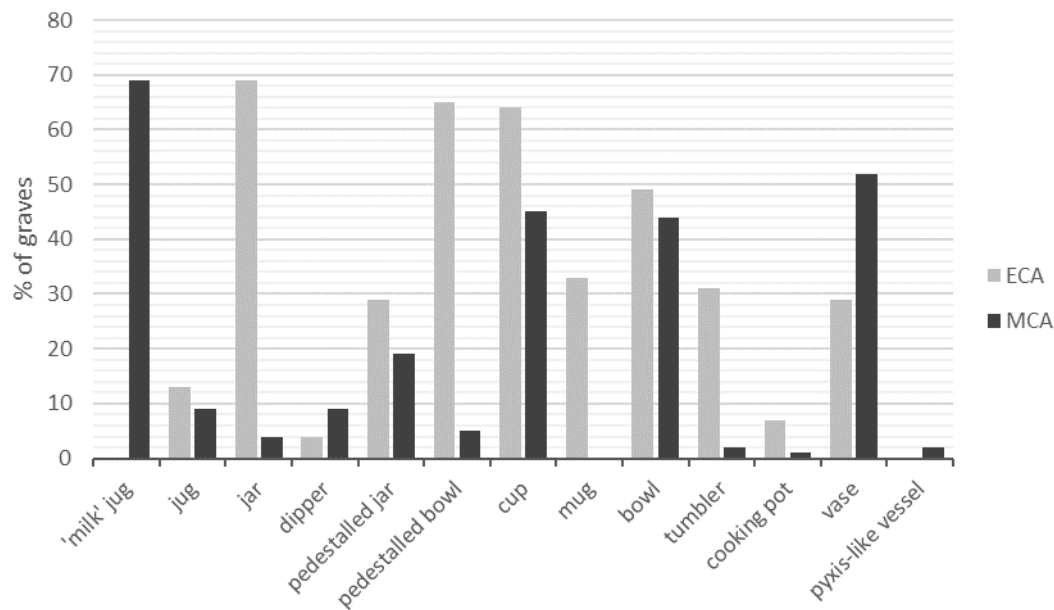


Figure 107: Frequency of ceramic types in Tiszapolgár graves

7.7.2.6.2 Tools and weapons

Stone tools are found in 57% of the graves. Burial 60 has the most with 21, the second highest number is 12, singling burial 60 out as extraordinary in term of stone tools. This grave, of a mature male, included among its worked stone items nine flint blades, four flint scrapers, an obsidian blade and an obsidian core.

In both phases the most common stone artefact type is the flint blade, present in 40% of ECA burials and 44% of MCA burials (Fig. 108). Other artefact types occur far less frequently. In the ECA the second most common stone item is the flint flake, presumably debitage from knapping, although they may have been included as unretouched tools. Obsidian blades (in 12%) and flakes

(in 10%) are also present in ECA graves but are rare in the MCA, but strangely 8% do contain obsidian cores. The grinding stone is the second most common stone artefact type in the MCA, in 15% of graves.

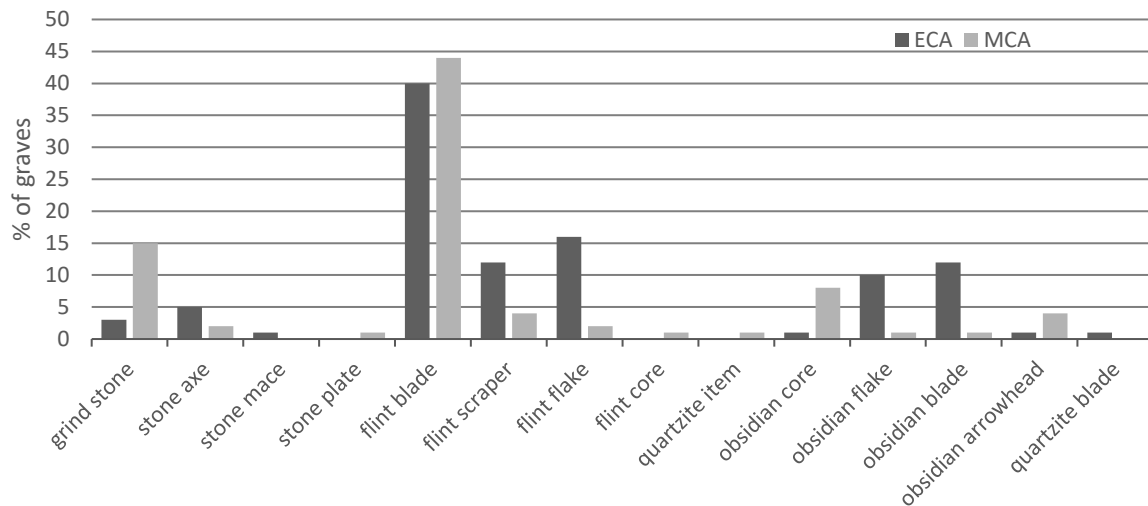


Figure 108: Frequency of stone tool types in Tiszapolgár graves

The stone blade (whether of flint, obsidian or quartzite) is a multipurpose tool. It would have been useful for many activities within daily life accounting for its frequency in Basatanya graves. Other artefact types are much less frequent, and may represent more specialised activities. Arrowheads (only known from obsidian on the site) occur in less than 5% of burials in both phases. Was hunting (of game or, it should not be excluded from possibility, other humans) a specialised activity within this society? It could be that ‘archer’ was a recognised role, and an identity to be expressed in burial.

7.7.2.6.3 Copper

Copper items are found in 20% of the graves. The highest number is 5, found in burial 24. In the ECA they copper is most commonly used for jewellery, such as rings, bracelets and beads (Fig. 109). In the MCA, however, only one instance of a copper bracelet is recorded, while all other occurrences of copper are tools.

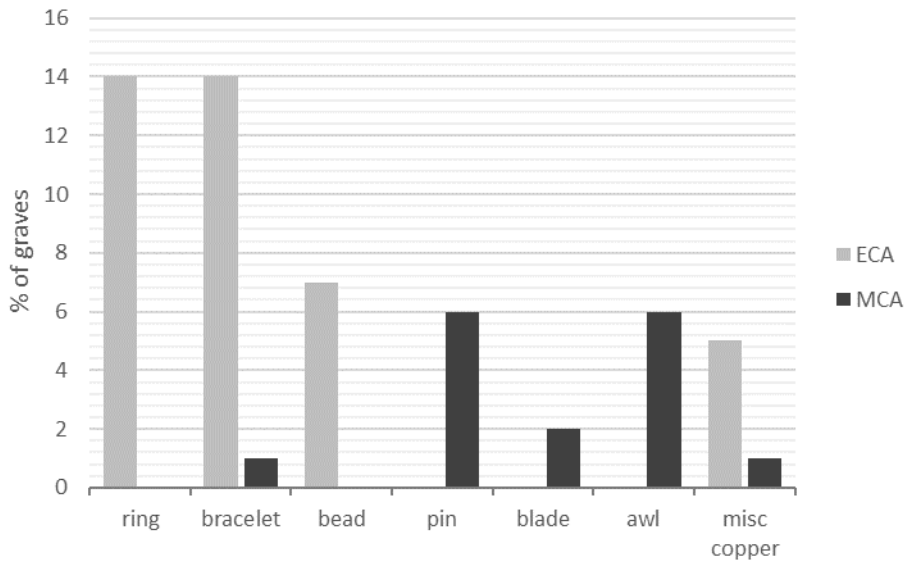


Figure 109: Frequency of copper artefacts in Tiszapolgár graves

Correspondence analysis

An initial run of the cemetery including both phases (Fig. 110) showed, as we would expect from the univariate analysis, a clear distinction between males and females. There is no overlap between males from the ECA (circles) and males from the MCA (squares), however female and child burials do display a small degree of overlap. As was seen at Durankulak, it seems that female identities were more conservative than male. Male burials also have a greater spread, while the female graves are more closely clustered (although with some notable outliers – Burial 113 is a female burial plotting in the male area). Interestingly, although it has been suggested that the engendering of children can be seen in artefacts (Sofaer Derevenski 2000), few of the child burials are plotting much outside the female zone. This appears to indicate that male identities were more linked to achievement and lived experience over time, while female activities remained similar through the life cycle.

Separate runs were then plotted for the ECA and MCA, where age categories were also included. Fig. 111 shows the initial ECA run including all objects and variables. The distinction between male and female burials remains, with a small amount of overlap. The male burials, plot from the

centre to the left of the graph. To the extreme left, apparently pulling the males out are artefacts made from antler, flakes of obsidian and flint (interestingly flakes not artefacts – indicative of a male activity of flint working?) and dog skeletons. These items seem to be the most overtly associated with maleness. Plotting more centrally but still in the male area are specific stone tools, as well as the bones of both domesticated and wild animal species. The central right portion of the graph is dominated by pottery types. Pottery is the most common form of grave good, and seems to have little association with specific gender or age identities. A few adults of either sex are present in this area, but it is mainly children that plot here. This would lend some support to the idea that gendered identities develop towards adulthood; the children are mainly plotting in association with the universal/generalised grave goods. However, child burials are also plotting to the far right, in the same region as the females. Unlike the males there are not any artefacts that seem to be specifically for adult females. Children are associated with the same objects. Whether or not these children were biologically female is of course impossible to say without DNA analysis, but it is an interesting possibility. Artefacts associated with this area of the graph include copper rings, limestone beads, grind stones, shells, pebbles, and two types of ceramic that seem to be specifically for women – vases and jugs.

After the initial plot a number of outliers were removed to see how this would affect the pattern (Fig. 112). These were the antler “arrow head” and the unidentifiable (misc) copper items which were plotting high on the x-axis, and snail shells which were plotting high on the y-axis and low on the x-axis. The resulting plot shows females plotting to the right, in association with shells. Another run, this time excluding some of the most common artefacts, which might be expected to affect the clustering, again showed a clear pattern of males spread out on the lower part of the y-axis, while the females are clustered to the higher end. The three different runs of the ECA data all therefore seem to indicate a division between males and females in terms of grave goods, although with a little overlap. Males are more spread out, indicating a greater range of artefacts associated with them.

Unexpectedly, considering the patterns seen in the overall run, the initial run of the MCA data (Fig. 114) does not show differentiation between males and females, although there is a grouping of child burials. The majority of the burials cluster in the centre of the graph, while a few objects show divergence from this central cluster. Whether these outliers represent specific grave assemblages or identities is an intriguing question. The MCA grave goods are, as in the ECA, dominated by pottery. Four of these types (the ‘milk’ jug, cups, bowls and vases) are present in at least 40% of the graves, and their high occurrence is likely to hide other relationships between less common artefacts. Therefore, these pottery types were removed from the next run (Fig. 115). This also resulted in a large number of graves being removed as their grave goods were either exclusively pottery or containing only one other artefact type. This indicates that the inclusion of pottery was a universal – individuals who were buried with nothing else still had pottery. This may mean that pottery was not so much a signifier of identity as a part of the burial rite. This would account for its near universality in the MCA grave. Interestingly no single child burials remain in the correspondence analysis, suggesting that rather than being treated in a similar way to adults, children were given the ‘minimum’ in terms of grave goods.

With the removal of these four pottery types a sex-based distinction is once more visible on the MCA plot (Fig. 115). There is some mixing in the central portion of the plot, but it appears there is a continuum from male artefacts and graves on the left to female graves and artefacts on the right. Artefacts plotting in the male area include flint tools, stone axes, copper awls and obsidian. Interestingly the artefacts at the far end of the plot are wild animal bones, associated with males in the ECA, and grinding stones, strongly associated with female burials in ECA. It appears that this artefact type, and presumably the activities with which it was involved, changed in significance from Early to Middle Copper Age society. Female artefacts include the pedestalled jar and bowl, limestone beads, bone awls, dippers, girdles, pebbles, pyxis-like vessels and fish-bones. The pyxis-like vessel is a new pottery type that did not exist in the ECA burials, and it is found exclusively in female burials. What specific activities was it associated with? Bognár-

Kutzián (1963, 187) suggested that fish bones may have been for tattooing. In Grave 109 a fish bone was found along with a stone plate and coloured stone. This is an interesting possibility, not only because it represents possible female activity, but because it suggests the existence of further activities that may have been about displaying social identities through a medium which is lost to archaeology: the skin. The inclusion of a single smoothed pebble in many female graves is also noted by Bognár-Kutzián (1963). It seems unlikely they were part of any processing activity due to their size and overall smoothness (although microwear analysis would be more authoritative on their uses), and it could be that they were a kind of charm or talisman carried by women. Similarly, girdles, strings of beads found around the waist area, are exclusively female.

Interestingly pig bones are plotting centrally, between male and female zones. Bognár-Kutzián (1963, 159) noted that Grave 85 contained a sow mandible, which was unusual in a female grave. The mandible of wild boar being placed in males graves is a recurring theme through this chapter (at Polgár-Csőszhalom, Aszód, Mórág and Tiszavalk). The correspondence analysis does not support this theory in the case of pig bones; it seems that they were also placed within assemblages that had more ambivalent sex associations.

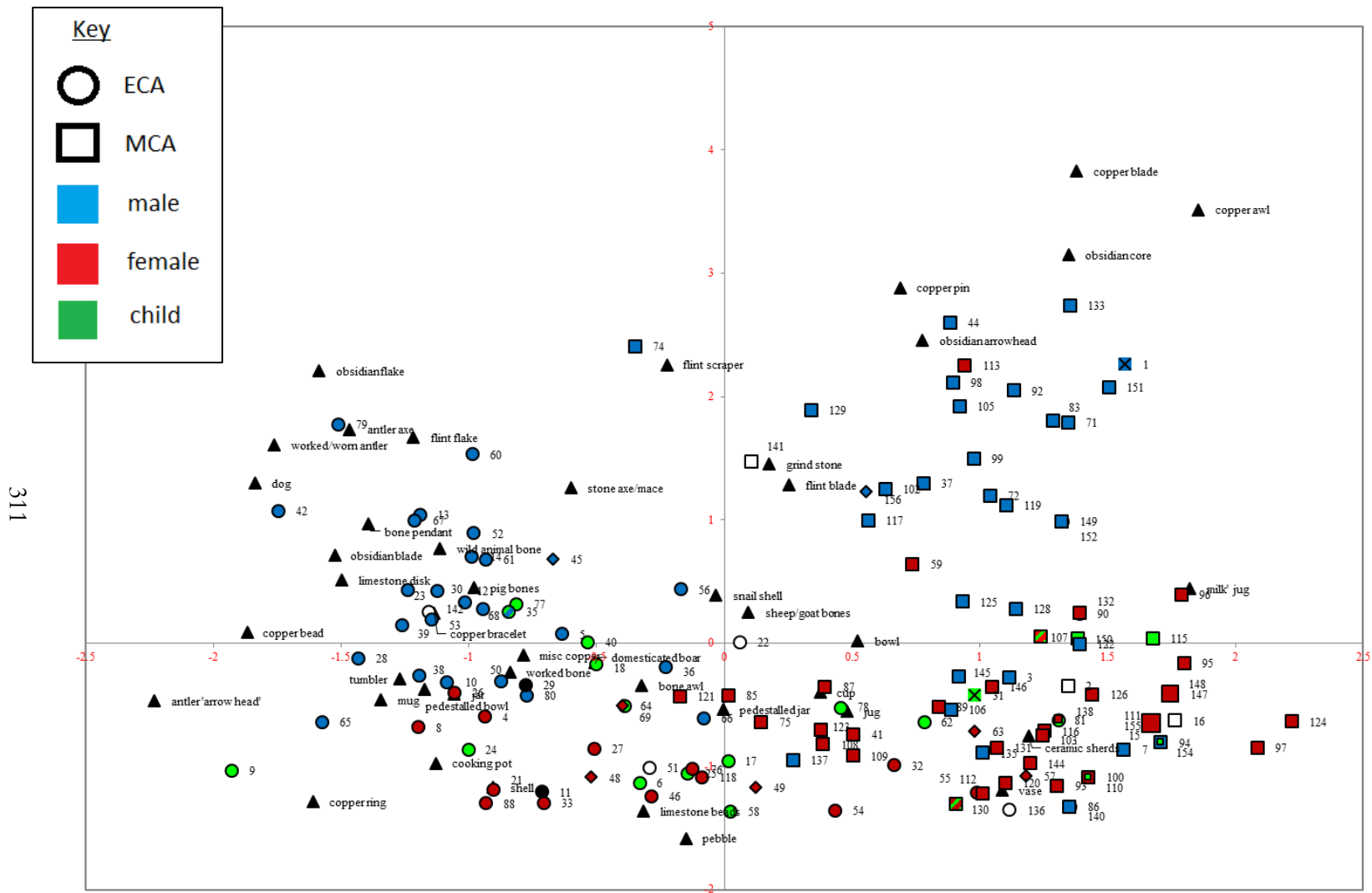


Figure 110: Combined object and variable plot on 1st and 2nd principal axes

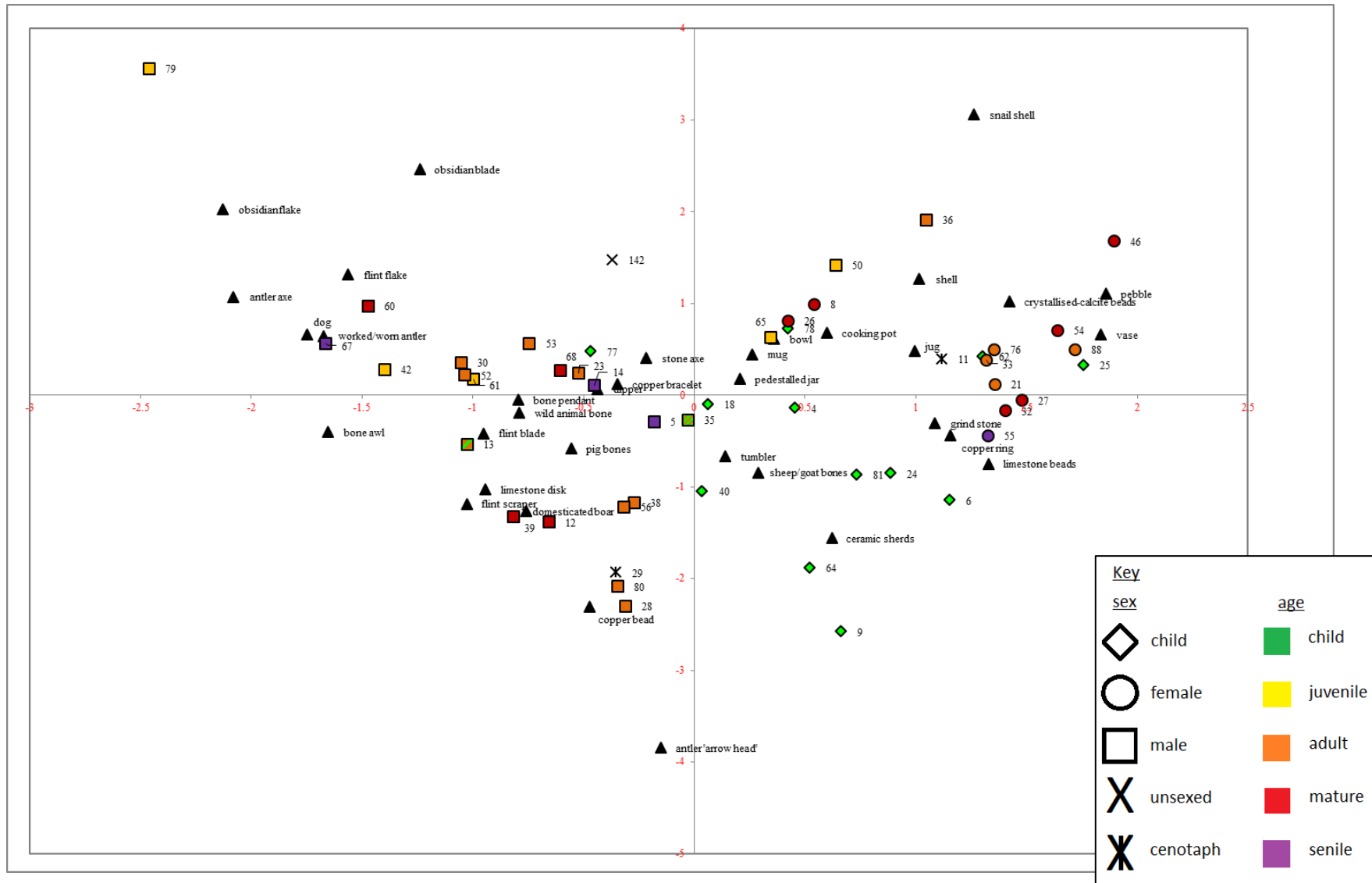


Figure 113: ECA run with most common artefacts removed (on 1st and 3rd principal axes)

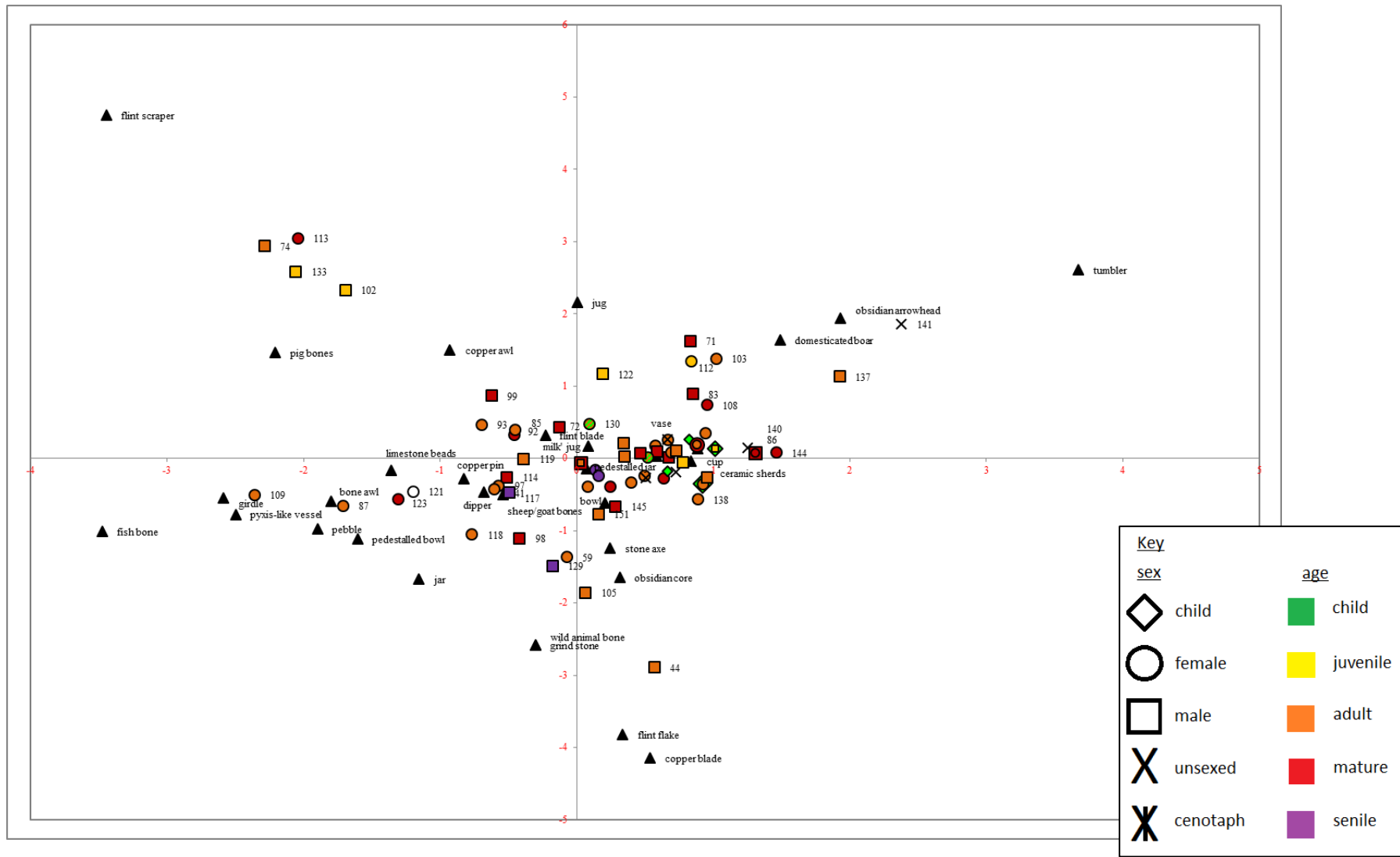


Figure 114: Initial run of MCA data (object and variable plot on 2nd and 3rd principal axes)

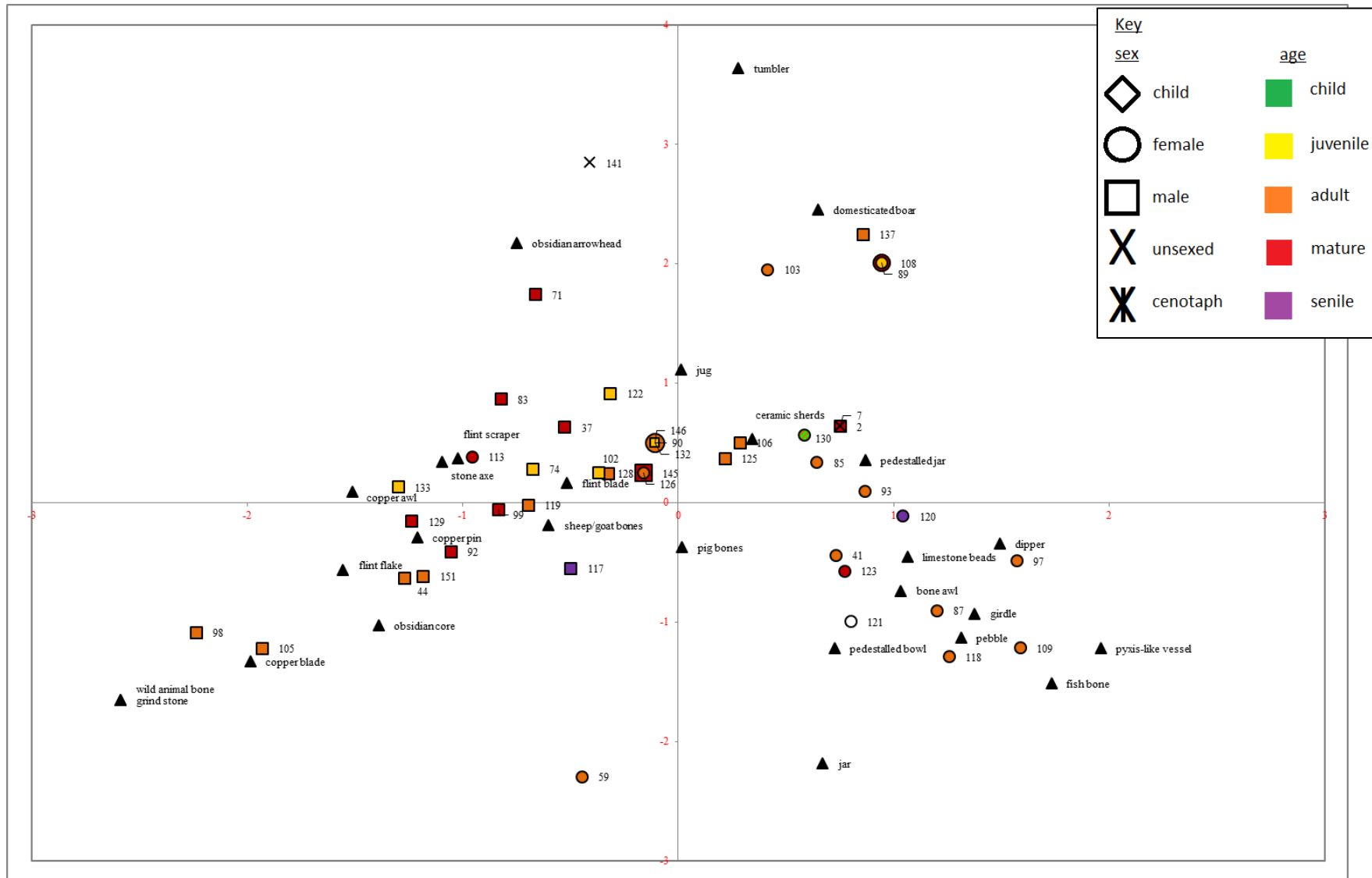


Figure 115: Run of MCA data with most common variables removed (on 1st and 2nd principal axes)

7.8 DISCUSSION

7.8.1 Grave goods, offerings, or funerary rites?

As was the case in the eastern region, the Late Neolithic was a time of increasingly complex burials. Individuals were being buried, on average, with more artefacts, artefacts that would have been full of meaning for those who were present at the burial. It may be that these items that accompanied a person into death had already accompanied them through life, that these were items which they wore or used. The increased number of grave goods is likely the material expression of a greater variety of social roles and identities. Expressing who you were, what family you belonged to, your status in the community, your wealth, or your age, was becoming more important.

The overall pattern of the western region is not, however, simply one of increasing complexity across all categories of grave good. This is not just a case of people being buried with more or less stuff. Different communities laid different emphasis on the importance of artefact types. On the Pannonian Plain items of adornment were the most common grave good type in the Late Neolithic. In the Lengyel area, however, at Aszód and Mórógy, pottery was the most common artefact type, and at Mórógy in particular adornments were rare. This difference in grave good assemblages represents at least a difference in funerary ritual, if not also in understandings of death or worldviews. Were people in Lengyel communities less interested in expressing their identities through adornments in general, or what it just at the grave side? The predominance of pottery, in particular the almost ubiquitous inclusion of a jug and cup at Mórógy, may indicate there was a greater concern for providing for the deceased in the afterlife.

7.8.2 Space

One of the focuses of this thesis is the emergence of the cemetery as a separate place to bury the dead, away from the living. Although only two of the sites detailed above can be considered true cemeteries in that sense, the grouping of burials within settlements shows a shift in the relationship of the living to the dead. All of these sites clearly have areas specifically considered acceptable for burial. The rationale for the location of the burial areas may vary. It may be due to the proximity of previous burials and remembering/referencing the past (Kisköre-Damm), or the association with other contemporaneous settlement features such as houses (Kisköre-Damm and Alsónyék-Bátaszék). The burial place itself may not have had special significance, it may just have been a currently unused part of the settlement (although that it was once a part of the settlement is in itself probably significant) which became the focus for burial (Gomolava), a place that came to be associated with the dead through repeated funerals. Were such places consciously chosen and set aside, or did they emerge organically? How was membership of small burial groups decided? At Kisköre-Damm it seems that these groups were related to households, but what about at Aszód, where each burial group had such a different demographic?

Spatial considerations are also important within grave groups. At Mórágý it is possible to see how the cemetery area moved over time based on cultural phasing. The presence of grave rows at Kisköre-Damm and Basatanya indicate diachronic development. At Gomolava, by contrast, space may have been concerned with prestige and age. It seems that only adult males could be buried in the centre of the cemetery area, while younger males were placed around the edge.

7.8.3 Time

A key issue in understanding these sites, which has already been mentioned in discussing space, is time. Unfortunately, all of the sites with the exception of Alsónyék are lacking a refined chronology, although both Polgár-Csőszhalom and Basatanya have been radiocarbon dated. For

these sites at least we have a reasonable understanding of their period of use, even if the internal chronology is not clear. Such timescales are important; a cemetery group of 25 burials set down over a period of 50 years has a very different dynamic to the same over a period of 200 years.

For the most part, the chronologies of the cemeteries discussed above were only broad phases based on typologies. It may be possible to identify a general pattern of development, such as at Mórág, but more refined chronologies, such as whether a burial row was added to in a particular direction, or whether one row/area was finished before another came into use, do not as yet exist.

7.8.4 Connections

Another theme which reoccurs throughout this chapter is connections, both across regions and over time. Although these sites are spatially situated in the territory of particular 'culture' groups, there is plenty of evidence, both from the burials and from the wider sites, for contact between these groups. This largely comes in the form of pottery types, which are found on sites outside of their usual territory, such as finds of Vinča and Lengyel pottery styles at Polgár-Csőszhalom and Tisza-Csőszhalom-Herpály at Aszód (Kalicz 1970). Other aspects of behaviour that show outside influences include methods of construction and burial practices. Again, Polgár-Csőszhalom is probably the best example of this (Bánffy and Bognár-Kutzián 2007, 217-19), and the site seems to have been a connection point between various traditions (Bánffy 2007).

There are a number of aspects of burial practice which seem to have been 'cross-cultural'. Rather than appearing as one-offs outside of their generally accepted area, these are practices that occur across the region, and may point to shared understandings or values between these groups. For example, red deer teeth are found used as parts of jewellery or sewn onto clothing in a few graves on many sites. It seems that they had a special significance or prestige, but was this the same in all areas? Throughout this study we have also seen the recurrence of wild boar mandibles

in lavishly furnished male graves. Again, this seems to be a shared symbolism across the region (Siklósi 2013, 426). Bánffy has suggested that on the basis of these shared traditions and practices we should stop considering Transdanubia and the Pannonian Plain as two completely separate cultural groups; rather, there was integration between them, with material connections and shared symbolic understandings.

7.8.5 Diversity and difference

So far, these discussions have focused on similarities and connections that can be seen in the cemeteries of the Western region. However, despite the clear evidence for connections between communities there is still a great deal of variability between the burial practices on the individual sites. Each cemetery appears to have been governed by a specific local set of rules and traditions. This is particularly true in the region of the Pannonian Plain, where every site has its own dominant burial direction, burial positions varied, there were widely differing age and sex demographics, and very different preferences in types and numbers of grave goods.

As described in Chapter 5 (5.6.2), the Pannonian Plain in the Late Neolithic is generally considered to have consisted of three different cultural entities (Tisza, Herpály and Csőszhalom), which were very interconnected. Overlaps of settlement type and pottery styles indicate that these could be regional variations of one cultural group. However, the lack of commonality in burial indicates that there were some fundamental differences between these communities in their understanding of death or what they considered to be appropriate reactions to it.

The Lengyel sites of Transdanubia, considered to be one cultural entity, show greater conformity of burial practice from site to site. All three sites studied here had burials in

intramural grave groups, in a crouched position on either side, with the majority of burials orientated to the north-west, the percentage of children probably reflects infant mortality rates, and over 90% of graves contained grave goods. It seems that there was more of a shared set of values underlying funerary ritual across Lengyel sites. Yet even between these sites there are differences. At Alsónyék it was more important for the deceased to be facing south than to conform to the north-west orientation. Burial structures were used in some graves at Alsónyék, while at Aszód a small amount of burials were cremations.

In contrast to the variability in burial practices are the apparent similarities across the region in terms of settlement structure, house construction techniques and pottery styles. Although this thesis has not focused on the settlement sphere, the significance of burial in Late Neolithic and Early Copper Age life cannot be understood without consideration of it. Of course, without carrying out a similar study focusing on settlement sites and pottery assemblages it cannot be a true comparison. However, from the evidence available there appears to be greater diversity within community approaches to burial than to other aspects of life.

This lack of consistency in ways of treating the dead may indicate to us that these communities were more different in social and ritual understandings than is sometimes thought. Apparent similarities in other aspects of material culture may be masking what were actually much more varied communities. This variability may have emerged from the difference in origins of the communities, particularly on the Pannonian Plain where there is clear evidence for influence of various smaller preceding Neolithic groups. However, it also seems likely that the burial sphere was a chance to challenge orthodoxies, as we see with the increasing expression of the individual through grave goods over the period, in what appears

to be a challenge to the egalitarian ethos of the settlements. It appears that in burial practices we see the true individuality both of people and communities.

7.9 SUMMARY

This chapter discusses eight cemeteries from the western regional case study area, the Carpathian Basin. In this region there was a clear phase of intramural burial in small cemetery groups during the Late Neolithic, c. 5100–4500 cal BC. These included two tell settlements from the Pannonian Plain, Polgár-Csőszhalom in the north, and the Vinča period settlement of Gomolava to the south, and the Tisza culture flat settlement of Kisköre-Damm. Three sites were included from the Lengyel area, two from Transdanubia, Alsónyék-Bátaszék and Mórággy-Tűzkődomb, and Aszód from the Lengyel area east of the Danube. Two extramural cemeteries from the Copper Age on the Pannonian Plain, Tiszavalk-Kenderföld and Tiszapolgár-Basatanya were analysed.

8 THE EMERGENCE OF CEMETERIES: BODIES, BURIALS AND COMMUNITIES

“For her, the forty days were fact and common sense, knowledge left over from burying two parents and an older sister, assorted cousins and strangers from her hometown”

- Tea Obreht, *The Tiger's Wife*

To date, little has been said about what prompted the emergence of the cemetery phenomenon. While much has been written on the what, where, and to some extent who of the question, and more recently the when, little has been said about why cemeteries came into use. Indeed, it often seems that the emergence of cemetery burial is a given; the inevitable result of an increasing development of society. The adoption of cemetery burial should not, however, be seen as some natural evolutionary step. Whether on-settlement in cemetery areas or in off-site extramural cemeteries, the adoption of a formal burial practice was a big change in the way people treated their dead. This new treatment indicates a corresponding change in the way the dead were thought of by the living. While this thesis, and the following discussion, makes contributions towards all aspects of understanding the cemetery phenomenon in south-east Europe, why is the question that most demands attention, and which so far in the region has been under addressed.

This discussion will start with a comparison of various aspects of the case study cemeteries that have emerged through the course of this thesis, before going on to discuss the wider issues of the emergence of cemetery use.

8.1 THE CASE STUDY CEMETERIES: LOCAL DIFFERENCES AND REGIONAL SIMILARITIES

A key premise of this thesis is that south-east Europe in the Late Neolithic and Early Copper Age represents a coherent set of related cultural groups with many commonalities of practice among them. This is why the region was chosen to study as a whole. The further sub-division of the study region into two areas, divided by the Carpathian Mountains into eastern and western, was suggested by apparent differences in the way cemetery use developed. The premise is that what we have is two strongly related cultural regions, with the same preceding traditions, which have diverged across the physical barrier of the Carpathians. These cultural areas can in turn be sub-divided into cultural groups, primarily represented by pottery typologies, with their own cultural practices. This thesis largely supports this premise; while there certainly are differences across the cultural groups there are plenty of instances of similarities that point to shared symbolic understandings (e.g., the use of the extended burial position, the use of ochre on the body, the presence of wild boar remains and axes in male graves, and the underrepresentation of children).

There is much evidence of contact and mixing. A number of the western region sites included pottery of a style not considered typical of that area, e.g., Polgár-Czõszhalom. Other examples can be found. The settlement of Bodrogzsadány, in the Upper Tisza region has yielded pottery from the Tiszadob, Bükk, Czõszhalom, Lengyel and Tisza traditions (Bánffy 2008). Despite this, it does seem that the Carpathians acted as a barrier; there are examples of different pottery styles being found on settlements in the Carpathian Basin, but styles from the Lower Danube region are not found there. The difference in the trajectories of change to full extramural cemetery use also indicate limited contacts between the two regions.

Eastern region		<p><u>Cernica</u></p> <p>⇒ Extramural cemetery</p> <p>⇒ 378 burials</p> <p>⇒ West orientated</p> <p>⇒ Primary position supine extended. Secondary crouched either side</p> <p>⇒ Equal ♂ ♀</p> <p>⇒ 7% children</p> <p>⇒ 30% with grave goods</p>	<p><u>Durankulak</u></p> <p>⇒ Extramural cemetery</p> <p>⇒ 1191 burials</p> <p>⇒ North orientated</p> <p>⇒ Both supine extended and crouched either side. Some cenotaphs</p> <p>⇒ Equal ♂ ♀</p> <p>⇒ Hamangia 20% children, Varna 54% children</p> <p>⇒ 76% grave goods both phases</p>	<p><u>Varna</u></p> <p>⇒ Extramural cemetery</p> <p>⇒ 294 burials</p> <p>⇒ Northwest orientated</p> <p>⇒ Both supine extended and crouched either side burials</p> <p>⇒ 40% cenotaphs</p> <p>⇒ Equal ♂ ♀?</p>	
	Western region	Pannonian Plain Late Neolithic	<p><u>Kisköre-Damm</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 31 burials</p> <p>⇒ Primarily SE orientated. Some to SW</p> <p>⇒ Supine extended burial</p> <p>⇒ Equal ♂ ♀</p> <p>⇒ 35% children</p> <p>⇒ 53% with grave goods</p>	<p><u>Polgár-Csőszhalom</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 7 tell, 123 flat site burials</p> <p>⇒ Tell east, flat site NE</p> <p>⇒ Tell supine extended, flat site crouched either side. Cenotaphs on tell</p> <p>⇒ Equal ♂ ♀ except in mature age group more mature ♀</p> <p>⇒ 17% children</p>	<p><u>Gomolava</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 27 burials</p> <p>⇒ East to NE orientation</p> <p>⇒ Crouched burial on left side</p> <p>⇒ ♂ only</p> <p>⇒ 26% children</p>
		Lengyel	<p><u>Alsónyék-Bátaszék</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 2300 burials</p> <p>⇒ Orientated east or west, with face to south</p> <p>⇒ Crouched burial on either side</p> <p>⇒ Some wooden structures</p>	<p><u>Aszód</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 220 burials</p> <p>⇒ Orientation varied, mainly NW</p> <p>⇒ Crouched on either side. Some cenotaphs</p> <p>⇒ More ♀</p> <p>⇒ 40% children</p> <p>⇒ 90%+ with grave goods</p>	<p><u>Mórágy-Tűzkődomb</u></p> <p>⇒ Intramural grave groups</p> <p>⇒ 110 burials</p> <p>⇒ West, with deviations to NW and SW</p> <p>⇒ Crouched, mainly on rights</p> <p>⇒ More ♀</p> <p>⇒ 50% children</p> <p>⇒ 90% with grave goods</p>
Copper Age		<p><u>Tiszavalk-Kenderföld</u></p> <p>⇒ Extramural cemetery</p> <p>⇒ 54 burials</p> <p>⇒ Mainly NW, some SE, mainly facing NE</p> <p>⇒ Crouched either side</p> <p>⇒ 100% grave goods</p>	<p><u>Tiszapolgár-Basatanya</u></p> <p>⇒ Extramural cemetery</p> <p>⇒ 156 burials</p> <p>⇒ East orientated</p> <p>⇒ ECA supine extended or crouched, MCA crouched.</p> <p>⇒ Equal ♂ ♀. Mostly ♂ buried on right, ♀ buried on left</p> <p>⇒ ECA 45% children, MCA 18% children</p> <p>⇒ 99% with grave goods</p>		

Table 4: Summary of the case study sites

Of course this is partly a question of scale. Even within a region, within the same cultural group, there are differences in the way the dead were treated. Such differences may indicate different social standing for various societal groups; within the Lengyel, for example, at Aszód we see suggestions of a strong difference in the treatment of males and females, something which is much more blurred at Mórággy. How can we reconcile these differences and similarities? Perhaps in the same way as on a different scale we can view the collectivity of the cemetery itself in contrast to the individuality of each burial.

There follows a brief comparison of some of the elements relating to the cemetery areas which have been encountered during this study.

8.1.1 Size and duration

The number of graves on the sites investigated varies from 27 at Gomolava, to 2300 at Alsónyék-Bátaszék. Of course, these are not directly comparable, as the proportion of the sites excavated varies according to the nature of the excavation. The large area excavation needed for rescue excavation yielded many burials across sprawling sites, while small-scale research excavations (particularly on tells where deep stratigraphy must also be dealt with) discovered only small snap-shots, which may or may not be representative of the site as a whole. On the basis of the density of burials in the excavated areas, it seems likely that the horizontal settlements of Aszód (220 burials in small groups), Mórággy-Tűzkődomb (110 burials in an intramural cemetery area) and Polgár-Csőszhalom (123 burials from the horizontal or flat site in small groups and scattered individuals) may contain similarly high numbers of graves, were it possible to fully excavate them.

Of what may be considered genuine cemeteries, i.e. areas specifically designated for the burial of the dead, separate from any settlement, the largest is Durankulak, which had a total of 1191 graves. The Late Neolithic Hamangia phase had 747 burials attributed to it, while the Early

Copper Age Varna phase had 439 burials. Even taken on their own each individual phase of use of the cemetery would still be larger than any of the other cemeteries investigated. Cernica is the second largest cemetery, with 378 burials, and Varna the next with 294. These three cemeteries are all located in the eastern study region. The largest cemetery in the western study region is Tiszapolgár-Basatanya with 156 graves. Neighbouring Tiszavalk-Kenderföld contained 54 graves, but if the excavator's estimation that this was about half of the original site then it could have been slightly smaller than Basatanya.

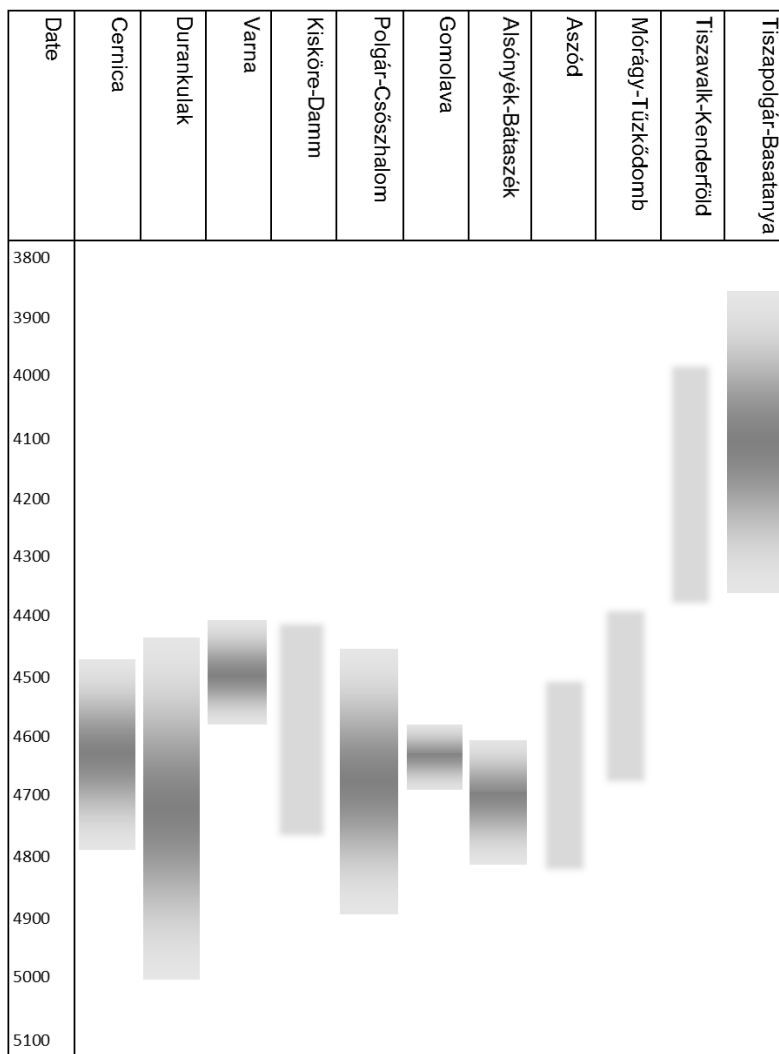


Figure 116: Periods of use of the case study cemeteries. Fuzzy outlines are those dated only by typological phasing, sharp outlines represent those radiocarbon dated

While the differences in size between individual sites appear large, comparison of the overall number of burials with the estimated duration of use of the cemeteries indicates that, with the exception of Alsónyék, there was not a massive difference in the intensity of use. Unfortunately, this is only possible for a few of the sites, due to a lack of accurate dating for Kisköre-Damm, Aszód, Mórággy-Tűzkődomb, and Tiszavalk-Kenderföld. Estimates of use are available for Cernica (1–190 years, (95% probability)), Durankulak (470–650 years), Varna (70–155 years, with 110 most probable (Higham *et al.* 2007, 104)), Polgár-Csőszhalom (400 years, covering all settlement and burial activity), Gomolava (0–70 years), and Tiszapolgár-Basatanya (300–510 years). Although Alsónyék-Bátaszék has been well modelled, with the use of the subsites varying from 240–315 years on subsite 5603 to just 1–40 years on subsite 10b, the situation in terms of the exact number of burials on the subsites is currently less clear. Therefore, the use of the whole site as between c. 4600 and c. 4800 cal BC (Osztás *et al.* forthcoming) will be used to provide a rough estimate of burial frequency.

Based on this information the most intense burial activity by far was at Alsónyék-Bátaszék, at a rate of 11.5 burials a year. In the eastern region it seems that burial activity was most intense at Varna, where burial occurred at a rate of almost three graves a year. It was less intense on the other two eastern cemeteries, between two and a half to two a year at Durankulak, and two a year at Cernica. In the western region, both Polgár-Csőszhalom and Tiszapolgár-Basatanya average a burial every two to three years. Gomolava potentially had a very brief intense period of use, as the burials could have been made within 0–70 years. If the real length of use is towards the longer end of the time period then it too would have received a burial every three years or so. It seems from this rather limited sample that, with the exception of Alsónyék-Bátaszék, generally burial was more intensive on the large eastern extramural cemeteries than in the western region, even at the extramural cemetery of Tiszapolgár-Basatanya. Given that the death rate of these communities ought to have been comparable, this indicates that the eastern cemeteries were

drawing from a larger potential community. This could be indicative of a larger settlement size, a difference in the eligibility of individuals for formal burial, or could potentially support the theory that the Lower Danube and Black Sea coast cemeteries were used by multiple communities from the surrounding area. Without reliable estimates of associated settlement size it is difficult to draw firm conclusions.

8.1.2 Burial orientation

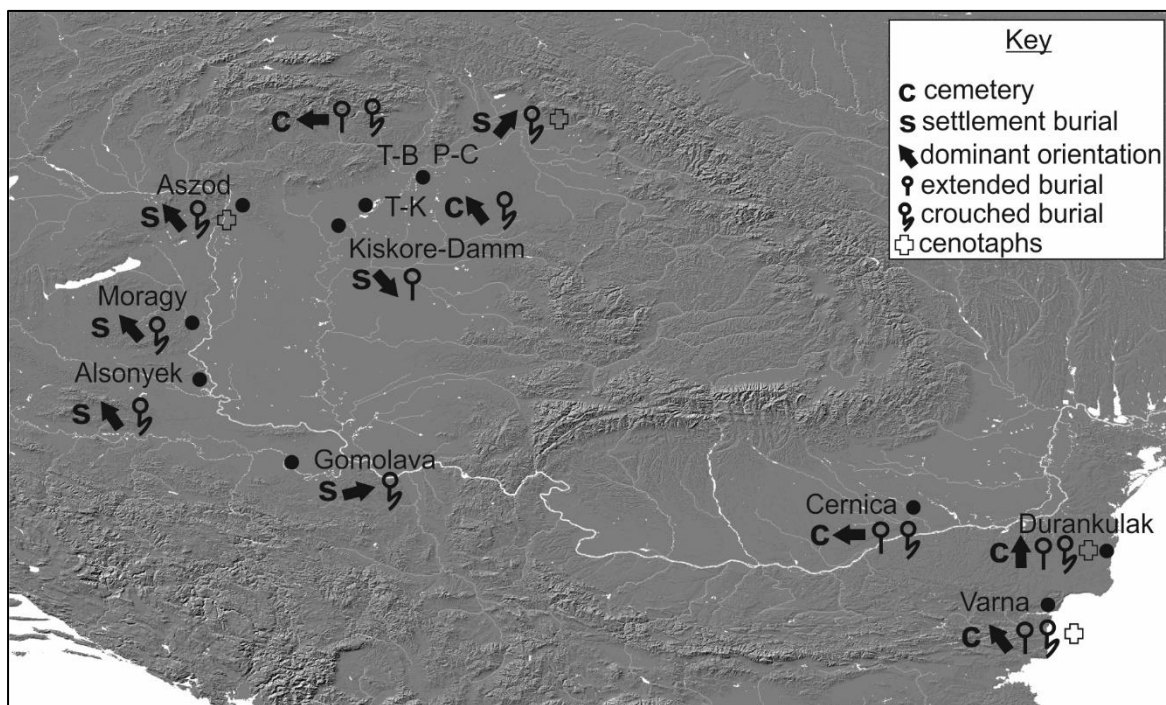


Figure 117: Map summarising the main burial practices of the case study sites

The orientation of the burials was never haphazard; each site had a dominant burial direction. In some cases this was the orientation of the body, in others, specifically the Lengyel sites, it was the direction the body was facing. The potential explanations for this practice are many, and it could relate to religious beliefs, understandings of the afterlife, concepts of rebirth, or origins. What is important about this is that it shows, in most cases, a great deal of conformity throughout the community, demonstrating shared understandings of death. Perhaps more

interesting are those sites where there was less conformity. Are we seeing the meeting of different traditions or beliefs, or is this an example of local practice?

Interestingly, there was little conformity across the region in terms of the dominant burial orientation (Fig. 117). At Cernica and Tiszapolgár-Basatanya it is west, Durankulak north, Varna north-west, Kisköre-Damm south-east, at Polgár-Csőszhalom the tell burials were orientated east, those on the horizontal site were mainly north-east, and at Gomolava east to north-east. At Alsónyék-Bátaszék, Aszód, Mórággy-Tűzkődomb and Tiszavalk-Kenderföld the orientation was nearly exclusively north-west/south-east (although there was quite a bit of variation at Aszód), but the head could be to either direction. This lack of concord indicates that whatever worldview or rationale dictated burial direction varied from community to community. Of course the rationale could be the same but the direction different; for example burials may have been placed towards a place of origin, with each community having its own (possibly mythical) place to refer to.

At some sites, such as Cernica, the variation is mainly slight, with no burial being more than 45° from the main orientation. These cases could conceivably be related to astronomical events such as the rising of the Sun, which would have shifted on the horizon with the seasons, or simply slight mistakes in alignment. However, burials which diverge from the main direction more drastically need a different explanation. What was it that meant that people were buried in an opposite direction to the rest of the community? Was this a rejection of that individual by the community, or did it mark them out as in some way special? It may be, as appears to be the case at Kisköre-Damm, that these burials were referencing a different burial tradition. At Kisköre-Damm a number of the burials are orientated to the south-west, which was the burial orientation used in the LBK, and which had been used for LBK burials preceding the Tisza burials on that site (section 6.5.1).

In the two sites which were in use for more than one cultural phase, Durankulak and Tiszapolgár-Basatanya, there is continuity, with the burial orientation remaining the same while other traditions changed. Indeed, at Durankulak, the conformity increased over time, with the Varna phase burials being 78% towards the north, while in the preceding Hamangia it was 67%.

Overall, the use of burial orientation across the study region shows a diversity of practice which indicates that the rationale for orientation varied virtually on a site by site basis. Only in the Lengyel region does there appear to have been a degree of inter-site agreement.

8.1.3 Burial position

There are two main positions for the placement of the body across the region, extended and crouched. There are variations on these, as the body could be placed on different sides, back or face, and the degree of flexing of the lower limbs varied.

It is interesting that at a number of the sites the two positions were employed at the same time, in contrast to the conformity that has already been noted in burial orientation. At Cernica, Durankulak, Varna, and Tiszapolgár-Basatanya both supine extended and crouched on either side positions were employed. At Durankulak the preference for the extended position declines from 67% in the Hamangia phase to 34% in the Varna phase. At Tiszapolgár-Basatanya there is a more clear-cut chronological difference (if you accept that these chronological phases still stand; if Raczky and Siklósi (2013) are correct about the overlap of these two phases then another explanation needs to be found for the different traditions); in the ECA bodies were either extended on the back or had their lower limbs flexed, in the MCA the burials are almost exclusively crouched.

On the Pannonian Plain in the Late Neolithic the crouched burial position, which was the main burial position for this period (Lichter 2001, 216), was used on the flat settlement at Polgár-Csőszhalom. Both the tell settlement burials at Polgár-Csőszhalom and those at Kisköre-Damm

contradicted the regional norm, as the extended supine position was used exclusively. The crouched position was also used exclusively at Gomolava, where an even greater degree of conformity was demonstrated, all the burials were also on their left sides. In the Copper Age at Tiszavalk-Kenderföld the typical Bodrogkeresztúr burial practice of a crouched position was used exclusively, either on the right or left side.

As with the orientation, the greatest conformity across an area is found in the Lengyel culture. At Alsónyék-Bátaszék, Aszód and Mórággy-Tűzkődomb burials are nearly exclusively crouched, on either the left or right. This is the burial position used across the Lengyel culture (Lichter 2001, 242).

Cenotaphs, graves without bodies, are found at a number of the cemetery sites. At Durankulak cenotaphs make up 8% of the Varna phase graves, at Varna itself they make up 47%. At Polgár-Csőszhalom two cenotaphs were found on the tell, but on the flat site, with a much larger sample area there were none. Cenotaph graves were also found at Aszód, an unusual practice for the Lengyel culture (Lichter 2001, 242). The presence of cenotaphs across the region, from the Black Sea coast to the Pannonian Plain, indicates a shared understanding about the symbolism of these graves across a wide area.

Other different burial types are much rarer. Cremations were found only at Aszód (section 6.6.2.1). Burial within pottery is used for child burials at Aszód and both children and the burial of skulls at Mórággy-Tűzkődomb. A few burials have evidence of body parts being removed before burial. This is a practice known from the Lengyel area, but it has also been noted at Cernica and Polgár-Csőszhalom.

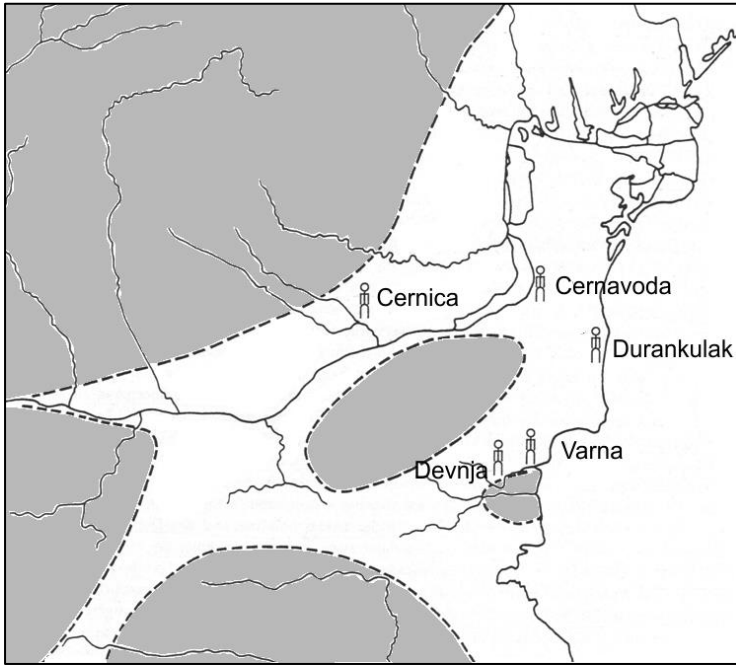


Figure 118: Map showing areas with no known Early Neolithic activity against the distribution of cemeteries with extended burials. Grey shaded areas have evidence for Early Neolithic settlement (adapted after Lichter 2001)

The use of two different burial positions together on some sites is particularly interesting. Up until this period the extended burial position was found only in pre-Neolithic burials, whilst the crouched position appeared with the first Neolithic communities in the region and is the dominant burial type throughout the Early and Middle Neolithic. The use of the extended position, which appears

with the first cemeteries in the Lower Danube region may therefore indicate the influence of remaining hunter-gatherer populations. The correlation between the use of the supine extended position and the lack of Early and Middle Neolithic settlement evidence in the Lower Danube has been noted by Lichter (2001, 71) (Fig. 119). It seems possible that what we are seeing here is a mixing of two different populations with their own burial traditions. As we saw in the example of the Ok, people are able to make sense of contradictions in their practices or beliefs (Barth 1987). Why the extended burial position would make an appearance on the Pannonian Plain, as it did at Kisköre-Damm and Polgár-Csőszhalom, despite the predominant position for that period being crouched, is less clear. For Polgár-Csőszhalom it is noteworthy that the extended position was used only on the tell, for what may have been special or different status burials.

8.1.4 Age and sex profiles

Age and sex profiles can tell us about the burial population, and indicate whether certain demographics were underrepresented or preferred for burial in the cemetery area. This is of course reliant on the assumption that the data we have available is representative of the full burial population, something that cannot be assured when only a small proportion of a site has been excavated. It also depends on having accurate and reliable osteological information, which is not available for Varna, Alsónyék-Bátaszék and Tiszavalk-Kenderföld. The sites where this information is available show a surprising diversity, which indicates that different communities had different rationales for determining who qualified for cemetery area (either on-settlement or off-site) burial.

Within the region as a whole, infants and children are generally underrepresented (Lichter 2001) in comparison to the expected mortality rates for a prehistoric population, where pre-adolescents should make up about 40% (White and Folkens 2005). At Cernica and Polgár-Csőszhalom, children are dramatically underrepresented, making up less than 20% of the burials. At Kisköre-Damm, although older children are well represented, there are none under the age of 2 and a half. In this society infants apparently did not qualify for burial.

At both Durankulak and Tiszapolgár-Basatanya there are quite sharp differences between the two phases of use. During the Hamangia phase at Durankulak adults make up 70% of the population, and subadults only 20%. By contrast, in the Varna phase children make up 50% of the burials. At Tiszapolgár-Basatanya children were similarly well represented in the ECA, but in the MCA children are again under represented and adults are in much higher proportions. As well as on these two sites a 'normal' burial population (where children represent between 40 and 60% of the burials) is only found at Aszód. Gomolava is notable for the number of neonates (three), which are largely absent elsewhere.

By and large, then, it is possible to say that there is a general preference across the region for the burial of adults. Children were less likely to be formally buried. The usual explanation for this phenomenon is that children are not considered to be full people, as they have not been able to create the necessary social relations or perform the social roles (e.g., Ucko 1969; Moore and Scott 1997). In such circumstances the question becomes why some children are thought to warrant burial at all. Often, as has been seen in several cases above, some individual child burials are lavishly furnished, and it would seem that they may come from powerful families or lineages. In such a case it seems that emotion could override the lack of a child's social persona. Or is this purely political, using a deceased child to make an overt show of wealth? What social barriers were in place to stop less influential parents from burying their children?

For many of the sites analysed the sex ratio is roughly even, indicating that neither sex was preferred. At Cernica, Kisköre-Damm and Tiszapolgár-Basatanya the proportion of males and females was even. There are more females than males on the Polgár-Csőszhalom flat sites (55% to 45%), Aszód (females 35%, males 23%), Durankulak Varna phase (66% female, 33% male) and Mórágyp-Tűzkődomb (59 females, 40 males). However, in the Durankulak Hamangia phase it is the opposite situation, with two-thirds of the burials being male and one-third being female.

Only at Gomolava does it appear to have been the case that only males could qualify for burial. No female burials were found on the tell settlement at Polgár-Csőszhalom, but from such a small excavation area it would be unwise to draw any conclusions about this.

8.1.5 Grave goods

A dominant narrative about the Late Neolithic to Copper Age in south-east Europe is that the number of grave goods increases over time. By and large this research supports that narrative. Unfortunately there are no, or only incomplete, data on the frequency of graves goods from half of the sites studied here: Varna, Polgár-Csőszhalom, Gomolava, Alsónyék-Bátaszék, and Aszód.

Cernica, one of the earlier cemeteries, has the lowest frequency of burials with grave goods (30%). At Kisköre-Damm 53% of burials included artefacts. Of the other Late Neolithic sites only the Hamangia phase at Durankulak has any data. Here the figure is much higher; 79% of the burials were accompanied by at least one item. Interestingly, in the succeeding Varna phase at Durankulak there is a slight decrease, to 77%. In the western region there is a massive increase, with between 90–100% of the graves containing grave goods at Mórógy-Tűzkődomb, Tiszavalk-Kenderföld and Tiszavalk-Kenderföld.

Of course, when we say there are no grave goods in some graves we are only talking about items which have survived. It is highly likely that, at the least, all burials were clothed. Other perishable artefacts, such as ornaments or tools made from wood, may also have been lost to us. This causes us a problem. It means we only ever have a partial picture of these cemeteries, and we could be writing off as ‘poor’ or ‘insignificant’ graves that were actually full of items of meaning when the burial took place. That being said, we cannot guess what was originally in the grave, and we must deal with the data available to us.

The frequency of burials including grave goods was generally varied across age and sex categories. In the Hamangia phase at Durankulak in any age category there was around an 80% chance of an individual having grave goods. Other sites show inequality in the frequency of grave good inclusion. At Cernica children are most commonly accompanied by artefacts, with 46% of the graves having them, then there is a gradual decrease as age increases, to only 20% for the senile age category. On the other sites the pattern is reversed; children are less likely to have grave goods while mature adults tend to have most. Interestingly, there is sometimes a decrease for the senile age category. Does this indicate a decrease in status or participation in the community, or is this one of those instances, such as for the Lokop of Kenya, where the elders, despite having more power, have fewer or smaller items?

8.2 BURIAL AND THE BODY

While the adoption of cemeteries to bury the dead in shows a shift in the relationship between the living and the dead, another change in Late Neolithic burial practice is perhaps more indicative of changes to everyday lived experience. The burial of individuals in clothing and jewellery, and with items they may have used in daily life, shows an increasing concern with the visual display of who a person was and what they did. It seems highly likely that this was a change which occurred not only in burial practice but also in daily life. That this increased use of ornamentation to express meaning occurred at the same time as new materials (copper and gold) may not be coincidental.

For Borić *et al.* (2013, 50) “The body was completed through material things.” Different types of artefact worn may have referenced certain qualities – for example it is suggested that Spondylus shell ornaments may have been demonstrative of trading skills. “Bodies were differentiated not to make them outstanding in terms of wealth but rather simply to create social difference of various kinds” (Borić *et al.* 2013, 50).

Chapman (2000a) has looked for costumes, searching for evidence of repeated use of the same items in combination to see if certain types of people dressed in a particular way. However, diversity and individuality seem more prevalent than specific costumes. Correspondence analysis in particular, which would be expected to highlight assemblages of this nature, did not show any grouping. There are some artefact types which are more common, the wearing of an armband on the upper arm, for instance, but its combination with any other specific artefact is not noticeable. Some grave goods are highly individual (i.e. the specific shapes of gold appliqués from Varna).

8.2.1 Inequalities: evidence for social differentiation on buried bodies

8.2.1.1 *Children*

Notions of childhood are very different in different cultures. The Western concept of childhood as being a time for play and education, not work, only really emerged in the late 19th century. As has been seen in Chapter 3 (section 3.2.6.1), in other cultures children may have very different statuses. For some, it may be that, until a certain age is attained a child is not considered a real person. Even from an early age subadults are likely to have tasks to perform, probably associated with their age range (Scott 1997).

The way in which children were treated in mortuary practice can, therefore, be very informative about the experience of childhood, and how someone's persona developed in a society. The first thing to note is whether or not children are included in the same mortuary practice as adults. The numbers of children found in nearly all the sites analysed here indicates that children are underrepresented in the burial record. In other words, only some children are considered to qualify for formal burial. Indications that children were being treated differently are evident in the higher number of children being buried on settlements in the preceding Early and Middle Neolithic. The implication here is that children retained a different (diminished?) status throughout the Neolithic and Copper Age in the region.

If children are underrepresented, what was it that meant that some children were eligible for burial in the same cemetery areas as adults and others not? There does not seem to be a general rule across the region. At Kisköre-Damm, for example, there are no children under the age of two and a half. Otherwise, children are in reasonably high number, which may indicate that older children are not underrepresented. What we see at Kisköre-Damm could well be that very young children and infants were not considered as fully people, and were therefore unworthy of burial. What is interesting is that at most of the other sites young children are represented in similar

proportions to older children. Something happened, presumably a rite of passage into adulthood, when a person reached physical maturity that meant they were more eligible for formal burial.

The presence of any grave goods within child graves is also informative about how children were viewed in these societies. In general, where children are buried they have quite a high, in comparison to the adult population, incidence of grave goods. The most plausible explanation for this is that these individuals come from an important family, lineage or clan, who used the death of a child to demonstrate and consolidate their influence or wealth.

8.2.1.2 Males:females: were there binary gender categories?

Throughout the literature on burial practices in south-east Europe there is a very strong sense that gender is a binary category, and that it is sex-based and begins in childhood. Part of my aims when starting this thesis was to challenge the usual understanding of gender as a binary. The region is known for studies which portray gender as simply being the same as sex, failing to consider the performative nature of the construction of gender. Previous studies have found patterns regarding males and females, but have not considered how we can think about those people who contradict these patterns.

A number of the sites I have analysed do indeed conform to the binary gender pattern, while others indicate a lesser concern. At Durankulak in particular we see artefacts associated with male and female burials, and the correspondence analysis supports this difference, with males and females plotting in different areas. There is however, plenty of overlap.

The correspondence analysis for Durankulak and Tiszapolgár-Basatanya also indicates that there was a greater degree of variation within male roles. The male burials plot more broadly, while females are tightly clustered, indicating that females were more constrained to certain activities and ways of expressing themselves. On other sites there is less of an obvious distinction between

the ways male and female bodies were treated. At Mórógy-Tűzkődomb the correspondence analysis does not highlight any artefacts as being particularly associated with males or females.

The association between males and stone tools can largely be deconstructed here. Flint tools, mainly blades and scrapers, are found in graves of both sexes, although generally are slightly more common in male graves. They also make an appearance in child graves at a number of sites. The use of knapped stone tools appears to be universal; any member of the community may have used them. Of course, as these tools, blades and scrapers, could have had a variety of functions, they may have used them for very different activities. Without further typological or use-wear analysis it is not possible to make any inferences about such activities.

Flint or obsidian cores are only found as grave goods at Mórógy-Tűzkődomb and Tiszapolgár-Basatanya. On both sites cores are found in both male and female graves. While these could be seen as offerings, as a resource for the afterlife, it seems more likely that these were placed in the grave because that individual was associated with that activity. Were these people specialist or particularly skilled knappers, for whom knapping was an important part of their identity? If so, it seems that contrary to preconceptions, females could also knap stone.

The association of the ground stone axe with prominent male burials has been noted across south-east Europe (Anders and Nagy 2007; Borić 2015a; Stratton and Borić 2012). An axe was found with an adult male at Polgár-Csőszhalom (Grave 3), and in an unspecified number of male graves on the flat settlement. Seven burials contained axes in Aszód grave group A. Of these, two were in male graves, two were in child graves, two were in unsexed cremations, and the last grave was badly disturbed. The correspondence analysis from Aszód indicates that both the stone axe and the wild boar mandible were associated with males. Five burials contained axe heads at Mórógy-Tűzkődomb, of which three were adult males, one was a juvenile female and one was a female child between 8 and 9. Five graves, all of adult males, three in the mature age

category were found at Tiszapolgár-Basatanya over both phases. At Cernica, eight adult males had axes, as did five adult females. At Durankulak the picture is complicated, but axes, including of antler and copper, were much more common than on other sites. Here, 14% of the Hamangia phase male burials contained stone axes, and 3% contained antler ones. In the Varna phase 7% had stone, 15% had antler, and 7% had copper axes. In contrast, only 1% of females and possible females were buried with any type of axe.

Axes then do seem to be associated with maleness. Was this symbolic? With other grave goods I have argued that these are items used by the deceased in their life, possibly items which came to be seen as a part of them in some way. However, axes appear almost exclusively in graves that are otherwise lavishly furnished. It seems an unlikely scenario that only men who were rich were able to wield an axe, although it could be that a polished stone axe, due to the work that was required to make it, was in itself a prestige item, and only the wealthy or influential had access to them.

The stone axe, albeit in very small numbers, has been found in some female burials. What does this contradiction of an apparent rule mean? The inclusion of axes in any burials is rare, so it could be that rather than representing a specifically male activity using the axe or the axe was a symbol of a position in society that males usually, but not exclusively, held. In some circumstances we may see other factors crossing the usually clear gender boundaries. As the axe is a relatively rare grave good type, and as in general it is found in more lavish graves, this could well be related to high status or powerful individuals.

Another artefact association which was noticed in a number of sites (e.g., Tiszapolgár-Basatanya and Tiszavalk-Kenderfold) is that of wild boar or pig mandibles being placed in male graves. Siklósi (2013, 426) noted that mandibles and artefacts made from wild boar tusks were found in burials of males in north-eastern Hungary and Transdanubia, but not on the southern part of the

Pannonian Plain. Siklósi considers that these are the graves of high-ranking men. It is intriguing to consider what meaning these grave goods may have had. The wild boar, for example, may have been some kind of talismanic animal, or been symbolic of male prestige or status. Certainly, its meaning was understood and shared across the cultural areas of south-east Europe.

If the axe and the wild boar are gendered, and associated with male activities, then it also indicates that cenotaphs were often gendered as male. The cenotaph (Grave 7) at Polgár-Csőszhalom had an axe and wild boar mandible, and cenotaphs at Durankulak and Tiszapolgár-Basatanya also contained axes.

Siklósi (2013, 428) has proposed that *Spondylus* bracelets were almost exclusively worn by women in the Hungarian Late Neolithic, although she notes two exceptions of male burials 9 and 36 from Kisköre-Damm. She supports her argument with evidence from figurines, on which only on female figurines are bracelets depicted on the upper arms. In terms of the sites studied here, at Aszod there was only a single burial with a *Spondylus* bracelet, burial 101, an adult female. This is not the case at Durankulak, where it is worn by both males and females in both phases. At Varna they were found in male and cenotaph graves. Interestingly, at Cernica *Spondylus* bracelets were only found in the graves of children and a juvenile female.

8.2.1.3 Evidence of social roles and tasks

Flint tools, produced by knapping, are generally common finds on these cemeteries. Less common, however, is evidence of their production. Only at Mórággy-Tűzkődomb and Tiszapolgár-Basatanya is evidence of the knapping process found, in the form of cores and a hammer stone found at Mórággy-Tűzkődomb, and cores of flint and obsidian at Tiszapolgár-Basatanya. The rarity of these artefacts is intriguing. Does it mean that only a few specialists knapped stone tools? What about the sites where no evidence is found? It seems strange that there is nothing to indicate what must have been a frequent and important activity.

Grave goods are not the only indicator of social inequality in burials. The treatment of the body itself is also informative. The majority of burials on any site conform to a dominant burial position. When a body is arranged in a way which deviates from the normal method of burial something is clearly being conveyed by the buriers about this individual. Why are they not considered to qualify for the usual method of burial, or what is it about them that qualifies them for a different method?

By and large the dead were buried with variations on common artefacts. However, some individuals were buried with artefacts that had no precedent on the site. At Varna, for example, one burial, Burial 36, had gold appliques in the shape of deer. These are not used to adorn any other person, and must have been full of meaning for those who saw the body being buried.

8.3 CEMETERIES AND COMMUNITY

8.3.1 Place

A defining distinction between the cemetery areas and the traditions that predated them is the importance of place. Specifically, we see the repeated use of the same space to bury the dead, while in the previous periods burials were by and large individual where they are known; the unknown mortuary practice that existed for the majority of the Early and Middle Neolithic dead may have involved the repeated use of the same place, but it did not involve placing the body there permanently.

It is notable that on the northern Pannonian Plain in the Copper Age, c. 4400 BC, we see a dispersal of settlement at the same time (broadly, given the generally poor chronologies) as the arrival of extramural cemeteries. Cemeteries may have resulted out of a desire to maintain some kind of community across a region, despite the break-up of settlements due to inter-group tensions. Is this a tension between increasing individuality that divided settlements and desire for

community that meant the use of the same cemeteries? The cemetery, in this specific area, can perhaps be seen as representing community history, in the way that the repeated occupation layers of the tell did previously. Despite the commonality that the shared use of a burial space suggests, the tensions may well still be visible in use of cemetery rows or areas for specific groups. While the repeated construction of the house in the same place on tells expressed the long-term continuity of a specific group, the importance of ancestry can perhaps be seen in cemeteries through these groups and rows. It seems likely, in this scenario, that the large cemeteries, such as Tiszapolgár-Basatanya and Tiszavalk-Kenderföld, were used by communities from multiple nearby settlements, who perhaps had their origins in the same tell settlement.

In the Eastern region, however, there is a different relationship between tells and cemeteries. Tell settlement continued in the Lower Danube and Black Sea coast, existing contemporaneously with the use of large cemeteries. A question that, in the case of Varna in particular, remains to be answered, is where are the people buried in these cemeteries from? At Cernica it appears likely that they are from a single settlement, as the settlement area dominates the promontory that the cemetery is located on. At Durankulak there is also an obvious candidate for both periods, with the nearby Hamangia settlement of the lagoon edge, and the Varna period tell settlement located on the Big Island. At Varna, however, there is no obvious associated settlement, although there are several candidates in the surrounding area. Due to the richness of the finds at Varna it has been suggested (Renfrew 1986) that Varna is a regional cemetery reserved for the important individuals/leaders of the area. However, the Varna cemetery does contain the full range of graves, from those with no grave goods to the incredibly lavish. Although all we tend to hear about Varna is the gold, there were plenty of 'poor' individuals buried there, people who were buried with no or very few grave goods. Varna may well be used by a number of different settlements in the region, but it should not be thought of as some exclusive cemetery.

It is interesting to note that it appears that the richest graves came early in Varna's use (Higham *et al.* 2007). Coupled with the spatial information that there was no single first zone of use, but rather various parts of the site were in use at the same time, it does seem plausible that the display of wealth is a result of inter-community tensions. Unlike what is seen at this period in the western region, where settlements were dispersing, tell settlement continued in the eastern region.

The sense of place created by the repeated use of extramural cemeteries must have been very different to that of intramural settlement burial in groups. The repeated visiting of a cemetery for burial of the dead, which perhaps was little or not at all visited at other times, would have associated this place with very specific memories. It was separate from daily life. Intramural burial, however, takes place within the living community. The dead are always present, as, for example at Kisköre-Damm, and perhaps also at Gomolava, burials are placed only metres away from houses. Of course, our site chronologies are not good enough to understand the exact relationship between them, but based on typo-chronologies it seems these houses and burials were coeval. The grave, probably marked, was ever-present, as a reminder of family or lineage ancestry.

8.3.2 Community

The usual narrative for the Neolithic and Copper Age of south-east Europe is one of increasing social inequality over time, as agglomeration of settlement meant more people were living in one place, providing more opportunity for inequality to develop. This scenario is usually backed-up by the burial evidence; the wealth of some Varna graves has been taken to indicate a few individuals were able to control resources and acquire wealth.

However, the mortuary evidence contrasts with the settlement evidence. Here, we see little evidence for hierarchy. House sizes on individual settlements are roughly the same (Reingruber

et al. 2010). Indeed, the regularity of house sizes and lack of differentiation in household assemblages indicates a very strong egalitarian ethos on settlements throughout the region and period, with little evidence for the chieftains or elites that are apparently present in the burial record (Chapman 2010).

Although we do not see evidence of hierarchy there are discernible differences within these communities on a house (household?) level. Although outside this study area, the work of Amy Bogaard *et al.* (2011) on the LBK settlement of Vaihingen, south-west Germany, demonstrates that there was differential access to land. At Pietrele, Romania, pottery assemblages differ from house to house of the off-tell settlement, indicating different buildings were used for long- and short-term storage, food preparation and consumption (Reingruber 2012). The use of cemetery burial in a shared area for the mortuary ritual can perhaps therefore be seen as an act of commonality among a community with many tensions (Whittle 2015).

The burial of a deceased member of a community would have been a time for people to come together. The way that the burials within these formal cemeteries, cemetery areas, and even single burials on settlements, were carefully dressed and laid out for display indicates that the mortuary ritual was at least in part a spectacle. The opportunity to present the body in a way which was full of meaning would not have been missed. As Serematakis (1991, 213) put it, “the dead ornament the living as much as the living ornament the dead.”

A multitude of themes could have been being presented. For example, we may see symbols of the wealth or power of the clan that the person came from. Other aspects may indicate a task the person excelled at or a craft they carried out. Other inclusions may have been more personal, a family member may have insisted they were buried wearing their favourite ornaments, or it may have been politic to display in the funeral artefacts which had significant biographies themselves. Some items may have required no consideration, because they were so much a part of the

person, they were essentially a part of them. Maybe armbands constantly worn from childhood, or bead girdles worn as a symbol of womanhood were as much a part of the individual as their body. All these rationales, and more, could be occurring in the creation of the funerary ritual.

As times of coming together funerals were times to emphasise collectivity. The rituals which took place would have been repeated over and over, according to custom. Each funeral would spark in the attendee the memory of previous funerals, and the knowledge that one day they too would be treated in this way. Through this bringing together of community, funerals were a time of collectivity. They were also a time when social rules and traditions were enforced. The repeated use of a certain artefact type as a symbol of power or status would have maintained that status. Society was reproduced through the repeated actions and the witnessing of these actions by the mourners. Such things as gender, age categories, status, and other social roles, were all reproduced in the mortuary sphere.

A further way of bringing the community together could have been the sharing of food. With the exception of Cernica, pottery is the most common artefact type found in graves. These may well have been used as part of a funerary ritual involving the consumption of food by mourners. Acts of commensality, the specific smells and tastes of the funerary rite, would have added to the shared experiences of the mourners. At some sites, e.g., Tiszavalk-Kenderföld and Durankulak, animal bones, presumably deposited as meat, were also placed in the grave. Again, this may well have been as part of a wider sharing of the food among the living as part of the mortuary ritual. As Robb (2010, 509) notes, meat would have “formed the food of inter-household sociality,” while staples are loaded with meaning about home, hospitality, sharing and nourishing. Meat was not eaten often, but when an animal was slaughtered it provided enough meat for more than just one household, and hence was the food of commensality.

The pattern of pottery inclusion at the cemeteries varies. As has been noted, Cernica had almost none, but five burials did contain animal bones. Pottery is nearly ubiquitous at Aszód (in grave group A), Mórógy-Tűzkődomb, Tiszavalk-Kenderföld and Tiszapolgár-Basatanya. Generally, the pottery types are small, for the serving of food and drink to an individual, although larger vessels, presumably for storage or serving to groups, are also found. Tiszavalk-Kenderföld is particularly interesting, as there is a set of small cup and large jar (*Milchtopf*) found in nearly every grave, irrespective of how many other artefacts were found with it. This indicates that the sharing of drink, either among the living or with the dead, was a central part of the funeral rite.

8.4 THE FIRST CEMETERIES IN SOUTH-EAST EUROPE

This thesis set out to date one of the earliest cemeteries in south-east Europe. Cernica was thought, on the basis of culture-historical chronologies, to be one of, if not the, earliest cemeteries in Europe. The modelling of the radiocarbon dates indicates this is in fact not the case, with Durankulak remaining the earliest dated cemetery, with its use starting circa 5000 cal BC. Typologically, Cernavodă in Romania and Botoš in Serbia are also potentially early, and until they are securely dated we cannot know which the first is. All we can say is that according to the culture history chronologies the first cemeteries in the region seem to have appeared in the Lower Danube region.

These are not, however, the first cemeteries to exist in Europe. LBK cemeteries in central Europe appeared around 5300 cal BC. Could there be any connection between these two events, or did cemeteries emerge separately in the two regions? Cemetery use started at Nitra, western Slovakia, at 5320–5230 cal BC (*68.2% probable*), and at Vedrovice, southern Moravia, at 5330–5260 cal BC (*68.2% probable*) (Griffiths 2013) and at Kleinhadersdorf, eastern Austria, at 5220 cal BC (Stadler 2013). If the LBK cemeteries were influential in the start of use of cemeteries in south-east Europe we would expect to see the earliest appearance of the phenomenon in the

Lengyel region. It seems however, that Lengyel communities were not influenced by their neighbours to the north and west in this regard. Instead, it appears that there were two independent processes of change, one in the central European LBK, and one in the Lower Danube.

Despite recent advances we are still a long way from understanding the timeframes of these changes. Although some of the major cemetery and intramural burial sites have been dated, we do not yet have the kind of temporal framework that would enable the creation of a narrative of the emergence of cemeteries over a regional scale. On the site scale, very few sites have been dated using a large sample size and there is poor understanding of the development of individual cemetery areas. Certainly, we cannot yet examine individual sites on a generational scale. Suggestions of lineage rows or contemporary burial groups are therefore currently unverifiable.

It is important to bear in mind that cemeteries did not just appear, fully formed. At some point in time someone was the first person to be buried in a formal manner, at a specific place. For extramural cemeteries there must have been a rationale behind the choice of place. Others then chose to continue this practice, leading to the development of a cemetery, in opposition to preceding mortuary traditions. It seems that in the Early and Middle Neolithic there was already a tendency to remove the dead from the settlement area (chapter 5), and as such the appearance of formal cemeteries cannot be considered to have been a significant break in traditions regarding the separation of the dead from the living. Rather, it represents a change in emphasis; there was a new focus in the burial ritual on the importance of the body and its display, and of the continued use of a specific place. The increasing inclusion of grave goods, which continues through the Late Neolithic and Early Copper Age, emphasises that part of the function of these burials was display, and possibly communication of statuses, roles and other identities. Whether Early and Middle Neolithic burials were similarly used as moments for display before their

disposal in an impermanent location is uncertain, but the occasional inclusion of some items in intramural burials (such as probable shell clothing decorations found in Burial 1 at Karanovo, and shell beads and a marble amulet from a child's burial, 1b, at Gradešnica (Lichter 2001) from this period indicates this may be the case.

The most significant difference in the appearance of the cemetery is, therefore, not the division of the living from the dead but the selection of a permanent place for the burial of the dead that was repeatedly returned to over tens or hundreds of years, over generations of human lives. Here we see evidence for the role of memory and links to the past and a desire to create a permanent feature in the landscape. Discussions surrounding the monumental mortuary constructions in the British Neolithic have focused on the mnemonic value of highly visible constructions in the landscape and possible links between 'ancestral' tombs and concepts of place, linking the living population with past generations (Bradley 1998; Thomas 1999, chapter 3), or even a pre-Neolithic past (Bradley 2002, chapter 2). Similarly, Gosden and Lock (1998) have discussed the importance of place, history and myth in the British Bronze and Iron Ages. The Late Neolithic/Early Copper Age cemeteries in south-east Europe were not such striking markers in the landscape as the monumental constructions of Britain. Indeed, it is not clear how visible they would have been in the landscape. From the available plans they do not seem to have had any form of large-scale boundary, and although there were stone constructions used in burials at Durankulak these were below the ground surface. Despite this lack of special demarcation the cemetery sites were well known in the landscape. They were repeatedly visited over generations (Higham *et al.* 2007), and the presence of very few overlapping burials shows that some kind of marker must have been visible on the ground surface. The repeated use and spatial respect of cemeteries demonstrates knowledge of and connection with past activities.

We must be careful to avoid the assumption that the development to fully extramural cemeteries was somehow inevitable. Having established separate areas for the dead on settlements, why did communities then establish areas off settlement? The transition demonstrates a very different social logic towards death. There was a shift in attitude towards the dead, who now occupied their own space, either on settlement or off. In the Early and Middle Neolithic burial practices, whether they were on the settlement or off, they were impermanent, whereas the cemetery areas meant the dead were permanently present.

For the most part studies of cemeteries have been descriptive rather than explanatory. Little has been written about what may have led to their emergence. The usual regional culture-historical explanation of change by external stimuli, generally considered as waves of people from the south (Chapter 5) does not work here. The author who has made the most contributions to this topic is John Chapman. As was described in chapter 2 (section 2.7) Chapman (1991; 1994c) saw cemeteries as alternative arenas of social power to settlements. Cemeteries emerged as places where increasing vertical differentiation could be expressed, as opposed to the strictly egalitarian settlement spaces. They were places where the accumulation of wealth could be demonstrated, and competition between corporate lineages could take place. In his more recent works (i.e. 2000a; c), however, vertical differentiation is not seen as a driving factor. Instead, the arenas of social power are created through ancestors and community history (Chapman 2000a).

The importance of place is also touched on more recently by Borić *et al.* (2013). In their chapter on the history of the body in the Neolithic they argue that just as the Neolithic period was a time of settling down into a sedentary lifestyle, so cemeteries represent the settling down of the body. Burial “was a way for people to reformulate the community of the living after death and to identify the history of the group with its specific landscape and territory of the village. It marked

a new linkage between the history of the body, the history of the group, and places” (Boric *et al.* 2013, 53).

While our understanding of the timescales involved remains poor, we can be confident in saying that there were two different trajectories of changes in the region. What is behind these differences? One answer may lie in the different process of Neolithisation which occurred. The Pannonian Plain was settled by Neolithic communities from around 6500 cal BC (Whittle *et al.* 2002), but there is a noticeable gap in Early Neolithic settlement evidence in the Lower Danube area. A number of factors suggest that Mesolithic groups had a greater influence in the Lower Danube Neolithisation, which also occurred not long before the appearance of cemeteries. The use of the extended burial position is taken as a key signifier. Neolithic communities throughout the Early and Middle Neolithic exclusively used a crouched burial position for the body. This tradition itself can be traced back to the Middle East, while there is no precedent for its use prior the arrival of Neolithic communities. Other Mesolithic traditions visible in the burial practices of the Lower Danube Late Neolithic are the inclusion of red deer canines, antler axes, and animal skulls as grave goods (Borić 2015a).

On the Pannonian Plain, cemetery use was being adopted by communities with their own well established burial traditions, and they were perhaps less open to change. Although this does not explain the appearance of cemeteries themselves, it may account for a different attitude towards their use. The first use of cemeteries on the Pannonian Plain comes at a time of change in settlement structure, when there was a dispersal of settlement. Was the creation of a permanent place for the dead linked to the process of settlement dispersal? This again can come back to the importance of place – perhaps cemeteries were used to maintain a sense of community despite dispersal of people across a broader area.

In the western region cemetery areas are created first within settlements. In the eastern region of the Lower Danube the cemetery appears fully formed, with minimal evidence for a preceding period of intramural cemetery zones. What is behind these two trajectories, and what does it say about people's understanding of death? The Lower Danube region is different to the rest of south-east Europe, because evidence for the Neolithic occupation of the area only appears in the Late Neolithic of the wider regional chronology (see Chapter 5). The use of the cemetery comes part and parcel with virtually the first Neolithic settlement of the area. It is not clear, however, where these people have come from. Have they come from an inundated coastal region now lost to us? It may be that people moving inland were the reason for the sudden adoption of cemeteries in the eastern region. By contrast, Neolithic communities had been established in the western region, the Carpathian Basin, since c. 6500 BC. The similarity of burial rites with the preceding period points to a local development (Kovács and Váczi 2007). This is a more gradual shift in attitude towards the dead.

Despite the commonalities between the sites investigated, it is clear that very different processes were going on in the emergence of cemetery use. This is most clearly seen in those examples which have been reasonably well dated, allowing for some chronological understanding of their development. For example, compare the use periods of Alsónyék and Durankulak. The high number of burials at Alsónyék took place over a surprisingly short period of time. Both the burials, (which came first) and the settlement activity demonstrate a sudden aggregation of people to one site, which lasted for only a few generations before dispersing again. Although dating evidence for Durankulak is poor, this site was in use over two cultural phases, and on the basis of the typologies there was no large hiatus in use. In contrast to Alsónyék's few generations Durankulak may have been used for burial for up to 650 years.

This brings us back to the relationship between burial practice and settlement patterns. Although it has been hypothesised that Varna cemetery was used by a number of (as yet unidentified) settlements, for the majority of cemeteries and burial areas there is an associated settlement. Aspects of the settlement pattern can tell us about the social dynamics at play. It appears that in the Lengyel period in Transdanubia there was a trend for short-term large settlement agglomerations to form and then disperse. Groups may have been moving *en masse* every generation or so. These large settlements are likely to consist of smaller social groupings, perhaps families or clans, which would break away or come together. The tendency for division into smaller groupings within the agglomerations could be represented in the use of on-settlement separate burial groups, with each group having its own burial area. In contrast, the Durankulak cemetery is located next to a tell settlement of the Varna period, a long-term settlement making use of a long-term cemetery.

However, the simple existence of a long-term settlement does not account for the appearance of extramural cemeteries. Leaving aside the proposition that cemetery use in the Eastern region started from new populations arriving from the inundated coastal areas (as this is only side-stepping the issue of why cemeteries appeared by pushing their emergence back into hypothetical sites now underwater), from what has been outlined above it is possible to identify a number of social factors that help explain this phenomenon.

Firstly, it is important to note that there was already a trend towards increasing separation of the living and the dead through the Early and Middle Neolithic. This is indicative of a shift in perceptions towards the dead, and may be related to concepts of pollution. It seems likely that an increasing desire to have the dead in a different place than the living could have pushed the dead outside of the settlement itself. Thus, changing worldviews or beliefs played an important role here.

However, what seems to come out most strongly from the sites studied here is the presence of social tensions. There are inter-group tensions, tensions between settlement and burial place, between community and individualism, egalitarianism and the accumulation of wealth and status. I would argue that it is from these tensions that cemeteries emerge as a space where the status quo of settlement life could be challenged.

8.5 SUMMARY

What comes through clearly in both the case study chapters and this discussion, is that while there may be commonalities of practice, each site went through different processes in the creation of cemetery areas. Of course, this is partly a question of scale. On a regional level the Lengyel culture cemetery areas seem highly consistent, all using predominantly crouched burial and facing in the same direction. However, on the individual cemetery scale we see differences. At Aszód, for example, we see the use of unusual burial practices, such as cremations. This goes to remind us that while on a broad scale we may see trends, in reality these trends are made up of many individual actions. These actions may reproduce or contradict, for various reasons, the dominant burial practice.

The question posed at the start of this chapter was, why do cemeteries appear? This is not an easy question to answer, partly because, as seems clear from the evidence above, it was unlikely to be one single factor that drove change across the region. Rather, there are multiple factors at work. This results in the differing trajectories towards cemeteries seen in the two regional areas, as well as smaller-scale site-specific developments.

One aspect that appears to be strongly linked to cemetery emergence is the expression of difference. At a time when settlements are strongly egalitarian in their layout it is striking that we start to see major differences in the lavishness of the individual burials. The body is being used in

the creation of social difference (Borić *et al* 2013). The burial evidence indicates these were increasingly diverse societies, where identities were displayed on the body. This is a strong contradiction to the settlement evidence, and it seems likely that the mortuary sphere was a key area where such identities were produced.

9 CONCLUSION: BURIAL AND IDENTITY IN THE LATE NEOLITHIC AND COPPER AGE OF SOUTH-EAST EUROPE

“He did not know then that stories do not stand still, that they change with new recollections and rearrange themselves subtly with every addition, and what seem like contradictions may be unavoidable revisions of what might have happened”

- Abdulrazak Gurnah, *The last gift: A novel*

This thesis has focused on the appearance of the cemetery phenomenon in south-east Europe in the Late Neolithic and Copper Age. This novel practice has remained largely unexplained by previous research, which has tended instead to be descriptive. As a body of work the thesis has considered two main issues. First, who were the people that were buried in these cemetery areas? By analysing the position of the body in the grave and the accompanying grave goods, it has been possible to draw conclusions about the burial society of each cemetery, about who was considered to qualify for cemetery burial, and what identities were being expressed in the grave. Secondly, it considers what the reasons may have been for the appearance of cemeteries. Why did the new burial practice start, and why was the trajectory of this change different in the two case study areas? It seems highly likely that the appearance of cemeteries was connected to tensions visible between the egalitarian settlement sphere and increasing display of difference on the body. Thus, the two questions are strongly related to each other.

Furthermore, this thesis has provided new data relating to the timing of the appearance of cemeteries. Cernica cemetery had been considered one of the first extramural cemeteries in the region, on the basis of the culture history chronologies. Our dating project has demonstrated

that in fact Cernica is later than thought, and that Durankulak's first phase of use started earlier, c. 5000 cal BC.

Chapter 2 provided a synopsis of the previous approaches to burial studies, which demonstrated the foundations this work is built on, but also that so far little has been written about why cemeteries came into use, and why a new approach is necessary. It then went on (Chapter 3) to consider theoretical approaches that might be useful. Discussion of embodiment and the body were used to argue that objects used and worn in daily life play an active role in the creation of an individual. In a mortuary context, such objects become signifiers of that person's identities. The funerary realm is also significant in the production and reproduction of society.

Chapter 5 provided an introduction to the archaeology of the region. It described the burial and settlement practices of the Early and Middle Neolithic, preceding the study period, and also provided brief descriptions of the main cultural groups of the study period (Late Neolithic and Copper Age). Chapters 6 and 7 are the main body of the thesis, consisting of a number of case study cemeteries. In Chapter 6, the eastern region, three large-scale extramural cemeteries were analysed: Cernica, Durankulak and Varna. These sites provide the first examples of the extended supine burial position seen since the Mesolithic. Alongside other indicators of Mesolithic traditions (the use of red deer canines as beads, the placement of animal remains in the grave), this indicates that in this region two separate traditions came together to form this new practice: the Neolithic, represented by crouched burials, and the Mesolithic. The western region (Chapter 7) provided a very different trajectory of change. Here, burial remained on settlements, in small cemetery groups, in the Late Neolithic. It was much later, around 4400–4300 cal BC that extramural cemeteries appeared in this region. These small cemetery groups indicate the presence of inter-community tensions.

There can be no doubt that the use of cemeteries for burial demonstrates a change in the relationship between the living and the dead in south-east Europe in the Late Neolithic. It seems that the recently dead became more important. Instead of being disposed of by some form of excarnation (as the lack of evidence for preceding burials points to) the dead were carefully placed. The way that they were displayed in their graves, wearing and surrounded by objects, indicates that the burial was a public occasion, one where connections and relationships with the dead could be clearly expressed. The contradiction between the equality of the settlement and the inequality of the burials is striking. It seems that the mortuary realm was being used for social differentiation and competition.

The scope of this thesis has been a challenge. It has analysed sites from four different nations (Bulgaria, Hungary, Romania and Serbia), and brought together scholarship written not only in these national languages, but also English and German. These different archaeological traditions do not always see eye-to-eye, and national differences, particularly in culture-history chronologies, were complicating. It also has to contend with a varying quality of publication and excavation. The further some sites have been looked into, the clearer it has become that some rather dubious excavation and recording practices were going on, and that in many cases data may be unreliable.

The difference in publication standards has been particularly problematic, as it has meant that the potential for analysis on each site varies. This in turn causes problems with cross-comparisons, yet it has also meant that different aspects of cemetery use can be focused on. For example, the use of DNA to sex children at Mórágý means that we can assess the possible sex or gender associations of artefacts for children in a way not possible at the other cemeteries, while at Alsónyék-Bátaszék, as yet unpublished, we have a very fine chronology allowing understanding of the site's development.

9.1 FUTURE RESEARCH

There are a number of potential ways to develop this research. Our understanding of the emergence of the cemetery phenomenon is hampered by a poor understanding of the timescales involved. Only seven of the cemetery or settlement group burial sites have been radiocarbon dated, and of those only two (Cernica and Alsónyék) with enough samples to be representative. A campaign of radiocarbon dating is necessary to fully understand the timescales involved. As Cernica has demonstrated, accurate dating has the potential to completely change our understanding of the chronologies currently based to pottery typologies. The other currently considered earliest examples of the cemetery phenomenon may also date to later than expected. It would be important to include in this the smaller cemetery areas known from the Lower Danube region, as they may hold the key to the emergence of the phenomenon.

Secondly, DNA analysis would be beneficial on a number of levels. As was demonstrated by the example of Mórágý, the use of DNA to sex burials means a higher accuracy of sexing overall, but also means that sexing can be extended to children. This allows for a greater understanding of gendered lifecourses. DNA analysis for matrilineal and patrilineal descent would also be extremely informative. It could verify whether the grave groups and rows, seen both on settlements and within extramural cemeteries, were indeed related to descent and kinship.

The combination of finer timescales with lineage information from DNA would revolutionise our understanding of these sites. It would allow us to track the development of the cemetery area or grave groups over time, while also demonstrating kinship and descent.

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APPENDIX – CERNICA RADIOCARBON DATING

Lab Code	Sample number and details	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C:N ratio	Result	Calibrated radiocarbon date (95% confidence)	FRUITS % estimated freshwater fish dietary contribution (prior = terrestrial herbivore contribution is greater than fish)	Nehlich estimate (% freshwater fish dietary contribution)
<i>Results from the cemetery</i>								
OxA-27422	Sample 3, bone, <i>Homo sapiens</i> left humerus from grave 28, from trench 9, northern area of cemetery. Male, estimated < 30 for this project ³ . Supine extended burial containing deer teeth, an axe and malachite beads.	-19.9	9.5	3.2	6149±35	5220–4990	14.0±8.7	**
OxA-27423	Sample 26, bone, <i>Homo sapiens</i> left femur from grave, trench 26, northern area of cemetery. Female, c. 40. Right-crouched burial, no grave goods noted. Discrete glued repair at break away from sample location.	-19.7	9.6	3.2	6266±34	5320–5200	14.2±8.7	**
OxA-27424	Sample 5, bone, <i>Homo sapiens</i> left ulna from grave 34, from trench 13, southern area of cemetery. Female, 16–18. Supine extended burial containing <i>Spondylus</i> (bi-lobed, barrel) and animal teeth and malachite beads.	-19.9	10.4	3.2	6232±33	5310–5060	15.9±9.4	**
OxA-27425	Sample 6, bone, <i>Homo sapiens</i> superior maxillary left side fragment, from grave 37, trench 12, southern area of cemetery. Identified as female, 15–16, for this project. Supine extended burial containing a bone idol-pendant.	-20.4	9.9	3.2	6092±35	5210–4910	14.6±8.7	**

Lab Code	Sample number and details	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C:N ratio	Result	Calibrated radiocarbon date (95% confidence)	FRUITS % estimated freshwater fish dietary contribution (prior = terrestrial herbivore contribution is greater than fish)	Nehlich estimate (% freshwater fish dietary contribution)
OxA-27426	Sample 13, bone, <i>Homo sapiens</i> left tibia from grave 113, trench 40, southern area of cemetery. Male <i>c.</i> 35. Supine extended burial containing greenish beads and shell barrel beads.	-20.2	10.7	3.2	6157±33	5220–4990	16.8±9.6	**
OxA-27427	Sample 18, bone, <i>Homo sapiens</i> left femur from grave 171, trench 84B, southern area of cemetery. Male, identified as <i>c.</i> 30 for this project. Supine extended burial containing deer teeth. Discrete glued repair at break away from sample location.	-20.1	10.5	3.2	6121±35	5210–4940	16.3±9.4	18%±12%
OxA-27428	Sample 19, bone, <i>Homo sapiens</i> left humerus (half superior part of the diaphysis) from grave 173, trench 84B, southern area of cemetery. Female, identified for this project as less than 20. Supine extended burial containing perforated animal teeth.	-20.6	10.3	3.1	6181±35	5230–5010	14.1±8.5	13%±10%
OxA-27429	Sample 20, bone, <i>Homo sapiens</i> upper left maxillary from grave 188, trench 84B, southern area of cemetery. Male, <i>c.</i> 35. Supine extended burial containing narrow shell bracelets (one <i>Glycimeris</i> , others unknown, all three published previously as <i>Pectunculus</i>) and shell bi-lobed and tubular beads.	-20.8	11.5	3.2	6370±40	5470–5290	19.2±10.2	27%±17%
OxA-27431	Sample 23, bone, <i>Homo sapiens</i> left femur superior part from grave 198, trench 86B, southern area of cemetery. Female, 35. Left extended burial containing greenish beads.	-20.2	9.7	3.2	6110±35	5210–4940	14.3±8.7	17%±11%
OxA-27432	Sample 24, bone, <i>Homo sapiens</i> left tibia from grave 267, trench 101B, southern area of cemetery. Female, 35–40. Supine extended burial containing narrow <i>Glycimeris</i> bracelet, bone ring, <i>Spondylus</i> and copper beads.	-20.5	10.2	3.2	6284±34	5330–5210	14.9±9.0	16%±11%
OxA-27560	Sample 15, bone, <i>Homo sapiens</i>	-20.3	10.7	3.2	6178±29	5220–5030	16.7±9.5	**

Lab Code	Sample number and details	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C:N ratio	Result	Calibrated radiocarbon date (95% confidence)	FRUITS % estimated freshwater fish dietary contribution (prior = terrestrial herbivore contribution is greater than fish)	Nehlich estimate (% freshwater fish dietary contribution)
OxA-27584	left femur from grave 134, trench 33B, northern area of cemetery. Male, <i>c.</i> 50. Right-crouched burial. No grave goods. Discrete glued repair at break away from sample location.	-20.2	10.0	3.1	($T^*=0.9$; $T^{*5\%}=3.8$; $df=1$)		15.0 \pm 9.0	**
OxA-27561	Sample 12, bone, <i>Homo sapiens</i> right femur from grave 109, trench 41, southern area of cemetery. Female, estimated <40 for this project. Left-crouched burial containing a chisel. Discrete glued repair at break away from sample location.	-21.0	10.6	3.3	6195 \pm 37	5300–5030	14.6 \pm 8.7	**
OxA-27563	Sample 29, bone, <i>Homo sapiens</i> humeral head from grave 321, trench 98, southern area of cemetery. Female, estimated 55–60 for this project. Right-extended burial. No grave goods.	-20.1	10.1	3.2	6114 \pm 26 ($T^*=1.5$; $T^{*5\%}=3.8$)		16.5 \pm 9.3	**
OxA-27586		-20.3	10.1	3.2			16.8 \pm 9.6	
OxA-27559	Sample 11, bone, <i>Homo sapiens</i> left tibia from grave 101, trench 39A, northern area of cemetery. Female, 25–30. Supine burial containing bone needle with figurine and shell (<i>Spondylus</i> and <i>Dentalium</i>) and malachite beads (tubular, circular), and a flint fragment. Discrete glued repair at break away from sample location.	-20.2	10.0	3.2	6163 \pm 28 ($T^*=0.0$; $T^{*5\%}=3.8$; $df=1$)	5220–5000	14.8 \pm 9.1	**
OxA-27583		-20.2	9.8	3.2			14.0 \pm 8.8	
OxA-27585	Sample 21, bone, <i>Homo sapiens</i> left humerus from grave 193, trench 86B, southern area of cemetery. Female, estimated as 30 for this project. Left-extended burial. Discrete glued repair at break away from sample location.	-20.2	10.0	3.2	OxA-27585	OxA-27430	14.7 \pm 8.7	**
OxA-27562		-20.5	9.9	3.3	5985 \pm 45	5210–4940	14.1 \pm 8.8	**
OxA-27430		-20.2	9.8	3.2	OxA-27562 5983 \pm 36 OxA-27430 6122 \pm 33		14.4 \pm 8.7	**

Lab Code	Sample number and details	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C:N ratio	Result	Calibrated radiocarbon date (95% confidence)	FRUITS % estimated freshwater fish dietary contribution (prior = terrestrial herbivore contribution is greater than fish)	Nehlich estimate (% freshwater fish dietary contribution)
OxA-27620	Sample 22, bone, <i>Homo sapiens</i> left femur from grave 194, trench 86B, southern area of cemetery. Female, 25–30. Extended burial containing shell bi-lobed beads.	-20.2	9.2	3.3	6175±35	5230–5000	12.6±7.9	21%±13%
OxA-27630	Sample 27, bone, <i>Homo sapiens</i> neonate left femur from grave 303, trench 28, northern area of cemetery. Grave contained adult female, 25–30, in left-extended burial, with foetus <i>c.</i> 40 weeks at death, and <i>Spondylus</i> beads (tubular, barrel).	-18.7	11.2	3.2	6117±34	5210–4940	20.7±11.2	18%±13%
OxA-27659	Sample 2, bone, <i>Homo sapiens</i> left femur from grave 12, trench 5, northern area of cemetery. Female, 45–50. Right-crouched burial. No grave goods.	-19.8	9.4	3.2	6256±34	5320–5080	13.1±8.4	**
OxA-28281	Sample 9, bone, <i>Homo sapiens</i> lower mandible, horizontal right ram from grave 62, northern area of cemetery. Grave contained male 25-35, right crouched burial. No grave goods. Trench 25	-20.8	9.9		6206±31	5300–5050	14.0±8.5	20%±14%
OxA-28282	Sample 10, bone, <i>Homo sapiens</i> upper maxillary, left part. Grave 97 contained male 35 years, unknown burial position, northern area, with microliths. Trench 37-38.	-19.9	10.2		6172±32	5220–5000	15.6±9.0	16%±12%
Poz-52598 (Șerbăneșcu 2015)	Grave 284. Southern area, <i>Homo sapiens</i> burial extended on the back. Grave included one flint scraper, one bone ring, one bone pendant.	-	-	-	6095±35	5210–4930	*	**
<i>Results from the settlement</i>								
OxA-27434	Sample 34, bone, <i>Bos taurus</i> right tibia from Boian feature [102].	-20.8	5.8	3.2	6099±34	5210–4930	-	**
OxA-X-2511-19	Sample 32, bone, <i>Cervus</i> sp. Phalange I, from Dudești pit [10].	-19.6*	5.5*		6096±34	5210–4930	-	**
OxA-27587	Sample 31, bone, <i>Bos taurus/primigenius</i> Phalange II	-19.9	7.2	3.2	6037±32	5030–4840	-	**
OxA-27565	Dudești pit [10].	-19.3	7.6	3.1	(T'=0.1; T'5%=3.8; df=1)		-	**
OxA-27564	Sample 30, bone, <i>Ovis/Capra</i>	-18.6	7.5	3.2	6195±25	5230–5050	-	**

Lab Code	Sample number and details	$\delta^{13}\text{C}$	$\delta^{15}\text{N}$	C:N ratio	Result	Calibrated radiocarbon date (95% confidence)	FRUITS % estimated freshwater fish dietary contribution (prior = terrestrial herbivore contribution is greater than fish)	Nehlich estimate (% freshwater fish dietary contribution)
OxA-27433	ulna from Dudești pit [10].	-18.7	7.6	3.2	($T'=0.7$; $T'5\%=3.8$; $df=1$)		-	**
<i>Failed samples</i>								
P32946	Sample 4, bone, <i>Homo sapiens</i> right femur from grave 29, trench 9, northern area of cemetery. Male, estimated at <30 for this project. Supine extended burial with grave goods	-	-	-		Sample failed due to low collagen yield		
P32947	Sample 8, bone, <i>Homo sapiens</i> left femur from grave 45, trench 4c, northern area of cemetery.	-	-	-		Sample failed due to low collagen yield		
P32950	Sample 16, bone, <i>Homo sapiens</i> right side of mandible from grave 141, trench 34B, northern area of cemetery.	-	-	-		Sample failed due to low collagen yield		
P32951	Sample 25, bone, <i>Homo sapiens</i> inferior mandible from grave 292, trench 24, northern area of cemetery.	-	-	-		Sample failed due to low collagen yield		

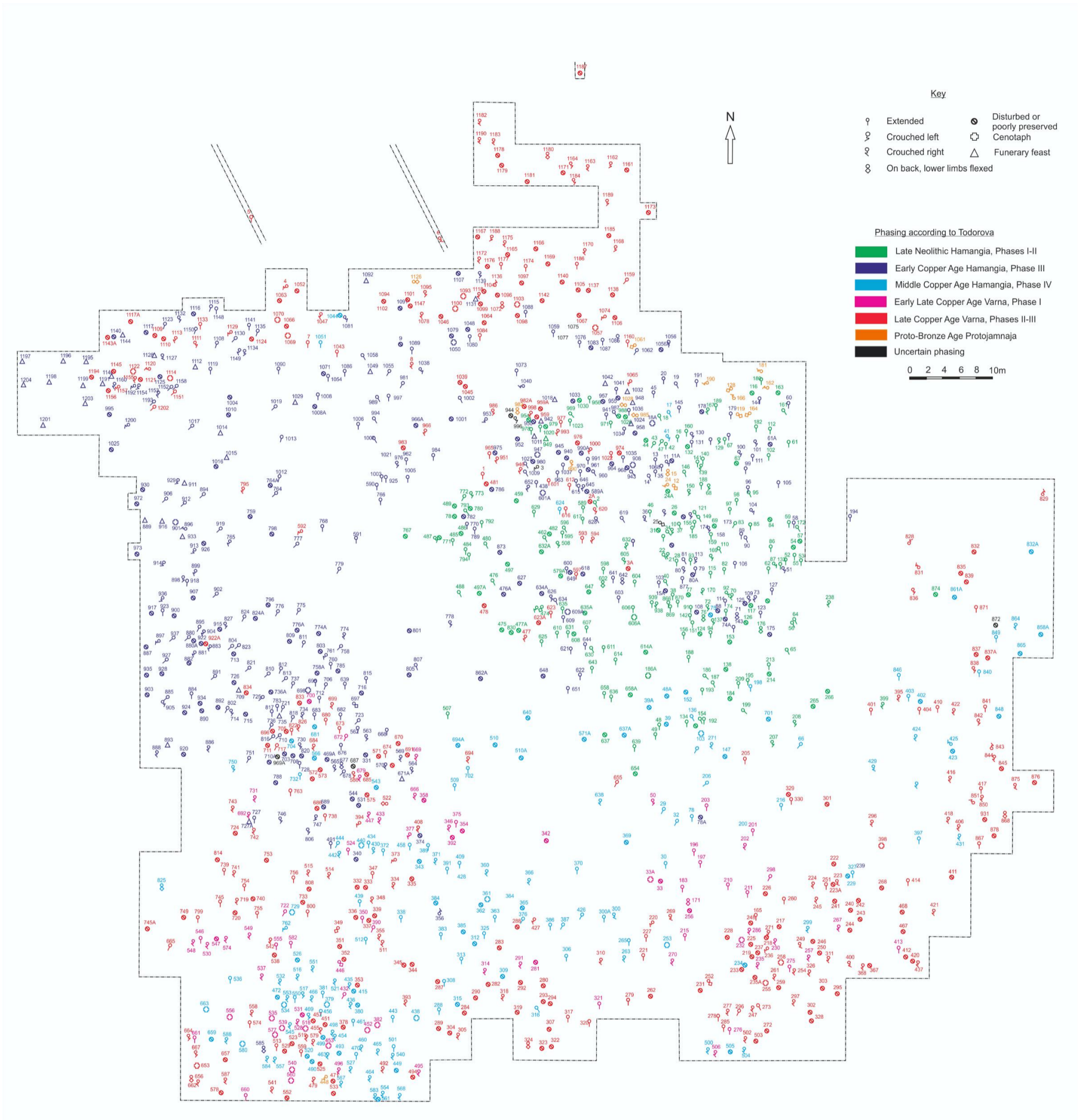


Plate 1: Plan of Durankulak cemetery (redrawn after Todorova 2002)