The seashore – beyond monumentality: the case of Pitted Ware coastal sites in southern Sweden

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"Landscapes, Histories and Societies in the Northern European Neolithic" presents papers from two sessions of the conference of the European Association of Archaeologists held in 2011 in Oslo. The papers of this volume describe new research on the relationships between landscape, history and society in the northern European Neolithic. They focus on the Funnel Beaker complex and related Neolithic contexts, with case studies extending from Poland and the Czech Republic to Norway and Scotland. Several case studies examine the significance of enclosures – from early causewayed enclosures in the north associated with the very beginnings of the Neolithic to the significance of palisaded enclosures constructed towards the end of the Neolithic in Scotland and Sweden. The volume also includes new studies on the origins, significance and interpretation of Neolithic burial and megalithic architecture found in a range of landscapes across northern Europe.

Importantly, the volume also outlines the significance of other kinds of places that were not monumentalised in the same ways, such as fens, the seashore and the wider environment, in the construction of Neolithic worldview. Finally, it concludes with a series of articles that consider the significance of particular forms of material culture – axes, grinding stones, pottery and food – in social reproduction in the Neolithic of northern Europe. Overall, the volume presents an important body of new data and international perspectives concerning Neolithic societies, histories and landscapes in northern Europe.
Landscapes, Histories and Societies in the Northern European Neolithic
Frühe Monumentalität
und soziale Differenzierung

Band 4

Herausgegeben von Johannes Müller

In Kommission bei Dr. Rudolf Habelt GmbH, Bonn
2014
Landscapes, Histories and Societies in the Northern European Neolithic

Herausgegeben von Martin Furholt
Martin Hinz
Doris Mischka
Gordon Noble
Deborah Olausson

in Kommission bei Dr. Rudolf Habelt GmbH, Bonn
2014
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Within the scope of meetings of archaeologists interested in megaliths and societies at the Oslo European Conference of 2011, a joint publication of contributions was planned as a sign of cooperative work on monuments and societies in northern and Central Europe. Consequently, the papers of three different sections of the Oslo Conference are published here through the collaboration efforts of the editors.

While providing a first impression by offering a mosaic of very valid contents, this book might also be handled as a kind of small handbook on the state of research concerning new questions on material culture, megaliths and societies within the indicated spatial frame. The contributions deal with topics which extend from Mesolithic developments and adaptations of innovations associated with social and ritual behavior that transpired in the realm of the 4th millennium BCE to changes observable during the Younger Neolithic, when the main ideological transformations of material culture, monuments and environments – as media of communication in non-literate societies – had shifted once again to a different mode of reception.

As the editor of this series, it is my pleasure to thank all the editors of this book in succeeding to unite the contributions to such an admirable volume. It also demonstrates the strength of networks, which, triggered by ritual activities, did not only exist about 5000 years ago but also those that are currently triggered by research activities. Both, the editors and the further Kiel team, including Eileen Küçükkaraca, Ines Reese and Karin Winter, are to be thanked for scientific and technical editing.

Kiel, July, 4th, 2014

Johannes Müller
During the Neolithic period of northern Europe, monuments and artefacts of many new forms signalize a range of innovative practices, forms of social organisation, and perceptions of place and landscape. Although not regionally and temporally uniform or coherently distributed, many of the phenomena under study can be found in the British Isles, in Scandinavia, northern Germany or Poland, thus in regions today showing very different traditions of research. The histories told by archaeologists in these regions are diverse, and the interpretations of these modelled societies can appear incompatible at times, yet in the framework of a European research community, the dialogue between regionally different schools has intensified during the last few years.

This publication presents papers from two sessions of the conference of the European Association of Archaeologists (EAA) held in Oslo in September 2011. Gordon Noble, University of Aberdeen, United Kingdom and Deborah Olausson, Department of Archaeology and Ancient History, Lund University, Sweden coordinated a session called “A new sense of place: Landscape and monuments in the northern European Neolithic” on September 15th. Martin Furholt, Martin Hinz and Doris Mischka, all Institute of Pre- and Protohistory Kiel University, Germany and members of the Priority Program of the German Research Foundation “SPP 1400 Early monumentality and social differentiation” together with Marzena Szmyt, Instytut Wschodni of the University Adama Mickiewicza in Poznań, Poland, organised the session “The Funnel Beaker complex: Multiple landscapes, histories and societies” two days later.

During the conference we noted that participants in the two sessions were nearly identical and the aims of the sessions closely related. Clearly the talks addressed the same audience and the sessions addressed similar research topics. Thus, during the conference, the session organizers decided to join the contributions into a single publication.

Johannes Müller from Kiel University kindly supported the present volume by accepting it for the new monograph series of the Priority Program of the German Research Foundation „SPP 1400 Early monumentality and social differentiation“. The editing work was coordinated in Kiel and carried out in two groups according to the sessions. Doris Mischka contributed significantly to the editing and realization of the project.

The volume contains contributions from eight countries: Czech Republic, Denmark, Finland, Germany, Norway, Poland, Scotland and Sweden. Ninety-one single sites, located in an area extending from Finland to Poland and across the continent to Scotland (Fig. 1) are discussed.

The volume begins with an introduction followed by four sections organised according to the nature of the source material. In the introduction, Martin Furholt provides a broad discussion presenting one of the focuses of the volume — the “Funnel Beaker complex” — as a supra-regional term referring to specific Neolithic societies, thus separating them from other northern European societies. Furholt explores and at times questions the validity of this term in Neolithic studies.

In the first section of the volume the focus is centered on “The Significance of Enclosure”, in which monumental enclosures of the Neolithic period are discussed along with the interpretive challenges that the phenomenon of enclosure presents. These enclosures date from the earliest to the final stages of the Neolithic period. In the first chapter, Håkon Glørstad and Lars Sundström present an Early Neolithic enclosure site from Hamremoen in southern Norway. The monument represents some of the earliest traces of the Neolithic in this region, dated to the time span from 3900–3600 cal BC, and the authors interpret the enclosures as an indication of the influence of the Funnel Beaker complex on late hunter gatherers in southern Norway. The focus then shifts to the coastal area of
Fig. 1. Sites focused on in more detail within the different articles. In brackets author's names.
Ostrobothnia in Finland, to the so-called ‘giant’s churches’ in this region. The research history and the current results of surveys and excavations of these monuments, which are dated to the Middle and Late Neolithic (3600–2000 cal BC), are described by Jari Okkonen. Among the so-called giant’s church sites, stone enclosures and cairns as well as house pits and dwelling sites can be found. These sites are interpreted as playing an important role in the rise of complex societies in the Middle and Late Neolithic. Turning to southern Scandinavia, more precisely southern Sweden, Kristian Brink reflects on the function of palisaded enclosures dated to the first half of the third millennium BC, social change, and the nature of the activities taking place within these monuments. Among the activities he mentions are fish drying, the use of new types of pottery and increased flint axe production. The fourth article in this section turns the focus more to the west, to the large palisade enclosures of Forteviot, Leadketty and others in lowland Scotland that share many similarities to the enclosures described by Brink. The authors, Gordon Noble and Kenneth Brophy, present the sites, dating to the early part of the third millennium BC, their regional context and discuss the incredible expenditure of labour that went into the creation, maintenance and destruction of these sites, the ritual activities conducted there and the possible significance of the activities for the societies once living there.

The second section of the volume relates to traditions of monumental burial sites constructed in the Neolithic of northern Europe. In the first chapter in this section, the evidence for distinctive traditions of megalithic burial on the island of Rügen are outlined. In the study, Anja Behrens presents the archaeological and archaeobotanical results from two sites labelled Burtevitz 1 and Burtevitz 2. Behrens demonstrates that the monument biographies are very complex with many additions and that changes have been made to the monuments in the Neolithic and the Early Bronze Age. She proposes that the monuments were utilized by small local communities cultivating local traditions visible in a special entrance construction technique but also influenced by distant communities, reflected in changes in the architectural details. On a broader scale, Georg Schafferer analyses the architecture of about 200 megalithic graves in Schleswig-Holstein and Mecklenburg-Vorpommern, northern Germany. He focuses on particular styles of architecture and their spatial distribution, with the aim of distinguishing local and regional building traditions. In a similar vein, Anne Brigitte Gebauer analyses a group of megalithic graves situated next to two Neolithic enclosures at Lønt in Denmark. In her article, Gebauer identifies differences in the building materials, architectonical details and the spatial connections between the monuments as expressions of social identity. The next article deals with the architectonical expressions of megalithic tombs. Here, Almut Schülke uses northwestern Zealand in Denmark as a key area when she compares the traditions of dolmen and passage graves with traditions of single interment. The primary aim in her study is to ascertain if there is a chronological sequence within the different traditions of interment.

The aim of Doris Mischka’s investigation in the following contribution is to identify the chronological relationship between dolmens and passage graves in northern Germany, using a series of AMS-dates related to the building and use of megalithic burials in Flintbek. Comparing with published dates from Scandinavian sites, she concludes that the primary building phase for dolmens falls between 3650/3600 cal BC and 3350 cal BC, with polygonal chambered types perhaps amongst the oldest monuments, while passage graves date mainly between 3300 and 3100/3000 cal BC. The region of Soester Börde in the Westphalian Basin in Germany forms the study region in the next article, by Kerstin Schierhold, who interprets the significance of gallery graves in the rise of early monumental. Schierhold examines her region in relation to Funnel Beaker Culture sites to the north and west, along with late Michelsberg sites with huge enclosures, during the period between 4100 and 3700 BC. Andrzej Pelisiak connects the architectural form of long barrows in Poland to the traditions of domestic architecture. He seeks characteristic features within settlements in the form of long barrows, investigating relations with landscape and interpreting the construction and positioning of the long barrows within the landscape as a ritual reflection of the domestic sphere. Finally, Johannes Müller, Hauke Dibbern, and Franziska Hage explore long-barrows in northern Central Europe and South Scandinavia. The architectural biography of such sites reveals the phenotypical expression of ritual and ideological changes. The authors outline two types of monuments: Type 1 shows the construction of a long mound as one architecture and a possible alteration from non-megalithic to megalithic grave architecture, whereas type 2 is described as several segmented mounds finally combined in one long mound.

In the third section – “Other kinds of places” – such as consumption locations, settlements, fens and the seashore, are examined. In the first chapter of this section, Marek Nowak provides an outline of the Funnel Beaker culture settlement history in the Upper Vistula River in southeast Poland. He interprets the Funnel Beaker complex as developing from the Lengyel-Polgár culture, which changed to a more hierarchical society during the beginning of the first half of the fourth millennium
BC. In his article, Lars Larsson also points out the importance of transformations, particularly in the environment, during the transition from hunting and gathering to farming. He posits that certain places were seen as links between this world and a metaphysical world. At such places, objects were transformed by fragmentation or burning, as occurred during the early, middle and late Middle Neolithic at causewayed enclosures and palisaded enclosure sites. Deposits in wetland sites are also interpreted as important transformative places. Martin Hinz presents a regional study of settlement and landscape use in the northern German Lauenburg area from the Late Mesolithic to Late Neolithic periods. He demonstrates the local nature of socio-environmental interaction, whose main transformations cut across supposedly established archaeological periods. Jan Turek focuses on Early Funnel Beaker longhouses. He compares the new discovery of more than ten longhouses from the excavation at Libenzic in Central Bohemia to other longhouse plans in Poland and Germany. In the following chapter, Åsa Berggren suggests that we pay greater attention to the special sensory experiences afforded by places like the Hindbygården fen and the Hindby mosse in the area of Malmö in Sweden, where depositions took place during the Neolithic. Marginal locations in the landscape are also the focus for Kristina Jennbert, who reflects on sites located at the seashore in Pitted Ware culture contexts. Her point of departure is Jonstorp in northwest Scania, where the people living on the coast were skilled in seafaring and using the coastal environment for subsistence. The development of these coastal sites took on different trajectories to those located inland.

The final section is comprised of articles on varied types of finds, their meanings in context and their special treatments or biographies. Susan Hydén opens this section with a study of an often disregarded find category: grinding and polishing stones. Her focus is on the finds from two Early Neolithic long barrows at Almhov in southern Sweden, where fragments of grinding and polishing stones were found at the facades of these monuments and along with burials. These stones were used, she suggests, both for polishing axes and were fragmented in order to fix social relations in time and place. Deborah Olausson then examines finds attributed to the Battle Axe culture (2800–2350 cal BC) at one dolmen and 20 passage graves from the Funnel Beaker period in Scania, southern Sweden. She concludes that the artefacts are not a result of burial practices at the megaliths, but rather represent ritual activities during which objects were deliberately broken or damaged at the tombs. Two articles then deal with pottery. First, Tine Schenck investigates the reasons for the introduction of pottery around 4000 BC in hunter-gatherer groups in Norway. The sites Slettabo, Vestgård 3 and Vestgård 6 are presented in detail. Using experiments, Schenck tests some possible functions of pots — storage, cooking and beer brewing. Her conclusions emphasise symbolic aspects within social networks, rather than simply practical functions. Agnieszka Przybył then focuses on the final stage of the Eastern Group of the Funnel Beaker complex on the Polish Lowlands and in Central Poland. In her study, she employs typological classifications using formalized descriptions and chronological ordering of the pottery finds. Przybył distinguishes the “Konary-Papros subgroup” as a direct successor of the tradition of the Eastern Group. Finally, Lars Larsson and Sven-Gunnar Broström examine a site called Stensborg, located on a former island south of Stockholm in Sweden. The site is notable for its surface finds of intentionally fragmented stone axes from the Early Neolithic Funnel Beaker period. During excavations at the site, a large amount of carbonized cereal was found. This was interpreted together with the other finds as remains of ritual activities similar to those seen in enclosures.

Most of the articles in the volume deal with the early or later phases of the North, East or Southeast Group of the Funnel Beaker complex (Brink, Behrens, Berggren, Furholt, Gebauer, Hinz, Hydén, Glerstad/Sundström, Larsson, Larsson/Broström, Mischka, Nowak, Pelisiak, Przybył, Schaffer, Schenck, Schülke, Turek). Two deal with later phenomena such as the Battle Axe culture (Olausson) or the Pitted Ware culture (Jennbert). Others focus on regions south of the Funnel Beaker North Group (Schierhold) or on the Neolithic communities of the west (Noble/Brophy) or on monumentality of hunter-gatherers in Finland (Okkonen). Overall, we hope the volume provides both a broad perspective on the landscapes, histories and societies of northern Europe as well as illuminating points of connection between the regionally diverse research traditions.

Note

The terminology regarding chronology and cultural groups differs widely, depending on the regional research history. Therefore, we decided to unify the terminology and to use the following names or abbreviations at least for the phases of the Funnel Beaker complex (FBC) in the north (Fig. 2):
Fig. 2. Chronology of the Neolithic in northern Europe. Abbreviations: LN = Late Neolithic; YN = Younger Neolithic; MN = Middle Neolithic; EN = Early Neolithic; BB = Bell Beakers; BC = Baden Culture; CW = Corded Ware; GA = Globular Amphorae; FBC = Funnel Beaker; ZC = Złota culture; grey shaded cell areas: Central Funnel Beaker groups.

Younger Neolithic – YN
Middle Neolithic V – MN V
Middle Neolithic IV – MN IV
Middle Neolithic III – MN III
Middle Neolithic II – MN II
Middle Neolithic I – MN I
Early Neolithic II – EN II
Early Neolithic I – EN I

In Schierhold’s paper, the Younger Neolithic is used according to the Neolithic Phases outlined by LÜNING 1996. It is partly contemporaneously to the northern Early Neolithic of the Funnel Beaker complex.

The terminology used for megalithic burial architecture is also very heterogenous. Here, we have retained the local terminologies, but we caution the reader to look carefully at the figures and ground plans when making comparisons of the grave types between regions. In Scandinavia, for example, it is often the form of the barrow — round or rectangular — which is used for the classification into round dolmen and long dolmen. In Germany the architecture of the chamber is used to differentiate between closed dolmen (Urdolmen), open dolmen (or extended or enlarged dolmen), grand dolmen (or big dolmen or large dolmen) and polygonal dolmen. The youngest grave type in all areas under discussion is the passage grave. These monuments are characterised by a passage entering the chamber, usually from the southeast, into one of the long sides instead of the narrow sides, as can be the case with dolmens.
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We would like to thank Johannes Müller for accepting the articles within the SPP series and for his technical support. We express our gratitude in particular to Karin Winter and Ines Reese for their layout work. We also wish to thank Eileen Küçükkaraca and Marianne Noble for English language editing. Ebbe Kocks Stiftelse contributed funding for some of the English revisions. Last, but not least, we would also like to thank all the contributors for their articles and their patience with us during the editing process. The conference in Oslo presented a rich stream of ideas and approaches regarding the relationships between the landscape, histories and societies of the northern European Neolithic. We hope that the readers of this book will also find the ideas stimulating and enjoyable.

References:

The seashore – beyond monumentality. 
The case of Pitted Ware coastal sites in southern Sweden

Kristina Jennbert

Abstract
What is the significance of a place at the seashore? What kind of a sense of place does a place by the seashore constitute in the absence of any kind of monumental structures? Today, it is obvious within the archaeological domain that archaeological material culture is not only functional, but also acts as a metaphor for people’s self-perception. In this article, my assumption is that the different archaeological cultural groups in southern Sweden during the Neolithic represent different social identities and lifestyles. As a result of this, both rival and syncretic cultural encounters existed in the past. Different cultural identities are dependent on scale, very local or regional in Scandinavia, as in other parts of Europe. Undoubtedly, processes of creolization occurred between groups of people and can perhaps be understood in terms of processes of domination and competition. The character of the archaeological material culture indicates a highly power-structured mentality in the Neolithic. In the case study outlined here, the location of the Pitted Ware sites at Jonstorp in the north-western part of Scania in southern Sweden far away from the monumental landscape further south in Scania is the starting point for a discussion of Neolithic coastal sites and seashores.

Introduction
The making of a place and a sense of place is socially constructed. People endow a place with meaning, and by using a place, spatial awareness increases, as the geographer Yi-Fu Tuan proposed nearly 40 years ago (Tuan 1977, 16). Geographers and anthropologists have since then worked with the conceptualization of place in terms of social identities, power struggles, contestations and politics (e.g. Bender 1993; Olwig 2001), as well as through the lens of the emergence of cultural landscapes (Cosgrove 1984). The sense of place is understood through both positivistic behavioural explanations and phenomenological approaches. Therefore, the concept of a “sense of place” includes a range of understandings and is methodologically hard to define (Kaltenborn 1998).
In this article, the concept of a “sense of place” is explored in terms of economic exploitation and social agency in the Neolithic maritime landscape of Kattegat and Skagerrak in the seascape of Sweden and Denmark. The social interaction with adjacent Neolithic monumental landscape in the western part of Scania in southern Sweden is likewise interpreted as an important element in the formation of the sense of place in north-western Scania (Fig. 1).

The article outlines the preliminary archaeological interpretation of the coastal Jonstorp Pitted Ware sites in the north-western part of Scania in southern Sweden. The sites do not have any form of built structures, and they were located on seashores. These sites will be a starting point in a Neolithic narrative about how the sense of place was formed in a space far away from the monumental landscape further south in Scania.

Archaeological classifications

In Scandinavian Neolithic research a debate has taken place over many decades (e.g. Becker 1954; Malmer 1962) about the archaeological classification of material related to the Funnel Beaker culture and the Pitted Ware culture respectively. Different interpretations have evolved about the relationship between the archaeological complexes. One school of thought is that the material culture in the Scandinavian Middle Neolithic, in the transition between MNA and MNB, all belonged to developments within the Funnel Beaker culture (Edenmo et al. 1997, 144; Iversen 2010). Another is that Pitted Ware was a cultural expression in its own right (Malmer 2002; Jennbert 2007).

Hypothetically, the Pitted Ware complex in southern Scandinavia signals quite another kind of materiality than the contemporary or slightly older Funnel Beaker complex. Although there are similarities in material expressions, my interpretation of the material culture and the setting of the Jonstorp sites leans towards a blended creolization of social identities of the southern Funnel Beaker complexes in combination with the Swedish eastern Pitted Ware complexes. I choose to classify the Jonstorp archaeological material as Pitted Ware; where processes of cultural encounter and complex social processes of creolization occurred.

Before beginning to develop my arguments about the maritime characteristics of the Pitted Ware cultures in southern Sweden, it is necessary to point out some theoretical and methodological issues. The archaeological challenge is to transform the material culture into narratives of past processes. If archaeological material culture not only reflects functionality but also acts as a metaphor for people's self-perception, it follows that a range of theories surrounding the role of materiality should inspire the exploration of "the sense of the landscape or place". Moreover, the location of Pitted Ware sites outside the monumental Neolithic landscape in Scania, southern Sweden, raises questions of diversity in the spatial use of maritime and terrestrial landscapes.

The sea

As the anthropologist John Mack writes, the sea is both a resource and a pathway. The sea not only provides food, it connects people and landscapes. In coastal regions, and in a sea of islands, the land is a limiting factor, not the water. The same approach is valid for heavily forested continental shores (Mack 2011, 76). For Neolithic archaeology, a comparative approach is essential for a wider exploration of the complex range of relationships between the sea, the islands, the seashores and the mainland during the Neolithic.

A coastal location is the main character of Pitted Ware sites in Scandinavia. Economic and ritual aspects of the use of places have been debated mainly since Anders Carlsson proposed ritual aspects of locations at the seashore (e.g. Carlsson 1998, 49; Akerlund 1996; Strinnholm 2001; Gill 2003; Stenbäck 2003; Larsson 2006; Pampmehl-Dufay 2006).

The formation of the Pitted Ware complex is closely connected to coastal areas in southern Scania as in eastern Middle Sweden. The locations of the Neolithic Pitted Ware sites in Scania have a special character. They are mostly located on the seashore, mainly on the north-eastern (Wyzomirska 1986) and north-western coasts of Scania (Lidén 1938; Malmer 1969; Jennbert 2007). Sites are also located in the central region of the landscape, along the shores of the great lake Ringsjön (Althin 1954, 82). The location of the Pitted Ware sites is associated with the coasts, and the shores of big lakes, while the Funnel Beaker sites are primarily situated on good arable soils.

A large number of Late Mesolithic Ertebølle and Middle Neolithic Pitted Ware sites are situated on the southern shores of Skålderviken in north-western Scania. This region in southern Sweden was a post-glacial island isolated from the
mainland by a wide strait between the present-day Höganas and Jonstorp. The shoreline displacement affected the landscape since the glaciation around 16,000 BP. During the Neolithic, the island continued to alter and around 5000 BP, the shore rose to roughly six metres above the present sea level (Fig. 2).

The archaeological sites of the Neolithic period are mainly registered by surface collection, and by a few excavations near Kullaberg. Sites of different ages very often share the same location, according to results from the restricted excavations and the survey collections that have taken place (Fig. 3; Lidén 1938; 1940; Althin 1954; Malmer 1969; 2002, 122; Jennbert 2007). The Jonstorp sites were located on a cape, most of them in a location sheltered from the north-west winds.

With the island location and with the main activities taking place on the beaches, the Jonstorp sites undoubtedly characterize a maritime economic system, but they also display connections to Funnel Beaker complex societies further south, including megalithic traditions. The sea opens up the potential for navigation, colonization, and trade. The sea should be understood as allowing movement and connections rather than a barrier for dividing social space.

Fig. 2. Neolithic sites on the post-glacial island (illustration by M. Wihlborg 2013; graphical image by K. Winter).
These views on the significance of the maritime non-monumental landscape of the Pitted Ware culture are not in themselves innovative. Most of the Pitted Ware sites are located along the coasts. It is, however, striking that in Neolithic Scania the exploitation of the landscape by the Pitted Ware complex encapsulates a shift towards the reuse of sites at the seashore during the late Middle Neolithic, a general practice also during Late Mesolithic Ertebølle period (Jennbert 2011). Why the seashore, and what did people do at these locations? What kind of “sense of place” do they represent?

There is, however, a great complexity in interpreting places at the seashore without any form of built structures. The archaeological challenge is to understand relations between material culture and economic systems in relation to the encounter of different groups of people. The earlier explanations of the Neolithic archaeological groups as closed groups of people do not match current archaeological understanding of agency and structure, and a phenomenological landscape approach. People cannot have lived entirely at the sea or the seashore, but must have had access to what happened on land, its products and other people. It does not look like Pitted Ware social groups colonized unfamiliar landscapes, as there are repetitive patterns in the use of the seashore, as represented by the character of the archaeological material culture. The Pitted Ware places at Jonstorp in southern Sweden, however, prompt a Neolithic narrative about how a “sense of place” was formed.

Fig. 3. The Jonstorp sites (Lidén 1940, 9; graphical image by K. Winter).
Economic exploitation

From the beginning of archaeological research, the distinction between archaeological groups has traditionally been explained by economic factors; lifestyles defined either by an agrarian or a hunting-gathering economy. The polarity between different economies goes back generations of research to the earliest Scandinavian archaeologists (e.g. Nilsson 1838–1843; Becker 1954; Malmer 1962). It is, however, too simplistic to argue that the two material complexes (Funnel Beaker and Pitted Ware) represent different subsistence systems. Intense anthropological and sociological research on economic systems must also consider social agency and structure (e.g. Sahlins 1972; Godelier 1986; 2012; Pryor 2005).

At the Jonstorp sites the archaeological materials give some hints as to the economic exploitation of the landscape and seascape. Hearths and pits were found in cultural layers on the sites, as well as a large amount of flint axes, flint artefacts and pottery. Cultivation of cereals was indicated due to imprints on pottery of cereal grains: wheat and emmer (Liden 1940, 189ff.; Hjelmqvist 1979). Imprints on pottery of wild plants and fruits give an impression of a fertile and diverse terrestrial space.

The preservation of organic material at these sites tends to be poor. Bones are preserved, though, and the analysis shows that bones of seals dominate, but cattle, pig, sheep/goat and fish are also documented (Jennbert 2007). Clearly, fishing and seal hunting were important. However, residue analysis on pottery indicates use for plants and terrestrial animals, but no fish or marine lipids (Isaksson 2000). Perhaps the preparation and storing of fish and seal was within containers other than pots? Or, do we see a greater rate of degradation of marine unsaturated fatty acids in carbonized crusts? At some spots in the cultural layer Phosphorus (P) levels of up to 350 P were calculated, indicating organic waste, including manure. The archaeological soils have anthropogenic indicators from plant and animal tissues, bones, urine, faeces and ashes. On the beaches there was occupation waste and midden material.

The Jonstorp sites give us some clues about economy, however, a restrictive emphasis on subsistence strategies does not consider all aspects of the economic system on the seashores around Neolithic Jonstorp. Economic exploitation incorporates both agency and structure, and these factors must guide our interpretations of the sites. Did people visit the sites in order to get supplies for growing terrestrial plants, or just to slaughter the catch of seals? Or, for social factors?

Social agency

At the sites there is some information that can be useful to get an understanding of seashore activities. The archaeological material culture reflects not only functional aspects of life such as the use of pottery, flint and stone tools, but the reuse of flint and the ornamentation on pottery are also clear indications of aspects of people’s mental and cosmological world. The Pitted Ware vessels (Fig. 4), and clay discs (Fig. 5) have a thematic variation in dimension and shape connected to deep traditions of craft (Liden 1938; Malmer 1969; Davidsen 1974). Ornamentation has local characteristics as well as certain similarities with Late Funnel Beaker pottery (Larsson 1982) and Pitted Ware further to the east (Bagge/Kjellmark 1939, 108ff.). Some sherds also indicate connections to Globular Amphora cultures to the south of Scandinavia. In the repetitive and recurrent design motifs on the Pitted Ware pottery, a strong lineage and craft tradition is evident with connections along the coast of Sweden and beyond. The design motifs as markers of social identity could also be an expression of cultural memory and tradition.

Work axes in the Pitted Ware are characterized by the same set of flint axes as in the Funnel Beaker and the Battle Axe complexes (Carlie 1986; Malmer 2002, 81).

Fig 4. GK pottery, rim diameter 29 cm (drawing by A. Jeppsson 1999, National Board of Antiquities).
However, the reuse of polished flint axes is notable at the Jonstorp sites M 2 and M 3. The reuse of polished flint axes for other flint tools (Fig. 6; Leffler 2013) enhances the possibilities of tool use in an area with no local flint access. The flint axe was certainly a desirable raw material, that offered excellent material for other flint implements: for example, tanged arrowheads, whose function could have been either as a tool for catching seal, or a weapon against other people.

The flint artefacts and pottery are found on the former seashores. The material reflects activities on the beaches. A large amount of pottery was used on the shores, along with flint knapping, slaughtering of seals and land animals, and cooking of plants and terrestrial animals.

Turning to possible interwoven metaphors in material culture, the reuse of flint axes can be interpreted as a deliberate killing of the flint axe; the flint transformed into another tool. In the light of other archaeological findings, it can be assumed that the Neolithic was not a particularly idyllic or peaceful time. Presumably, both rival and syncretic cultural encounters existed during the Scandinavian Neolithic period (Iversen 2010). According to the archaeological material culture and the different locality of sites, different lifestyles seem to characterize the use of local and regional landscapes in Scania, as in other parts of Europe. Surely, social identities were at least partly characterized by processes of domination and competition.

Human skeletal remains in Neolithic Europe show evidence for interpersonal violence (Shul-ting/Fibiger 2012). In Pitted Ware burials on the island of Gotland in the Baltic Sea, cranial trauma was identified in 11 % of 109 analysed individuals. Most of the traumas were healed, only one female cranium shows unhealed trauma. Suggested tools for violence involve blows to the head from axes or clubs (Ahlström/Molnar 2012).

Antler clubs in a few Pitted Ware burials and antler clubs and battle axes in Battle Axe burials in Scania might indicate such violence (Forssander 1933, 222; Malmer 1962, 318). In the Bedinge burial 53, the antler club was found in association with the head of the buried person, who had been killed by the weapon (Becker 1954; Malmer 1962, 318). In the Tygelsjö burial, a perforated cranium, probably caused by an antler club found at the head likewise indicates violence in the Scanian Middle Neolithic (Nilsson 1838-1843, 18). There is other evidence of burials of deliberately killed people in the Battle Axe period and in the Late Neolithic (Brink 2009, 175, 180). A few Danish Neolithic individuals found deposited in wetlands also show violent ends (Bennike et al. 1986).

Fig. 5. A selection of clay discs (scale 1:2; drawings by E. Rosengren 2012, LUHM).

Other lines of evidence for conflict are the archaeological artefacts themselves. The antler clubs have few use-wear indications so they are not interpreted as farming tools but as weapons. They are classified as belonging to both Pitted Ware (Becker 1954) and Battle Axe cultures (Malmer 1962, 317). Battle axes expressed violence in concrete ways, even if all battle axes need not have been used as weapons (Edenmo 2008, 18ff.). By the Early Neolithic, multi-angular axes appear. In the archaeological sources, weapons are the most ordinary tool during the Neolithic and onwards. At a few Jonstorp sites, stone clubs and stone axes are found as well (Liden 1940, 132ff.).

The seashores, the beaches, become social and working spaces that point to interaction between the maritime and the terrestrial landscape. The beach is an ambiguous place, an in-between place. Those who arrive from the sea by accident or looking for supplies can be seen as liminal actors in the social landscape (Mack 2011, 165). The seashores give a “sense of place” when people arrive and leave, during work and leisure time. It seems that the seashores around the cape in Jonstorp for generations had been loaded with cultural capital. The archaeological filter, however, does not allow us to come closer to the actual people and identify all aspects of past lives.
The Neolithic is a period of major transformation of the landscape. Beginning in the Mesolithic, economic systems changed, complex societies developed, and the use of the landscape altered. The multiple transformations of societies and landscapes evoke questions about methodological and theoretical standpoints in interpreting different kinds of places in a landscape, and about what kind of classifying principles about the archaeological remains we as archaeologists choose to use.

On a landscape scale, many Neolithic places became characterized by constructions of elaborate complexes of monuments with megaliths and enclosures in Europe (e.g. MüLLER 2011), and in Scania (LARSSON 1982; BRINK 2009; ANDERSSON 2004). The spatial use of the landscape by, for example, fortifications, enclosures, and settlement sites in Scania is connected to river valleys inland from the coastal regions (STRÖMBERG 1986). The spatial use of the landscape prompts the idea that during the Neolithic, agglomerations of populations occurred. When the Pitted Ware on a larger scale is divided into groups (STRINNHOLM 2001, 114), like the division into several regional groups of the Funnel Beaker culture (LARSSON/OLSSON 1997), authors are implicitly ascribing notions of social identity to these divisions. The archaeological research on warrior ideals during the Late Neolithic and the Bronze Age shows the use of clubs, daggers of bone and antlers, and arrowheads was an important element of social identity. The emerging warrior identities in burials (e.g. SARAUW 2007) show the presence of war and violence during the Neolithic.

The archaeological material on the Pitted Ware Jonstorp sites on the north-west coast of Scania reflect a hybridization/creolization of Neolithic social groups, as new elements from outside were incorporated into current traditions. Their location on seashores indicates a multilateral functionality of economic exploration and social agency. The seashores were certainly a kind of node in pathways over seas, and with waterways to the inner regions of the landscape. The differentiated use of the Scanian landscape during the Neolithic prompts questions about territoriality and competition surrounding the use and ownership of land. The hypothesis about the

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**Fig. 6. Polished flint debris (scale 2:3; photo by J. Leffler 2011).**
decrease in population during the end of the Funnel Beaker period allows for a landscape perspective connected to emerging social dynamics.

One other hypothesis is that a denser population was settled in the megalithic area in the western Scanian landscape, and that the post-glacial island further north was an area not as densely populated. Access to the island for people with a Pitted Ware social identity in the Late MN period formed a creolized social identity located on the seashore. The landscape ecology, with the different ecological niches, allowed for all kinds of economic routines, including farming, fishing, herding, hunting and the use of resources such as flint. Social conventions would have dictated how access to these lifestyles and resources was organized.

Perspectives on the spatial use of maritime and terrestrial landscapes form the archaeological narrative of the Neolithic. My assumption is that the different archaeological cultural groups during the Neolithic represent creolized social identities involved in specific spatial routines and traditions. So far, my hypothesis is that the landscape ecological mosaic and the social agreements of the access were negotiable. In the late Middle Neolithic, these processes were further influenced by competition between different social groupings; the Funnel Beaker complex and the Pitted Ware complex are expressions of competing lifestyles where violence was a part of the struggle between different understandings of the world.

The seashore was used as a continuation of the traditional use of particular ecological niches as in eastern Middle Sweden. As such, the seashore developed a kind of sense of place, that allowed for maritime connectivity. The sites on the post-glacial island were not isolated and separated from the mainland. The archaeological material does not exhibit remoteness, rather connectivity, integration and contact with the mainland. The sites were made in relation to the unrestricted space of the seashore. Several sites were located against the inner bay as people placed themselves in relation to a more limited horizon. Other sites are directed with views straight out to sea with the whole horizon evident. Most of the sites are spatially not very large, as if they were defined by bounded wooded areas, about which we today have limited possibilities to find out more. The people were certainly aware of the locations in relation to water, wind and safety.

Summing up, the Scanian Pitted Ware constellations seem to have negotiated identities in relation to social interactions with the sea, as well as with external influences such as the Funnel Beaker societies, a kind of creolization that dictated the material culture use on the island.

Conclusions

The seashore and wetland areas can be understood as ecological niches on the margins. But, the agency of the fish and the seals in the seas, like the wild and domesticated land animals on land, is as crucial for activities and identities along the seashore, as are the potential pathways out to the maritime landscape.

The Pitted Ware complex as expressed at the seashore around coastal areas in Scandinavia was defined by different economic systems. With the maritime location, the Pitted Ware culture expresses knowledge of seafaring and skilled handicraft. The people were also in close interaction with people in the adjacent monumental landscape, whether peaceful or violent.

The narratives of social and political transformation during the Neolithic period contrast complex transformations in areas with and without monument building. Settlement and burial evident in these landscapes highlight differences not only in Scania, but also across Europe and through time. The role of these landscapes articulates a new sense of place when considering the different utilization of the landscape, and different activities in areas outside the built monumental landscape. The seashores were truly used, modified and, like the monumental landscapes, augmented through time. The seashores heavily influenced a different sense of place in the Neolithic southern Scandinavian landscape.

References


The case of Pitted Ware coastal sites in southern Sweden