

On the Outskirts of the European Bell Beaker Phenomenon – the Danish Case

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Abstract

This article explores the Danish Bell Beaker phenomenon by focusing on the meaning of this distinctive pottery and seeking answers to the following questions: Does the pottery reflect social identities with respect to gender, rank, religion and so forth, and is the symbolic meaning of beakers the same all over their wide area of distribution? Furthermore, why are Bell Beakers adopted in some regions but rejected in others? The starting point for this article is a detailed analysis of a comprehensive selection of potsherds comprising not only Bell Beakers, but also different types of coarse ware found at Bejsebakken, a settlement site in northern Jutland. The intra-site distribution of pottery may reflect learning patterns and, consequently, matrimonial traditions. This has wider implications for our understanding of the social organisation of Late Neolithic society. Finally, this article discusses the directions of influence, rejecting a single source of origin, but arguing that the material culture of the Danish Bell Beaker phenomenon was shaped by many-sided influences.

Zusammenfassung

In dem Artikel wird das Glockenbecher-Phänomen in Dänemark untersucht. Bei der Frage nach Bedeutungsinhalten verschiedener Keramiken stehen folgende Aspekte im Vordergrund: Werden in unterschiedlichen Keramiken soziale Identitäten (z. B. Geschlecht, Rang, Religion) erkennbar? Sind die symbolischen Bedeutungsinhalte der Becher in ihrem gesamten Verbreitungsgebiet identisch? Werden Glockenbecher in manchen Regionen akzeptiert, in anderen nicht?

Ausgangspunkt der Studie ist eine repräsentative Stichprobe von Keramik aus Bejsebakken, einer Glockenbecher-Siedlung in Nordjütland. Die räumliche Verteilung der Keramik innerhalb der Siedlung dürfte Lernmuster und, als Konsequenz, matrimoniale Traditionen widerspiegeln. Dies hat Konsequenzen für das Verständnis spätneolithischer Gesellschaften. Am Ende des Artikels werden Einflussrichtungen auf die dänischen Glockenbecher diskutiert: Der Autor sieht die dänischen Glockenbecher nicht als Resultat einer einzigen, sondern zahlreicher Einflussrichtungen.

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1. Introduction

Following a general European development, new traditions in material culture emerge in the central and northern parts of Jutland in the form of Bell Beaker-like pottery and bifacial flint daggers about 2350 BC (cf. Lomborg 1973; Vandkilde 2001; 2005). This change in material culture marks the end of the Single Grave Culture (SGC) and the beginning of the Late Neolithic (LN). These changes coincide with a general prosperity and innovation in material culture embedded within the Bell Beaker-phenomenon and the Early Bronze Age cultures of central Europe (cf. Shennan 1993, 154 ff.; Sherratt 1987, 84 ff.). In Jutland, besides the new and special pottery – the Bell Beakers – the influences from the continent resulted indirectly in new types of weapons in flint: bifacial flint daggers and pressure-flaked arrowheads (Sarauw 2007). Furthermore, both weaving and metallurgy gained a footing in domestic life and culture. The latter led to the first Danish production of copper flat axes (Vandkilde 1996, 177 ff.), whereas weaving is documented through several finds of loom weights on settlement sites (cf. Jensen 1972, 90; Rindel 1993; Sarauw 2006, 39). Also the dispersal of new customs within mortuary practises such as tiered graves, archery graves, and sometimes cremations indicate that also religious practices in some measure followed the networks of exchange or interaction, and that at least some people in Denmark and elsewhere were aware of what was going on in other areas. However, new customs were not blindly accepted and adopted. This is shown by the fact that most Bell Beaker equipment in central Europe and on the British Isles occurs in graves (cf. Clarke 1970, 4), whereas the Danish beakers are mostly found on settlement sites (cf. Boas 1993; Simonsen 1983; Møbjerg/Mikkelsen 2005; Nielsen 2004). Furthermore, the distribution of Bell Beakers is not to be seen as representing a homogenous coherent culture. On the contrary, Bell Beaker material culture appears with small displacements in time and usually as smaller bound beaker islands next to various types of local Late Neolithic or Early Bronze Age groupings in material culture (cf. Vandkilde 2005, 30).

The high degree of resemblance between Bell Beakers all over Europe, especially the curved profile and the ornamentation – whether found in a cave in Spain, in connection with henges in Britain, or in a sunken house in Denmark – naturally gives rise to more questions than answers. One might in particular ask what meanings¹ were attached to the special ornamentation on Bell Beakers and if the patterns made sense to people from other areas within the total distribution of the Bell Beaker phenomenon. Furthermore, did the beakers have the same symbolic value in the vast areas of distribution reflecting perhaps some kind of social identity? Or was the meaning of the pottery totally changed when adapted in other areas and adjusted to various local contexts? As the majority of thin section analyses document the Danish Bell Beaker pottery might never have left the household and apparently did not travel far. This raises the question what messages the beakers conferred? And for whom these messages were intended?

These questions and more will be further discussed in the next chapter of this paper, which discusses both ethnographic material and theory from social anthropology. Thus, without a theoretical approach, archaeology might relapse to concerning only descriptions of objects and archaeological 'cultures', instead of revealing some fundamental aspects of social practice. This would be a pity since we know from several ethnoarchaeological studies that the symbolic meaning of material culture is multiple and seldom straightforward (cf. Hodder 1986, 109 ff.; Miller 1985).

Criticism has been raised against the use of ethnographic parallels in archaeology because "... we can never use the present of one society simply to interpret the past of another" (Gosden 1999, 9 and others). However, ethnographic analogies provide us with indispensable models for interpreting material culture and translating the past (Costin 2000, 399 f.; Weedman 2006, 248). Furthermore, the resemblances in material culture, disposal, settlement pattern and so forth in societies regardless of temporal and spatial distances cannot simply be ignored. On the contrary, they suggest that some processes regarding occupation, social organisation, exchange, technological choices, gender and so on might have been the same or similar (cf. David/Kramer 2001; Hegmon 2000; Hodder 1978; Kramer 1985).

Bell Beaker material culture as connected to the display of social identity will provide the theoretical background of the subsequent contextual analysis of a selection of Danish Bell Beaker pottery. Inspiration is therefore sought in the work of scholars such as Barth, Jenkins, Hobsbawm and others. The pottery is the focus of the investigation because it constitutes the core of the Bell Beaker 'package'. Indeed, without this special kind of pottery and ornamentation it would be difficult to maintain a Bell Beaker concept.

The point of departure, though, is a comprehensive selection of pottery from a recently excavated key site, Bejsebakken, comprising 23 Late Neolithic houses and 17,950 potsherds. This strategy is chosen due to the general lack of knowledge about the early Late Neolithic Bell Beaker-like pottery in Denmark and the Late Neolithic context in which it emerges. Furthermore, this approach provides a large body of comparative material, as well as some interesting details concerning the internal distribution of ornaments within the site. This distribution might hypothetically be wholly or in part rooted in chronological differences. However, as argued below, it might primarily be associated with the social organisation of Late Neolithic settlements and their matrimonial practices. Accordingly, if we assume that most potters were female (cf. Rice 1991; Weedman 2006, 272 f.; Wright 1991, 214), one must ask if the learning patterns of, for

1 In this article the term 'meaning' refers in particular to the content of associated symbols and ideas (cf. Hodder 1986, 124), which, in the extreme, includes Bourdieu's (1977) social and cultural capital.

instance, mother/daughter or mother-in-law/daughter-in-law implied an uxori-local or virilocal pattern of residence (cf. Hallgren 2000, 188).

Furthermore, this article explores the directions of influence contributing to the Danish Bell Beaker phenomenon. Often such examinations are rooted in cultural-historical or processual approaches using either migration or other general models to explain changes or the dispersal of new trends in material culture. An example of the latter is 'the prestige model', where beakers and associated items are seen as defining an emerging elite (Shennan 1976; 1977). However, in the present work it is argued that no general model can account for the entire Bell Beaker phenomenon (cf. Clarke 1976, 461), and regarding the Jutish case that no exact place of origin existed. Instead the reasons for the adoption of Bell Beaker material culture should be searched for locally within indigenous Late Neolithic culture (cf. Besse 2004, 142). Moreover, the article discusses why certain types of material culture are adopted in certain areas, whereas other areas reject them (cf. Kristiansen/Larsson 2005, 16 ff.).

Finally, this article reassesses the Bell Beaker phenomenon of northern Jutland, focusing on why this material phenomenon was adopted here but not in the rest of South Scandinavia.

2. Bell Beaker Pottery. The display of social identities?

Despite the fact that beakers are just pots, and the possibility that their original meaning might have been strictly functional (Boast 1995, 69), in many studies they are at the heart of complex theoretical explanatory models (cf. Mizoguchi 1995; Thomas 1991; Thorpe/Richards 1984; Vander Linden 2004). Thus, scholars have ascribed huge importance to the beakers in social strategies as overt symbols of some kind of social identity, especially as the expression of social status (cf. Barrett 1994, 97 ff.; Boast 1998, 386; Shennan 1986). In this chapter, which addresses current theories of identity and material culture in addition to ethnographical analogies, my particular concern is to investigate the meaning of Bell Beaker-like decoration and pose a number of questions in this regard. Does it relate to some kind of social identity in the field of gender, rank, regional groups, ethnicity, religion etc. on a Jutlandic, or maybe even European, scale? Is it possible at all to talk about shared cultural identities for these geographical areas on the basis of a few types of artefacts and associated customs? Finally, did this special kind of pottery have the same symbolic value, and was it 'readable' in large parts of Europe at the end of the 3rd millennium BC?

Following the sociologist and anthropologist Richard Jenkins (1996, 4), social identity concerns the ways in which people distinguish themselves and others through their social relations with others on the basis of similarity and difference. He further states that "social identity is our understanding of who we are and of who other people are, and, reciprocally, other people's understanding of themselves and of others" (ibid. 5). One of Jenkins' key conclusions is that individual and collective social identities can be understood using the same model as the dialectical and simultaneous interplay between internal and external processes. The internal processes concern on-going self-definitions, while the external processes include the definitions of oneself offered by others (ibid. 20). In the construction of social identities it is not enough to assert an identity by sending some more or less controlled signals. This identity also has to be validated by the receiver even though one cannot be sure that the signals are received and interpreted as they were intended by the sender (ibid. 21–22).

One of the greatest weaknesses in Jenkins' theoretical framework seen from an archaeological point of view is that it does not encompass material culture as a potential medium for sending signals concerning social identity. That material culture actually holds such potential is shown by several scholars (cf. Bowser 2000; Gosselain 2000; Wiessner 1983). One of these is Sørensen (1997), who convincingly shows that material culture in the Bronze Age was actively used in displaying certain kinds of social identities. For example, in the Middle Bronze Age of southern Germany the female costume and its ornaments and dress fittings were used in a lot of different combinations displaying regionality, contacts, social categories and maybe social standing (ibid. 101). Efforts of varying intensity were made to express categorical differences, especially among women, and the construction of differences within rather than between groups. Apparently the principles of some of these categories were cross-cutting differences in wealth and shared by several 'cultural groups' (ibid. 110). Furthermore, Sørensen states that categorical identities, which are explorable through patterns in material culture, place people according to a social code of general relevance such as life-style or life-cycle (ibid. 95).

Sørensen's concept of 'categorical identities' is then to a certain degree comparable to the concept of 'collective identities' in the terminology of Jenkins (1996, 80 ff.), which concern the ways in which people are similar to each other and what they are believed to have in common. Thus, we find two different kinds of collective identity or two different ways of looking at social interaction. In the first, the collective is aware of its own existence and knows who and what comprises it. In the second, the members may be ignorant of the existence of the collective and the collective is constituted by observers (ibid. 82). However, in this archaeological context the observer is not other past people but archaeologists attempting to read what signals may be left over. This entails the danger of creating categories or collective identities that never actually existed. Most past social identities then become categorical because we can never tell precisely how people in prehistory perceived of and categorised themselves and others.

Returning to Sørensen (1997, 93), she also rightfully stresses that individuals have many overlapping identities and that most of these layers have been ignored in archaeological studies. A similar point of view is presented by Thomas Hylland Eriksen (2001, 272): "We may imagine the social identities of an actor as a series of Chinese boxes or concentric circles, which includes an increasing number of people as we move from the small to the large scale." According to Eriksen all persons are members of many different groups which partly overlap each other. These different identities or memberships of certain groups can be activated if necessary (ibid.; Lucy 2005, 101). The social context decides which group or fellowship is relevant. An example illustrating the complexity of segmentary social identities is given by Eriksen, who calls attention to the fact that a person's social identity could be described, for example, as African, Kenyan, Kikuyu or member of clan X (ibid.). The same person might also hold a number of other identities which could not be systematised in the same way – for example husband, father, warrior or humorous. To this might be added primary identities which encompass gender, humanness, selfhood and sometimes ethnicity and kinship (Jenkins 1996, 21). Such identities, which are formed early in life by socialisation are more robust to change later in life than other identities, which are all highly changeable.

We might then say that social identity is socially and culturally defined and expressed through action or everyday practice and ma-

terial culture (cf. Jones 1997, 120f.; Lucy 2005, 101; Wiessner 1983, 273; Wobst 1977). Material culture such as clothes, ornaments, pottery, burials and so on is part of showing who one is, or which group one belongs to. The cultural borders are established by creating contrasts in material culture, and it is only through contacts with other groups that different kinds of identity or ethnicity occur (Barth 1969). So, for a group to become aware of its own ethnicity or cultural identity there has to be some kind of contact between groups – something to share and/or be different about.

In his famous work from 1969, the "Introduction" in "Ethnic Groups and Boundaries", Fredrik Barth has indeed addressed some of these problems. He explored the different processes that create and maintain ethnic groups and in particular ethnic borders. Many of Barth's ideas about ethnicity may also concern social identity because these terms are closely inter-connected and therefore cannot be studied in isolation (Lucy 2005, 100). He also stressed that we cannot assume a simple relationship between ethnic units and cultural similarities and differences. The features taken into account are not the sum of 'objective' differences, but only those which the actors themselves regard as significant. Some cultural features are used by the actors as signals and emblems of difference, others are ignored. According to Barth, the cultural content of ethnic categorisation seems to be of two orders: overt signals or signs, i.e. the features that people look for or exhibit in order to show identity – for example, ways of dressing or types of houses – and basic value orientations. Especially signals of the first order are of interest to the archaeologist because this order may include many different items relating to material culture.

Using ethnographic studies from different parts of Africa, Ian Hodder (1982) has demonstrated that certain forms of material culture were actively used to express identity while others were not. His case studies moreover showed the complex nature of material culture and that material symbols play an active part in social strategies: "Individual artefact types may be used to emphasise or deny, to maintain or disrupt, ethnic distinctions or networks of information flow" (ibid. 85). He has further shown how some material items crossed tribal boundaries, while others respected them. In the central Barin-go case study, clear material culture distinctions were maintained in spite of vivid interaction across borders even though the opposite could have been expected. So the material distinction played an active role in between-group competition.

According to other ethnographic studies, the meaning of decoration on pottery might be multiple and associated with many topics. The decorations may not only have marked and maintained boundaries or acted as non-verbal communication displaying the identity of individuals or groups (cf. Hegmon 1992, 522 ff.; Kramer 1985, 83 ff.; Weedman 2006, 272 f.). Hence, according to Braithwaite (1982), ornamented pottery was used by women in Sudan as a means of symbolic and ritual protest against male domination. And decoration on pottery made by female potters in the Ecuadorian Amazon expresses political identity (Browser 2000, 241). Many more examples could be added, and it is no wonder that nobody has attempted to create a general explanatory model (cf. Kramer 1985, 88). However, an explanatory model focusing on the dispersal and correlation of technological style and fashioning and social identity in Africa might provide a basis for further discussion of the wide dispersal and associated meaning of Bell Beaker pottery (Gosselain 2000). Due to the salient stage of decoration techniques and their motifs, they are easily copied. As a consequence, they fluctuate over time and gain wide distribution in space through loose networks of interaction (ibid. 209). Furthermore, Gosselain finds that the technological style re-

flects superficial, situational, and temporary facets of identity, even though he does not preclude that it could have additional symbolic meaning or ideological importance to a particular group.

The same is not true for other categories of production (notably the *chaînes opératoires*) and use constituted within a specific social and historical context (Edmonds 1990; Lemonnier 1986; Lucy 2005, 102). Interestingly, looking at the dispersal of particular kinds of pot fashioning in Africa, Gosselain (2000, 210) demonstrates that their diffusion coincides with language divisions, castes and gender reflecting social networks of kin and cultural affiliation. Along the same lines, Sam Lucy (2005, 101 ff.) stresses that the variety of communal identities is best studied through the uses of material culture in social interactions. Here, context of use and production are key factors in the articulation of social practices, which construct different types of communal identities that have to be continually generated through the shared ways of doing things (*ibid.*).

Returning to the Bell Beakers and some of the questions asked at the beginning of this chapter, they cannot have had the exact same symbolic value (cf. Besse 2001, 278) or have symbolised shared cultural identities across wide areas. The contexts including Bell Beakers are simply too different: in different geographical areas they are predominant at settlement sites, henges or in different types of burials including megalithic tombs, caves, flat grave cemeteries, barrows and so on (cf. Harrison 1980; Strahm 1995; Vander Linden 2004). On the Iberian Peninsula, Bell Beakers even occur in long-term and large fortified settlements (cf. Kunst 2001, 86 f.). Moreover, in most cases the beakers enter already existing local contexts and traditions and appear next to pottery of more local styles (Besse 2001, 277 ff.; Shennan 1977, 53; Strahm 2004, 122). Beakers are, for instance, seen in male graves of central Europe where battle axes and AOC beakers were replaced by different kinds of daggers, archery gear and bell-shaped decorated pottery (cf. Turek/Černý 2001, 604 ff.; Kruťová 2003, 213). However, even though they were used in the same type of burial as in the previous period, major changes in religious or ritual practice may have taken place in this region. This is illustrated by the fact that the orientation of the body changed (cf. Vander Linden 2003).

Looking at the wide distribution of beakers, it is clear that they were also adopted in very different climatic and geographical environments with different conditions of life and thereby often among culturally unaffiliated populations. Such populations were presumably not aware of the wide distribution of the beakers, and 'foreign' beakers might have looked familiar but also quite different due to the local mark. Hence, in my point of view the Bell Beaker phenomenon did not reflect groups of people sharing collective or ethnic identities, at most on a very regional level or between some neighbouring regions. Instead, and partly following Shennan and others, the phenomenon should be viewed as a gathering of specific objects and customs, varying somewhat from region to region, but with certain overall likenesses, depending on the local cultural context, and joined together by superior interaction networks, whose intensity might differ in time and space (Clarke 1976; Shennan 1977; see also Benz et al. 1998).

With regard to beakers and the display of gender, rank and religion, some overall tendencies may be observed, as burial traditions seem to be connected with gender and age. Especially the tradition depicting the males as having some kind of idealised warrior identity is conspicuous, whereas the female graves are more anonymous. However, these customs are not necessarily due to similarities in religion and belief at a very detailed level since they are also prevalent in beaker-free areas and in the Corded Ware culture (see above). For in-

stance, in Jutland the Bell Beakers and pottery of a more local stamp were only rarely used in burials and therefore for the most part they should be connected to domestic activities. However, this does not exclude the possibility that the pottery might have held a special status and was used in particular on special occasions like feasts and banquets. In this region idealised identities focused on the display of flint daggers and arrowheads. This implies that they were especially connected to the male sphere (Sarauw 2007). In Bohemia and Moravia the situation was somewhat different. Here, pottery, in the shape of Bell Beakers or 'common ware', occurs in most graves regardless of age or gender (Müller 2001, 592). In fact, Bell Beakers proper are more often present in male graves, whereas female graves frequently have more pots than male graves (Havel 1978; Shennan 1977, 53; Turek/Černý 2001, 606). In this region, Bell Beakers may very well have held a particular symbolic meaning as compared to the 'common ware'.

The British Isles, in turn, had other traditions. Here beakers occur in most graves (Clarke 1970, 4), both in quite ordinary ones and in graves of supreme wealth such as Amesbury in Wiltshire (Fitzpatrick 2002; 2003). In such graves, however, not only the quality of the beakers but also their quantity seems to be a parameter indicating wealth and that the deceased might have held a special status in society. Nonetheless, it is difficult to see the beakers alone as signalling prestige and wealth since they occur in most contemporary graves (Brodie 1997, 300; Salanova 2001, 99; Shennan 1977, 56); rather, they relate to traditions or norms of behaviour in a funeral context. Boast (1995, 72 ff.) has demonstrated that in general beakers in British burials were of a poorer quality with regard to fabric than the beakers found at settlement sites. Furthermore, often the beakers found in graves had very complex designs and their surface treatment was good, indicating that some beakers were especially made for the burial. Based on the investigation of a sample of Wessex beakers from graves, Mizoguchi (1995, 184) suggests that they represent different age-class groups reflecting a basic structuring principle in various spheres of life in society. Also the sizes of British beakers seem to be associated with gender, since the males received the largest ones (Case 1995, 60).

Despite the fact that beakers occur in different types of graves in various regions, beakers were not necessarily part of the same ceremonial actions (Barrett 1994, 91). In some areas the deceased and the grave goods may have been put on display for social reasons and feasting might have been practiced (Barrett 1990, 186; Vander Linden 2001, 47), whereas in other areas other customs might have been normal. The use of beakers in graves must be connected with a cultural continuation of traditions and belief, and they might have been viewed as necessities on the journey to the after-world. However, the grave goods might also be items of high symbolic value depicting the deceased, relatives, and the surrounding society in a way that was obvious to the participant. The use of beakers in graves may, then, in combination with other material culture and people, be part of the creation of collective or communal identities but still in a relatively superficial and passive way.

The same signals may be provided by beakers used on settlement sites. Such beakers were probably not intended for the display of ethnicity or the like, for which other and more distinct types of material culture such as clothes or hairstyle are much more obvious choices (cf. Friedman 1994, 29; Wiessner 1983, 259). In a cross-cultural comparison, Jones and Hegmon found a connection between material visibility, the marking of social distance, and the particular kind of information transmitted stylistically (Hegmon 1992, 521). Highly visible material often transmitted messages regarding group or eth-

nic boundaries, whereas less visible materials intended for private domains often transmitted messages about ritual or belief systems (ibid.).

In this perspective, Bell Beakers may be interpreted both as items used in everyday life and as socially visible vessels used in connection with banquets, feasting, celebrations or visiting travellers (Vencl 1994, 319). The fact that most beakers probably were used as drinking vessels may not come as a surprise due to their size and shape. Furthermore, even though the consumption of alcohol is not properly documented in connection with beakers (Brodie 1997, 298f.; Case 1995, 60; Sherratt 1987, 96; Vander Linden 2001, 47) such a use is to be expected and documented by future investigations using lipid residue or other analysis (cf. Copley et al. 2005; Craig et al. 2003; Tite 1999, 209ff.). Besides, already from the beginning of the SGC, beakers are thought to have contained beer, as made known by a recently examined Danish case (Klassen 2005 a, 39; 2005 b).

To conclude: this small-scale investigation into Bell Beakers and social identity suggests that the meaning of the beakers could not have been exactly the same in their different geographical areas of distribution. This is indicated by the different environmental and culturally determined contexts in which the beakers appear. Hence, even though beakers are mostly associated with burials, the contexts of the burials were not the same. Contextual similarities in some regions therefore reflect similarities on a very general level regarding gender, age, and maybe some kind of communal identity, though on a passive and unconscious level. Such similarities do not, however, justify a universal interpretation of beakers as presenting the same ideology or people from the same social sphere. Instead, the distribution of Bell Beaker pottery seems to mirror different groups of people sharing particular categories of material culture enabled by the networks of interaction that were created by a general flow of innovation and prosperity in society in the mid and late 3rd millennium BC. The character of these interaction networks could well have varied considerably from region to region and through time. Based upon the thoughts on social identities and Bell Beakers presented above, I will proceed to examine the Danish case in greater detail, trying to pinpoint and subsequently explain the Bell Beaker phenomenon on a regional level.

3. The Danish Bell Beakers – a case study

Before presenting the pottery from Bejsebakken and Denmark and further investigating the associated identities of local potters and the adoption of beakers into the Danish region, a short description of the settlement, the houses and so forth is necessary in order to understand the typical context in which the Danish Bell Beaker phenomenon materialized.²

3.1 Bejsebakken – close to the northern border of Bell Beakers?

The settlement site of Bejsebakken – one of the northernmost Danish sites – located on Hasseris Hill close to Aalborg and Limfjorden, was excavated in 1999 and 2000 due to town development (Fig. 1). Besides revealing a large settlement site from the Late Iron Age (Nielsen 2002; Ørsnes 1976), the area contained 23 Late Neolithic houses, culture layers, pits and so on. Prior to the excavation, the area was used for farming, which resulted in plough marks in various places in the mostly sandy subsoil.

2 A detailed description of all the houses, the settlement structure, and aspects concerning the manufacture of daggers is published elsewhere (Sarauw 2006; in press).

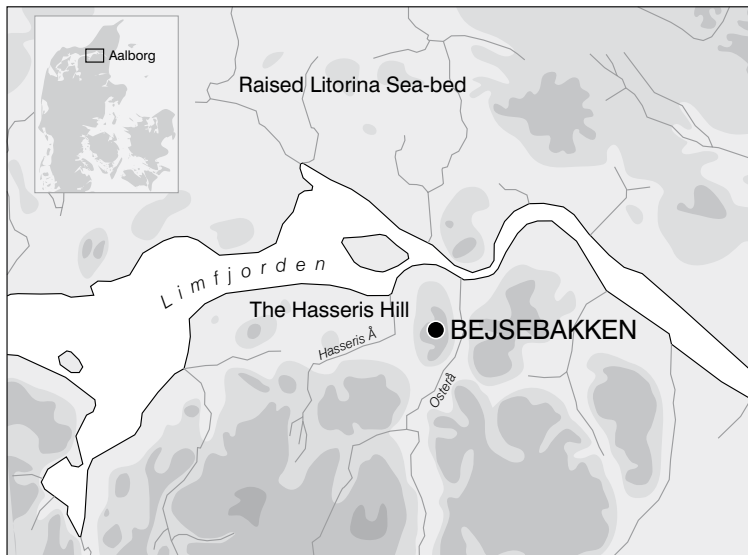


Fig. 1. The approximately 4.5 km long and 2.7 km wide limestone formation 'The Hasseris Hill' and the surrounding raised Littorina seabed. In the Late Neolithic the area was likely an island or a peninsula surrounded by wetland (after Sarauw 2006).

Abb. 1. Die 4,5 km lange und 2,7 km breite Kalksteinformation „The Hasseris Hill“ im Bereich des angehobenen Littorina Meeresgrundes. Im Spätneolithikum handelte es sich um eine Insel oder Halbinsel, umgeben von feuchten Niederungen.

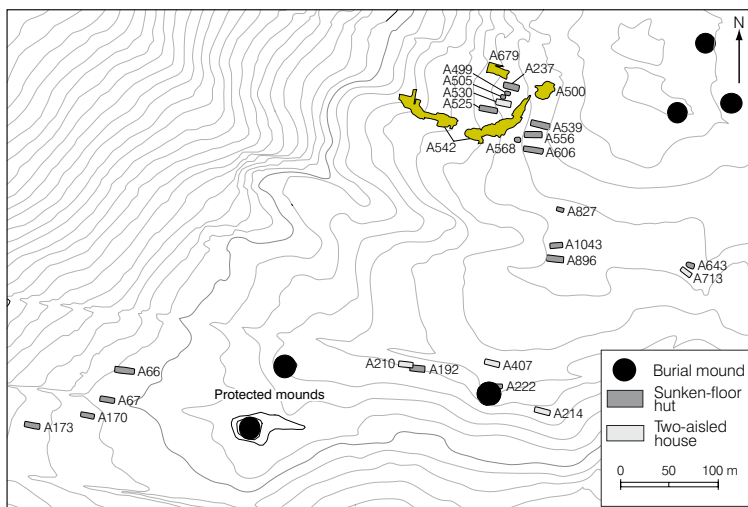


Fig. 2. Bejsebakken. Map showing the location of the Late Neolithic houses, culture layers and other contemporary structures included in the analysis. Most of the burial mounds are undated but presumably belong to the Early Bronze Age. The north-eastern area was up to 57 m above sea level (after Sarauw 2006).

Abb. 2. Bejsebakken. Spätneolithische Häuser, Kulturschichten und andere gleichzeitige Befunde, die in der Analyse berücksichtigt wurden. Die Mehrheit der Grabhügel ist undatiert, aber wahrscheinlich frühbronzezeitlich. Das nordöstliche Areal weist eine Höhe von NN + 57 m auf.

Within the c. 80,300 m² large area that was excavated, the Late Neolithic houses clustered within three or four areas (Fig. 2). Apart from two protected burial mounds and three mounds investigated prior to this excavation, the area yielded one more burial mound most likely dating to the Early Bronze Age.

The 23 houses, both with and without sunken floors, displayed very similar constructions and sizes. The only exceptions were four small sunken-floor houses, which probably functioned as some sort of shed or shack for working or for storing food or the like (Sarauw 2006, 61). In general, the two-aisled houses without sunken floors had very identical constructions, as illustrated by three almost similar houses situated in the south-eastern concentration of houses. Presumably, these houses were constructed by the same group of people. They had five postholes supporting the roof, measured about 5.75 x 14–15.5 m and lay almost E-W, turned slightly to the north-west. Furthermore, in two of the houses traces of a double post setting consisting of outer and inner wall posts were found to the north, whereas such a construction was not preserved in the third house (Fig. 3).

As regards the large huts with sunken floors, the sizes vary from 70–110 m², and the sunken part was sometimes dug almost one metre into the subsoil. The sunken part, typically situated at the eastern end of the house, should be seen as part of the habitation area or an area used for storage or work. Thus, phosphate analyses of two houses with sunken east ends at Bejsebakken document that

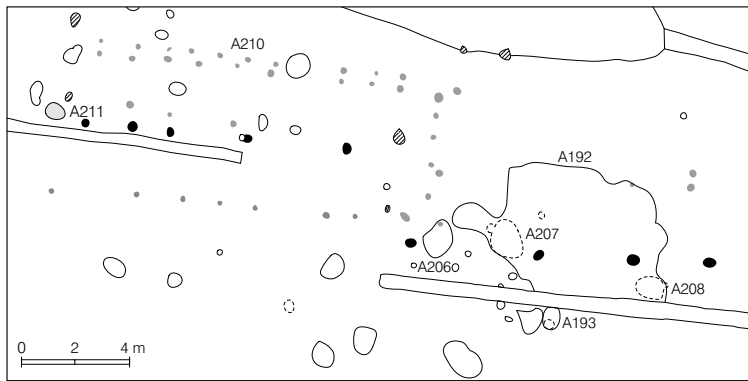


Fig. 3. Bejsebakken. Example of two-aisled houses with and without a sunken floor, both dated to the Early LN. This is the only place where two houses overlapped each other, but with no clear stratigraphic relation. In the two-aisled house without a sunken floor two post-holes contained four bifacial flint sickles of various types (after Sarauw 2006).

Abb. 3. Bejsebakken. Zwei Beispiele zweischiffiger Häuser mit und ohne sunken floor, die beide in das frühe Spätneolithikum datieren. Es handelt sich um den einzigen Fall, wo sich zwei Häuser überschneiden, allerdings ohne klare stratigraphische Beziehung. Im Haus ohne sunken floor enthielt die Füllung zweier Pfostenlöcher vier bifaziale Flintsicheln unterschiedlichen Typs.

the sunken floor was not used as stables (Sarauw 2006, 56 ff.).³ Furthermore, this interpretation relies on the fact that fireplaces, when present, are often situated in the sunken part or where the sunken part meets the non-sunken part (ibid.). In addition, the presence of a number of small depressions located at the bottom of some sunken floors indicates that special activities sometimes took place here (cf. Asingh 1987, 146 and footnote 21; Sarauw 2006, 52).

In a Danish context similar houses are particularly attributed to the Late Neolithic Bell Beaker milieu of central and northern Jutland even though comparable constructions are also known from the late Single Grave Culture (Boas 1993; Hvass 1977) as well as from the Early Bronze Age (cf. Nielsen 1997). In all probability this type of construction was favoured in certain periods in order to save timber and perhaps because it was easier to keep cold and drafts out of the building (see also Zimmerman 1992, 192 ff.).

As indicated above, the sunken parts of the houses contained very rich find materials, which, besides the pottery, included charcoal, fire-cracked stones, and thousands of flint flakes and tools, among them several daggers of type I (Sarauw, in press). No bones have been preserved.

The duration of the habitation will be further discussed below. However, 22 radiocarbon datings, as well as the find material, clearly place the settlement within the early Late Neolithic Bell Beaker milieu of northern Jutland, approximately 2350–2000 BC (LN I) (Vandkilde 2005, 9). Many of the two-aisled houses without a sunken floor seem to belong to an early phase of the habitation (c. 2400–2200 BC, Sarauw 2006, 63), whereas the major part of the sunken-floor huts have a somewhat later dating (c. 2200–2000 BC).

3.2 Comments on contexts and source criticism

Since the majority of the Danish Bell Beaker-like pottery is associated with sunken-floor houses (see pp. 48 ff. Catalogue A), this type of context deserves closer inspection focusing on aspects related to source criticism. Thus, most of the pottery from settlement sites is found in dark earth as part of secondary depositions in pits or in former house pits deposited after the house was abandoned (Fig. 4). This is also the case with the pottery from Bejsebakken and from most other similar sites. Many scholars, however, wrongly equate the secondarily deposited waste with the habitation time of the house (cf. Earle 1997, 29; Prieto-Martinez, in press). Earle (ibid.), for instance, considers one of the houses in Thy (THY 2758) the house of a distinguished family due to the fact that a number of discarded fragments of bifacial daggers were present. However, only a very limited part of the artefacts may be ascribed to the habitation phase, and of-

3 A similar result is achieved with two-aisled houses without a sunken floor and dated to the Late Neolithic or Early Bronze Age (cf. Artursson 2000, 26; Björhem/Säfstestad 1989, 98; Ethelberg 2000, 172).



Fig. 4. Bejsebakken. Example of the sunken part and the infillings of house A170. Seen from the north-east.

Abb. 4. Bejsebakken. Der sunken floor und das Füllmaterials des Hauses A170, Blick von Nordosten.

ten they cannot be separated from the ones secondarily deposited (cf. Hodder 1982, 147; LaMotta/Schiffer 1999), so it may be concluded that such former house pits were reused as refuse areas by nearby houses.

Schiffer and others, who have studied the nature of the abandonment process using ethnographic analogies, come to the conclusion that house sites abandoned under planned conditions result in few *de facto* artefacts (Schiffer 1987, 89 ff.), i.e. usable cultural material such as tools left behind when a house was abandoned. Put another way, "house floor assemblages cannot be presumed to be fossilized representations of past activities" (LaMotta/Schiffer 1999, 21).

At Bejsebakken and on other sites it is also documented that these dump sites were ploughed several times, most likely already in the Late Neolithic when the site was abandoned (Boas 1993, 132; Jensen 1972, 67; Nielsen 2004, 26; Sarauw 2006, 38). Apparently people knew that such areas possessed a high manurial value. Judging from the general state of preservation of the pottery from other house sites, similar ploughing almost certainly took place, even though such traces are seldom detected. Furthermore, the trampling of the site by humans and oxen in connection with ploughing or other activities might have further reduced the pottery (cf. Reid 1984, 68; Scarborough 1989). This point of view is supported by the fact that among 30 sunken-floor houses dated to the early LN, the average assemblage consisted of 717 often highly fragmented potsherds (see also Table 1; 3).⁴

The degree of destruction of the pottery is further illustrated by a comparison of the average weight of the potsherds found within similar structures as e.g. sunken floors (Table 1). Such a comparison should be held against the general state of the pottery such as surface erosion and so forth, in order to hint at the character of the formation processes (cf. Schiffer 1987, 265 ff.; 276). As illustrated by the table, the average weight varies considerably, which might point to the fact that in most cases the pottery was subject to different formation processes before the deposition. The fragmentary state of the pottery alone cannot be ascribed to activities such as ploughing. This is shown by the fact that the maximum depth of the sunken floors does not seem to have any influence on the state of preservation. Apparently, in most cases the pots were already broken when

4 Besides sixteen houses from Bejsebakken, a house from Hemmed Plantation, Stendis, Tastum, Hovergårde, Svapkærret, Thy 2756, two houses from Diverhøj, three houses from Thy 2758, and three houses from Myrhøj are included in these statistics.

Sunken floors	Number of sherds	Weight (gram)	Average weight	Max. depth of sunken floor (cm)
A192	536	1991	3.71	20
A643	181	695	3.84	40
A170	626	2623	4.19	28
A827	146	620	4.25	14
A896	2054	8804	4.29	60
A173	1202	5204	4.33	42
A525	1009	4494	4.45	46
A237	1173	5239	4.67	38
A606	347	1659	4.78	18
A 67	459	2236	4.87	32
A499	263	1336	5.08	16
A 66	1109	6459	5.82	30
A505	431	2581	5.99	20
A556	504	3043	6.04	14
A568	208	1341	6.45	20
A222	634	4356	6.87	24
A539	2099	16945	8.07	83

Table 1. The average weight and total number of potsherds from the sunken floor areas of 17 houses situated at Bejsebakken. Furthermore, the maximum depth of the sunken floor is given. Only houses A192, A525 and A643 held traces of ploughing.

Tab. 1. Das durchschnittliche Keramikgewicht und die absolute Scherbenzahl der sunken floors aus 17 Häusern in Bejsebakken. Zusätzlich ist die größte Tiefe der sunken floors angegeben. Nur bei den Häusern A192, A525 und A643 gab es Hinweise auf Pflügen.

deposited, which explains why a minimal representation of sherds from each pot was present in the depositions of the sunken floors (Fig. 5).

In the majority of the houses at Bejsebakken, the depositions in the sunken floor areas consisted of uniform dark earth, implying that the sunken floor area was culturally refilled within a short time after abandonment. The depositions containing the artefacts represented displaced refuse and possibly subsoil from other construction works (LaMotta/Schiffer 1999, 20). Moreover, some sediment must have derived from both ploughing and the weathering of the sides of the house pit (Schiffer 1987, 218). Subsequent cultivation might have made the depositions look more homogeneous than they actually were when deposited. Similar depositions in the sunken floor area are seen at many other sites such as Stendis in north-western Jutland (Skov 1982). However, in some houses, including the three houses at Myrhøj and the house at Tastum near Skive, several stratified layers were present, indicating that more complex processes were involved in the infilling (Jensen 1972; Simonsen 1983, 82). Some of these layers are interpreted by the excavator as floor layers (Jensen 1972, 64; Simonsen 1983, 82). In such cases both cultural and natural processes were involved in the infilling (Schiffer 1987, 218 ff.). This explains the sometimes rather heterogeneous distribution of artefacts.

In order to clarify the nature of the depositions in the sunken floors, a number of analyses based on a refitting of the pottery were conducted to see if the find material in the sunken floors could justifiably be perceived as chronological units. One test was carried out on the potsherds from the sunken-floor house A173 (Fig. 6). Here the sunken floor measured approximately 6.5 x 7 m and had a maximum depth of 42 cm (Sarauw 2006, 17 ff.). No general stratification was observable. However, at the bottom level of the central parts there was an irregular layer with a maximum thickness of 8 cm consisting of inhomogeneous black sandy fill with numerous light areas.

Among the 1,200 potsherds present in the soil of the sunken floor a number of potsherds could be ascribed to four different vessels, each displaying certain characteristics and found at different verti-

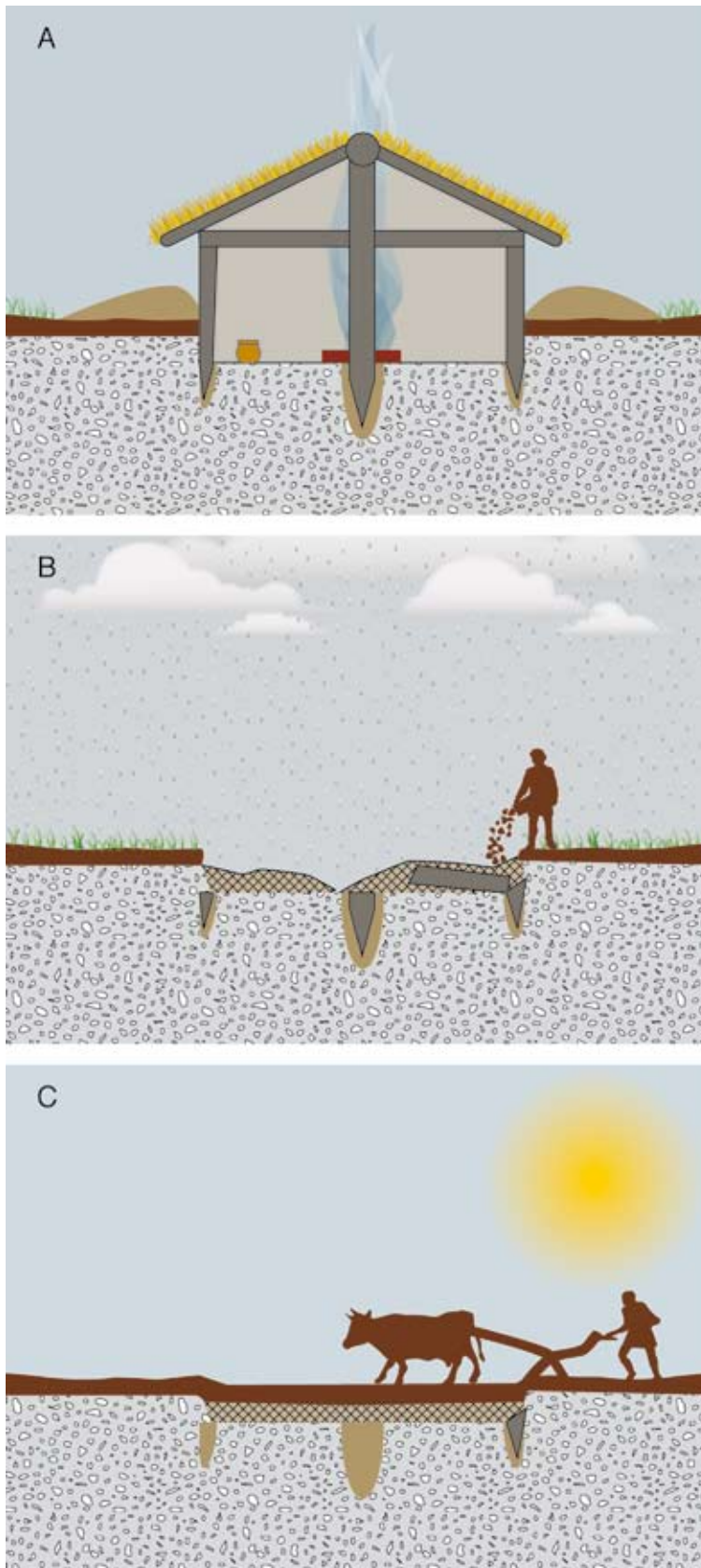


Fig. 5. Schematic presentation illustrating how different kinds of formation processes may have been involved in the infilling of the sunken floor area. A The habitation phase – a thin, almost 'invisible' floor assemblage may be present containing a few potsherds, charcoal and so on. B The house is just abandoned. All usable timber has been removed, resulting in the rounded and trampled sides of the sunken floor. Cultural and natural formation processes are involved in the infilling. C After a few years the former house area appears as a small and most likely cultivated depression. Drawing: Louise Hilmar, Moesgård.

Abb. 5. Schematische Darstellung der Entstehung eines sunken floors. A Die Wohnphase – ein dünnes, nahezu „unsichtbares“ Fundpaket könnte einige Scherben, Holzkohle o. ä. enthalten. B Das Haus wurde gerade verlassen und das gesamte Bauholz entfernt, der Boden ist abgerundet und zertrampelt. Kulturelle und natürliche Prozesse sind an der Entstehung des Füllmaterials beteiligt. C Einige Jahre später ist die ehemalige Hausstelle an einer möglicherweise landwirtschaftlich genutzten Vertiefung zu erkennen.

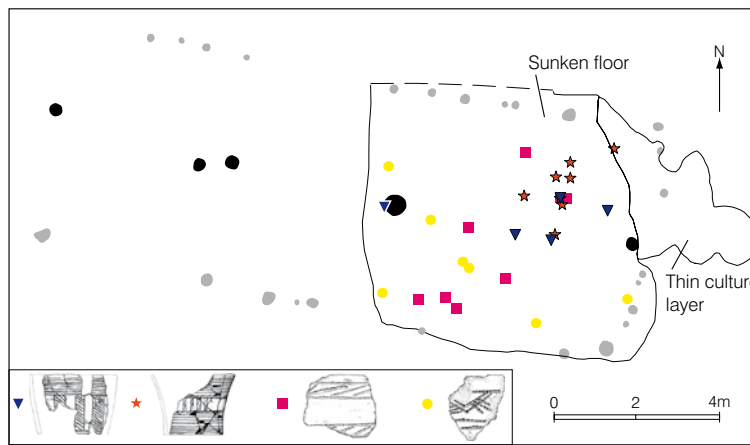


Fig. 6. Bejsebakken. Distribution of a selection of refitable pottery found in the deposition of the sunken floor of house A173.

Abb. 6. Bejsebakken. Verteilung der zusammensetzbaren Keramik des sunken floors von Haus A173.

cal positions (Fig. 6).⁵ As seen from the horizontal distribution, where sherds from the same pot were distributed over a distance as widely as 6.5 m, the filling appeared to be a contemporary inter-related unit. Other houses provide similar examples. The information given by the A542 culture layer included in this investigation should be taken with certain reservations due to its extreme size. Regarding houses where the sunken floor consisted of several layers, and where one might assume a longer process of infilling, the vertical distribution was tested in a similar way revealing no stylistic division in the vertical distribution of potsherds.

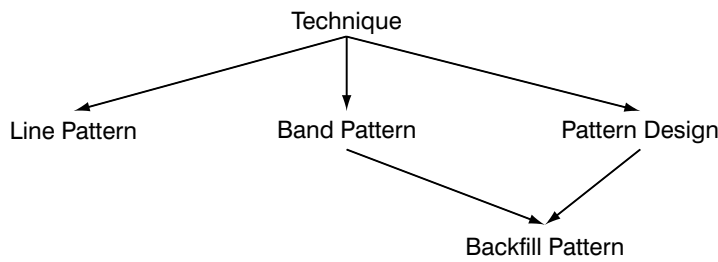
This small-scale analysis regarding the vertical and horizontal distribution of artefacts along with evidence presented from similar find contexts leads to the conclusion that the time of the back-filling seems to have been rather short. Apparently, this goes for both stratified and un-stratified layers and it is further supported by the uniform character of the artefact material situated in the houses (cf. Asingh 1987, 148 ff.; Boas 1993, 132; Jensen 1972, 63 f.). Even though some mixture of artefacts must be expected due to the long period of inhabitation, the arguments presented above justify treating the artefacts from a single house site as a chronologically closed unit.

3.3 Definitions and classification

At the beginning of this study the following classification was thought to have been used on all Danish settlement sites containing Bell Beaker-like pottery. However, working with Bejsebakken and looking through the pottery from other sites, I came to the conclusion that most of the settlement material was too fragmented to provide useful and detailed information on pottery types, composition of ornamentation and so forth. This assumption is further supported by most of the published settlement sites, as described above (cf. Asingh 1987, 150; Skov 1982).

As an alternative, and governed by the specific aim of this study, I have chosen to present a detailed and selective analysis focusing on the ornamental aspects of the design of the material from one of the key sites – Bejsebakken. I am fully aware of the danger involved in mainly focusing on decorations and pattern designs instead of using a more traditional and comprehensive holistic approach also including the analysis of unornamented potsherds, rim sherds, technological aspects and so on (cf. Arnold 1985, 231 ff.). Still, I believe that this kind of analysis may contribute to revealing aspects of the meaning of the Bell Beaker-like decoration.

5 In the sunken-floor houses and culture layers, all potsherds were collected within square metres and the finds attributed to the respective layers. Concentrations of potsherds, ornamented potsherds etc. were often collected separately (Sarauw 2006, 12).



Due to the fragmentary state of the pottery, it is not possible to use any current classification systems used in analysing Bell Beaker pottery. Such systems are for the most part developed for use on intact pottery (cf. Clarke 1970, 24 ff.). As an alternative, the majority of the potsherds from the Late Neolithic houses, pits, and occupation layers were recorded in an Access database, ArchaeoInfo, developed by Torsten Madsen and Jens Andresen (Madsen 2003). The advantage of using such a means of registration is that it allows both simple analyses of, for instance, different techniques and more complex analyses involving the pattern design or combinations of more attributes. However, one should of course keep in mind that only small parts of the complete design are recordable (cf. Hulthén 1974, 25). Furthermore, the database enables different kinds of searches and the data can be transferred directly to an Excel spreadsheet and thereby to programs that can carry out different kinds of multivariate or statistic analyses.

Among the pottery from Bejsebakken, all the potsherds larger than 1 cm² were counted and weighed, whereas ornamented sherds and rim sherds were registered separately. Potsherds smaller than 1 cm² were not counted but are included in the total weight of pottery in each structure.

The Late Neolithic pottery is classified in a hierarchical way according to the on/off presence of the following elements: technique of ornamentation, line pattern, band pattern, pattern design, and backfill pattern (Fig. 7). The tables presented below should not be seen as illustrating the exact number of different sherds of a certain technique or design, since sherds with complex patterns of design may include more than one decoration element. In addition, a number of other attributes concerning rim profiles, thickness of the sherds, tempering and so forth were registered. However, only some of these will be used below.

When defining Bell Beaker-like pottery the criteria used are curved-angular or straight-walled beakers either entirely decorated with zones in a maritime style or with typical Bell Beaker-decoration. The latter usually involves beakers with a broad zone decorated with geometrical figures and encircled by zone ornaments. While straight-walled beakers are clearly associated with the late SGC, Bell Beaker-like ornamentation does occur on such beakers (Vandkilde 2005, 20). Even though curved beakers decorated with horizontal grooves, as shown below, seem to be an integrated part of the ware at the Danish Bell Beaker sites,⁶ such pottery alone is not affiliated with beakers and is thereby of a more local character. Additionally, such pottery is also present on settlement sites later than the 'Myrhøj-phase' (cf. Liversage 2003, 43 ff.) and on settlement and burial sites without any Bell Beaker pottery (cf. Karsten/Knarrström 2000, Fig. 4; Schiellerup 1991, 50). More remotely associated with the Bell Beakers is the coarse ware, which is often undecorated and of a coarser and plainer character. The coarse ware may be separated into two more general classes – both of which may occur in contexts with Bell Beakers. The first group comprises coarse ware with a wide pan-European distri-

Fig. 7. Schematic representation illustrating the classification system concerning ornamented potsherds. 'Technique' refers to the technique of ornamentation. 'Line pattern' refers to the horizontal decoration such as a single line, double lines. 'Band pattern' refers to the way the horizontal bands are made. 'Pattern design' refers to the characteristic 'picture frieze' often decorating the Bell Beakers. 'Backfill pattern' comprises the pattern design and the band pattern and describes the way the backfill is made.

Abb. 7. Schematische Darstellung des Klassifikationssystems verzierter Scherben.

6 Such beakers are equivalent to Glob's B3-beakers or Jensen form 1 (Glob 1944, 66 ff.; Jensen 1972, 95).

bution such as beakers with a cordon near the rim (cf. Besse 2001, Fig. 1; 2004). The second group consists of vessels of a more local or regional character such as the Jutish straight-walled beakers both with and without decoration (cf. Ebbesen 1977, 62; 1985, 29 ff.; Glob 1944). In the present work, however, such pottery alone without Bell Beaker-like ornamentation is not used in defining the Bell Beaker sites since coarse ware typically has broader distributions and datings than the Bell Beaker-like pottery. This could be illustrated with the aforementioned beakers ornamented with cordoned rims, which also occur in LN II and the Early Bronze Age as well as in the southern parts of Sweden, which are almost Beaker-free (cf. Burgess 1995; Callmer 1971/72, Fig. 8; Rasmussen 1993, 139; Schiellerup 1991, 48 f.; Simonsen 1983, 85 f.; Stilborg 2002, 78 ff.; Strömberg 1991/92, Fig. 21; Tilander 1962/63, Fig. 5.).

These definitions should be seen in contrast to those of Liversage (2003), who also operates with a late Bell Beaker horizon of degenerated Bell Beakers. However, in my opinion such a phase is misleading since it describes the time after the Bell Beaker phenomenon.

3.4 The pottery from Bejsebakken

This chapter gives a presentation of the ornamented pottery from Bejsebakken including both the Bell Beaker-like pottery and the ornamented ware of more local character, since they cannot be separated if the aim is to understand the character of this site. Instead of following a traditional framework of interpretation explaining all differences in styles of pottery as connected to chronological circumstances, an alternative model of explanation is offered. It is argued that differences and similarities in styles of Beaker pottery may mirror different identity groups, probably potters. Such identity groups, which are deeply connected with kinship and social organisation, can be followed over a couple of generations within some of the house concentrations corresponding to the internal settlement pattern of the site. Thus, from a bird's-eye view the Danish Bell Beaker-like pottery may appear very homogeneous. However, viewing the material on a macro-scale reveals a rather diverse and complex situation.

3.4.1 General characterisation

The Late Neolithic pottery from Bejsebakken includes 17,950 potsherds or 104.3 kg distributed on seventeen two-aisled houses with sunken floors, one sinkhole, four culture layers, and a number of smaller pits and post holes (see Fig. 2). By comparison, the rich material from Myrhøj or the settlement 'Thy 2758' consisted of 4,143 and 3,025 potsherds respectively (Jensen 1972, 90; Prieto-Martínez, in press). In the following analysis it is primarily the ornamented pottery from the large and very rich structures, especially the houses, at Bejsebakken that is presented (Table 2).⁷ As mentioned above, the material is in a very fragmentary state of preservation and the number of potsherds only represents a tiny fraction of the original pottery. This is illustrated by Table 2, which presents an estimation of the number of different pots.⁸ However, the poor state of preservation should not be seen as resulting from the quality of the pottery. On the contrary, most potsherds were well fired. The colour of the potsherds is very variable, which may in some cases be due to post-depositional circumstances (cf. Hulthén 1998, 50; Pappmehl-Dufay 2006, 139). Nevertheless, many sherds vary from reddish to brown

7 All the houses and the majority of the sinkhole were completely excavated. Only small samples of the culture layer were excavated.

8 This estimation is based on an analysis of the number of rim sherds and ornamented sherds (cf. Rasmussen 1993, 41; Baudou 1984).

Structure	Potsherds	Weight (gram)	Rim sherds (%)	Ornamented sherds	Estimation of pots	Calibrated age (1 sigma)
A66 (house)	1165	7098	78 (6.7 %)	58 (5 %)	40-50	2020–1900 BC
A67	464	2254	64 (13.8 %)	138 (29.7 %)	c. 26	.
A170	626	2623	44 (7 %)	99 (15.8 %)	32–36	2200–1970/ 2130–1950 BC
A173	1202	5204	162 (13.5 %)	344 (28.6 %)	55–65	.
A192	586	2272	35 (6 %)	52 (8.9 %)	c. 25	2280–2040/ 2210–2040 BC
A222	638	4367	154 (24.1 %)	233 (36.5 %)	c. 16	.
A237	1173	5239	70 (6 %)	65 (5.5 %)	42–60	2200–1980/ 2280–2040 BC
A499	263	1336	10 (3.8 %)	15 (5.7 %)	c. 11	.
A505	431	2581	33 (7.7 %)	15 (3.5 %)	c. 25	2030–1900 BC
A525	1009	4494	67 (6.6 %)	68 (6.7 %)	c. 28–38	2620–2470 BC
A539	2099	16945	197 (9.4 %)	187 (8.9 %)	c. 100	2460–2280/ 2200–2030 BC
A556	504	3043	45 (8.9 %)	70 (13.9 %)	30–35	.
A568	208	1341	16 (7.7 %)	28 (13.5 %)	c. 20	.
A606	347	1659	14 (4 %)	15 (4.3 %)	c. 12–16	.
A643	181	695	19 (10.5 %)	65 (35.9 %)	24–30	.
A827	146	620	22 (15.1 %)	50 (34.2 %)	15–20	2120–1940/ 2130–1950 BC
A896	2054	8804	107 (5.2 %)	162 (7.9 %)	41–60	2200–2030/ 2200–2020 BC
A500 (sinkhole)	1912	19779	322 (16.8 %)	194 (10.1 %)	?	.
A542 (culture layer)	1437	6139	64 (4.5 %)	75 (5.2 %)	?	.
A679 (culture layer)	1317	6377	69 (5.2 %)	74 (5.6 %)	?	.
Other structures	188	1430	9 (4.8 %)	24 (12.8 %)	?	.
Total	17950	104300	1601 (8.9 %)	2031 (11.3 %)	542–633	.

and greyish brown – sometimes sherds from the same pot, although black and yellowish potsherds also occur.

The preferred tempering material is sharp-edged granite, even though feldspar also occurs. Most of the tempering material probably comes from the crushing of cooking stones, which was present in huge quantities in the sunken floors (Boas 1983, 97; Rasmussen 1993, 39). As a rule, large-grained tempering material up to c. 5 mm was used in large storage or cooking jars, often decorated with horizontal grooves all over the neck part or cordoned rim. Such rough tempering material may have resulted in jars more tolerant to heat than other pottery or served strictly to minimize the shrinking of the pot during the drying process (cf. Arnold 1985, 97; Pappmehl-Dufay 2006, 140). In a number of instances burnt crust was visible on such pottery. By contrast, the fine and thin-walled pots often had a finer tempering material and in general the outer surface was more carefully smoothed. On a number of potsherds impressions of grain and straws were visible. Furthermore, many potsherds had secondarily been exposed to fire.

The thickness of the rim sherds and ornamented sherds varies from 2.6 to 16.4 mm, with an average of 6.4 mm (Fig. 8; see also Asingh 1987, 150). This can be contrasted with a sample of Early Bronze Age pottery from settlements, where the average thickness is c. 10 mm (Rasmussen 1993, 71).

Table 2. Distribution of potsherds, rim sherds and ornamented sherds among 17 sunken-floor houses, two culture layers, and one sinkhole. Furthermore, the number of pots represented in each structure is estimated. Further information regarding the datings is found in Heinemeier 2006.

Tab. 2. Verteilung von Randscherben und verzierten Scherben in 17 sunken floor-Häusern, zwei Kulturschichten und einem Sinkloch.

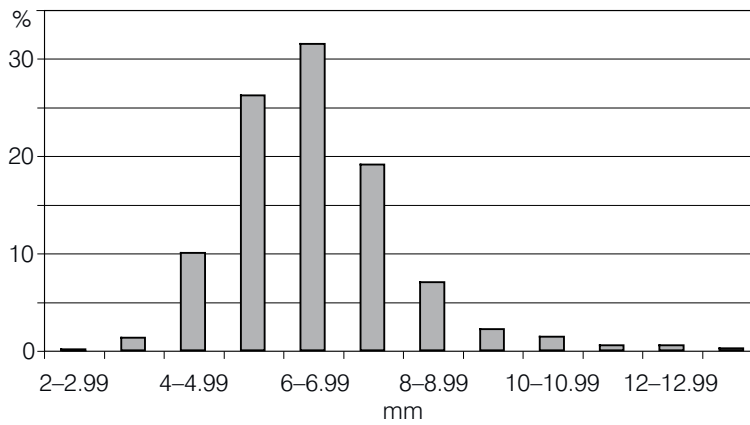


Fig. 8. Bejsebakken. Distribution of the thickness of rim sherds and ornamented sherds.

Abb. 8. Bejsebakken. Wandstärke von Randscherben und verzierten Scherben.

Settlement site	Potsherds	Rim sherds	Ornamented sherds
Myrhøj house D	1817	228 (12.6%)	669 (37.2 %)
Myrhøj - area W of house D	412	36 (8.7 %)	102 (24.8%)
Myrhøj house EAB	1575	201 (12.8 %)	408 (26 %)
Myrhøj house GAB	339	55 (16.3)	171 (50.4 %)
Hovergårde	183	?	32 (17.5 %)
Svapkærret	c. 300	?	50 (16.7 %)
Stendis	308	?	27 (8.8 %)
Hemmed Plantation	c. 450	?	?
Tastum	1380	?	?
Diverhøj houses	183	22	136 (19%)
Diverhøj occupation layer	535	21	
Thy 2756	117	?	19 (16.2 %)
Thy 2758, house I	1627	?	658 (40.4 %)
Thy 2758, annex house I	221	?	16 (7.2 %)
Thy 2758, house II	63	?	23 (36.5 %)
Thy 2758, house III	176	?	37 (21 %)

Table 3. Distribution of potsherds, rim sherds, and ornamented sherds among other Jutlandic Bell Beaker sites, all except Thy 2453/2757 including sunken-floor houses (information after Asingh 1987; Boas 1986; 1993; Jensen 1972; 1984; Prieto-Martínez, in press; Simonsen 1983; Skov 1982). Only parts of the sunken floors in Thy 2758, house III and Tastum were excavated.

Tab. 3. Keramikverteilung in jütländischen Glockenbecher-Fundstellen.

As documented in Table 2, and as compared to other settlement sites, the degree of ornamentation varies considerably among the houses and other structures at Bejsebakken (Tables 2; 3). In some cases these differences may be seen as accidental and related to subsequent formation processes. As an example, the already mentioned concentration of potsherds decorated with horizontal grooves in house A222 is caused by the fact that a huge part of a large storage jar with such decoration was present in this structure (Table 4).⁹ However, such differences could also be seen as resulting from small chronological differences. The 23 early LN houses are certainly not contemporary, and one must assume that vague changes in the shaping and decoration of the pottery took place continuously. Changes like this may have been related to personal preferences as regards pot style within each household. This point of view will be further investigated at the end of this chapter.

3.4.2 Ornamentation techniques

Regarding the ornamentation techniques, at least eleven different types are present on the pottery from Bejsebakken (Fig. 9). Nar-

9 The difference in the sum of ornamented pottery between this table and Table 2 is due to the fact that in some cases two different techniques are used on the same potsherd.

Structure	Narrow grooves	Wide grooves	Finger grooves	Line ornament	Cardium	Circular impression	Impressions, miscellaneous	Nail/arch impression	Comb impression	Barbed-wire	Cordon/cordoned rim	Not determinable ornamentation	Total number of registration
A66	20	3.3	10	1.7	.	.	.	.	6.7	.	58.3	.	60
A67	39.3	.	.	2.9	4.3	.	2.9	.	50.7	.	.	.	140
A170	42.7	.	1	1.9	3.9	.	4.9	5.8	35.9	.	2.9	1	103
A173	25.9	0.3	.	3.1	2.8	0.3	1.7	1.1	61	.	2.8	0.9	351
A192	31.6	1.8	15.8	10.5	14	.	5.3	12.3	.	.	7	1.8	57
A222	95.7	.	1.7	1.3	.	.	.	0.4	0.4	.	0.4	.	234
A237	18.5	7.7	7.7	1.5	4.6	.	1.5	.	32.3	10.8	10.8	4.6	65
A499	40	.	.	.	.	.	6.7	.	53.3	.	.	.	15
A505	.	.	6.7	.	.	.	.	.	86.7	.	6.7	.	15
A525	42.9	2.9	4.3	5.7	5.7	.	.	.	21.4	4.3	4.3	8.6	70
A539	24.8	6.4	19.8	2	7.4	.	.	0.5	27.2	.	11.9	.	202
A556	11.3	2.8	10	4.2	1.4	.	2.8	.	67.6	.	.	.	71
A568	7.1	14.3	39.3	.	.	.	.	.	32.1	.	7.1	.	28
A606	20	6.7	46.7	.	.	.	.	.	20	.	.	6.7	15
A643	41.9	2.7	.	21.6	4.1	.	2.7	.	25.7	.	.	1.4	74
A827	40	2	.	6	2	.	2	.	46	.	2	.	50
A896	42.7	0.6	7.6	12.9	3.5	1.8	0.6	2.3	14	.	10.5	3.5	171
A500	13.3	3.6	13.3	.	1	1	1.5	.	47.2	6.7	3.1	9.2	195
A542	27.4	1.2	8.3	7.1	3.6	.	2.4	1.2	33.3	.	10.7	4.8	84
A679	13.3	4	5.3	5.3	2.7	1.3	2.7	.	40	17.3	4	4	75
Other structures	29.6	.	.	7.4	.	.	3.7	.	51.9	.	7.4	.	27
Total (%)	35.5	2.2	6.9	4.4	3.2	0.3	1.6	1.1	34.7	1.7	6.1	2.2	.
Total	746	46	144	92	68	7	33	24	730	36	129	47	2102

row horizontal grooves and comb impressions (*dentated spatula*) are the most common ones, each constituting about 35 % of the total (Table 4; Fig. 9). Still, within the different houses their distribution varies quite a lot. A similar repertoire of techniques occurs on most other Danish settlement sites with Bell Beaker-like pottery (cf. Asingh 1987, 150; Boas 1986, 320; 1993, 132; Skov 1982, 40 ff.; Simonsen 1983, 85). At Myrhøj, which is the only other Danish settlement site where the character of the ornamentation is investigated statistically, horizontal grooves account for 66 %, line ornaments for 15.3 %, comb impressions for 5.2 %, and cardium for 10.1 %.¹⁰ At Bejsebakken other decorating techniques are finger grooves, cordoned rim/cordon, line ornament, and cardium (Fig. 9), though these are not used nearly as often. In some cases it proved difficult to determine whether an ornament belonged to one group or another – for instance, when a cordon was present in the area between two broad finger grooves.¹¹ However, such matters of dispute are rather small in number and do not have much significance when dealt with statistically. Apart from the cordon and finger grooves, two different types of technique were

Table 4. Distribution of ornamentation techniques in structures at Bejsebakken (expressed in percentages). Furthermore, the total number of ornamented potsherds in each structure and the total number of potsherds distributed on different techniques are shown.

Tab. 4. Verteilung der Verzierungsstechniken in Bejsebakken (in %).

10 Calculated from Jensen 1972, 92. The remaining 3.4 % represent various ornaments.

11 In such cases both a cordon and a finger groove is registered on the same potsherd.

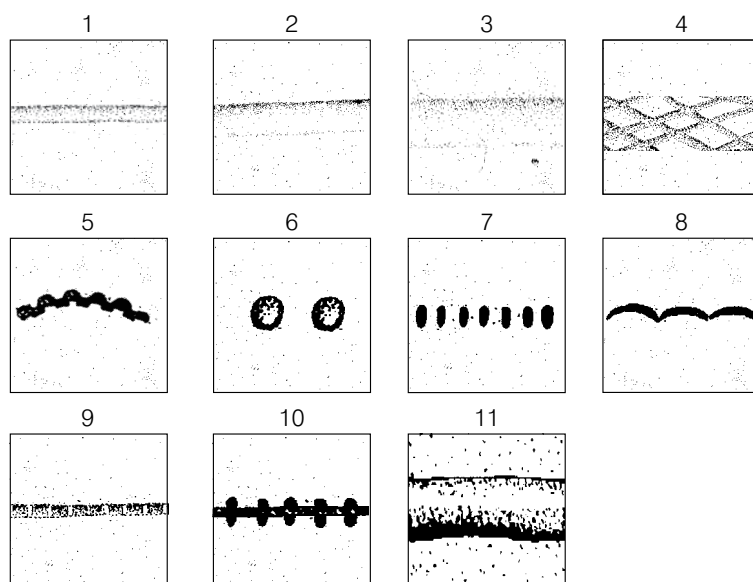


Fig. 9. Schematic presentation illustrating the various techniques of ornamentation represented at Bejsebakken. 1 Narrow grooves. 2 Wide (>3 mm) grooves. 3 Finger grooves. 4 Line ornament. 5 Cardium. 6 Circular impressions. 7 Impressions, miscellaneous. 8 Nail/arch impressions. 9 Comb impressions. 10 Barbed-wire. 11 Cordon/cordoned rim.

Abb. 9. Verzierungs-techniken in Bejsebakken.

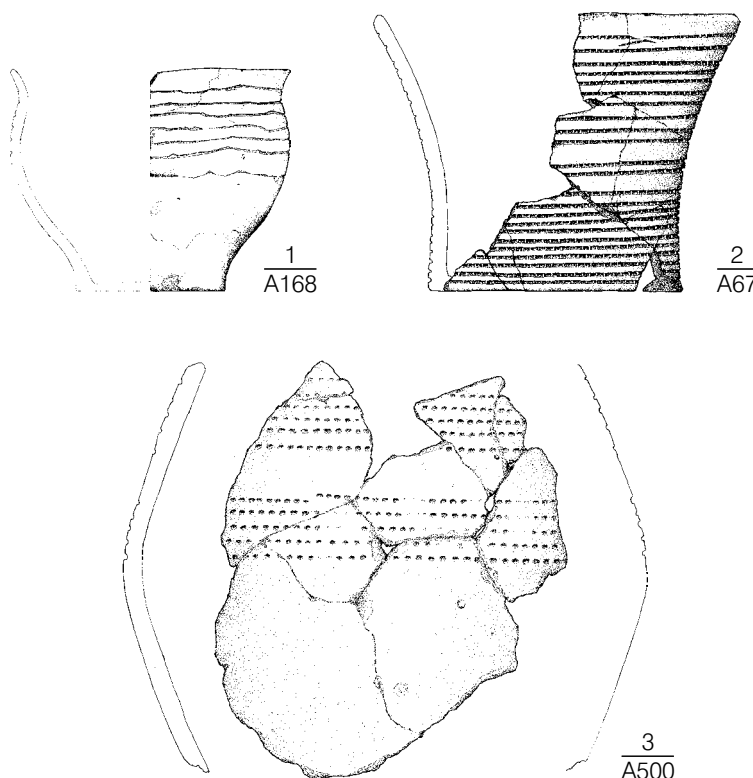


Fig. 10. Bejsebakken. 1 Small curved beaker decorated with horizontal grooves. Found in a posthole close to house A170. 2 Straight-walled beaker decorated in AOO style, but with two narrow blank horizontal bands at the centre of the pot, decorated by a dentated spatula. 3 Large curved beaker decorated by comb impressions placed as bunches of horizontal lines separated by a broad undecorated zone. The number below each beaker refers to the structure in which the beaker was found. Drawn by Jeppe B. Jepsen. Scale 1:3.

Abb. 10. Bejsebakken. Beispiele für Gefäß-
formen von Bechern.

rarely used on the same pot. The most often occurring combination is narrow grooves and comb impressions, which was found 13 times total. Often this combination was present in connection with horizontal bands where the grooves outlined the band and the comb impressions were used as backfill (see Fig. 12, 7.9). However, other combinations such as grooves and cardium occurred, too (see Fig. 13, 4).

Remains of white paste or incrustation were found on four potsherds from house A67 and two in A556 (Fig. 13.4). The latter are from the same curved beaker, whereas the others are from beakers decorated with comb impressions forming different kinds of horizontal bands or horizontal lines. Incrustation is also present on potsherds found at settlement sites on Djursland (Boas 1986, 322; 1993, 132) and Myrhøj (Jensen 1972, 95). Besides, both pottery from the preceding SGC (Jensen 1972, 107) and British and European Bell Beakers (Clarke 1970, 10; Harrison 1977, 22) sometimes had white paste in the decoration.

Structure	Band Pattern						Line Pattern					Pattern Design				
	Horizontal band	Multi-horizontal band	Multi-horizontal bands, contracted	Band of triangles	Band of triangles, double	Band of angles	Single line	Double line	Multi-line	Horizontal bundles of lines	Uncertain line	Hanging triangle	Vertical band	Standing triangle	Standing angles	Uncertain design
A66	3	.	.	.	.	.	36	10	6	.	.	1	.	.	.	.
A67	10	2	.	5	1	3	8	16	88	15	1	10	.	4	.	.
A170	6	5	2	.	.	.	15	22	53	4	1	.	1	.	.	.
A173	34	11	1	.	.	1	43	55	189	14	7	.	13	2	3	.
A192	9	5	.	.	.	1	8	10	8	.	8	.	.	.	.	5
A222	3	1	.	.	.	.	5	12	208	.	3	.	.	.	.	.
A237	2	.	.	.	.	.	21	10	30	1	2	.	.	.	.	.
A499	.	.	.	.	.	1	2	6	6	1	.	.	.	.	.	.
A505	3	.	.	.	.	.	4	3	5	.	.	.	.	.	.	.
A525	.	.	.	.	.	.	10	28	28	1	3	.	.	.	.	.
A539	3	.	.	.	.	.	62	54	65	.	2	.	.	.	.	.
A556	1	1	.	.	.	.	11	14	42	2	3	.	.	.	.	1
A568	1	.	.	.	.	.	1	11	10	1	8	.	.	.	.	.
A606	.	.	.	.	.	.	12	.	1	.	1	.	.	.	.	.
A643	13	12	.	1	1	.	8	11	20	.	.	6	1	1	.	.
A827	8	3	.	.	1	.	2	5	22	.	.	1	1	3	.	.
A896	14	.	.	.	.	.	40	32	65	.	11	2	4	1	.	3
A500	2	7	1	.	.	.	9	26	124	9	14	.	.	.	.	.
A542	4	.	.	.	.	.	10	14	41	2	8	2	.	1	.	1
A679	.	.	.	.	.	.	20	15	32	2	5	1	.	.	.	1
Other structures	4	1	.	.	.	.	3	4	12	1	2	1	1	.	.	1
Total (%)	64.2	25.7	2.1	3.2	1.6	3.2	17.6	19.1	56.3	2.8	4.2	33.3	29.2	16.7	4.2	16.7
Total	120	48	4	6	3	6	330	358	1055	53	79	24	21	12	3	12

3.4.3 Decoration

The decoration can be separated into three types of ornamentation: line patterns, band patterns, and pattern designs (see Fig. 7). Line and band patterns refer to horizontal decoration carried out in line technique or as bands, respectively, whereas pattern design describes the pattern situated in the 'picture frieze' of Bell Beakers.

Line patterns typically occur on two different kinds of vessels: on curved beakers of different sizes and on small straight-walled beakers, sometimes with a somewhat curved profile (Fig. 10). As seen from Table 5,¹² multi-lines are the most common decoration, constituting more than 50 % of all potsherds decorated with a line pattern. Moreover, many of the very fragmented potsherds decorated with a single or a double line should probably be assigned to this group as well (cf. Fig. 11, 6). Such decoration, which is mostly made in comb impressions or grooves (Fig. 11), is usually situated at the upper part of the beaker (Fig. 10) if the beaker is not ornamented all over.

Table 5. Instructive table illustrating ornamented potsherds and their distribution into groups of line pattern, band pattern, and pattern design. Only the total distribution within each of the three groups is in percentage.

Tab. 5. Die Anteile verschiedener Ornamentgruppen an den verzierten Scherben.

12 This table includes all ornamented potsherds. The table does not consider the fact that within the individual house some potsherds originate from the same pot. Furthermore, it is possible for a potsherd to be present in every group – for instance, when a potsherd is ornamented with horizontal bands, single lines and hanging triangles.

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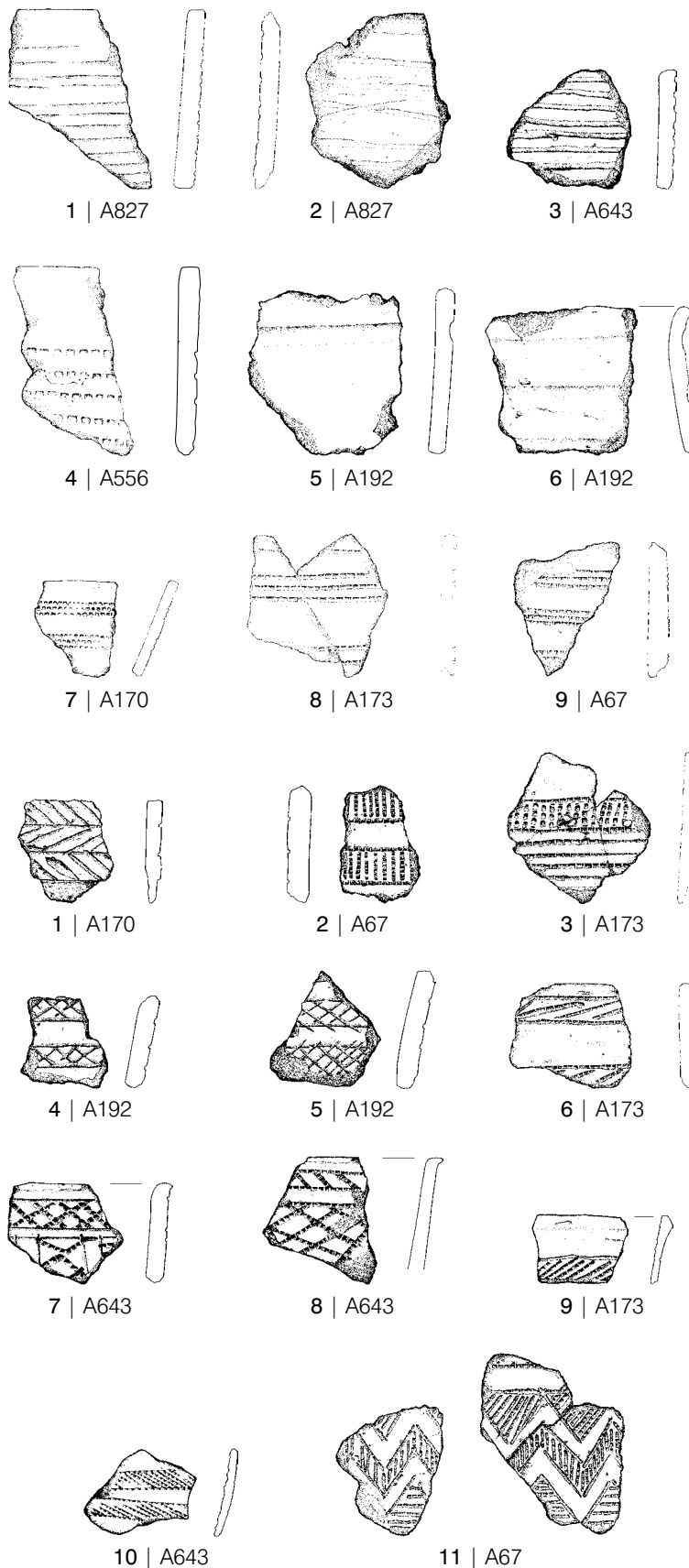


Fig. 11. Bejsebakken. Examples of potsherds decorated with different kinds of line pattern. 1–3.6 multi-lines in horizontal grooves; 4 multi-lines in comb impression; 5 single line in broad horizontal grooves; 7–9 bunches of horizontal lines made by comb impressions. Drawn by Jeppe B. Jepsen. Scale 1:2.

Abb. 11. Bejsebakken. Beispiele verschiedener Linienmuster.

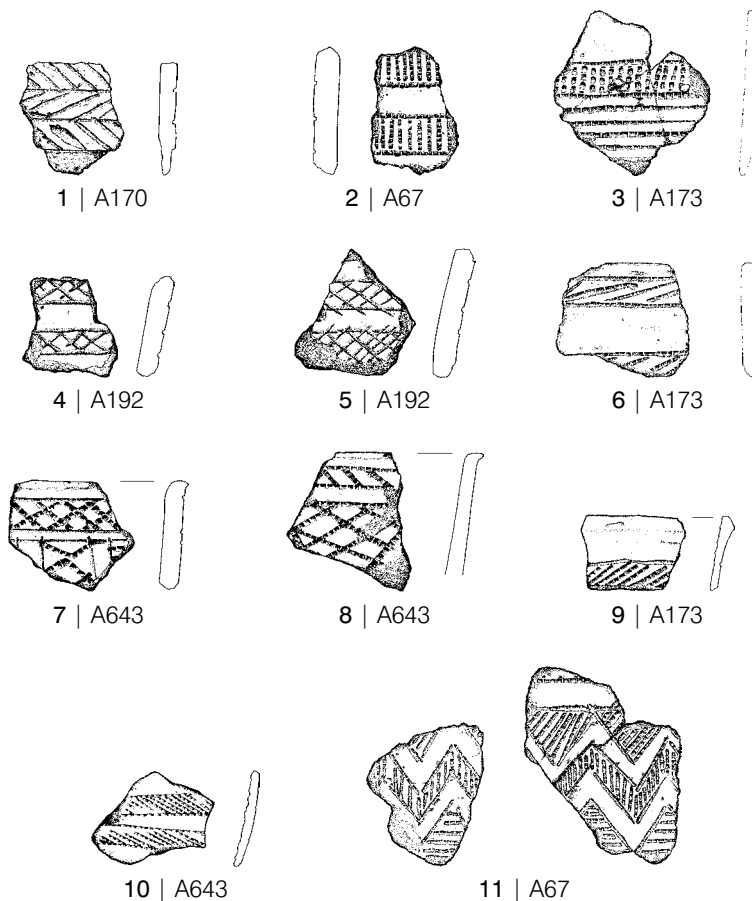


Fig. 12. Bejsebakken. Examples of potsherds decorated with different kinds of horizontal band pattern. 1 Closely positioned bands; 2.4.6.10 multi-horizontal bands; 3 horizontal band in combination with rows of comb impressions; 5.7.8 horizontal band in combination with different kinds of geometrical figures; 9 single horizontal band; 11 horizontal bands made of triangles and chevrons. Drawn by Jeppe B. Jepsen. Scale 1:2.

Abb. 12. Bejsebakken. Beispiele unterschiedlicher horizontaler Bandmuster.

A small group of potsherds found in twelve different structures are decorated with horizontal bunches of lines (Fig. 11, 7–9) almost resembling continental pots decorated in a maritime style with horizontal bands. The horizontal bunches of lines can also be rather broad, consisting of four single or more lines framing a horizontal band without

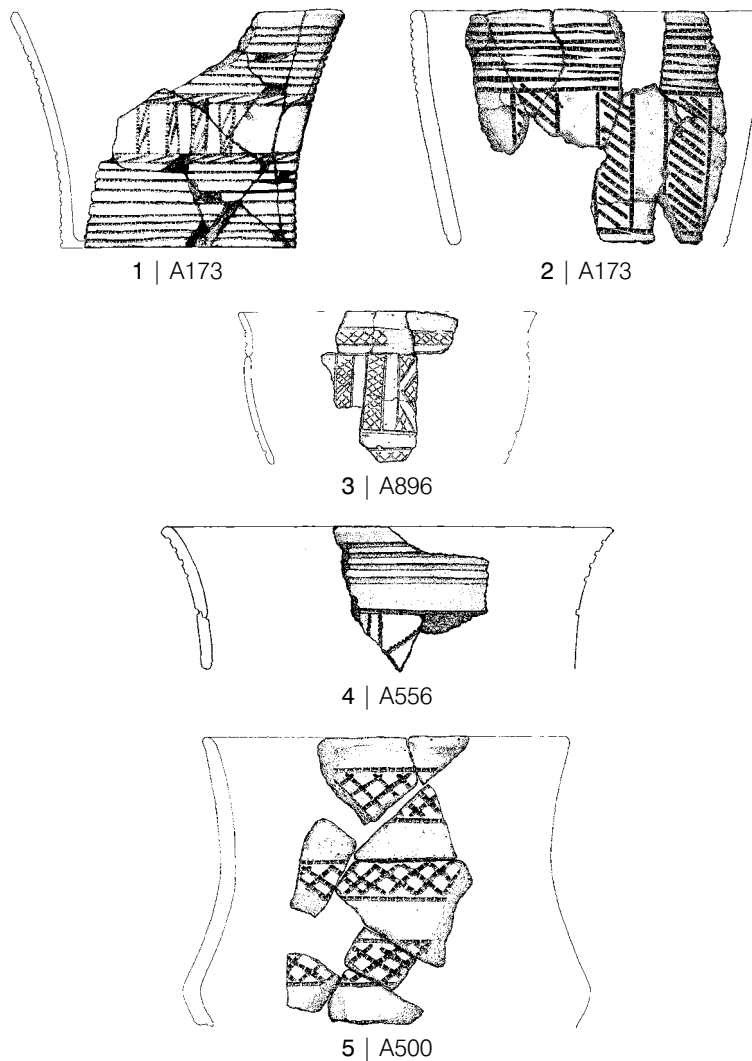


Fig. 13. Bejsebakken. 1–2 Straight-walled beakers decorated with vertical bands framed either by horizontal lines or by horizontal bands and lines. Both are made by a dentated spatula. 3 curved beaker decorated by both horizontal and vertical bands in grooves and line ornament; 4 curved beaker decorated in horizontal grooves and cardium; 5 curved beaker decorated in a maritime style. Drawn by Jeppe B. Jepsen. Scale 1:3.

Abb. 13. Bejsebakken. Beispiele verzierter Becher.

any decoration (Fig. 10, 3). Most of the potsherds in this style are extremely thin-walled with a nicely polished surface, most likely originating from small curved or straight-walled drinking cups (Fig. 11, 7–8). However, a few potsherds are from larger and coarser beakers (Fig. 10, 3). Beakers decorated with rows of horizontal grooves as well as horizontal bunches of lines typically made in comb impressions have a wide distribution and are for instance known from the British Isles (cf. Clarke 1970, 292–93), the middle Rhine area and northern Germany including Schleswig-Holstein (cf. Gebers 1978, plate 37, 14; 42, 9; Kühn 1979, plate 10, 3; Strahl 1990, 79 f. plate 14).

Turning to the band patterns, which are present in most of the structures, a single horizontal band dominates markedly because of the fragmentary state of preservation (Fig. 12, 9; Table 5). The horizontal bands both occur as multi-horizontal bands in a maritime style (Figs. 12, 2.4.6; 13, 5) and sometimes as contracted bands (Fig. 12, 1) resembling pottery from the late SGC (cf. Hübner 2005, Fig. 126, f; Ebbesen 2006, Fig. 32, 1). In several cases the horizontal bands frame the central or upper parts of the pot where the picture friezes are situated (Fig. 12, 5.7.8). A few times horizontal bands made of hanging and/or standing triangles in combination with horizontal bands of chevrons are also seen (Fig. 12, 11).

Finally, potsherds with a pattern design have a rather limited frequency and are known within twelve different structures, primarily houses (Table 5). Common designs are triangles either hanging or standing and sometimes in combination with vertical bands (Figs.

13, 3; 14). The latter are seen both on curved and straight-walled beakers (Fig. 13, 1-3). The backfill pattern seen in connection with different pattern designs or band patterns are most commonly made in oblique- or cross-hatching (51 % and 36 % respectively; Table 6; Fig. 12, 5-6). Similar observations are made on the material from Myrhøj (Jensen 1972, 93). However, at Bejsebakken backfill is also but not very frequently made in horizontal hatching (Fig. 12, 11) and vertical hatching (Fig. 12, 2-3).

Regarding the style of ornamentation and the pottery type, a few general observations could be made. As documented in Table 7, certain ornamentation and design techniques were apparently reserved for or preferred on specific pots even though exceptions occur. Accordingly, comb impressions were normally used on thin-walled pots, often with some kind of pattern design, horizontal bunches of lines or band pattern (cf. Figs. 10; 13; 14). Different kinds of grooves and barbed wire, on the other hand, typically belonged to more thick-walled pots, probably displaying that in general these had another function. Potsherds decorated with wide grooves or cordoned rims were normally thick-walled, which indicates that they most likely originated from large storage jars (Fig. 15). It was not possible to make general assumptions relating the decorated rim sherds to the type of pots they originated from. This statement is especially underlined by the fact that 'straight-walled' beakers decorated by a dentated spatula often had a rather concave profile, with the result that in some cases small rim sherds from such beakers could resemble those from curved beakers (compare Figs. 13, 1 and 5). However, as indicated by the few reconstructed ornamented beakers, curved beakers of many sizes and shapes seem to have been the most ordinary type next to straight-walled beakers of different shapes.

3.4.4 Spatial distribution

Turning to the general distribution of different kinds of ornamentation and techniques in the different houses and structures, more interesting questions arise. I shall therefore investigate whether the distribution reflects different identity groups such as family units or

Backfill pattern	%
Cross-hatching	36.2
Oblique-hatching	51.1
Vertical-hatching	4
Horizontal-hatching	3.4
Indefinable-hatching	5.2

Table 6. Distribution expressed in percentage of backfill pattern among 19 structures. The total number of registrations is 174.

Tab. 6. Prozentanteile der Füllmuster in 19 Strukturen.

Style of ornamentation	Av. thickness	Number
Comb impression	5.82	431
Narrow-grooves in combination with multi-line	6.63	227
Wide grooves	8.00	36
Cordoned rim	7.85	29
Pattern design	5.86	41
Horizontal bundles of lines	5.82	34
Band pattern	5.58	126
Barbed-wire	7.28	18

Table 7. Distribution of the average thickness (millimetres) of sherds carried out in different kinds of technique and design. The total number of sherds used in the calculation is shown.

Tab. 7. Durchschnittliche Wandstärken der Keramiksherben mit verschiedenen Verzierungs-techniken und -mustern.

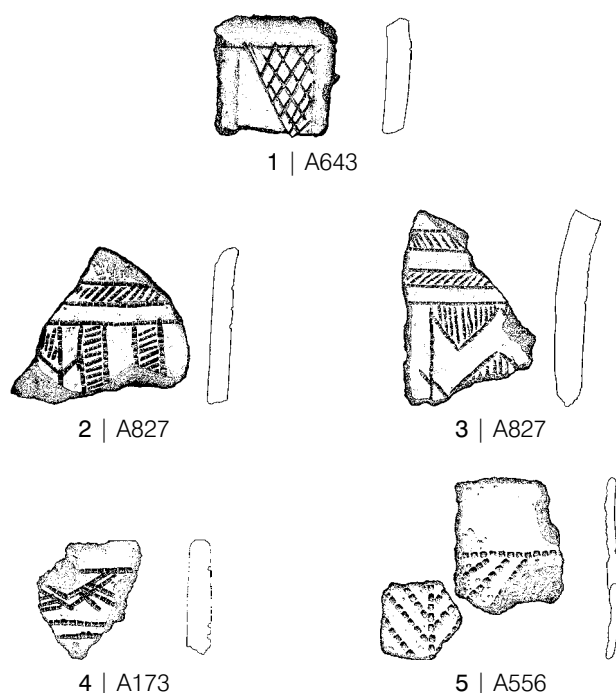


Fig. 14. Bejsebakken. Examples of potsherds decorated with different kinds of pattern design. 1 Hanging triangle outlined by finger grooves; 2-3 triangles in combination with standing and horizontal bands (from the same beaker); 4-5 hanging triangles in combination with horizontal lines made in comb impressions. Drawn by Jeppe B. Jepsen. Scale 1:2.

Abb. 14. Bejsebakken. Beispiele unterschiedlicher Mustergruppen.

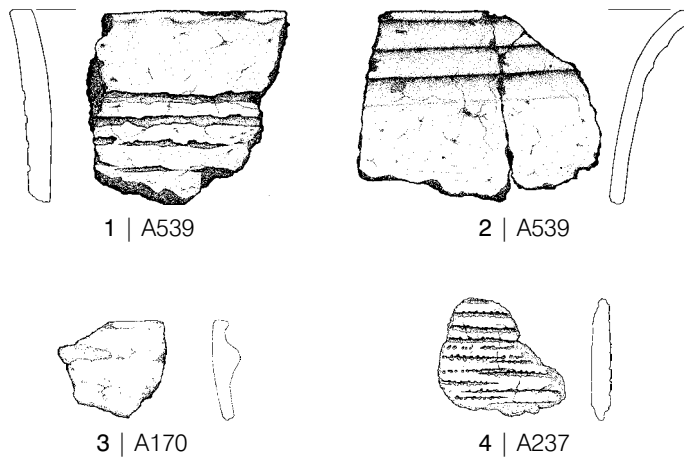


Fig. 15. Bejsebakken. Examples of large storage or cooking jars of a coarser and plainer character. 1–2 curved beakers decorated with wide horizontal grooves and finger grooves respectively; 3 potsherd decorated with a cordoned rim; 4 potsherd decorated with barbed wire. Drawn by Jeppe B. Jepsen. Scale 1:4.

Abb. 15. Bejsebakken. Beispiele großer Vorrats- oder Kochgefäße.

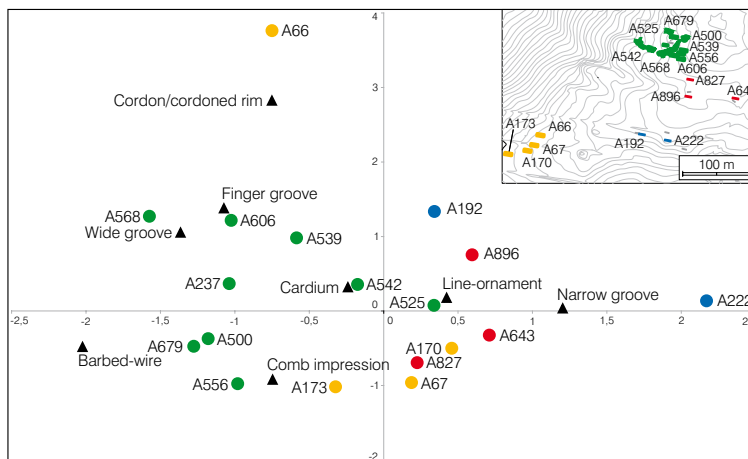


Fig. 16. Bejsebakken. Plot from correspondence analysis including a selection of houses/structures (objects) and different techniques of ornamentation (variables). Both on the plot and on the small distribution map the houses/structures are coloured according to their physical location. Only the coloured objects (green, yellow, and red) are included in the analysis.

Abb. 16. Bejsebakken. Korrespondenzanalyse der Verzierungsstechniken ausgewählter Hausstrukturen.

potters following different traditions or whether, as in a more traditional perspective, the distribution rather mirrors some kind of chronological development.

Hence, a comparison of Tables 4 and 5 points in the direction that certain kinds of ornamentation and the degree of ornamented pottery are tied to the physical location of specific houses or other structures (see also Hodder 1982, 151). This point of view is further strengthened by comparing these tables with the results from a correspondence analysis,¹³ which involves the distribution of techniques in 16 different houses and two other structures (Fig. 16). As shown from this analysis and from Table 4 and 5, small clusterings in the material actually do occur. Houses A67 and A173, for example, are situated very close to each other (see Fig. 2) and are both characterised by a high degree of Bell Beaker-like ornamentation such as bands or pattern designs (Table 5). Moreover, 29.7 % and 28.6 % respectively of all the potsherds in the two houses are ornamented (Table 2). House A170 situated in-between houses A67 and A173 is tied to this group, also due to the presence of a band pattern and because comb impressions are often seen on the potsherds (Table 4; 5). Two ¹⁴C-datings from A170 roughly date this group of houses to 2280–1940 BC (Table 2).

Another minor concentration of houses containing many ornamented potsherds (35.9 % and 34.2 % respectively) as well as many potsherds with Bell Beaker-like ornamentation is A643 and A827 (see Fig. 2; Tables 2; 4). In the correspondence analysis, these cluster within the same group as the houses described above (Fig. 16). House A896 strongly relates to this group due to the presence of a band pattern and pattern design even though only a minority of

13 For further information describing the multivariate quantitative analysis, see Madsen 1985; 1988, 14 f.; Nielsen 1990, 121 ff.

the sherds are ornamented (7.9 %). This group of houses is dated to 2200–1940 BC from four radiocarbon samples obtained in A827 and A896, thereby allowing for a certain contemporariness between the houses in the two groups. Furthermore, houses A192 and A222 are connected to these groups as well due to a relatively frequent presence of band pattern and narrow grooves (Table 4; 5). However, the many potsherds found in these houses that are ornamented with narrow horizontal grooves and the fewer sherds ornamented with comb impressions result in them being situated differently on the principal axes. Two radiocarbon datings from A192 fall between 2280–2040 BC (Table 2).

Other characteristic similarities are found within the pottery from the nearby structures A237, A500, and A679 (Figs. 2; 16). Apart from a relatively low degree of ornamented potsherds (Table 2), and the fact that comb impressions dominate, barbed-wire decoration is present in all of these, although typical Bell Beaker pottery is also found in these structures (cf. Fig. 13, 5). Two radiocarbon datings exist from A237, placing the pottery between 2280 and 1980 BC. Finally, I will call attention to houses A568 and A606, both of which contained many sherds ornamented with finger grooves (Table 4) and lay next to each other (Fig. 2). As seen from Table 4 and the plot from the correspondence analysis, not only the material in houses A539 and A66 but also that in the houses characterized by having barbed-wire ornamentation are closely related to this group. Apart from A66, all these houses are concentrated in the same area at Bejsebakken.

Without going further into detail, it may be stated that the examples presented above illustrate that certain patterns in the depositional practices regarding the types and frequencies of ornamented pottery connect the various houses or dump sites and structures to one another in a complicated pattern. In addition, almost corresponding ¹⁴C-datings, relatively few as they may be, support this assumption. In more cases, house constructions, sizes and so forth were also very similar among houses lying close together, implying that some of the houses were built by the same people (Sarauw 2006, 63 ff.).

As mentioned above, such a pattern may illustrate internal chronological differences within the settlement structure of the site and thereby reflect the development in pottery style over a period of 200–400 years. Otherwise, the clusterings in the data may also indicate that different pottery styles and types coexisted within the different farmsteads in the individual concentrations of houses. Thus, we may assume that Bejsebakken was inhabited for 200–300 years by two or three contemporary households situated in different areas. The first phase, beginning somewhere between 2400 and 2200 BC, mainly consisted of two-aisled houses without sunken floors (Sarauw 2006, 63 ff.). From c. 2200 BC most of the houses had sunken floors. The single farms were presumably renewed in the proximity of the old house within the local settlement area. The similarities in the pottery material as reflected by the dump sites within these areas may indicate that the next generation of people belonged to the same ceramic tradition and that the pottery craft was transmitted from one generation to the next. What we then hypothetically may see – for instance, in the area situated west of the two protected burial mounds (Fig. 2) – is a development and/or continuation in pottery style in three or four generations. Similarly, the material of the whole area might well reflect fragments of the parallel and more or less contemporary development in pottery style in at least 3–4 generations and seen in different households at the same site (Fig. 17).

An analogous situation may well be present at Myrhøj, where the three houses can be interpreted as representing three generations

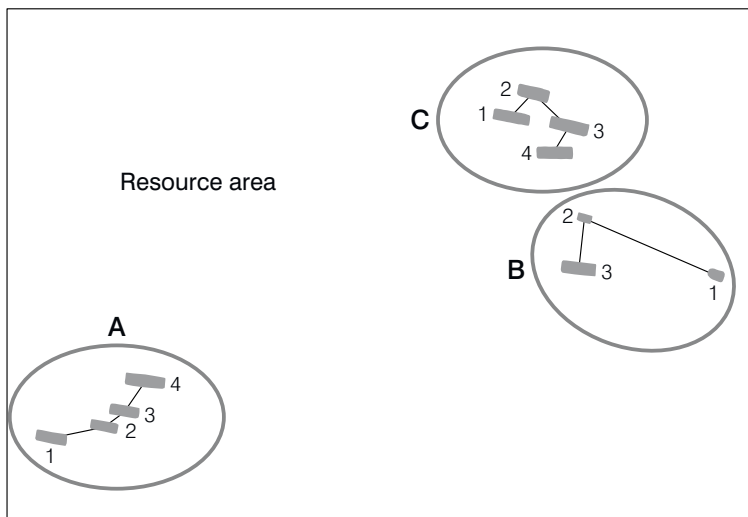


Fig. 17. Bejsebakken. Model illustrating what the settlement pattern might have looked like in the early LN during a period of c. 100 years. Within a large joint resource area used for grazing, obtaining wood and so on, three more or less contemporary farms are situated within independent settlement areas (A–C). The farms were continually renewed (1–4) and in some phases an area may have consisted of more farms, whereas another area could have been empty.

Abb. 17. Bejsebakken. Rekonstruktion des Siedlungsmusters im frühen Spätneolithikum während einer Periode von ca. 100 Jahren.

of houses and thereby of people belonging to the same pottery tradition.¹⁴ Although this difference exists in the distribution of certain types of pots, the three houses clearly belong to the same pottery tradition. This is especially evident in the preference for pots ornamented with rows of horizontal grooves. Furthermore, Bell Beakers found in house GAB had the same decoration motifs as straight-walled beakers found in house EAB, which can hardly be seen as accidental (compare Jensen 1972, figs. 46–48 and 59 and 61). Apparently, the choice of technique for decorating a pot was occasionally connected to a certain degree of conservatism, too (cf. Salanova 2001, 91). Thus, horizontal grooves and line ornaments dominate (ibid. 92), and comb impressions are not used very frequently. The fact that cardium was often used in house D may be seen as a personal preference by one or more potters. Finally, it should be emphasised that in all three houses a high degree of all potsherds were ornamented (c. 37 %, 26 % and 50 % respectively; Jensen 1972, 90).

Nonetheless, the matrimonial patterns stressed above have some interpretative implications regarding the understanding of pottery as craft and the social organisation of production and of society. For instance, we can assume that most pottery was made in households and perhaps mainly by female potters, as is familiar from world-wide ethnographic parallels (cf. Arnold 1985, 101 f.; Murdock/Provost 1973; Rice 1991; Weedman 2006, 272 f.; Wright 1991, 214). We can ask whether the pattern described above implies that the young males traditionally moved in with the wife's family (an uxorilocal pattern of residence)? Or is it possible that the evidence presented above rather reflects a mother-in-law/daughter-in-law learning pattern (cf. Herbich 1987)? Furthermore, the bride and groom may very well have had to live with his or her family for a period before taking over the farm or establishing a new farm. This discussion will be resumed in section 6 since it is highly connected with the dispersal of pottery styles.

Summing up on chapter 3, a huge amount of ornamented potsherds from 17 former houses and other settlement structures at the key residential site of Bejsebakken were analysed and the find context submitted for critical evaluation. The statistical approach showed that horizontal grooves and comb impressions in the shape of horizontal multi-lines were the preferred ways of decorating pots even though many other techniques were used. Comb impressions were generally reserved for fine ware such as Bell Beakers, whereas different kinds of grooves, cordoned rim and so forth often belonged

14 This interpretation contrasts with that of Jensen (1972, 104), who saw houses D and EAB as contemporary.

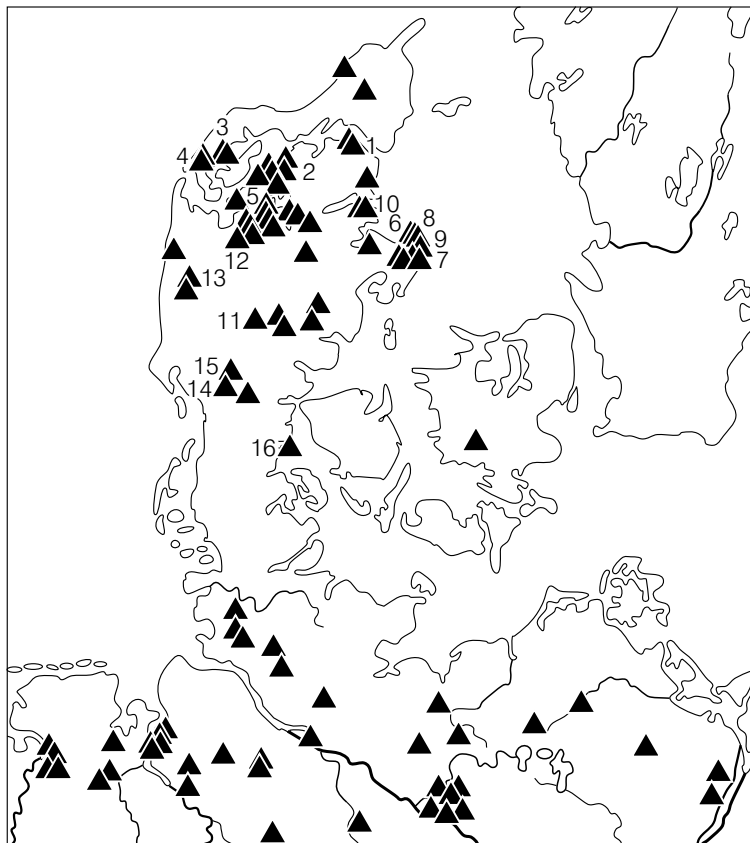


Fig. 18. Distribution of settlement sites with Bell Beaker-like pottery in Denmark (see pp. .. Catalogue A) and distribution of Bell Beakers or potsherds from sites in northern Germany (data after Mertens 2003). The most important sites mentioned in the article are 1 Bejsebakken, 2 Myrhøj, 3 Thy 2758, 4 Lodbjerg Cliff (Mortens Sande, Barrel site, Bodbjerg Ditch), 5 Tasmum, 6 Hemmed Plantation and Church, 7 Diverhøj, 8 Svapkæret, 9 Glæsborg Lyng, 10 Sem Bakker, 11 Enkehøj, 12 Stendis, 13 Hovergårde, 14 Nørre Holsted, 15 Tørsigård, 16 Gammelbygård.

Abb. 18. Glockenbecher-Siedlungen in Dänemark und die Verbreitung von Glockenbecher-Keramik in Norddeutschland.

to the coarse ware. The analysis of the intra-site distribution of techniques and of frequencies of ornamented pottery in the single dump sites gave surprising results that may display a combination of chronological development, social organisation and learning patterns.

4. Expanding the context of distribution: Beaker pottery at other Danish sites and in graves

Expanding the area of research, the distribution of Bell beaker-like pottery on settlement sites is shown in Figure 18. As the figure documents, the sites cluster especially in the coastal areas of the western part of Limfjorden and on Djursland. However, more clusters of sites are also known from the central and southern parts of Jutland in the area halfway between Esbjerg and Kolding. As a consequence, the Danish Bell Beaker phenomenon is no longer to be seen as a strictly northern Jutlandic phenomenon even though a certain predominance does exist (cf. Rasmussen 1990, 35; Jensen 2001, 524; Vandkilde 2001, 338; 2005, 19). Oddly enough, the area between the west coast of Schleswig-Holstein and the southernmost Danish sites, corresponding to a distance of c. 100 km, is totally without Bell Beaker finds (Fig. 18). Similarly, no proper settlement sites are known from the Danish islands. Nonetheless, a possible Maritime Beaker, most likely a stray find, was found at the southern part of Zealand during an excavation of a medieval farmstead (Ebbesen 2006, 85 Fig. 31, 6). Among the pottery found on assumed settlement sites, almost 50 % was from sites with house remains. These were often sunken floor huts, whereas a number of sites only consisted of occupation layers or pits (Table 8; Catalogue A). The latter are illustrated by the extraordinary finds from Nørre Holsted III, situated in the southern part of Jutland, where a pit contained 17 loom weights as well as parts of an almost intact Bell Beaker and a side from another Bell Beak-

Context	%
Houses	48.4
Only pits	9.7
Surface finds	9.7
Culture layer	14.5
Miscellaneous	17.7

Table 8. Distribution of different find contexts within 62 settlement sites (total 1,747).

Tab. 8. Unterschiedliche Fundkontexte in 62 Siedlungen (Anzahl gesamt 1 747).

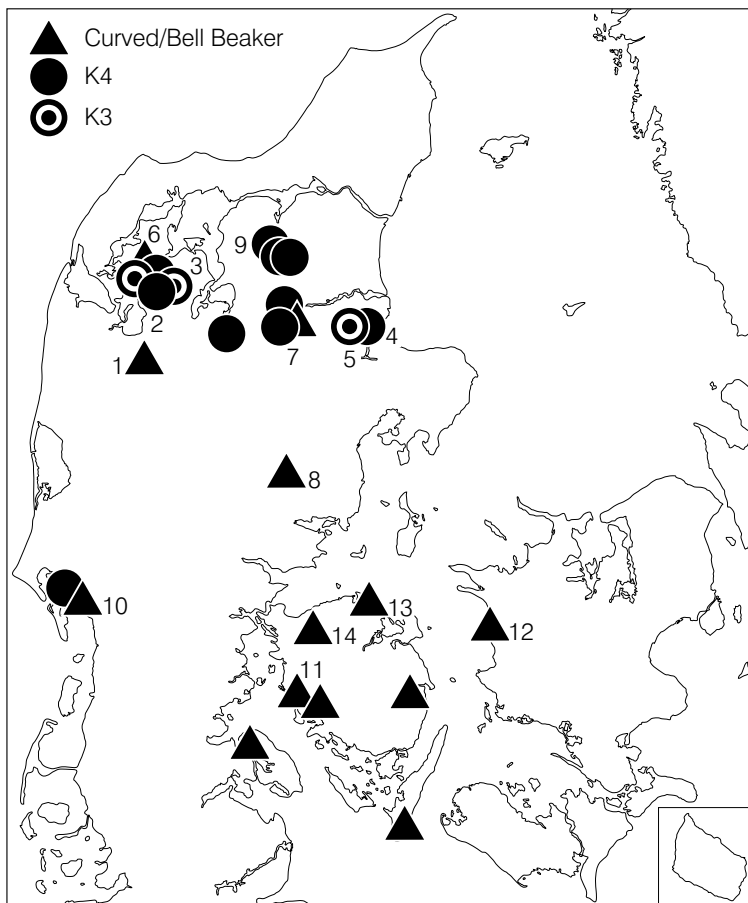


Fig. 19. Distribution of Maritime Beakers and Bell Beakers (Glob's K1 and K2 groups) and straight-walled beakers with Bell Beaker-like ornament (Glob's K3 and K4 groups) found in graves in Denmark (see pp. 50ff. Catalogue B). Sites mentioned in the article are 1 Vandborg, 2 Rødding, 3 Frammerslev, 4 Blenstrup, 5 Blenstrup Mark, 6 Ljøslev, 7 Bigum, 8 Dørup Østergård, 9 Blære, 10 Solbakkegård, 11 Frederiksgave, 12 Kirke Helsing, 13 Bårdesø, 14 Harndrup Møllebakke.

Abb. 19. Maritime Becher, Glockenbecher (Glob K1 und K2) und steilwandige Becher mit Glockenbecher-artiger Verzierung (Glob K3 und K4) in Dänemark.

er (see Fig. 24, 2–3; Rindel 1993, 20f.). At Sem Bakker, a Bell Beaker and potsherds from at least two undecorated beakers were found in another pit (Fig. 24, 6; AUD 1992, no. 275). However, such isolated findings should not be seen as representing special sites. On the contrary, the lack of houses on some sites must be seen as a source-critical problem connected, for instance, with difficulties in separating badly preserved two-aisled houses or the lack of a proper excavation (Sarauw 2006, 46).

Comparing the distribution given by the settlement sites with the distribution of burial sites, a rather strange picture emerges (Fig. 19). Hence, with a few exceptions, straight-walled beakers with Bell Beaker-like ornamentation are concentrated in Himmerland and Mors, whereas the curved beakers of Maritime and developed types concentrate in the coastal areas in the southeast, especially on Funen. In the latter area most of the beakers are found in passage graves reused in LN (see pp. •• Catalogue B), whereas the northern parts of Jutland offer a more mixed picture (cf. Vandkilde 1996, Fig. 286). In this area straight-walled beakers are found in burial mounds, stone cists of the SGC, and flat graves (Catalogue B). In the northern part of Jutland and close to a Bell Beaker settlement, a cremation burial is known – Vandborg – which besides containing the remains of a human being also included two potsherds with Bell Beaker-like ornament (AUD 1993, no. 410). This cremation is just one of several cremations dated to the early LN and somehow connected to the Bell Beaker milieu.¹⁵

Investigating the distribution of the curved beakers with Bell Beaker decoration in burials, one might ask why the distribution clusters rather strongly in the southeast in an area without any known settlement sites instead of following the distribution of settlement pot-

¹⁵ Others are Blære (Fabeck 1986, 62 ff.), Fjallerslev (Simonsen 1978), Stejnildgård (Kunwald 1954, 86 f., Lomborg 1973, 84; Ebbesen 2004), Solbakkegård IV (AUD 1999, no. 611), Rammedige (Ebbesen 2004, 110), Sønderød Nørremark (Lambertsen 1993), and Smørup (Ebbesen 2004, 106).

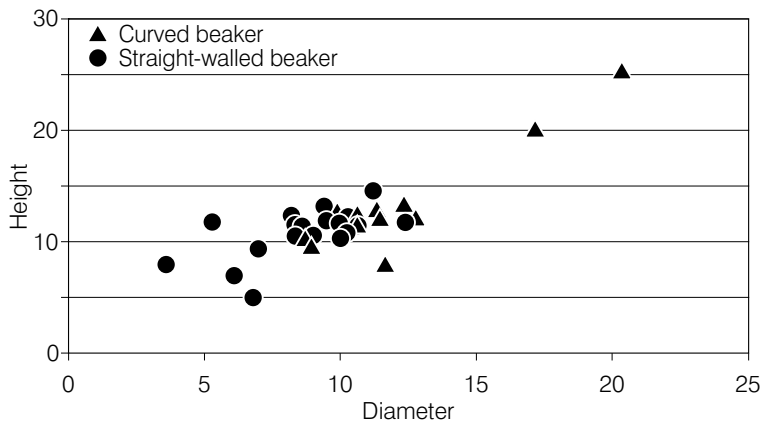


Fig. 20. Scatter diagram illustrating the relationship between heights and rim diameter of straight-walled and curved beakers mentioned in the catalogues.

Abb. 20. Streudiagramm von Gefäßhöhe und Randedurchmesser steilwandiger und geschwungener Becher.

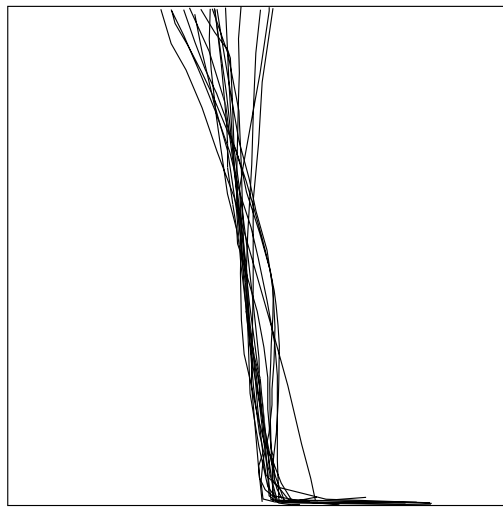


Fig. 21. Profiles of 17 straight-walled beakers from Glob's K3 and K4 group all scaled to fit within a box of 5x5 cm.

Abb. 21. Profildarstellungen von 17 Bechern der Gruppen Glob K3 und K4.

tery as seen in the pattern of distribution of straight-walled beakers. Do the differences display local adoption, interpretation, and maybe 'testing' of foreign customs and pottery types? Or do these or some of these beakers represent an early horizon of influence taking place in the late SGC, as suggested by Lomborg (1975) and others? Before engaging in this discussion we need a more general characterization of the different types of pottery.

The straight-walled beakers are all relatively small drinking cups (Fig. 20) which generally do not differ in size as compared to straight-walled beakers (Hübner 2005, 228 ff.). As seen from Figure 21, the profiles of the beakers vary from straight-sided to out-turned with straight or slightly concave sides. Nonetheless, several barrel-shaped beakers also exist (cf. Fig. 13, 2). Most of both the straight-walled and curved beakers are decorated with comb impressions. However, a few beakers, above all from Myrhøj, are also decorated with cardium or a combination of line ornament and narrow grooves (Jensen 1972, Figs. 57–61). These types of techniques are in accordance with SGC traditions, where especially line ornament and comb impressions are frequently used (cf. Hübner 2005, 170 ff.; Simonsen 1987, 148 ff.). With regard to ornamentation, changes occur from the onset of the early LN when ornamental designs from the continent were adopted but changed or adjusted to fit into already existing traditions and styles. This is evident in a little group of straight-walled beakers decorated with horizontal comb impressions separated by a picture frieze consisting of vertical bands or lines in combination with standing triangles (Glob's K3 group; see Fig. 22). Sometimes this geometrical decoration is also separated by one or two horizontal bands (cf. Fig. 13, 1 or Fig. 22, 1). A more simplified way of making this decoration is made

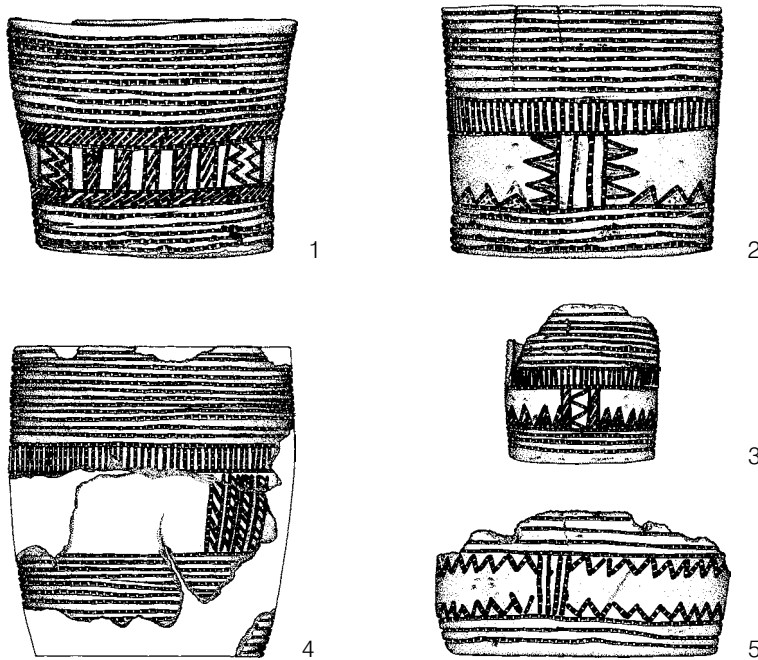


Fig. 22. Straight-walled beakers all found in graves. 1 Frammerslev, 2 A2103 (unknown provenance), 3 Blenstrup Mark, 4 Ljøslev, 5 Blenstrup. Drawn from photos by Jeppe B. Jepsen. Scale c. 1:3.

Abb. 22. Steilwandige Becher aus Gräbern.

up by Glob's K4 group. Here the picture frieze is decorated with three or four vertical lines separated by blank areas. Furthermore, a small group of fully ornamented straight-walled beakers more remotely belong to this group of beakers (Glob's K5 and K6 group; cf. Glob 1944, 87 ff.; 1952, Figs. 452; 453; Vandkilde 2005, 20). The adoption and imitation of foreign pottery traditions in LN I occurred within a context of material continuation from the late SGC. Hence, both fully ornamented and zone-decorated beakers are sporadically seen from period 2 and 3 of the SGC according to Hübner's classification (Hübner 2005, 750 ff.; see also van der Waals 1984, 11 f.).

As mentioned above, the straight-walled beakers with metope ornamentation primarily concentrate in northern Jutland, where they occur especially in burials, but they are also found at the settlement of Bejsebakken. Due to the similarities between the different pots (cf. Fig. 22), it is very likely that some of these beakers were made by the same potter or by affiliated potters. Such local or regional pottery styles are also seen within other areas of the SGC (cf. Hvass 1986; Ebbesen 2006, 267 ff.).

In several cases, the horizontal decorations occur as bunches of lines imitating band decoration – for instance, on the straight-walled beaker from the Rødding burial (Ebbesen 1977, Fig. 9) and a similar one from Bejsebakken (Fig. 10, 2). True band decoration is also seen on straight-walled beakers such as on a beaker from Myrhøj (Jensen 1972, Fig. 57) and on one from the stone cist in Blære (Fabeck 1988, Fig. 13). Finally, it should be pointed out that on a few straight-walled beakers from Myrhøj found in house EAB (Jensen 1972, Figs. 59; 61) and from Thy (Liversage 2003, Fig. 2, 9), the picture frieze is comprised of a broad band of cross-hatched triangles and chevrons. Recalling the two somewhat different straight-walled but similarly decorated beakers from house A173 at Bejsebakken (Figs. 13, 1.2), one might suggest that sometimes a certain degree of uniformity was preferred by the people using or making the pottery within the single settlement.

With regard to the size of the curved beakers or Bell Beakers, they appear as a rather homogeneous group (Fig. 20) except for one of the beakers from Myrhøj (Jensen 1972, Fig. 48), the beaker from Tørsiggård (Kjersgaard 1963–65), and one of the beakers from Nørre Hol-

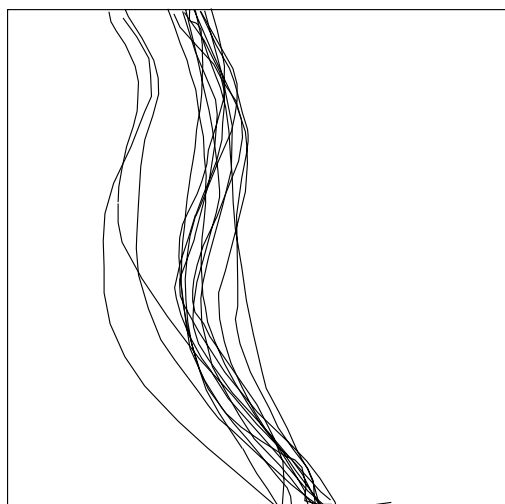


Fig. 23. Profiles of 15 Bell Beakers all scaled to fit within a box of 5x5 cm.

Abb. 23. Profildarstellungen von 15 Glockenbechern.



Fig. 24. Bell Beakers and Bell Beaker-like pottery. 1 Gammelbygård, 2–3 Nørre Holsted, 4 Bårdesø, 5 Harndrup Møllebakke, 6 Sem Bakker, 7 Frederiksgave, 8 Solbakkegård, 9 Ljørslev (after Lomborg 1975), 10 Myrhøj (after Jensen 1972). Drawings (1–5) made by Louise Hilmar and (6–7) by Jeppe B. Jepsen. Scale 1:5.

Abb. 24 Glockenbecher und Glockenbecher-ähnliche Keramik.

sted III (Fig. 24, 2; AUD 1993, no. 437). The height and rim diameter of these beakers are almost twice as big as that of the others. More heterogeneity is seen both as regards the profiles of a selection of pots (Fig. 23) and the pattern designs (cf. Fig. 24). An exception to this is the beakers from Myrhøj, which are characterised by their low and round-bodied shape, often broader than it is high (Jensen 1972, 98f.). This is most likely the preferred shape of a single potter. A similar shape, but with a protruding foot, is seen on the beaker from Stendis (Skov 1982, Fig. 1). Another group of Bell Beakers – for instance, Tør-

siggård, Sem Bakker, and Ljørslev – are characterized by a carinated belly (Fig. 24, 6.9), whereas the two beakers from Nørre Holsted III and the beaker from Solbakkegård IV only have faintly curved profiles (Fig. 24, 8). Also the beakers from Enkehøj¹⁶ and Dørup Østergård differ, the first by its rounded and only slightly curved profile (Møbjerg/Mikkelsen 2005, Fig. 3), and the latter by its broad belly and narrow entrance (Hübner 2005, Fig. 135, a).

The form repertoire of Bell Beakers is further multiplied if we include the material from a Bell Beaker site in Thy consisting of three sunken-floor houses (Thy 2758; Prieto-Martínez, in press). Even though the rather fragmented pottery material consists of only 3,025 sherds representing c. 124 pots, Prieto-Martínez manages to reconstruct 68 pots (ibid. Fig. 7) of which 19 Bell Beakers are classified into three different categories. However, in my opinion these reconstructions and thereby the form repertoire are somewhat optimistic, since in many cases they are based on very few sherds. For example, two Bell Beakers are reconstructed to resemble Spanish or Portuguese cylindrical vessels (Prieto-Martínez, in press Figs. 14; 15 and cf. Kunst 2001, Fig. 1), a pottery type, which does not exist in north-western Europe (cf. Hübner 2005, 280).

Correspondingly, but in contrast to the straight-walled beakers, the pattern design of the Bell Beakers shows a high degree of variation and only some overall resemblance exists between the beakers. This applies to the hatched or cross-hatched horizontal bands framing a broad horizontal picture frieze, which in most cases has a rather individual look. Triangles, rhombs, chevrons and so forth are typically separated into metopes by vertical lines or bands. On some vessels, such as Sem Bakker and Frederiksgave (Fig. 24), the decoration in the broad zone is repeated more or less regularly, whereas on others, such as Kirke Helsing (Ebbesen 2006, Fig. 50), the decoration consists of uniform horizontal bands made of hatched triangles in combination with bands filled with vertical line ornament.

Even though the above-mentioned settlement material is very poorly preserved, fragments of equivalent pattern designs are present on the potsherds found at, for instance, Stendis (Skov 1982, Fig. 5) and Hemmed Plantage (Boas 1993, Fig. 21). Both Diverhøj and Thy 2758 seem to have had pottery with metope ornamentation (Boas 1986, 320; Prieto-Martínez, in press), as well as horizontal bands (Asingh 1987, Fig. 21–22). At both of these sites, excavations also revealed a large curved beaker decorated in a maritime style. This indicates that such a style may have lived longer in the Danish area than in the Netherlands (cf. Lanting/van der Waals 1976, 36 ff.; Hübner 2005, 670 ff.; see also Boas 1995, 73; Thomas 1999, 120). At Diverhøj a piece of charcoal from the same house as the Maritime Beaker was dated to 2200–1975 BC.¹⁷ Furthermore, a Maritime Beaker from Bejsebakken (Fig. 13, 5) was found in the same context as type I daggers. In addition to the already mentioned curved beakers decorated in a maritime style, we know of three more beakers found in a passage grave on Langeland, in a burial mound at Als, and in a gravel pit on Funen (Fig. 24, 5), respectively (Ebbesen 2006, 83). Ebbesen, however, does not see these as maritime Bell Beakers, but as rounded beakers belonging to the late Battle Axe Period of the Danish islands (ibid. 70 f.; 85 footnote 15). Still, the resemblance between these beakers and the Maritime Beaker from Diverhøj is great and justifies such a term.

This may be traced back to the discussion at the beginning of this chapter concerning the distribution of curved Bell Beakers in central Denmark. Do they belong to an early horizon of beakers or are they to be seen as contemporary with the Bell Beaker settlements of northern and central Jutland? The latter might be revealed by fu-

16 Radiocarbon datings suggest that this atypical beaker might be dated to the late LN (pers. commun. Tinna Møbjerg).

17 K-4720, first standard deviation (Asingh 1987, 151; 152 footnote 16).

ture excavations on Funen. The context of these burials does not offer much help due to the lack of closed find circumstances and thereby contemporary artefacts. In Grossenbornholt, Schleswig-Holstein, a Maritime Beaker was found along with a type K1 battle axe (Struve 1955, 173 no. 578; Lanting/van der Waals 1976, Fig. 24). In the Netherlands, beakers of developed types occur along with both type K4 battle axes and Lomborg's type I daggers (Bloemers 1969; van der Waals 1984, 6). In Jutland, the Bell Beaker from the passage grave at Bigum was situated close to Glob's type K4 straight-walled beaker (Lomborg 1975, Fig. 1–2). The dating of this burial has been the subject of some debate due to the fact that both Glob's type K battle axe and several type I daggers were also found inside the chamber, but without any clear stratigraphic evidence (cf. Lomborg 1975; Ebbesen 1977, 61; 1983 footnote 41; Hübner 2005, 211). However, as shown above, the straight-walled beakers from Bejsebakken found along with bifacial flint tools of different kinds clearly place the majority of such pottery in the early LN Bell Beaker-influenced milieu. Additionally, in two old but non-professionally excavated burial finds from Rødding and Års, straight-walled beakers of similar types are said to have been found along with type I bifacial daggers (Ebbesen 1977, 61). As a consequence, if the two vessels in the passage grave at Bigum were deposited together, this dating must also apply to the Bell Beaker. Finally, developed beakers are found at several early LN settlement sites such as Myrhøj, Stendis, and Bejsebakken, which underlines the fact that many of the Bell Beakers should be dated to this period. On the other hand, we cannot exclude the possibility that the Maritime Beakers, as well as some of the developed beakers from the Danish islands such as Kirke Helsing, Frederiksgave, and Baardesø, may be somewhat older than the ones found on early LN settlement sites corresponding to the Late Battle Axe Period or a transition phase (Ebbesen 2006, 80 ff.; Hübner 2005, 210 f.). A similar date may concern the curved beaker from Solbakkegård IV (Fig. 24, 8) that was found in a small group of flat graves, one of which contained classic Bell Beaker equipment in the shape of four conical amber buttons, a flint dagger of the feeding knife type, a strike-a-light, and four pressure-flaked tanged and barbed arrowheads (AUD 1999, no. 611).

Furthermore, an early horizon of beakers on Funen might explain the presence of more wristguards in this and the adjoining area, some of which have the broad eastern form of Sangmeister's early type (Skov 1969/70; Sangmeister 1974; Vandkilde 2005, 21; Ebbesen 2006, 56). However, the lack of clarity is shown by the fact that three wristguards of the eastern form are also known from northern Jutland (Becker 1960, Fig. 1, c; Skov 1969/70, Figs. 1; 4). This might be supplemented by the wristguard from Myrhøj, which has the western form and is the only Danish piece found in a known context (Jensen 1972, Fig. 16). In spite of possible chronological differences, the distribution of wristguards is clearly associated with the distribution of Bell Beaker pottery.

As documented in connection with the beaker from Kirke Helsing, such pots were locally manufactured (Ebbesen 2006, 85), but clearly emulate similar pottery in north-western Europe. It seems that the beakers found on Funen and western Zealand were used in a context similar to the context of use on the continent: the burial. Perhaps the tradition of making such pottery and using it in burials was tested but rapidly rejected and therefore never gained footing in this area. This is further illustrated by the fact that settlement sites like the ones in northern Jutland are totally absent from this area (cf. Skaarup 1985, 379 ff.; Ebbesen 2006, 147).

Using the evidence from the Bell Beaker settlement site of Hovergårde near Ringkøbing and the passage grave at Bigum, Hübner

(2006, 211; 228) argues for the existence of a transition phase between the SGC and the LN with Bell Beaker pottery but without bifacial flint tools. Based on the material found at several sites at Lodbjerg cliff in Thy, Liversage (2003, 45) claims the existence of three typo-chronological groups among the Bell Beaker pottery. However, such a claim has yet to be properly documented and, furthermore, the material from Lodbjerg and in general is probably too slight to provide a proper basis for general chronological conclusions (cf. Hübner 2005, 211; Liversage 1987, 223). A transition phase between the SGC and LN I is very likely, since major changes in material culture and/or ideology do not happen overnight. Nevertheless, the lack of bifacial flint tools such as daggers at Hovergård must be seen as accidental. Furthermore, the presence of both barbed-wire ornamentation and the preform of a pressure-flaked arrowhead seems to indicate a younger dating (Jensen 1984, 67). A future investigation of the flint waste from this site would clarify if bifacial tools were made or not.

To sum up, as shown at the settlement sites, the distribution of Bell Beaker pottery in present-day Denmark is a Jutlandic phenomenon. In burials, the custom of using Bell Beaker pottery never really gained ground. It seems that the society was characterised by a certain degree of conservatism resulting in the favouring of local types of burials and pottery. Additionally, the local pottery – the straight-walled beakers – was only provided with the 'new' Bell Beaker-like decorations to a limited extent. Regarding the curved Bell Beakers, we saw great variation with regard to shape and decoration. Consequently, disregarding the straight-walled beakers and the homogeneous beakers from Myrhøj, it is difficult to interpret the Danish material as reflecting only one local style. However, one should keep in mind that the Bell Beaker period in Jutland may have lasted 300–400 years, which somehow ought to be reflected in the pottery. The matter of the duration of the Bell Beaker phase in Denmark will be further discussed in the next chapter. Besides, future well-preserved settlement finds like Myrhøj may reveal a larger stylistic homogeneity in general as well as within the single sites.

5. Notes on the Bell Beaker chronology in Jutland

Even though recent chronological studies have dealt with the Bell Beaker phenomenon in Denmark (Vandkilde 1996, 166; Vandkilde et al. 1996, 187; Hübner 2005, 667 ff.), a number of new dates, especially from the settlement site of Bejsebakken (Heinemeier 2006), have increased the number of dates markedly.¹⁸ Accordingly, this investigation includes 55 dates mainly on charcoal from 14 different sites distributed in the central and northern parts of Jutland. From these, 45 dates are from settlement sites with Bell Beaker-like pottery and ten from graves including type I daggers and in some cases pressure-flaked arrowheads. The dates from graves are included due to the fact that the distribution of type I daggers and pressure-flaked arrowheads seems to be connected with, and maybe even a precondition for, the introduction of Bell Beaker pottery in Jutland (see below) (cf. Czebreszuk/Szmyt 2001, 465; Saraauw 2007; in press).

As shown from the sum of the probability distribution of all the calibrated dates (Fig. 25), the range of the Bell Beaker phenomenon lies between 2340 and 1930 BC (1. sigma) with a duration of c. 410 years, almost analogous to the supposed duration of the type I daggers (Apel 2001, 251) or LN I (Vandkilde 1996, 166). Hübner (2006, 689) sets the end of the SGC at 2250 BC and supposes that the transition phase lasted at least 100 years. However, such an assumption is not

18 Helle Vandkilde most kindly provided the database used in Vandkilde 1996 and Vandkilde et al. 1996. Jan Heinemeier, AMS ¹⁴C-Dating Centre, University of Aarhus, most kindly supervised the data processing and made Fig. 25. The ¹⁴C-ages were calibrated by the IntCal04 terrestrial calibration curve (Reimer et al. 2004) using OxCal v4.0 (Bronk Ramsey 1995; 2001). A copy of the database is available by emailing the author.

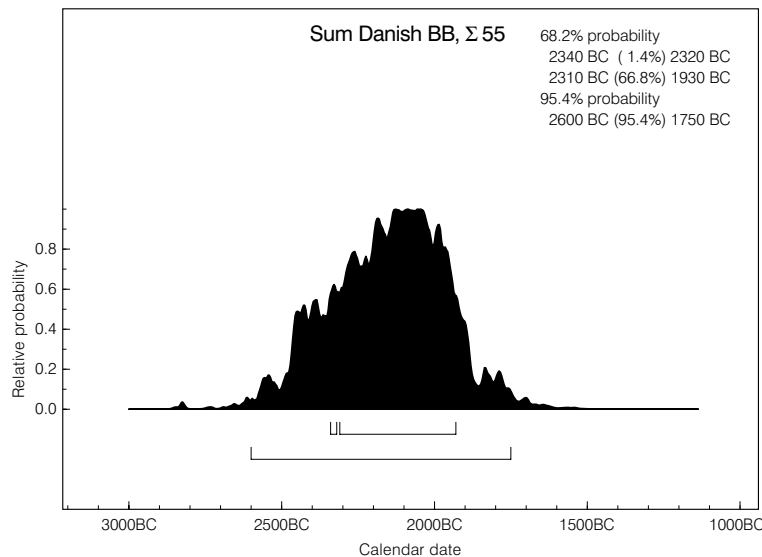


Fig. 25. The sum of probability distributions for the Danish Bell Beaker phenomenon.

Abb. 25 Wahrscheinlichkeitsverteilung des Glockenbecher-Phänomens in Dänemark.

statistically supported because of the few ^{14}C -dates from this period (ibid. Fig. 482; Vandkilde et al. 1996, 186 f.). As an alternative, it is likely that battle axes and type I daggers were only in contemporary use for a generation or so. By then the daggers must have replaced the battle axes as the main weapon and male prestige symbol. Furthermore, in a period of a generation or so the conservative, presumably elder, men, who were the ones carrying these weapons, must have been replaced by new generations who had a desire for new types of weapons and thereby followed the general trend in society (see further discussion in section 6).

Comparing the Danish radiocarbon dates to other areas with Bell Beakers, they begin rather late when compared to the chronology of both central Europe and the Netherlands, where the Bell Beaker period started at about 2500 BC (Müller/Willigen 2001, 73; van der Beek/Fokkens 2001; Drenth/Hogestijn 2001, 310). On the British Isles, the Bell Beakers cover a time span of almost 800 years from 2600–1800 BC according to radiocarbon dates (Kinnes et al. 1991, 39), and evidence suggests the presence of more local groups (cf. Case 1993; 2001; Clarke 1970, 277 ff.; Thomas 1999, 120 f.) but no general chronological division following 'The Dutch model' (Kinnes et al. 1991, 38; Brodie 1998, 45). A new processing of ^{14}C -data from Lanting/van der Waals (1976) and Pape (1979) suggests that the range of Jutlandic Bell Beaker dates coincides with Bell Beakers of developed and Veluwe types from the Netherlands (Hübner 2005, 669 ff.). According to this, the calibration sum of such beakers ranges from 2410 to 1930 BC (68.2 % probability). Similarly, the calibration sum of Mari-time Beakers dates to 2580–2230 BC (Hübner 2005, 670), although the existence of such a phase is denied by some scholars (Drenth/Hogestijn 2001, 312). Thus, the Bell Beaker period of the Netherlands is approximately between c. 2500/2450 and 2000 BC (van der Beek/Fokkens 2001; Drenth/Hogestijn 2001, 310).

In sum, the Danish Bell Beaker horizon, even though starting a bit later, is in accordance with western Europe, whereas the Bell Beaker phenomenon in central and eastern Europe is replaced by the Early Bronze Age and a number of local groups at about 2300–2200 BC (Vandkilde 1996, 165). But how do we explain the idea that influences of western Europe only really gained ground in Jutland from the onset of the Late Neolithic, c. 2350 BC? And is it at all possible to detect a specific source of origin?

6. Bell Beaker culture in Europe – directions of influence

In most regional studies concerning the Bell Beaker phenomenon, much effort has been put into searching for the place of origin or the place from which influence is thought to have come (cf. Brodie 1994, 12 ff.; Mertens 2003 a; Rassmann 2003). In this respect the Danish area is no exception. Both the British Isles, Mecklenburg, and the Veluwe-region etc. have in previous works been seen as key areas in explaining the material culture of Jutland (cf. Ebbesen 2006, 82; Lomborg 1973; Liversage 2003; Vandkilde 2005). This article suggests that the influences were multi-directional and provides an explanatory framework suggesting that the distribution of type I flint daggers was instrumental in attaining knowledge about Bell Beaker pottery and affiliated material culture and habits.

Besides discussing the Danish case, this chapter also offers some considerations on the spread of specific types of material culture and traditions. Why are, for instance, some types of artefacts such as beakers adopted and copied in one region but not in a neighbouring region? And why are only certain artefacts desirable whereas others are totally ignored?

Returning to the question of influence, Lomborg (1975, 30 ff.) believed the Myrhøj pottery to be influenced by the beaker groups of western Europe, in particular the British Isles. This assumption was surely effected by the fact that he saw the Danish flint daggers as imitations of their British counterparts (Lomborg 1973, 91 ff.). In Britain such daggers are known from burials in contexts including developed beakers (ibid.) and therefore the majority of them are contemporary with and in some cases earlier than the Danish ones (Apel 2001, 249 ff.). However, even though the resemblance between British and Danish daggers is great,¹⁹ one must bear in mind that at the time and just before the onset of LN I, many different types of daggers were circulating in north-western Europe including tanged copper flat daggers (ibid.; Vandkilde 1996, 180 f.) as well as both Grand-Pressigny and pseudo Grand-Pressigny daggers (Lanting/van der Waals 1976, 13 ff.; Struve 1955, 130). Thus, in my opinion, and due to the fact that the resemblance between foreign and Danish Bell Beaker pottery is not at all outstanding, it is very difficult to see the Danish daggers as imitations of a specific foreign type (see also Agthe 1989, 62 f.; Brodie 1997, 311; Kühn 1979, 53 ff.; Rassmann 1993, 18 ff.). Furthermore, the presence of some kind of direct connection between, for instance, northern Jutland and eastern England is not supported by other archaeological evidence such as metal, where much of the Danish copper items from this period, for example, seems to be of the Dutch Bell Beaker type probably mined in Brittany (Vandkilde 2005, 25 ff.).

Another point of view is put forward by Vandkilde (1996, 296; 2005, 20). According to her, the Danish metal objects, supplies, and technology originated from north-western Europe, and she sees this as an indication of particularly tight bonds between the Veluwe area at the Lower Rhine and northern Jutland. This certainly seems a very convincing interpretation. However, it is only partly supported by other material culture, notably bifacial flint daggers and Bell Beaker pottery. As to the pottery, and to the fact that Vandkilde (2005, 20) underlines that the resemblance is of a general kind, she calls attention to the angular profile of the curved beakers and their specific ornamental design. Regarding the squat shape of the beakers, especially the ones from Myrhøj, and some of the motifs filling the broad zone, similarities do exist. However, this is on a very general level, which could easily include other regions in Europe,

19 Many of the published British daggers seem somewhat shorter and very broad as compared to the Danish ones (cf. Green et al. 1982, Fig. 5; Grimes 1932, Fig. 1; Lomborg 1973, Fig. 60; Harrison 1980, Figs. 69; 70). Furthermore, England has remarkably few flint daggers (Brodie 2001, Fig. 2; Clarke 1970, 448; Ebbesen 2006, 82).

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too. Hence, Bell Beakers in Veluwe style are typically decorated with contracted zones especially at the neck (cf. van der Waals/Glasbergen 1955, 24 ff.), whereas the Danish ones are usually decorated with zones separated by undecorated ones. Furthermore, also the lower part of the pot extending to the bottom is often heavily decorated, whereas the Danish beakers are typically undecorated (cf. Fig. 24). In addition, the Danish 'style' does not appear as homogeneous as the Veluwe style, but this may be because the material is much smaller than in the Veluwe area, from which a huge number of intact pots have been found (van der Waals 1984, 6). Finally, it should be stressed that many of the Veluwe beakers were constructed with wraps of flexible bands that affected the shape of the pottery (van der Leeuw 1976, 95 ff.). This technique is not known from Danish beakers.

Regarding the flint daggers, Vandkilde (1996, 296) assumes that Danish daggers occur quite frequently in the Veluwe area. However, the amount of Danish daggers that reached the Netherlands might have been quite small, as illustrated by the fact that we only know of 28 type I daggers (Apel 2001, 295; Bloemers 1969; Sarauw, in press). Besides, new investigations of the origin of the type I daggers from the province of Drenthe seem to indicate that they were made of flint from Helgoland, north-western Germany or from the east coast of Schleswig-Holstein (Drenth/Hogestijn 2001, 325).

More scholars have argued for the existence of more eastern influences (cf. Liversage 2003; van der Waals 1984, 13; Czebreszuk 1998; 2003 a, 481; 2003 b). Liversage (2003, 46 f.), for instance, rejects the idea that the Danish Bell Beakers derive from the Veluwe style. Instead he pleads for the existence of strong connections to Mecklenburg, even though he pinpoints a number of differences in both pottery types and style (ibid. 48). Furthermore, Liversage endorses the old interpretation of Shennan and others (cf. Shennan 1976; 1977), claiming that the ties of power or belief among new trans-cultural elites are reflected in the distribution of pottery (ibid. 49). On the subject of the eastern connections, Czebreszuk and others go even further by describing Jutland and the area along the Baltic stretching to the Vistula basin in Poland as the north European Bell Beaker province (Czebreszuk 1998; 2003 a, 481; Czebreszuk/Kryvaltsevich 2003, 107 f.; Czebreszuk/Szmyt 2001; 2003, 285). According to Czebreszuk/Szmyt (2003, 285), this area is tied together by the presence of flint daggers and a concurrent development of stylistic changes in pottery style. Moreover, the Bell Beaker phenomenon in the different areas is said to build on common SGC traditions and is especially known from graves and settlements with house remains (ibid.). This group of scholars holds the Lower Rhineland as the major source of all Bell Beaker traits in the 'Northern Province' (ibid.). Their interpretation partly leans on van der Waals (1984), who also, based especially on the Myrhøj pottery and the distribution of wristguards of Sangmeister's eastern type, sees Jutland as part of a Bell Beaker zone extending from Mecklenburg over Funen to central and northern Jutland (ibid. 13). However, van der Waals (ibid.) also points out that the resemblance between the Danish beakers and Veluwe and developed beakers from the British Isles is great in particular as regards the motifs in the broad metope band.

Yet, in my opinion it is not possible to detect a single area of influence or to separate Jutland as part of a wide-ranging geographic zone within a larger European Bell Beaker community. The resemblance between, for instance, Jutland and parts of Poland is thus on a very general scale and could not be seen as an expression of some kind of shared cultural identity. On the contrary, influences must be seen as multi-directional and perhaps shifting from time to time de-

pending on such factors as regional alliances and demand for certain commodities.

The changing or multiple directions of influence might be illustrated by a view of some of the Danish Bell Beaker pottery. Liversage and van der Waals may indeed be right in emphasising the similarity between the Bell Beakers from Myrhøj and beakers from Mecklenburg with regard to shape and motifs (Kühn 1979, 92; Liversage 2003, 48; van der Waals 1984, 13; Wetzel 1976, Fig. 2, 17).²⁰ Contradictory to this, but illustrating the point made above, is the wrist-guard from Myrhøj, which is of the western type. Other beakers such as Kirke Helsingør or Bårdesø, which have bands of oppositely directed triangles forming undecorated lozenges, may have their closest parallels in the Mediterranean area (cf. Gramsch 1995; Griesser 1995). Furthermore, the bow tied decoration on the beakers from Frederiksgave and Gammelbygård (Fig. 24, 1) is very common on beakers found in central Germany (cf. Behrens 1973, Fig. 63, f; 64, o; Shennan 1978, Fig. 16). Also the beaker from Bigum is said to be a central European or German type (Lomborg 1975, 24). However, none or very few of the Danish or European beakers are believed to be imported (cf. Ebbesen 2006, 79; Brodie 1997, 301; Drenth/Hogestijn 2001, 325; Rehman et al. 1992), which partly explains the lack of similarity between the beakers of different regions in Europe.

Subsequently, we might ask how the diffusion of Bell Beakers took place towards the north. In my opinion and due to chronological, geographical and cultural differences like the ones mentioned above, no general model of explanation such as 'the prestige model' or a migration model can account for the entire Bell Beaker phenomenon (cf. Chapman 1987, 74; Clarke 1976, 461; Thomas 1999, 122 f.). Instead, we should look for local explanations. In the Danish case the explanation might be quite straightforward as illustrated by the diffusion of certain artefacts or motifs on pots in some ethnographic societies (cf. Friedrich 1970; Larick 1986, 276; Gosselain 2000).²¹

Such straightforward diffusion might be illustrated by exchange patterns: During their journeys or when journeymen came to the Jutlandic hamlets, some people may well have been introduced to the new pottery, other types of material culture, and ideology. Later on in the hamlets, the style of the foreign pottery could have been copied and adjusted by a few progressive potters so that it remained in agreement with the local style or tradition. This was probably done either from memory or from the descriptions of others. Being easily borrowed, the diffusion of ornamental designs therefore happens very quickly (Hodder 1982, 190; Salanova 2001, 91; Vander Linden 2004, 44). When it comes to more technical aspects, such as the fashioning or tempering, the situation is different, revealing that some contacts between potters had to exist (Brodie 1997, 307; Gosselain 2000; Salanova 2001, 96). The same applies to the dispersal of metallurgy, where knowledge, know-how and obviously access to raw material are preconditions for setting up an independent production (cf. Vandkilde 1996, 262 ff.).

In the long term such hamlets most likely also adapted other kinds of material culture as well, such as copper flat axes or gold ornaments, new fashions in clothing, and metallurgy, with the result that the people of certain regions detached themselves from old customs and from their surroundings. Such people might definitely have looked successful somehow when compared to others, which would have made their material items attractive. It is well-known from ethnographic parallels how material culture is sometimes used in an active way to manipulate the surroundings – for instance, in northern Kenya where new spear styles were copied from more successful ethnic groups nearby (Larick 1986, 276 ff.). The presence of

20 The Bell Beaker found in a grave at Solbakkegård (Fig. 24, 8) also has parallels in the east (cf. Wetzel 1976, Abb. 1, 1). Also its similarity to the beakers of Glob's type D2, which has an eastern distribution, is great (Glob 1944, Fig. 40, 2).

21 However, despite similarities, such explanations should not be confused with old theories like the 'information exchange theory' (Wiessner 1983; Wobst 1977) or the 'social interaction theory' (cf. Longacre 1970).

new types of material culture in the Jutish hamlets might therefore have resulted in other groups of people or lineages also wanting to adapt the new items or to get their share of the exchange. As a consequence, more parallel developments may have taken place, resulting in the fast distribution and diversity of Bell Beakers. In many cases new types of pottery could also have been distributed in regional areas such as northern Jutland through lineage connections and other kinds of social or religious activities where people within the community gathered. We must therefore assume that many local potters never saw a 'genuine' foreign Bell Beaker or were aware of the wide distribution of such beakers. Instead, in all likelihood many local potters copied the shape and style of the beaker from other locally made beakers, which occasionally resulted in rather odd-looking vessels like the one from Ljøslev (Fig. 24,9). In other cases, as evidenced by ethnographic parallels where the dominating production is in the household, households often received pottery made by others as a result of an ad hoc exchange or gift giving within the social group or among kin (Costin 2000, 397 with references).

As mentioned above, also female potters from neighbouring communities, or from more distant areas, may have moved to new areas now and then in connection with arranged marriages (Brodie 1997, 309 ff.; 2001, 492 ff.). The fact that small-scale population movements, maybe especially of women, actually took place in the Late Neolithic/Early Bronze Age is in some cases proven by inter alia strontium isotope analyses on human skeletons (Budziszewski et al. 2003; Fitzpatrick 2003; Makarowicz 2003; Price et al. 1998; 2004). Furthermore, the presence of Veluwe beakers in the Moravian cemetery of Šlapanice or beakers of the Bohemian type found in Veluwe might also indicate movement of either people or pots (van der Waals/Glasbergen 1955, 36; Butler/van der Waals 1966, 100; see also Salanova 2001, 94).

The question is, then, whether such women were allowed to make pottery according to their own tradition or if they had to conform in their married communities as seen in some ethnographic societies (cf. Salanova 1998, 4; Herbich 1987, 200; Hodder 1982, 43). One must assume that if many foreign women moved to Jutland through marriage and continued to make pottery in their domestic style, this would in some way be observable on the pottery. So foreign people probably had to conform somehow, leaving room, however, for some personal expression. As mentioned above, such expressions mixing the local style with the new potter's style might be seen on several pots, where the resemblance between Danish and foreign beakers is great (cf. Brodie 2001, 494).

A precondition for the model outlined above is the presence of some kind of interaction network like, for instance, a full-grown exchange system on a European scale. That far-reaching networks of exchange actually existed from the onset of LN I is illustrated by the distribution of lanceolate shaped flint daggers (Lomborg's type I; Apel 2000; 2001; 2004; Sarauw, in press). Such daggers, mainly produced in northern Jutland due in part to the presence of primary flint resources, entered the exchange networks as commodities and were especially distributed in Norway and western Sweden, but also in regions towards the south (ibid.). Although interaction networks existed prior to LN I (Becker 1953), the exchange of daggers and the ensuing many contacts with foreigners and their cultures might have triggered the production of Bell Beaker-like pottery and other affiliated cultural habits such as knowledge of metallurgy.

As we have seen, people in northern Jutland became aware of new types of objects and customs on the continent and found some

of them desirable. These contacts were hardly organised by a few people representing the entire region of northern Jutland. On the contrary, and in accordance with the settlement structure (cf. Johansen et al. 2004, 36; Sarauw 2006, 63 ff.), contacts were most likely established by people living in smaller territorial groups organised according to lineage and residence. Lineage must therefore have been the most important social institution and an instrumental aspect in the constitution of social and communal identities (cf. Eriksen 2001, 93).

Furthermore, as indicated by the dagger exchange over wide distances and across seas, some people were very experienced long-distance travellers (Solberg 1994; Østmo 2005), and in general people must have been accustomed to travellers in the shape of craftsmen, traders and the like offering their goods or services. Travelling and trade were thus an integrated part of society resulting in a constant flow of cultural influences and quick dispersal of certain items and traits. Contacts were presumably multi-faceted and organised by people living in different local areas and/or by people in the reception areas. One could imagine that direct contacts by sea existed along the North Sea coast both between northern Jutland and the Lower Rhine-area or north-western Germany (cf. Hinrichsen 2006, 274) securing supplies of raw material for an independent metal production (Vandkilde 1996, 190). Moreover, direct contacts between, for instance, Funen and Djursland and Mecklenburg might also have existed.

Furthermore, as evidenced by the distribution of Bell Beaker pottery, contacts were also made by land. The fact that several sites with Bell Beaker-like pottery resembling the Danish sites are known from Schleswig-Holstein or adjoining areas like Heidmoor or Hamburg-Boberg underlines this point of view (cf. Mertens 2003 a; 2003 b; Kühn 1979, 24 f.; 91).

The dispersal of certain customs and material items of great symbolic value may be comparable and interpretative within a theoretical framework emanating from traditions and symbolism in recent history. This is the idea introduced by Hobsbawm (1983), who speaks of two types of 'invented' traditions. The first kind comprises those which are "actually invented, constructed and formally instituted", whereas the second type consists of "those emerging in a less easily traceable manner within a brief and dateable period ... and establish themselves with great rapidity" (ibid. 1).

The latter kind of invented traditions might be a very precise characterisation of the dispersal of the Bell Beaker phenomenon at least in some areas, whereas the first might encompass certain burial customs in core Bell Beaker areas like central Europe, where the dead are buried according to strict gender-specific rules. Inspired by Hobsbawm, we might say that in the Bell Beaker society such traditions, understood as ritual or symbolic actions that followed strict rules, were repeated in order to strengthen certain values and norms of society and to establish continuity with the past. According to Hobsbawm, new traditions are in particular expected to be invented in times of rapid societal change, when the old invented traditions no longer serve the needs of the society and new ones are therefore sought for (Hobsbawm 1983, 4 f.).

The interpretative framework of Hobsbawm does not, however, explain why particular artefacts and customs are only adopted and copied in some areas, whereas in others they are totally ignored. This point of view might be illustrated comparing flint daggers and Bell Beakers found in northern Jutland, Norway and the Veluwe area. In Norway we know of approximately 600 type I daggers of Jutlandic

origin, whereas in the Netherlands and Jutland the corresponding numbers are 28 and 1511 respectively (Apel 2001, 295). Looking at Bell Beakers, we know of more than 100 Veluwe beakers from the Veluwe area (van der Waals/Glasbergen 1955, 26f.; van der Waals 1984, 6), whereas the number of beakers in Denmark is much smaller. In Norway Bell Beakers are almost non-existent (Myhre 1979; Østmo 2005, 61 ff.). Nevertheless, the intensive contacts between Denmark and Norway, as well as the fact that a Bell Beaker possibly of continental origin actually occurs in Jæren in south-western Norway (Rosenquist/Rosenquist 1977, 301; Skjølsvold 1977, 104f.), renders probable that people here were aware of the Bell Beaker pottery, but deliberately chose to ignore it. Such pottery either did not have any appeal or did not fit into the local traditions and practices. Furthermore, the presence of several barbed and tanged flint arrowheads in Norway (Myhre 1979; Østmo 2005, Fig. 5) actually demonstrates that continental influences did reach this area, most likely along with the Jutlandic daggers found in the same areas.²² Evidently, new types of weapons were more easily incorporated into the existing traditions and norms.

In Denmark the foreign pottery was adopted and adapted into the local traditions. In general, the context of deposition was, however, different when compared to north-western Europe, and as a result the original underlying meaning might have changed, as illustrated in section 2. Many more material items or customs of foreign origin were copied and tested, but only some became popular and in time turned into local traditions. An example of this is the central European tradition of burying males with a copper dagger, Bell Beaker, and archery gear in flat grave cemeteries (cf. Czebreszuk 2003 a). In the Danish version many different types of graves are used and often the deceased was buried with a flint dagger and arrowheads (Sarauw 2007).

In conclusion, we might suppose that even though some degree of homogeneity in the mid and late 3rd millennium BC existed and covered large areas of Europe, it was primarily of a very general and material kind. It was restricted to a few material items and may have included the worship of some kind of male warrior ideal. Hence, no ideological union existed, and the meaning of Bell Beakers might, as suggested in section 2, have been totally different in the different areas of distribution. People of northern Jutland probably did not feel any cohesion or social identity with people elsewhere in Europe or Denmark apart from areas where tight matrimonial connections existed. Furthermore, people generally did not have any idea about the wide extension of the 'Bell Beaker phenomenon' (Barrett 1994, 97). So, following Thomas (1999, 122) we might say that the dispersal of the Beaker phenomenon is to be seen as caused by "innumerable exchanges and interactions between different communities across a huge geographical zone".

7. Conclusion: Bell Beaker Culture in Denmark – shared identities or a remote outpost?

As claimed in the introduction, this paper has explored the Danish Bell Beaker phenomenon, focusing especially on the Bell Beaker-like pottery of c. 2350–1950 BC. The meaning of the pottery has in particular been at the centre of attention. Was the symbolic meaning the same in the different areas of distribution and were the beakers somehow attached to the display of social identities in the field of rank, gender, group affiliation and so forth? One of the conclusions

22 The barbed and tanged arrowheads and type 1 daggers are indirectly connected through a cremation burial, Solbakkegård, where among other things four arrowheads were found along with a flint dagger of the feeding knife type (see above), and the dagger hoard found on the island of Karmøy in south-western Norway (Sarauw, in press). Among other things, this dagger hoard contained 25 type I daggers and two feeding-knife daggers. However, it should be emphasised that barbed and tanged arrowheads do not occur at Danish Bell Beaker sites, where arrowheads are typically barbed (cf. Boas 1993, 132; Jensen 1972, 88; Skov 1982, 40).

was that the symbolic meaning was not the same due to the wide area of distribution among populations that may have been culturally unaffiliated as indicated by differences in context, social organisation, environmental factors and the like. Bell Beakers were probably adopted by different groups of people for different, or in some cases the same, reasons. Similarly, lots of people all over Europe chose to ignore the Bell Beakers. Apparently, they did not have an appeal or fit into the existing local material culture. However, in some regions, such as the British Isles, the beakers were clearly used to display gender and age. In spite of the fact that Bell Beakers predominated in burials in many of the neighbouring beaker 'areas', this was not the case in Jutland, where the Bell Beakers were closely connected with domestic life. Here Bell Beakers may have been associated with an unconscious display of communal and personal identities. However, and taking the interpretation to the extreme, the understanding or the meaning of pottery was not necessarily the same, since meaning depends on the context and on the person interpreting the signals. For example, a person from outside a group may get different associations when presented with a Bell Beaker than persons within the group. For persons within the group it may convey a whole range of intimate knowledge associated with self-perception or concrete action, whereas an outsider might just see it as an exotic drinking beaker belonging to group X. Additionally, pottery may also confer different meaning to people within the group, such as to males and other female potters.

The designs on Danish Bell Beakers reveal huge diversity. Nonetheless, when more beakers are present in the same context the opposite seems to be the case. This applies to for example the two Bell Beakers from Nørre Holsted (Fig. 24), the Bell Beakers and some of the straight-walled beakers from Myrhøj, and the two straight-walled beakers from house A173 at Bejsebakken (Fig. 13, 1–2). Furthermore, the analyses of the intra-site distribution of techniques at Bejsebakken indicated that the choice of technique was often connected with the physical location of the dump site. This leads to the suggestion that the distribution was linked to specific potters or to more potters belonging to the same tradition. Consequently, the small concentrations of houses may represent contemporary units using related stylistic expressions or, and perhaps more likely, more generations of potters partly following the same tradition. Based on ethnographic models it was suggested that the learning patterns were connected with the household of perhaps extended families such as mother/daughter or mother-in-law/daughter-in-law. Such a learning pattern relies upon the social organisation, where we must assume that whether or not kinship was organised according to matrilineal, patrilineal, bilateral or other principles, the lineage or the residence group must have been the most important social institution providing safety and identity (Eriksen 2001, 93).

One could easily imagine a society consisting of different segmentary autonomous groups organised according to kinship and residence, i.e. a non-hierarchical decentralised system without a common leader (cf. Sahlins 1968, 49ff.). Such a society may have been organised as approximately equal families settled in individual households situated in small hamlets or settlement units tied together in working cooperatives or partnerships encompassing, for example, common grazing, flint extraction, exchange, and house building.

In times of peace the individual households may have acted as independent units, but in case of strife or other problems, strategic marriages and so forth, the units may have united as larger cooperative groups with a provisional leader (Sahlins 1968, 49ff.). This may

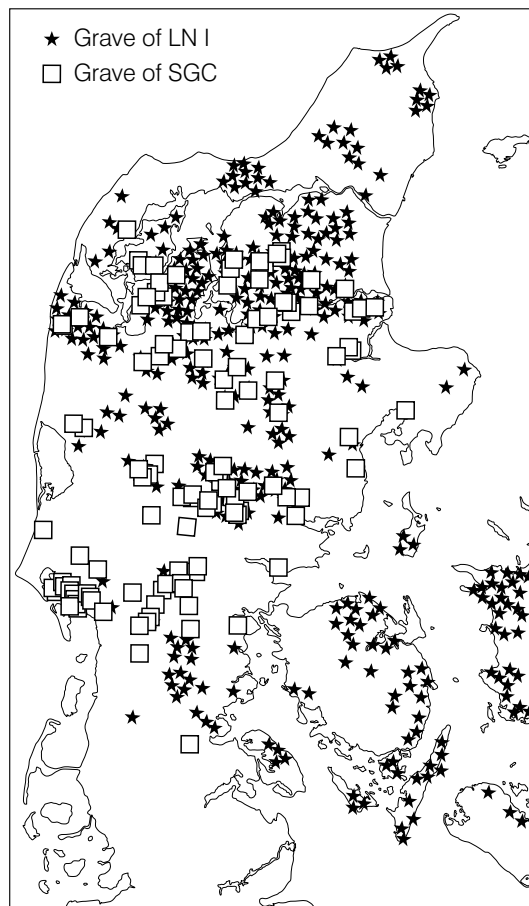


Fig. 26. Distribution of graves dated to LN I and the late SGC (Hübner's phase 3 b). Data after Vandkilde 1996, Fig. 286; Hübner 2005, Fig. 476. Compare with Fig. 18.

Abb. 26. Die Verbreitung von Gräbern des Spätneolithikums I und der späten Einzelgrabkultur (Hübner Phase 3 b).

tally well with the picture given by the settlement pattern described above. People were living in dispersed but not isolated hamlets, and most likely the residents had a certain territorial right to the land and thereby to fixed pastures. Such a right might have been connected with the geographical distribution of graves in LN I (Vandkilde 1996, Fig. 286), but also with the fact that some settlement sites such as Bejsebakken display a continuity that may have lasted 200 years or more (Sarauw 2006, 64). Regarding northern Jutland, especially the distribution of megalithic tombs of the Funnel Beaker Culture, cist graves of the SGC – both reused in the LN – and earthen graves in barrows are significant and could correspond to territorial areas of certain groups of people. Even though these groups shared aspects of material culture – for example, Bell Beakers, flint daggers, and building traditions – the distribution of Bell Beakers does not necessarily match up to groups of people sharing social identities, only on a very general level connected with, for instance, gender, warriorhood and the like. On the contrary, Jutland might have been inhabited by several competitive groups that may have copied each other's material culture. Such groups were perhaps loosely connected through marriages and exchange networks. The possibility that the society may have been decentralised without a common leader does not exclude that some ranking might have taken place and that some families were more influential than others (cf. Sarauw 2007; Vandkilde 1996, 280 ff.).

With regard to the emergence of the Bell Beaker phenomenon as seen from a Danish perspective, it does not mark the arrival of huge crowds of people or 'population density variation' – i.e. the migration of people from densely to sparsely populated areas (cf. Shenan 1993, 141 ff.). However, the continuous arrival of a few individuals through marriage, the movement of surplus metal workers

and so on very likely occurred as pointed out above. Thus, the Bell Beaker phenomenon primarily builds on the same population as in the SGC (Fig. 26) and also on material culture, as demonstrated by some of the Thy sites, where occupation phases of the SGC are succeeded by Bell Beaker sequences (Liversage 1987; Liversage/Robinson 1992/93, 44). Besides, changes in material culture and some sort of standardization covering large areas of Europe at approximately the same time is not a new phenomenon in the Neolithic – on the contrary, it is rather the norm and part of a repetitive cycle taking place almost every 400–500 years. In addition to the Bell Beaker phenomenon, such abrupt changes covering large areas are for example known from the Funnel Beaker Culture and the Corded Ware Culture. Some inventions such as daggers, pressure-flaked arrowheads, battle axes, and megalithic tombs, i.e. particularly inventions connected with warfare, prestige or ideology spread fast and over vast areas. On top of this come the different customs that are difficult to trace and document archaeologically. Such diffusion is not just connected with the Neolithic or with the Bell Beaker phenomenon, but has happened throughout prehistory and is still an ongoing phenomenon (cf. Hobsbawm 1983).

Returning to the distribution of the SGC as illustrated on Figure 26, graves of the SGC are not, unlike the LN I graves, heavily represented in the northernmost areas that border on the eastern Limfjord. Here, however, the distribution map gives a false impression as it is based on Hübner's classification, which primarily uses closed burial finds (Hübner 2005, 12). Many of the LN burials in this area are actually reused stone cists of the SGC and megalithic tombs, some of which were also used in SGC (Ebbesen 1978, 113 ff.; 1983; Vandkilde 1996, Fig. 286). Furthermore, as indicated above, the material culture and customs of the Bell Beaker phenomenon are clearly rooted in and in many cases a direct continuation of SGC or Corded Ware material culture and customs not only in Jutland but also in central and Eastern Europe (Shennan 1986, 143; 1993, 143). Nevertheless, and as mentioned above, changes do occur especially in central Europe as to the orientation of the dead, implying that major changes in religious perception may have taken place (cf. Kruťová 2003). In the Danish area such radical changes are not seen. However, in LN the dead person is normally disposed on its back in an extended position, whereas in the SGC a contracted position was used (cf. Jensen 2001, 527; Vandkilde 2005, 14). Furthermore, in the Danish area similarities between the two periods are especially shown by the burial customs, where we find many burials of the same type (cf. Hansen/Rostholm 1993). Thus, both new burial mounds and stone cists are constructed. Moreover, LN graves are often built into already existing mounds of the SGC and supplied with a new mound phase (cf. Sarauw 2007). What is more, in both periods we see a number of both stone and wooden-built burial cists, often in association with ring ditches or postholes placed more or less systematically (cf. Asingh 1987; Ethelberg 1982; Hansen 1993/94; Hansen/Rostholm 1993, 118 ff.; Jørgensen 1984).

Even though the number of battle axes decreased in male graves in the late SGC as compared to earlier times (Hübner 2005, 605), the grave goods are still related to gender. The latter might also apply to LN I, where focus is on the male sphere displaying many of them as some kind of idealised warriors, but also suggesting the dominant position of males in the social organisation. The rather anonymous display of women in LN I (cf. Vandkilde 1996, 279f.) in burials does not necessarily imply that the positions of women had changed as compared to the SGC. Rather the anonymity should be seen in relation to the changes in the general use of burial gifts and the fact that

typical female attributes such as amber beads and bone pins are not as characteristic as the main male attribute of the period, the dagger. Burial gifts and partly sacrificial practice in SGC and the Early Bronze Age imply that women had a prominent role in the social organisation (cf. Asingh/Rasmussen 1990; Ebbesen 2006, 221 ff.), and it seems likely that the same was true in LN, the period in between. This might favour a bilateral decent structure in the model suggested above, perhaps combined with patrilocal residence (Sahlins 1968, 55).

Regarding settlement structure, the tradition of building sunken-floor huts seems to be rooted in the SGC (Hansen 1986; Jensen 1972, 107; Hvass 1977; Simonsen 1987, 141). However, the fact that very few sites of this type are known from the SGC as compared to LN I implies that the settlement structure becomes more permanent in LN I. Such a major structural change in the settlement pattern may also have had consequences somehow on the subsistence economy. Hence, does the presence of sieve vessels in the late SGC (Hvass 1985, 96 plate 156, c) and especially in the early LN (Boas 1993, 132; Ebbesen 1977) indicate that the economy is slowly changing from pure meat production to a combined production of meat and dairy products (cf. Rowley-Conwy 1985, 85)? Furthermore, the presence of loom weights combined with a number of buttons and pins from the onset of LN I might indicate that woollen clothes were now becoming the preferred raw material for clothes in northern Jutland as well as on the continent (cf. Ebbesen 1995, 248 ff.). This is illustrated by the type I dagger with a preserved wooden handle and leather sheath found in a bog at Wiepenkarthen, northern Germany (Jørgensen 1992, 51). In connection with the wooden handle, a fragment of woven textile was found originally consisting of both wool and vegetable fibres (ibid. 114 ff.). That the weaving techniques might have been rather advanced is illustrated by the anthropomorphic stone slabs from Petit-Chasseur, Switzerland, dated at the Bell Beaker period (Gallay 1976; Pauli 1984, 114). On these we see, besides weaponry, woven textiles patterned with triangles, lozenges and so forth that correspond with some of the designs on Bell Beakers (ibid.). In the long run the use of wool must have had consequences for sheep-breeding even though this is not traceable until the Bronze Age when we find large quantities of sheep bones on settlement sites, amounting to about 36 % of all bones (Kristiansen 1988, 86).

Finally, and as stressed above, I would like to draw attention to the pottery tradition of the Jutish Bell Beaker group, which is a continuation of shapes and decoration techniques of the late SGC. This is particularly clear in the straight-walled beakers with Bell Beaker-like decoration (Fig. 22). Such beakers unite the new decorations with traditions of the past in a unique type of pottery that is characteristic of the northern Jutlandic group. However, also curved beakers and undecorated bowls refer to an old tradition (Hübner 2005, 687). The same applies to the common ware decorated with grooves and finger grooves which are known prior to LN I (ibid.). Regarding the Bell Beakers and the style in general, one of the main conclusions of this article was the fact that they could not be traced to a specific area of origin due to noteworthy stylistic differences. Instead, the influences were interpreted as multi-directional depending on prevailing but not permanent networks of interaction and exchange. Such changing connections were also seen within the Danish area by the five Bell Beakers from Funen and the adjoining areas (Fig. 19).

This leads to the question why Bell Beaker pottery and limited affiliated material culture was adopted and imitated and why areas in northern and central Jutland in particular were initiators as compared to the rest of Denmark. As argued in other works and by other scholars, the production and distribution of type I daggers were

instrumental to the implementation of Bell Beaker pottery (Sarauw 2007; in press; Vandkilde 2005, 32 ff.). Thus, judging by the pottery, already in the Late SGC connections between Jutland and the continent existed (Hübner 2005, 750 f.). From the onset of LN I, these contacts were reinforced due to the dagger trade, with the area around Limfjorden acting as a production centre due to the primary flint resources. Moreover, this centre was a link to the northernmost Scandinavian areas, which may have provided fur and other attractive raw materials (cf. Solberg 1994; Østmo 2005), and the European continent where people were in control of raw materials of copper and gold that slowly became more and more popular. As compared to the rest of Bell Beaker Europe, Jutland was a remote outpost, and cultural identities were only shared at a very superficial level.

8. Catalogues

8.1 Catalogue A. Settlement sites with Bell Beaker pottery

The sites are listed according to the 'old' Danish counties (Ørsnes/Voss 1985). The number in brackets refers to the Danish national registry of relics of the past (sb. no. = sognebeskrivelsen, www.dkconline.dk) or the number in a local museum (e.g. SMS = Skive; FHM = Forhistorisk Museum Moesgård) or The National Museum (NM A/NM B). AUD is an abbreviation for the annual publication "Arkæologiske udgravninger i Danmark" (Rigsantikvarens Arkæologiske Sekretariat (1984–2001), which describes new excavations in Denmark. The versions from 1984–2005 are available online (<http://www.kuas.dk/tjenester/publikationer/emneopdelt/arkaeologi/aud/index.jsp>).

Sorø county

1. Borup Riis, Gunderslev Parish (sb. no. 23). Maritime beaker found during excavation of a medieval farmstead (Ebbesen 2006, 85 footnote 15).

Hjørring county

2. Søndergård, Vrejlev Parish (sb. no. 158). Two-aisled house and house pit (AUD 1999, no. 284).
3. Rubjerg Knude, Rubjerg Parish (sb. no. 4). Surface collection (pers. commun. David Liversage).

Thisted county

4. Kildevang, Harring Parish (private collection). Surface finds (Ebbesen 1977).
5. Bjergene II, Sønderhå Parish (sb. no. 262/Thy 2756). One or two sunken floor houses (AUD 1992, no. 186; Earle et al. 1998; Prieto-Martínez in press; Thorpe 2000).
6. Bjergene VI, Hørsted Parish (sb. no. 17/Thy 2758). Two sunken floor houses found under a barrow (Andersen 1996/97, 8; AUD 1991, no. 188; 1992, no. 187; Earle et al. 1998; Liversage 2003; Prieto-Martínez in press; Thorpe 2000).
7. Bjergene IV, Sønderhå Parish (sb. no. 261/Thy 2757). Settlement site situated next to long barrow (Andersen 1996/97, 9; Prieto-Martínez in press).
8. Mortens Sande 1, Lodbjerg Parish (sb. no. 29). Culture layer (Liversage 1989, 2003).
9. Morten Sande 2, Lodbjerg Parish (sb. no. 38). Structures interpreted as shelters from the Single Grave Culture. A few potsherds found in the upper layer are ornamented with typical Bell Beaker ornamentation (AUD 1985, no. 136; Liversage 1987; 1989).
10. Øster Aalum, Agger Parish (sb. no. 8A). Disturbed settlement site (Liversage 1989; Liversage/Robinson 1992/93).
11. Barrel Site, Lodbjerg Parish (sb. no. 37). Occupation layer (Liversage 1989, 2003; Liversage/Hirsch 1987; Liversage/Singh 1985).
12. Bodbjerg Ditch, Lodbjerg Parish (sb. no. 401104a–5). Occupation layer (Liversage 1989; Liversage/Robinson 1992/93).

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Aalborg county

13. Myrhøj, Strandby Parish (sb. no. 105). Three houses with sunken floors (Jensen 1972).
14. Solbjerg III, Solbjerg Parish (sb. no. 104). Assumed sunken floor hut (Jensen 1972; Johansen 1986).
15. Rønbjerg Strandvolde, Ranum Parish (sb. no. 63). Coastal embankment (Skousen 1997/98).
16. Bejsebakken, Hasseris Parish (sb. no. 51). Sunken floor huts and two-aisled houses (Sarauw 2006; in press).
17. Kildalsgård, Sønder Tranders Parish (sb. no. 45). Stray finds from culture layer.

Viborg county

18. Tastum, Kobberup Parish (sb. no. 264). House with sunken floor (Simonsen 1983).
19. Fur, Fur Parish (sb. no. 120). Culture layer and post holes (Jensen 1972; 1986, 173).
20. Sødal Skov, Rødding Parish (private collection). Settlement debitage most likely transported to the site in connection with the construction of a Late Neolithic barrow (Ebbesen 1977).
21. Granlygård, Skive landsogn Parish (sb. no. 139). Pits and sunken floor houses (AUD 1994, no. 352).
22. Glattrup IV, Dommerby Parish (sb. no. 86). Houses with sunken floors (AUD 1999, no. 359).
23. Glattrup V, Dommerby Parish (sb. no. 86). Four two-aisled houses (AUD 2004, no. 289).
24. Vindelsbæk, Elsborg Parish (sb. no. 31). House with sunken floor (AUD 2000, no. 352).
25. Tromgade, Thise Parish (sb. no. 65). Pits and houses with sunken floors (AUD 2001, no. 387).
26. Lindum, Selde Parish (in private collection). Culture layer (Ebbesen 1977; 1983 footnote 41).
27. Skrubben 10, Lynderup Parish (sb. no. 72). At least seven houses with sunken floors, pits etc. (Nielsen 2004).
28. Kås Hovedgård II, Lihme Parish (sb. no. 162). Potsherd found in survey trench close to a Late Neolithic house (AUD 2002, no. 341).
29. Nordentofte, Skals, Skals Parish (sb. no. 104). Two two-aisled houses, one with a sunken floor (AUD 2003, no. 326).
30. Tinghøj Huse, Smøllerup Parish (sb. no. 57). Tree two-aisled houses (AUD 2004, no. 295).
31. Hellegård, Sæby Parish (sb. no. 48). One or two sunken floor houses (pers. commun. John Simonsen).
32. Marienlyst Strand, Resen Parish (sb. no. 72). Pit and culture layer (pers. commun. John Simonsen).

Randers county

33. Hemmed Plantage, hus III, Hemmed Parish (sb. no. 161). House with sunken floor (Boas 1986; 1991; 1993).
34. Hemmed Church (sb. no. 146). Culture layers/house VI (Boas 1993, 126f.).
35. Diverhøj, Homå Parish (sb. no. 18). Three two-aisled houses situated under a barrow (Asingh 1987).
36. Svapkæret, Rimsø Parish (sb. no. 66). House situated under barrow (Boas 1986).
37. Glæsborg Lyng, Glæsborg Parish (sb. no. 130). Pit and culture layer (Boas 1986).
38. Pismølle, Lyngby Parish (sb. no. 104). Large depression (Boas 1986).
39. Hasnæshøj, Enslev Parish (sb. no. 44). Culture layer (pers. commun. Niels Axel Boas).
40. Lindegårdens Mark, Sem Parish (sb. no. 19). Two-aisled house and pits under a barrow (AUD 1984; 1985 no. 255).
41. Ballegård, Skarresø Parish (sb. no. 9). Deposition of Late Neolithic debitage in an Early Neolithic system-ditch (AUD 1988, no. 307; 1993 no. 341).
42. Kongsager, Hørning (Nørre) Parish (Khm 180). Two houses with partly sunken floors (AUD 1994, no. 414; 1996 no. 305).
43. Sem Bakker I, Sem Parish (sb. no. 53). Pit (Fig. 24,6; AUD 1992, no. 275; Hübner 2005, 209).

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44. Kringelen, Nødager parish (sb. no. 236). Destroyed pits (surface finds).

Skanderborg county

45. Petersborg, Østbirk Parish (sb. no. 170). Assumed house with a partly sunken floor (AUD 1998, no. 443).
46. Alken Enge, Dover Parish (sb. no. 244). Culture layer and two-aisled houses (AUD 1995, no. 344; 1997 no. 338).
47. Birkholmvej, Østbirk Parish (sb. no. 183). Two-aisled house and pits (AUD 2001, no. 504).
48. Gab Sø, Hammer Parish (sb. no. 41). Surface find (Glob 1944, 246; Jensen 1972, 110; Mathiassen 1937, 130–131; Ebbesen 1975, 295 footnote 149 Fig. 201, 1).
49. Nørre Snede, Nørre Snede Parish (sb. no. 471). Rim sherd with three horizontal bands found in post hole belonging to an Iron Age house (pers. commun. Mads Holst).

Vejle county

50. Enkehøj, Brande Parish (sb. no. 303). Two-aisled houses and pits (Møbjerg/Mikkelsen 2005).

Ringkøbing county

51. Stendis, Ryde Parish (sb. no. 46). House with sunken floor (Skov 1982).
52. Hovergårde, Ølstrup Parish (sb. no. 40). Two-aisled house with partly sunken floor found under a burial mound (Jensen 1984; 1986).
53. Skank, Sevel Parish (sb. no. 691). House with partly sunken floor (AUD 1994, no. 479; 1997 no. 390).
54. Sevel, Sevel Parish (sb. no. 690). Surface find (one potsherd).
55. Nørre Holmegaard, Sdr. Lem Parish (sb. no. 283). Collected from surface (Jensen 1986, 171 f.).
56. Husby, Husby Parish (sb. no. 7). Collected during the construction of a road (Jensen 1972).
57. Hverremose, Sahl Parish (sb. no. 181). Postholes and house from the Bronze Age (AUD 2003, no. 491).
58. Vandborg, Borbjerg parish (sb. no. 622). Pit with Bell Beaker pottery and flint waste and scraper (pers. commun. Lis Helles Olesen).

Ribe county

59. Nørre Holsted III, Holsted Parish (sb. no. 79). Pit (Fig. 24, 2–3; AUD 1993, no. 437; Rindel 1993; Hübner 2005, 210).
60. Mariasminde III, Vejen Parish (sb. nr. 119). Pit (pers. commun. Steffen Terp Laursen).
61. Tørsiggård ved Hovborg, Lindknud Parish (sb. no. 225). Pit (Kjersgaard 1963–65; Ebbesen 2005, 79 ff.; 85 f.).

Haderslev county

62. Gammelbygård, Kappel, Halk Parish (sb. no. 216). Surface collection (Fig. 24, 1; Ebbesen 2006, 84 footnote 7).

8.2 Catalogue B. Burials with straight-walled or curved beakers with Bell Beaker-like ornament

Curved beakers/Bell Beakers

1. Baunehøj, Kirke Helsing Parish, Holbæk County (NM A 33259–383). Passage grave (Ebbesen 2006, 79; Glob 1952, Fig. 483; Rosenberg 1929, 289 ff.).
2. Baardesø Mark, Krogsbølle Parish, Odense County (Fyns Stiftsmus. 7075–85). Passage grave (Fig. 24, 4; Becker 1936, 196–197).
3. Frederiksgave, Sønderby Parish, Odense County (NM A 27520). No information available about the find circumstances (Fig. 24, 7; Glob 1944, 88; 1952, Fig. 485; Montelius 1900, Fig. 243).
4. Broballe, Oksbøl Parish, Sønderborg County (sb. no. 40). Burial mound (Aner/Kersten 1981, 116 no. 3165; Ebbesen 2006, 772 no. 136; Hübner 2005, 1439 no. 1548).
5. Sarup Gamle Skole, Hårby Parish, Odense County (sb. no. 63). Passage grave. Rimsherd ornamented with two horizontal bands found in concentration of sherds outside the chamber (personal commun. Niels H. Andersen).

6. Harndrup Møllebakke, Harndrup Parish, Odense County (sb. no. 11). From hill near a gravel pit. The beaker contained ash-like material (Fig. 24, 5).
7. Hulbjerg, Magleby Parish, Svendborg County (sb. no. 72). Passage grave (Ebbesen 2006, 767 no. 190; Skaarup 1985, no. 260).
8. Ørbækklunde, Ørbæk Parish, Svendborg County (sb. no. 26). From burial mound.
9. Ljørslev, Mors, Ljørslev Parish, Thisted County (MHM 94). Flat grave situated in natural rise. Found together with straight-walled beaker (see below no. 17 and Fig. 24, 9; Glob 1944; Ebbesen 1977, 61; Lomborg 1975, footnote 24; Hübner 2005, 209 cat.-no. 30, 1).
10. Bigum, Bigum Parish (A28064), Viborg County. Passage grave. Found together with straight-walled beaker (see below no. 22; Nordman 1917; Rosenberg 1929; Glob 1944; Lomborg 1975, 25 ff.; Hübner 2005, 209).
11. Dørup Østergaard, Voerladedgård Parish, Skanderborg County (SBM 220/68). Found in the fill of a burial mound (Ebbesen 2006, 86 footnote 16; Hübner 2005, Fig. 135, a).
12. Vandborg, Borbjerg parish, Ringkøbing County (sb. no. 641). Cremation burial with two potsherds, one with Bell Beaker-like ornament and burned bones from a human being (AUD 1993, no. 410).
13. Solbakkegård IV, Brøndum Parish, Ribe County (sb. no. 337). Flat field burial (Fig. 24, 8; AUD 1999, no. 611).

Straight-walled beakers

K3 (Glob 1944)

14. Ljørslev, Mors, Ljørslev Parish, Thisted County (MHM 93). Flat grave situated in natural rise and found next to another burial (Fig. 22, 4; Ebbesen 1977, 61; Glob 1944; Hübner 2005, 209 cat.-no. 30, 1; Lomborg 1975, footnote 24).
15. Frammerslev, Oddense Parish, Viborg County (VSM 1164). Burial mound (Fig. 22, 1; Glob 1944, 89 Fig. 61; 1952, 57; Hübner 2005, 270 f.).
16. Blenstrup Mark, Gjerlev Parish, Randers County (KHM 2189). From burial (Fig. 22, 3; Glob 1944, 271).

K4 (Glob 1944)

17. Ljørslev, Mors, Ljørslev Parish, Thisted County (MHM 95). Found together with curved beaker (see above no. 9).
18. Sønderup, Sønderup Parish, Ålborg County (sb. no. 6). Burial mound (Ebbesen 1983, 56 no. 40; Hübner 2005, 271).
19. Blære, Blære Parish, Ålborg County (sb. no. 53). Burial mound with stone cist from the SGC (Fabech 1988, 59 ff.).
20. Østertoft, Giver Parish, Ålborg County (S. Nielsen 178/private collect.), Flat grave (Glob 1944, 271; Hübner 2005 katalog 127 a-l; Thrane 1967, 66 f.).
21. Rødding, Rødding Parish, Viborg County (sb. no. 158, NM A 43.491–493). Burial mound (Ebbesen 1977, 62 and footnote 41).
22. Bigum, Bigum Parish, Viborg County (NM A28063). Passage grave. The straight-walled beaker and the bell beaker were found in the same horizon (see above no. 10).
23. Kvolsted, Kvols Parish, Viborg County (A10637). Passage grave among other things containing two straight-walled beakers of type K4 (Ebbesen 1984; Glob 1952, Fig. 450; Müller 1918, Fig. 230).
24. Blenstrup, Gerlev Parish, Randers County (KHM 2190). From burial chamber (Fig. 22, 5; Glob 1944, 271).
25. Snæbum, Snæbum Parish, Randers Parish (Hobro 461). Found in a small stone built coffin maybe originally situated in a burial mound (Glob 1944, 271).
26. Esbjerg, Sønderris, Guldager Parish, Ribe County (593x270–273). Straight-walled beaker found outside the chamber near traces of rim-stone (Rasmussen 1979, no. 167).

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