7

Late Neolithic graves

Nothing new under the sun

7.1 Introduction

The previous chapters have shown that in both the LNA and LNB people selected very particular types of objects to be included in graves. Although different objects were selected in each period, the common practice for both periods was that the grave goods consisted of a highly particular *set* of objects. In both the LNA and LNB there was a clear understanding of which things could be included in graves and which things should not. The grave should therefore be seen as a context for highly selective deposition. This chapter therefore aims to briefly look at the physical layout of these graves to come to a better understanding of the context in which this deposition – of both objects and bodies – took place.

As the focus of this study lies on the objects in graves, this excursion is of necessity a brief one. It must be stressed that a more thorough analysis of the construction of these graves and the barrows of which they were part of would definitely be a welcome avenue for additional future research. The barrows themselves, and particularly their placement in the wider landscape, has already been studied in detail by Bourgeois (2013) while Doorenbosch (2013) presented a comprehensive analysis of the vegetational development of barrow landscapes.

This chapter provides a summarized overview of different types of graves constructed in the Dutch Late Neolithic. Despite the apparent variety, it is argued that there in fact are very strong underlying elements structuring the layout of graves in both the LNA and LNB.

7.2 Pits, beehives, coffins and burial chambers

In some parts of the Netherlands, Neolithic burial mounds can still be seen, dotting the landscape as small hills on the heathlands of the Veluwe, or hidden in the (current) forests.[241] In size and shape they are remarkably similar and all seem to blend in as

241 Doorenbosch (2013) showed (based on both new data and pollen data from old research) that barrows had been constructed on heathlands, more importantly, locations that had often already been heathlands for centuries (and thus not newly reclaimed forests that only recently became heaths/pastures), stressing the importance of these locations in the landscape, hence the title of her thesis "Ancestral Heaths".

part of the wider barrow landscape.[242] Barrow excavations, however, have revealed a wide variety of different types of grave constructions. In this section I briefly discus these constructions and mention a few examples in more detail. This should provide the reader with a general impression of the types of graves occurring in Late Neolithic burial mounds.

For most of the Dutch Late Neolithic graves, only little is known about the structure of the grave or the body (or bodies) buried in it. This can be attributed to the often poor state of conservation combined with the fact that many graves were excavated in the early 20th century where unfortunately the focus lay more on the retrieval of the grave goods than on documenting their contexts.[243] For many graves we therefore know little more than that it was a simple oval or rectangular 'grave pit'. In some cases, discolorations in the soil or bands of charcoal indicated the presence of wooden planks that might either have been the lining of the grave pit or remains of some sort of coffin. Pollen analysis of a recently excavated LNA grave in Hattemerbroek indicated a high percentage (75%) of fern spores in a sample taken underneath the sherds of a beaker (Drenth *et al.* 2011).[244] This indicated that plant material was used to line the grave pit before the deceased and grave goods were placed there, remains of such a practice would normally not have been detected.[245] These observations indicate that the dead were not simply put in a pit to be covered in sand. Apparently, some sort of space was created to shield the dead from the sand and sods in which they were buried.

This is especially apparent in a few LNA graves where remains of wickerwork indicate the presence of some sort of beehive-like structures or even small burial chambers. The classic example of the beehive grave is an alleged flat grave excavated by Van Giffen (1930, 124) in 1927 near Onnen (Groningen).[246] Here Van Giffen found a small oval pit of about 80 × 50 centimetres which was probably well over 100 centimetres deep (the old surface level was missing). The edges of the pit were at the bottom deepened further by about 50 centimetres. Here a deep circular ditch was found at the edge of the grave pit that contained traces of stakes or posts and possibly wickerwork. Also in the cross-section of the grave, soil discolorations could be seen that indicated the presence of a decayed construction. Due to the small size of the grave pit, Van Giffen suggested that the grave had contained an upright-sitting individual (see Fig. 7.1). This interpretation may have been influenced by earlier observations by Holwerda who in his capacity of curator of the National Museum of Antiquities in Leiden, had conducted barrow excavations in the first decade of the 20th century at the Royal Estate on the Veluwe. In one of the mounds he excavated, he found a small pit that contained heavily degraded remains of human bones including a pelvis.[247] This led him to believe that the deceased in question had been buried in an upright sitting position, an interpretation

242 The graph presented by Bourgeois (2011, 263) shows the diameters of Late Neolithic barrows (based on the dataset collected by both Bourgeois and the present author), which forms a perfect bell-curve with its peak at around 10 m (smallest is 5 m, the largest 15 m, the average coincides with the peak of the bell-curve at 10,18 m).

243 See for example Bourgeois *et al.* (2009) for an detailed attempt at reconstructing the LN Niersen burial, excavated by Holwerda in 1907.

244 AMP0499.

245 An example of a similar find is the barrow in Oostwoud (Noord-Holland) where underneath an Early Bronze Age skeleton (no. 232) remains were found of a mat or basket made of bulrush (Fokkens *et al.* 2017, 105).

246 AMP0349.

247 AMP0397, Hertenkamp Tumulus 5 in Vaassen (Veluwe).

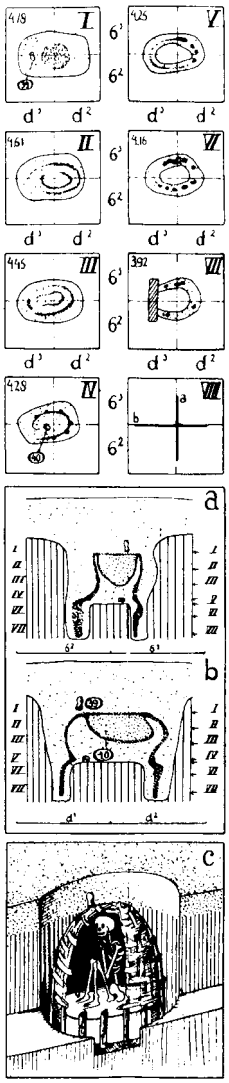

Fig. 7.1 Drawing of the LNA 'beehive' grave of Onnen (Groningen, AMP0349), as published by Van Giffen (1930, 124).

that was backed up by a physician who investigated the remains in the field (Holwerda 1910).[248]

In addition to the grave from Onnen, several other graves have been excavated that consisted of relatively deep, round to oval pits that at the edges were deepened further and contained posts that in all likelihood had been part of a construction that formed a small burial chamber. There, however, are also several graves with a similar construction but that are much shallower, perhaps not more that 20-30 centimetres deep, but these too are encircled by a palisaded ditch. Some of these, however, can be considerably larger than the classic Onnen beehive. A barrow in Putten (Veluwe) [249] for example contained in its centre a circular ditch with an outer diameter of about 4 metres and a depth of well over a metre (Van Giffen *et al.* 1971) (see Fig. 7.2). The ditch contained clear traces of posts and even traces could be observed of what supposedly was wickerwork. The grave pit enclosed by this ditch measured about 2 × 2.75 m, was about 50 centimetres deep and contained the body silhouette of an individual lying on its left side with its head in the south-east looking south. In addition, the grave contained a French dagger, a flint axe, a battle axe, a beaker and several flint flakes. With exception of the battle axe, which was found near the head of the body silhouette, all the grave goods had been placed along the south and south-west edge of the grave pit and were basically placed near or against the post/wickerwork wall of the construction that had encircled the grave. It is clear that the ditch around the grave formed the foundation of a post/wickerwork structure that must have been part of some sort of burial chamber in which the deceased and the grave goods had been placed. The burial chamber was subsequently covered by a barrow, which itself was surrounded by a second palisaded ditch (diameter of 14 m) that perhaps – as suggested by Modderman (1984) – acted as a revetment to support a flat, disc-shaped barrow.

These 'palisade trenches' found underneath barrows are much discussed in archaeological literature (for a more detailed discussion see Bourgeois 2013, 121). Some are found near the edge of the barrow and appear to be peripheral structures, while others are found closely encircling the grave. Especially when the interior of these latter trenches was deepened (as in the examples of Putten or Onnen, mentioned above) it is clear that these should be seen as the remains of some sort of burial chambers. However, apart from trenches either encircling the grave or the entire barrow, there are also palisade trenches found in between the

248 It must be noted however that since these early observations no new excavations have ever revealed additional evidence of graves with upright-sitting individuals. It must therefore be questioned if these early observations were correct. A similar upright-sitting individual was supposedly found in Parsley Hay (UK), published by Thomas Bateman in 1861 (see Parker Pearson *et al.* 2019b, fig. 4.17, 147), perhaps this publication inspired both Holwerda and Van Giffen?

249 AMP0229.

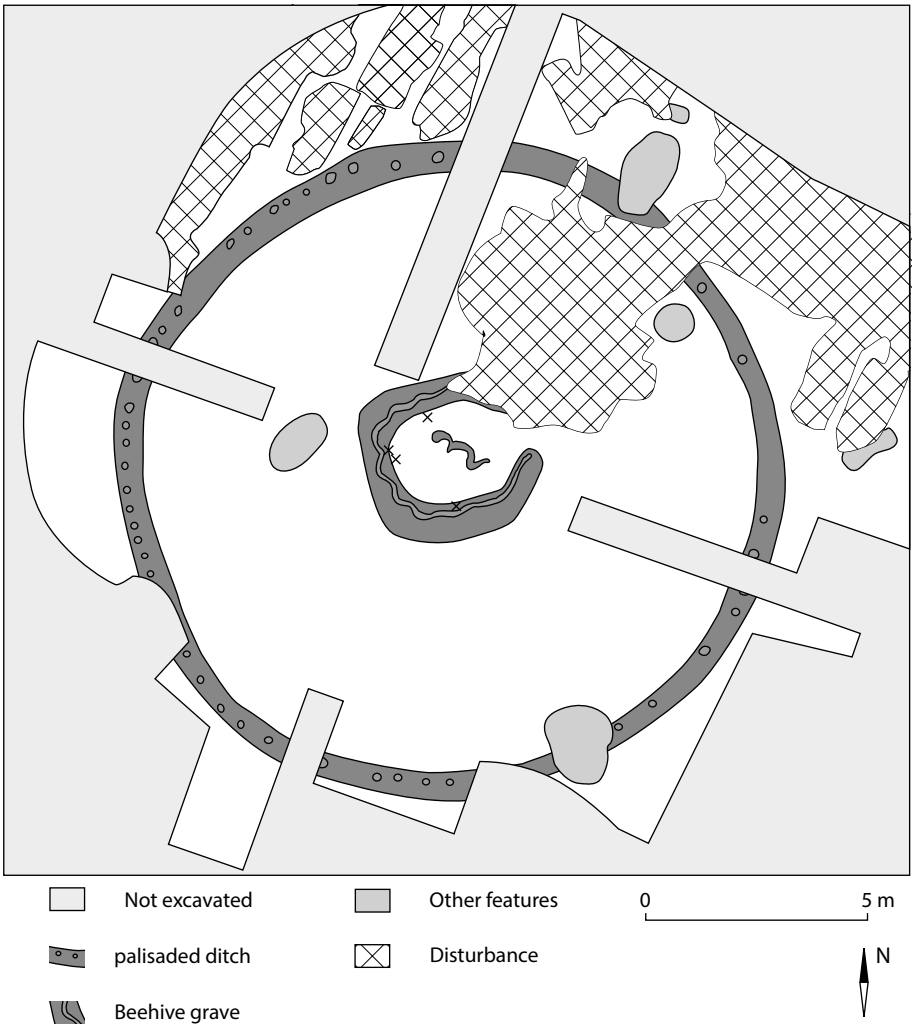

Fig. 7.2 Excavation plan of the Putten barrow (Veluwe, AMP0229), the 'beehive' surrounding the body silhouette contained traces of what appeared to be wickerwork (redrawn by Bourgeois (2013, fig. 6.7) after Van Giffen et al. 1971, fig. 2).

foot of the barrow and the actual grave (intermediary trenches). Van Giffen (1947) believed these trenches to be intermediary structures that encircled the grave at some distance, to be later covered entirely by the mound.[250] Perhaps it was some sort of temporary fence shielding the grave from the outside world (Drenth and Lohof 2005). This interpretation formulated by Van Giffen (Groningen) in the early 20th century, however, was challenged by prof. P.J.R. Modderman (Leiden) who argued that these trenches had originally stood at the foot of the mounds and should be interpreted as peripheral structures instead (Modderman 1984). He argued that these palisades at the foot of the mound had acted as revetments that supported flat, disc-shaped mounds.

250 According to Van Giffen (1947) first a primary mound was constructed inside the perimeter of the intermediary palisade, which was subsequently removed to be covered by the final mound.

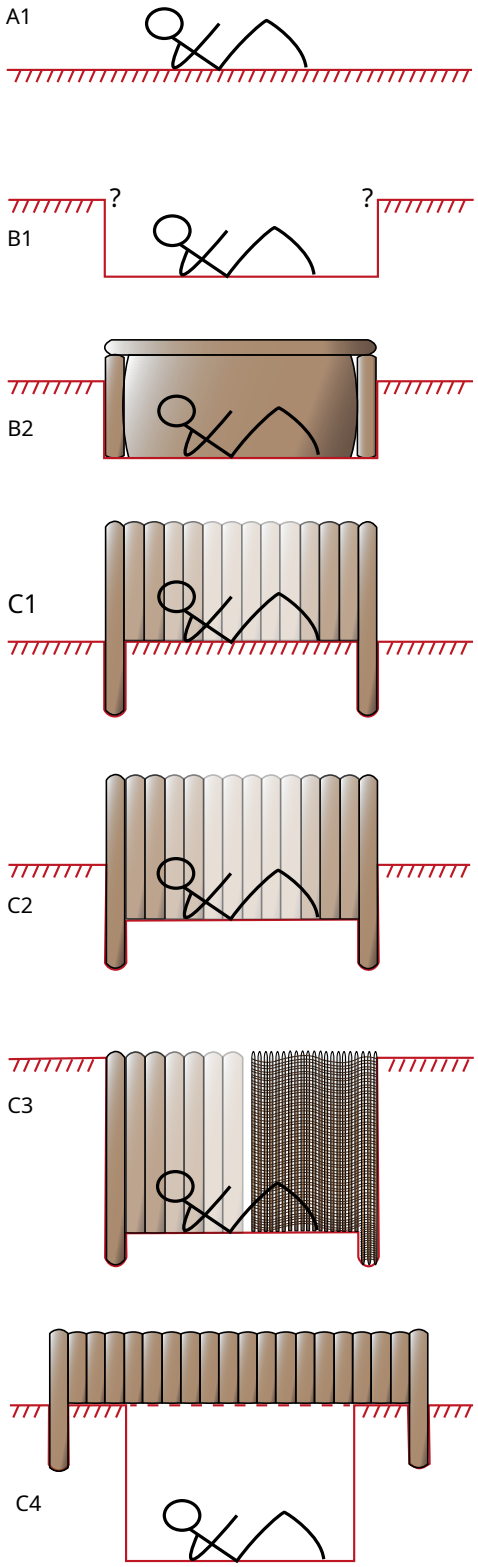

Fig. 7.3 Schematic drawing of the different types of Late Neolithic graves:

(A1) Interment on the old surface, no traces of grave-structure visible;

(B1) Interment in oval or rectangular pit, no traces of grave-structure visible;

(B2) Interment in plank-lined rectangular pit;

(C1) Interment on the old surface, enclosed by post-build circular structure;

(C2) Interment in round pit, circular post-build structure inside grave pit;

(C3) Interment in a deep round pit, with subterraneous circular wickerwork or post-build grave structure (so-called 'beehive' grave);

(C4) Interment in pit, encircled by round post-build structure.

Graves and grave structures are all covered by a barrow. Note that human figures are only intended to represent scale, for correct body postures, see Fig 7.4.

It is not the intention of the current chapter to resolve this discussion, merely to illustrate the complexity that exists with respect to these palisaded ditches.[251] In any case it is clear that at least some of these ditches are part of the foundation of what must have been small burial chambers in which both the dead and the grave goods were placed.[252]

This excursion can conclude by noting that various types of graves were constructed in the Late Neolithic (see Fig. 7.3). Interestingly, however, no clear (exclusive) patterns could be found that separate the LNA and LNB. Plank-lined pits occur throughout the Late Neolithic, as do palisaded ditches (although the latter appear to be more numerous in the LNA). The various types of graves have in common that throughout the Late Neolithic a space was carefully created to house both the deceased and the grave goods. A space that was subsequently covered with sand and sods to form a barrow, marking the grave in the landscape for all eternity.[253]

7.3 The orientation of bodies

The occurrence of a specific set of grave goods is not the only element that binds the LNA and LNB graves. In fact, throughout Europe, very specific patterns are observed with respect to how bodies were placed in graves (see below; Vander Linden 2002, 85; 2007a). Both in CW and BB graves, bodies were placed in a very particular posture and a very particular orientation (see Fig. 7.4). Bodies were placed in the grave lying on their sides in a crouched or semi-flexed position on either their right or left side. Depending on region and period, bodies/graves were oriented either N-S or E-W. In either of these orientations, bodies could be placed on their right or left side. For the N-S oriented graves, the bodies were always facing east. Hence bodies lying on their right side had their heads in the south while facing east, and bodies lying on their left side had their heads in the north while facing east. The same pattern exists for the E-W graves, where the bodies are always facing south. Hence, bodies lying on their right side have their heads in the west while facing south, and bodies lying on their left have their heads in the east while facing south.

These patterns can be observed throughout Europe, although it varies from place to place whether graves are oriented N-S or E-W. While in the CW graves are oriented N-S in Eastern/Central Europe (Krut'ová 2003, 213; Neugebauer and Neugebauer-Maresch 2001, 430; Przemyslaw 2003, 143; Struve 1955), the prevalent orientation in north-west Europe (including the Netherlands) was E-W (Furholt 2003, 121; Hübner 2005, 538; Lanting and Van der Waals 1976, 44). This pattern continues in the LNB where BB graves in Eastern/Central Europe continue to be oriented N-S, while in Denmark and the Netherlands the orientation remained E-W. Interestingly, in northern Britain the BB graves are also oriented E-W (in line with Denmark and the Netherlands) but in southern Britain the BB graves are oriented N-S (Clarke 1970,

251 For an excellent overview and reconstructions, see Bourgeois 2013, 117.

252 Highly similar grave constructions with chambers and ditches occur in Central Europe (*cf.* Turek 2006).

253 Not all graves were covered with barrows. Some graves that were found without evidence of a covering barrow are interpreted as flat graves. It, however, is very difficult to prove that such graves were never covered by a barrow. Bourgeois (2011, 261) presents several taphonomic examples that show how many of such sites could very well have originally been covered by barrows, even though evidence for them is now lacking.

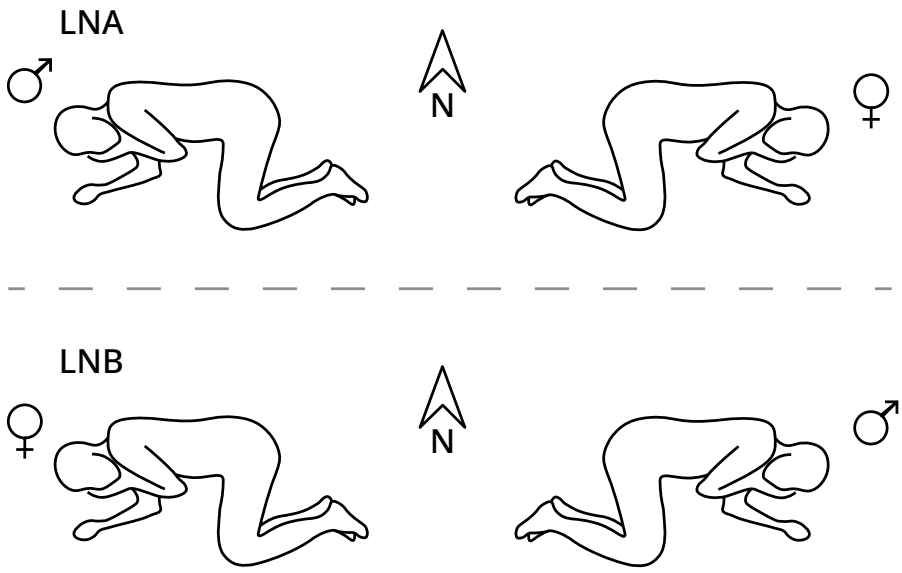

Fig. 7.4 Schematic overview of body orientations in the LNA and LNB in the Netherlands (drawing after Bourgeois and Kroon 2017, fig. 5).

455; Needham 2005, 179; Vander Linden 2002; 2007a). South of the original CW distribution-zone the BB graves also mostly seem to be oriented N-S (for an overview of BB practices across Europe see Vander Linden 2002).[254]

Whether the prevalent orientation was N-S or E-W in both situation bodies could be placed on the right or left side, either with the heads to the north or south (while facing east) or with their heads to the east or west (while facing south). This dichotomy is generally connected with the sex of the individual. Although for the Netherlands there is not much empirical evidence, it is generally assumed that for the CW males were placed on their right sides with their heads in the west, while females were placed on their left sides with their heads in the east (Lanting and Van der Waals 1976, 44). It is added, however, that (for the Netherlands) this male-female dichotomy in body-orientation possibly only applies to the early phase of the LNA (apparently associated with the 1a cord-decorated beaker). Moreover, this 'pattern' is inversed in the LNB when it is the men who are placed with their heads in the east and females with their heads in the west (Lanting 2008, 59).[255] It is moreover claimed by various authors that in the northern Netherlands the orientation of LNB graves is actually N-S instead of E-W (Drenth and Lohof 2005, 436; Lanting and

254 The BB funerary practices in southern Europe (France, Italy, Iberian Peninsula) appear to be much more varied and include the widespread use of megalithic tombs (France and Iberian Peninsula), burial in caves (Italy and Iberian Peninsula) as well as individual inhumation oriented in various ways (Vander Linden 2002).

255 None of these patterns are based on empirical data. They are based on traditional interpretation and attribution of grave good (battle axe = weapon = male) and traditional typochronology.

Van der Waals 1976, 45[256]). This claim, however, became rather questionable when Lanting (2008, 59) reported that actually only nine of the 38 graves (in his research database) in the north-eastern Netherlands were oriented N-S. This, however, means that apparently 76% of the graves were oriented E-W, and the N-S oriented graves are actually a minority.

It is at this point that I can understand that the reader is starting to become rather confused. From the offset the E-W orientation of graves seemed quite clear-cut, but now this 'pattern' is becoming more and more complex and confusing. When dealing with BB grave orientations, Vander Linden (2007a, 183) simply stated "the evidence in the Netherlands is difficult to appraise" and left it at that. The problem, I think, lies not so much in the evidence itself, but in the attempt of researchers to try to squeeze it into ill-fitting boxes. The problem lies in the categorization of 'east-west' and 'north-south', which are essentially two opposing categories like horizontal and vertical; binary. However, the evidence in reality is not binary. Lanting and Van der Waals (1976, 44) already pointed out that many graves are not exactly aligned E-W. In fact, they report that there is a deviation to either side of the E-W axis of 45° (both to the north and the south). Hence, the problem becomes obvious: if the categories used to describe them are labelled horizontal *or* vertical, what do we do with the diagonals? If we want to fit graves in either an E-W *or* a N-S box, what do we do with graves that are aligned NE-SW or NW-SE? Or graves that slightly cross over this 45° deviation margin? I argue that we should get rid of these boxes!

The claim that people aligned their graves E-W but with a 45° 'deviation' suggests that the goal was to create an E-W aligned grave and the 45° 'deviation' was some sort of 'margin of error'. However, is that really the case? Why, if people obeyed all sorts of rules when placing a body and objects in a grave, was there so much variation on this E-W axis? If it was only the intention to have the deceased face south, this surely would not have been that difficult to achieve, one merely has to observe the position of the sun during mid-day. Sites such as Newgrange in Ireland and Stonehenge in England clearly show that throughout the Neolithic people had no problems orienting even enormous megalithic monuments on the rising or setting sun, even marking specific days in the year. It might thus prove useful to see this '45° deviation to either side' as the result of intentional choices, rather than some sort of inability to identify the cardinal points.

Most authors reduce/summarize the orientation of graves to a somewhat inaccurate text-based description. For example, graves are described as being oriented 'east-west', or 'north-east-south-west'. For the purpose of this study however, the actual orientation of all graves in the research database was systematically recorded in degrees, based on published field drawings (see Fig. 7.5). When present, the actual orientation of the body (silhouette) itself was used, and if not, the orientation of the grave pit. It must be noted, however, with regards to the following that these measurements were based on the published field drawings. Many of these measurements are based on field drawings dating to the first part of the 20th century in which case it is not always entirely clear

256 Drenth and Lohof (2005, 436) claim that north of the river IJssel graves were oriented N-S and "some" E-W. However, Drenth (2005, 357) claims in a different publication of the same year that both LNA and LNB graves are oriented E-W with a 45° deviation, so one is left to wonder what happened to the supposed N-S oriented LNB graves of the northern Netherlands.

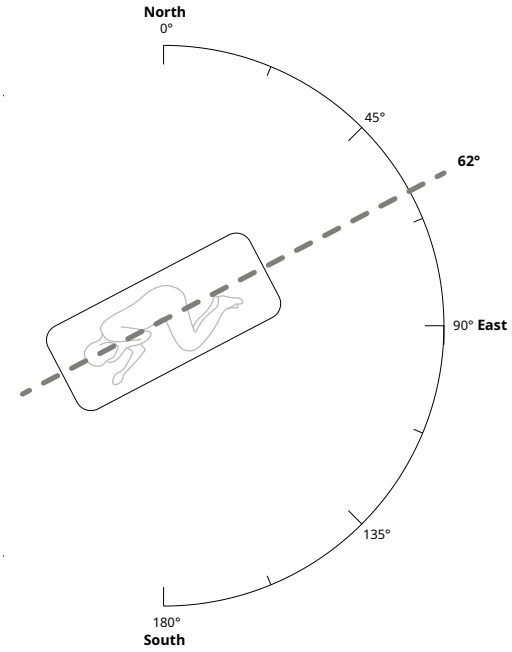

Fig. 7.5 Illustration of how the orientation of grave pits was measured. The orientation of the eastern end of the grave pit was measured and recorded, in the case of this example the orientation is 62°. Using this value the orientation of the western end of the grave pit can be easily extrapolated by simply adding 180°, in this case the western end of this grave pit is oriented at 62+180=242°.

where precisely north is, or if it is clear, whether this is true north or magnetic north. It would thus not be unwise to apply at least a 5-10° margin of error to the results. Also, in case of round/oval grave pits (including the beehive-like constructions), the longitudinal axis of the grave may not have been aligned exactly with the body placed in such a structure. Hence the recorded orientation may simply be entirely wrong in some occasions. However, individual errors or outliers should not greatly affect the overall trend.

7.4 The sky is the limit

Measurements could be recorded for a total of 139 Late Neolithic graves.[257] The eastern side of the long-axis of the grave was recorded, hence all values are between 0° (north) and 180° (south) (see Fig. 7.5). A perfectly aligned E-W grave would have the value 90° (east).[258] Assuming the observation of Lanting and Van der Waals (1976, 44) is correct (graves being oriented E-W with a 45° deviation to either side), the recorded values should all fall in the range of 45°-135°.

As can be seen in Figure 7.6 indeed the vast majority (82%) of graves fall within this 45-135° range.[259] However, when we speak of an E-W orientation with a 'deviation' of 45° to either side, one gets the impression that E-W is the norm and occasionally some graves deviate. But the graph in Figure 7.6, I argue, tells a much more nuanced story. Although the peak of the graph indeed lies at 90° (E-W), we are not dealing with an

257 68 LNA graves and 71 LNB graves.

258 The western-end can easily be calculated by simply adding 180° to the recorded value (for example: 90° (= east) + 180° = 270° (= west)).

259 114 graves out of 139 measured.

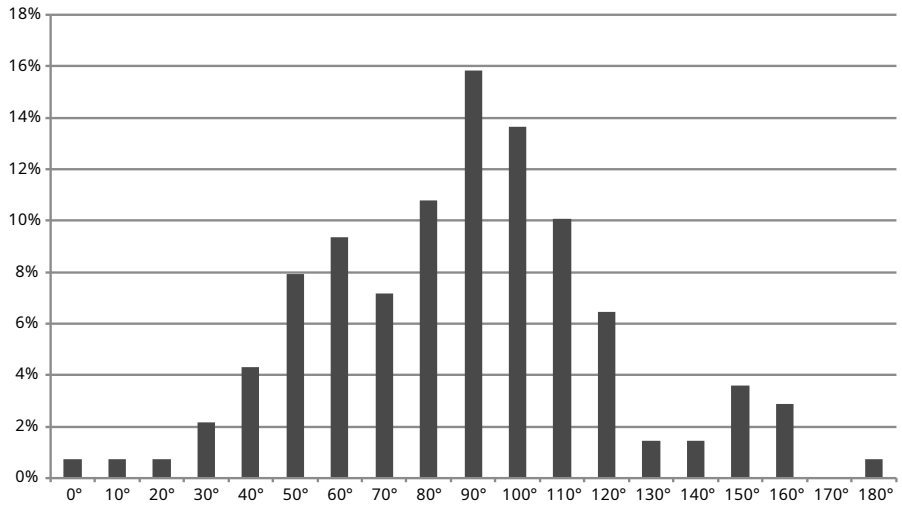

Fig. 7.6 Graph displaying the orientation of LN graves (in percentages) in bins of 10° based on the measurements of 139 Late Neolithic graves.

occasionally 'deviating' grave. If east-west (90°) was the goal, this means over 84% of the graves 'got it wrong'. Why is there so much 'deviation'?

Rather than describing this 45°-135° range as the result of a 'margin of error', let us instead assume that this *range* was the intended result. Other aspects of the funeral ritual (types of objects selected, posture of the body, location and size of burial mounds) are all highly structured – almost rigidly so – so what can explain people orienting their graves on this *range*? There is in fact a very simple explanation, and one only has to look up to see it. Every day the sun rises in the east and sets in the west. However, due to the axial tilt of the earth, the point on the horizon where the sun rises, slowly shifts and moves with the seasons. In midsummer when the days are longest, the sun rises in the Netherlands[260] at about 47°, and as the summer changes to autumn and on to winter the point of sunrise moves along the horizon to 130° at midwinter (see Fig. 7.7). As the year and the seasons pass, the point of sunrise slowly transgresses between these two points. This means that this range of 'deviation' actually coincides perfectly with the natural cycle of the rising sun.[261] If throughout the year, graves would be oriented on the rising sun, this would account for the observed distribution-range in grave orientations.[262]

260 At 52° north, being the average for the Netherlands, and calibrated for 2500 BCE with help of dr. Marco Langbroek. It must be noted that the points of sunset and sunrise have only shifted by 1.5-2° over the past 5000 years. Although this is thus taken into account, given the margin of error of the grave measurements, it should not really make any difference.

261 Carlin (2018, 210) also connected the alignment of BB graves with the daily movement of the sun, also in connection to the find of gold 'sun discs' in Ireland.

262 The same principle would apply to the point of sunset. In theory this could also have been the focus for aligning these graves and would create the same pattern. However, since the N-S oriented graves are all facing east, I argue that sunrise is the more likely option.

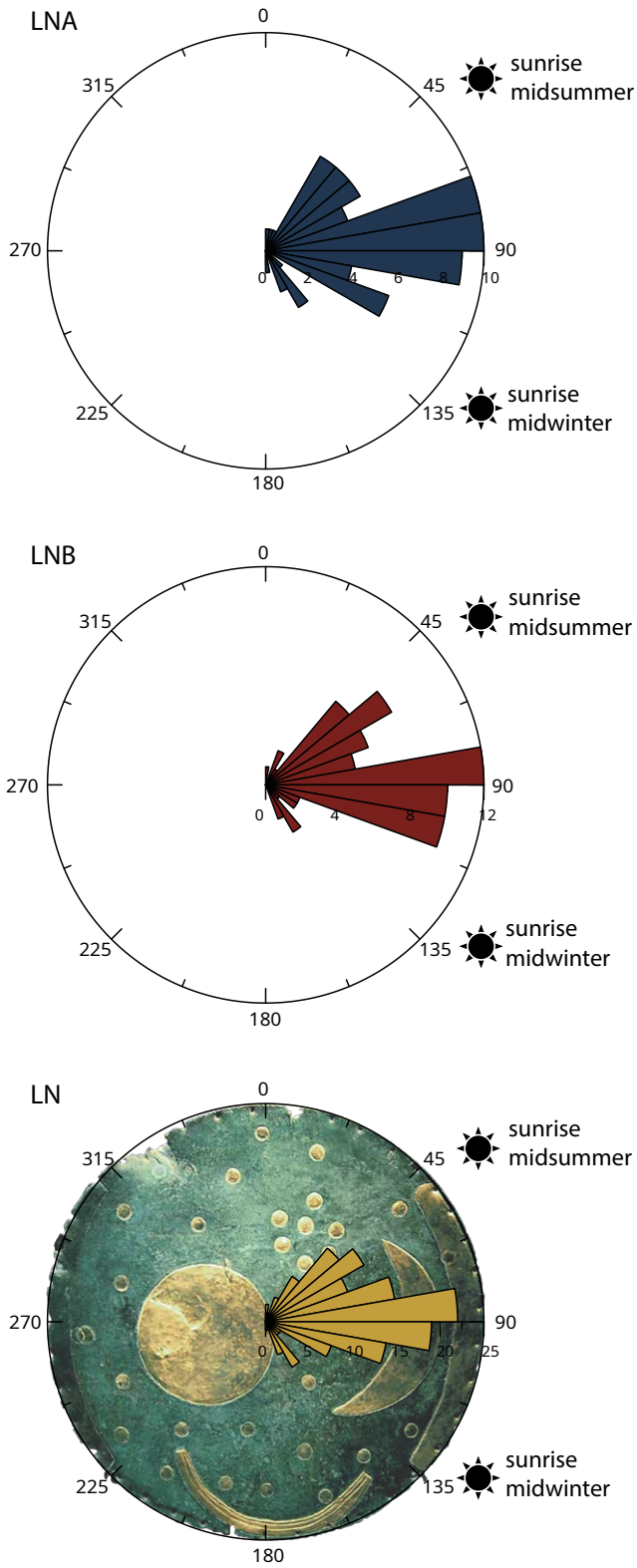

Fig. 7.7 Graphs displaying the orientation of LNA and LNB graves, plotted in wind charts; (bottom) a graph that includes all Late Neolithic graves projected over an image of the Nebra sky disc, note how the gold 'horizon' on the right is positioned perfectly to indicate the range between sunrise in midsummer and midwinter (photography: D. Bachmann, Wikimedia Commons).

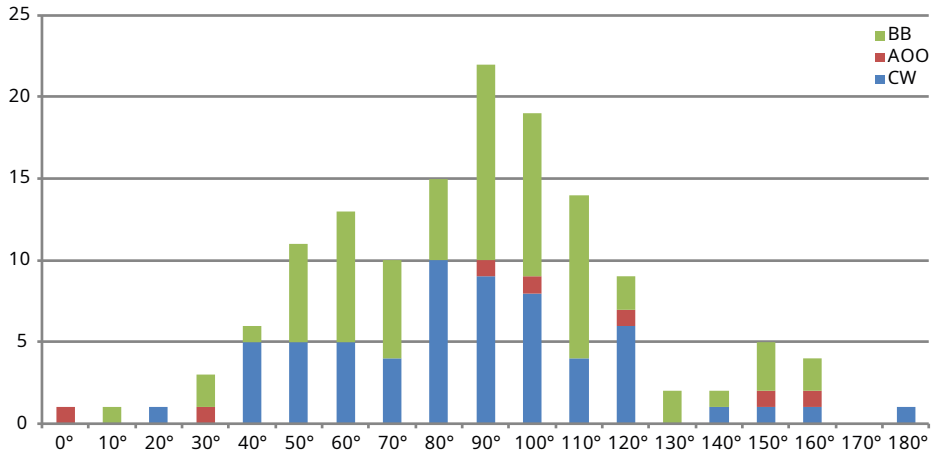

Fig. 7.8 Graph displaying the orientation of CW, AOO and BB graves (in absolute numbers) in bins of 10° based on the measurements of 139 Late Neolithic graves.

There is no clear difference observable between the LNA and LNB (see both Figs 7.7 and 7.8). In Figure 7.8 a distinction has been made between CW [263], AOO and BB graves. It can be seen that CW and BB graves are evenly distributed, only AOO stands out. Although there are only seven AOO graves for which an orientation is recorded, four of those fall outside the 'solar-range'. Interestingly, it was argued in the previous chapters that during the AOO suddenly 'southern' contacts are expressed in the LNA graves (such as the appearance of French daggers). As mentioned above, the prevalent orientation of Beaker graves south of the original CW distribution zone was north-south. Perhaps the 'deviant' orientation of these AOO graves can also be seen as a 'southern' influence. It is, however, important to mention at this point that although N-S seems to be the opposite of E-W, this in fact might not be the case. Although it did not fall within the scope of the current research I noted while looking at published CW and BB graves elsewhere in Europe with a 'north-south' orientation that these graves too have a '45° deviation', ranging between 315° and 45° (see also Vander Linden 2002). As the bodies in these graves face east, it might be that, instead of aligning the grave pit on the rising sun, these graves are actually aligned to have the deceased face the rising sun. Hence, in a grave oriented at 315°, the deceased lying in the grave, facing east, would be looking at roughly 45° (sunrise at midsummer). Similarly in a grave oriented at 45°, the deceased would be looking at a point on the horizon at 135° (sunrise at midwinter).[264] Hence, if CW and BB graves are oriented on the sunrise, the dichotomy between the N-S oriented graves versus the E-W oriented graves might simply be a nuanced difference in practice: whether the grave pit was aligned on the rising sun, or wheth-

263 Including those LNA graves that could not be positively categorized as either AOO or CW.

264 The optical points of sunset/rise can be influenced by local relief. If for example the sun rises at 47° at midsummer but there is a high hill, tree line or mountain on the north-eastern horizon, optically the sun will rise several degrees more to the south. As far as the Low Countries are concerned, the effects of this should be negligible, but if this theory is used for data elsewhere in Europe, local relief should be taken into account.

er the grave pit was aligned so that the *deceased* would be facing the rising sun.[265] Although this is seemingly a difference in practice, both could express the same basic cosmological understanding of the role of graves, death and the movement of the sun across the sky. The alignment of graves – or the dead themselves – on the rising sun would thus explain the observed variability in orientations.

It is of course impossible to reconstruct exactly why the sun was a focal point with respect to the layout of the grave and the positioning of the body. However, the sun – its movement across the sky, its disappearance at one side of the horizon and its daily reappearance at the opposing side – has a powerful symbolic potential and was of great significance in many of the world's cosmologies. In ancient Egypt, for example, the sun was believed to travel through the underworld associated with death during the night to be reborn at dawn, thus creating an eternal cycle of life, death and rebirth (see Goelet 2008, 143). Flemming Kaul (1998) suggested a similar cosmology existed in Bronze Age Scandinavia where the sun travelled with the aid of ships through the sky and netherworld. A more direct parallel for the importance of the sun in funerary rituals is undoubtedly the already mentioned monument of Stonehenge. According to Parker Pearson *et al.* (2006) Stonehenge – which is oriented at the sunrise on the midsummer solstice – was part of an extensive ritual landscape and functioned in annual funerary or ancestral rituals. Whether one agrees with the interpretation of Parker Pearson *et al.* or not, it is clear from the alignment of this site that the sun must have played a highly significant role in the cosmologies of the 3rd millennium BCE, at least in this part of north-west Europe (see also Carlin 2018, 210).

It, moreover, is becoming increasingly apparent – especially with recent discoveries in the fields of aDNA and linguistics – that the Beaker cultures are not only linked with material innovations such as the wheel, but also with large-scale migrations (Allentoft *et al.* 2015; Haak *et al.* 2015; Kristiansen *et al.* 2017) and the introduction in Europe of the Indo-European languages. Apart from being able to reconstruct the words for such things as wagons and horses, linguists have also ascertained that the speakers of Proto-Indo-European recognized a male sky deity (Anthony 2007, 15). The role of the sun and its movement across the sky is also expressed in the Nebra sky disc dating to the 17th century BCE which displays, apart from the moon and the sun, two arcs on either side (the left/west one is missing but its imprint can still be seen) that mark the 82° range from midsummer to midwinter sunrise and sunset, as well as what appears to be a ship sailing between the two horizon arcs (Schlosser 2004, 44; see Fig. 7.7).

Based on the fact that the vast majority of graves are aligned within the margins of the midwinter and midsummer sunrise, as well as the large amount and varied types of evidence that support the importance of the sun and its movement across the sky, I suggest that the sunrise was the structuring element for the alignment of both LNA and LNB graves.

265 For example, both the 'Amesbury Archer' (see Fitzpatrick 2011, fig. 28) and his 'Companion' (see Fitzpatrick 2011, figs 22-26) found near Stonehenge are facing 45° and are hence facing the point of sunrise at midsummer.

7.5 Those outside the range

The fact that not all graves fall within this range (18%) can be partly attributed to inaccuracies by archaeologists in the recording and interpretation of graves (especially in the beginning of the 20th century). One of these graves, for example, was some sort of stone-packing grave, but the beaker was found *outside* of what was interpreted as the 'grave' so it is unclear if this 'stone-packing' really was the grave.[266] Some are large or irregular grave pits, or roundish beehive-like structures, for example, for a BB grave pit of 3 × 2 metres the longitudinal axis was measured, but given the large size of this pit a body could have been oriented in any which way.[267] Among the 'deviant' graves is also the previously mentioned grave with the reportedly "upright sitting body".[268] But these cannot account for all 'deviant' graves and some most definitely reflect prehistoric realities.

Some graves, for example the AOO graves mentioned earlier, may be aligned in the N-S tradition, but this too does not account for all 'deviant' graves. For whatever reason, some graves may simply not comply with the norm intentionally. An interesting parallel for such a practice can be found in the Linear Pottery culture (Early Neolithic) cemetery of Elsoo in the southern Netherlands. Here graves are oriented NW-SE, identical to the orientation of the houses. Three graves, however, were oriented NE-SW. According to the excavator such a complete opposition in orientation by a small number of graves also occurs in other Linear Pottery culture cemeteries. A possible interpretation for this phenomenon might be that the persons being buried in such a deviating orientation played a liminal role in society, such as perhaps strangers, shamans/ritual specialists or even criminals (Modderman 1970, 66).

For most graves there is no way of knowing why they are different. However, there are two graves with a very clear 'deviant' orientation and even bodily remains that can help explain their 'deviance'. Both graves were found underneath Late Neolithic barrows. The first was an LNA grave excavated near Garderen (Veluwe)[269] which was oriented at 150° and the second was a LNB grave near Emmen-Angelslo (Drenthe)[270] oriented at 25°. In both graves the individuals buried were lying on their right side and were looking north. These graves thus seem inversions of 'normal' graves. Their 'deviance', however, did not only manifest itself in their orientation and posture. Instead of humans both graves contained the remains of animals. The Emmen-Angelslo was in fact a bovine burial (Lanting 2008, 317).[271] The Garderen grave was excavated and published by Bursch (1933) as a horse burial, but there is reason to question this. Bursch's interpretation was perhaps coloured by the popular notion of the 'horse riding tribes' conquering Europe. The same may have been the case, for example, with the 'horse' found by Holwerda and Evelein (1911) in the LNA burial mound of Emst-Hanendorp (Veluwe).[272] Re-examination, however, of photos of this find clearly showed this was

266 AMP0304, mound 2, Anloo (Drenthe), LNA, measured at 180°.
267 AMP0194, Ermelose Heide (Veluwe), early 20th century excavation, measured at 160°.
268 AMP0397, Vaassen mound 5 (Veluwe), early 20th century excavation, measured at 15°.
269 AMP0002, Garderen Solsche Berg mound 3 (Veluwe).
270 AMP0478, Emmen-Angelso mound XII (Drenthe).
271 Remains of tooth enamel could be identified as cattle (Lanting 2008, 317).
272 AMP0163.

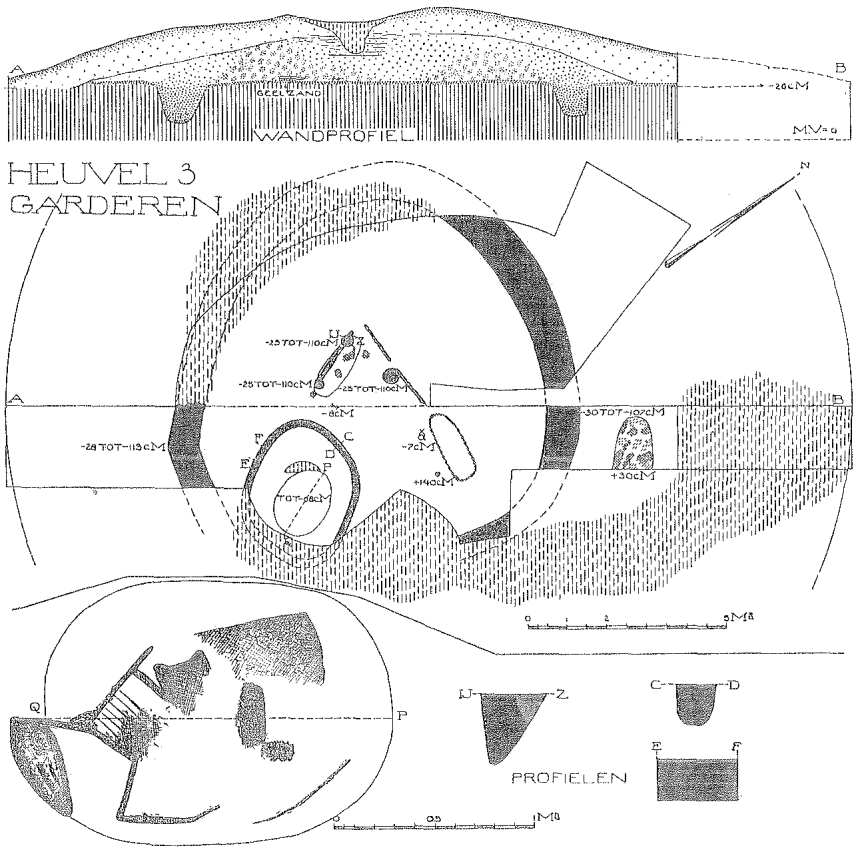

Fig. 7.9 Excavation plan of the Garderen barrow as published by Bursch (1933, 69; fig 66; AMP0002). The horse/cow itself was oriented about 120° with its head in the east facing north. One of the human graves has the same alignment as the horse/cow, the other human grave is oriented east-west.

in fact a cow.[273] Also in Molenaarsgraaf (Zuid-Holland)[274] a bovine burial was found. Since evidence of Late Neolithic horse burials is lacking in the Netherlands, while several examples of cattle burials exist, I would argue that it is likely that the Garderen 'horse' too was in fact a cow.[275]

The Garderen grave (Fig. 7.9) consisted of a large beehive-like burial chamber about 3 metres in diameter (Bursch 1933). Although the longitudinal axis was aligned at 150°, the horse/cow itself was oriented about 120° with its head in the

273 Remains of a skull were found together with a human burial, an AOO beaker, CW beaker, a flint flake and a French dagger. The skull was published as a horse (Holwerda and Evelein 1911), but re-examination of the photos shows molars of a cow (I. van der Jagt, zoologist, pers. comm.). For this grave the orientation was not recorded.

274 In Molenaarsgraaf a cattle grave was also found (Louwe Kooijmans 1974, 264) but it is not sure whether this burial is Late Neolithic or Early Bronze Age. It is therefore not included in the current dataset. The cattle was buried in an N-S orientation and both phalanxes of the forefeet were missing (intentionally?).

275 Burials of cattle dating to the 3rd millennium BCE also occur in Jutland and Central Europe, see Johannsen and Laursen (2010) .

east. Instead of looking south, as humans would, the animal was placed on its left side facing north. In Emmen-Angelslo too, the cow was found with its head in the north-east (25°) and facing north-west (Lanting 2008, 315), hence an inversion of a human burial. Apparently, animals could be included in the funerary ritual, even buried in burial mounds, but their grave pits and body orientation did not follow the same alignments as humans.

It is probably impossible to reconstruct why people subjected cattle to such formal burials. But perhaps linguistics can provide us with a clue. Anthony (2007, 15) mentions that the speakers of Proto-Indo-European practised ritual sacrifices of cattle and horses. In fact, cattle also feature in Proto-Indo-European myth:

> "At the beginning of time there were two brothers, twins, one named Man and the other Twin. They travelled through the cosmos accompanied by a great cow. Eventually Man had to sacrifice Twin (or, in some versions, the cow). From the parts of this sacrificed body, with the help of the sky gods (Sky Father, Storm God of War, Divine Twins), Man made the wind, the sun, the moon, the sea, earth, fire and finally all the various kinds of people. Man became the first priest, the creator of the ritual of sacrifice that was the root of world order." (Anthony 2007, 134)

This is one of the myths fundamental to the Proto-Indo-European system of religious belief, reflected in creation myths preserved in many Indo-European branches (Anthony 2007, 134; see also Kristiansen 2010). Although it might be conjecture and anecdotal at best, it is interesting to note that this myth features two humans (twins) and a cow. The burial mound of Garderen[276] covered, apart from the grave pit with the animal remains, two other grave pits, presumably for humans. One was oriented at 95° and contained various grave goods such as a French dagger, a flint axe and amber beads. The other grave (lined with charred wooden planks) was oriented at 150° (following the alignment of the bovine burial) and contained a flint axe.[277] All three graves were covered by the primary burial mound and are therefore likely contemporaneous. Perhaps the inclusion of cattle in some burial mounds was part of creating reference to a specific cosmological narrative.

7.6 Concluding remarks

When focussing solely on grave goods one might have the impression that there is a strong break between the LNA and the LNB: with exception of the beaker, the entire grave set changes. The most notable connection between the LNA and LNB from the perspective of the grave goods is the fact that in both periods graves contain standardized sets of objects and that in both periods these seem to refer to some cultural ideal, rather than that they reflect the deceased's unique identity or particular life-history.

276 AMP0002, Garderen Solsche Berg mound 3 (Veluwe).

277 The heavily disturbed burial of Emmen-Angelso contained a cattle burial overcut by at least one second burial of a human, AMP0478, Emmen-Angelso mound XII (Drenthe).

The grave, as a context of deposition, however tells a very different story, one that focuses on continuity and cultural cohesion. Although different types of graves were in use in the Late Neolithic, no particular type of grave is exclusively found in any one period. In all cases it seems that people tried to create a space – a coffin, or even a chamber – for the dead and the grave goods. This could consist of a grave pit lined with ferns, wooden planks or even wickerwork constructions resembling beehives. Bodies were placed in a highly specific and standardized position: crouched or semi-flexed, facing south. The grave pits themselves were oriented to be aligned with the rising sun. This practice starts in the LNA and continues during the LNB.

The orientation of the graves indicates that the movement of celestial bodies (*i.e.* the sun) were used as a basis for the alignment of both grave pits and human bodies. Perhaps by doing so, the dead were connected with elements that had a higher cosmological significance and connected the world of the living to the world of the dead, or at least transcended the here and now and placed the dead in the context of the eternal cycle of the sun and the seasons (see also Carlin 2018, 211). The continuity between the LNA and LNB indicates that while people may have been equipped with different grave goods, perhaps indicative of different identities or statuses, they were nonetheless buried according to this wider and overarching cosmological understanding.

This could be taken to indicate that the BB complex went hand-in-hand with the introduction of new identities, new statuses, or at least with new ways of indicating these by means of certain types of objects. But apparently these did not greatly influence the core understanding of how the dead should be treated with respect to the construction of graves or the orientation of bodies. As a context for deposition, the grave itself and the manner in which the deceased were placed therein, remained largely the same. As such, the grave and position of the body should perhaps be disconnected from the objects that adorned the body. Although the former clearly shows a strong line of continuity with the past – perhaps indicative of a continued cosmological understanding of life and death – the latter apparently was open for adaptation and incorporation of new elements, perhaps indicative of new/different identities or statuses.

Perhaps both practices were not causally linked to one another, but rather represented the outcome of choices made on different levels. One related to the deceased individual and the display of a certain type of identity, and the other with a deeper understanding of how the world of the living is structurally connected with the world of the dead. Or in other words, perhaps the route to be taken to the afterlife was not necessarily connected with the luggage one would take along on this journey.