

UDK 903.5-033.6(292.414)"634":2-5

Documenta Praehistorica XXXVII (2010)

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

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

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

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

Introduction to relational archaeology

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

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

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

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

Methodological and theoretical aspects: relational statistics – correspondence analysis

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

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

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

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

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

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

Ritual activities and group identity

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

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

Local and regional Correspondence Analysis analyses of Gotlandic grave fields

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

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

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

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

Correspondence analysis of the Visby graves

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

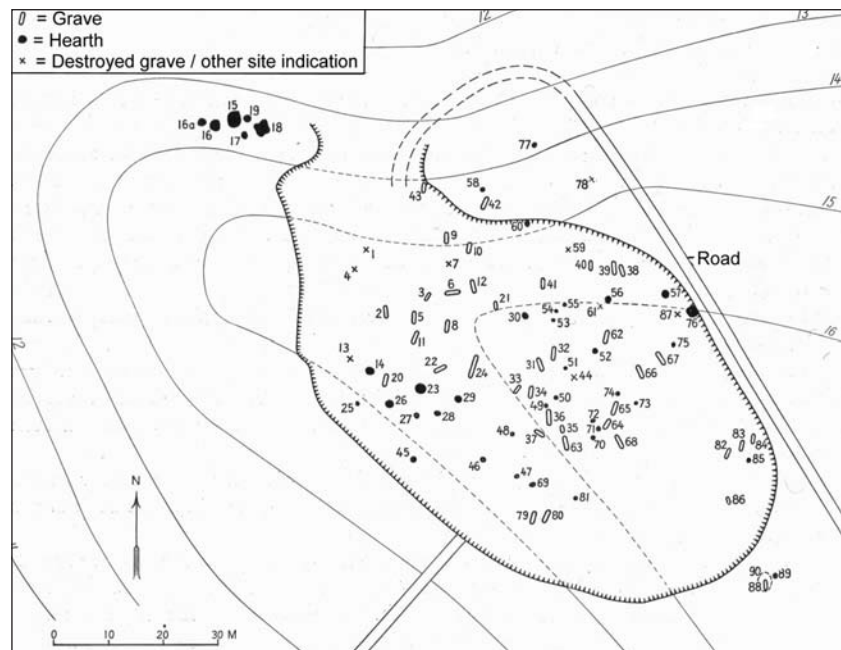


Fig. 1. Overview of the Neolithic grave field at Västerbjers (after Stenberger 1943).

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

The female/infant cluster (Cluster 1)

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

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

The male cluster (Cluster 2)

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

The children/juvenile cluster (Cluster 3)

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



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

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

Correspondence analysis of the Västerbjers graves

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

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

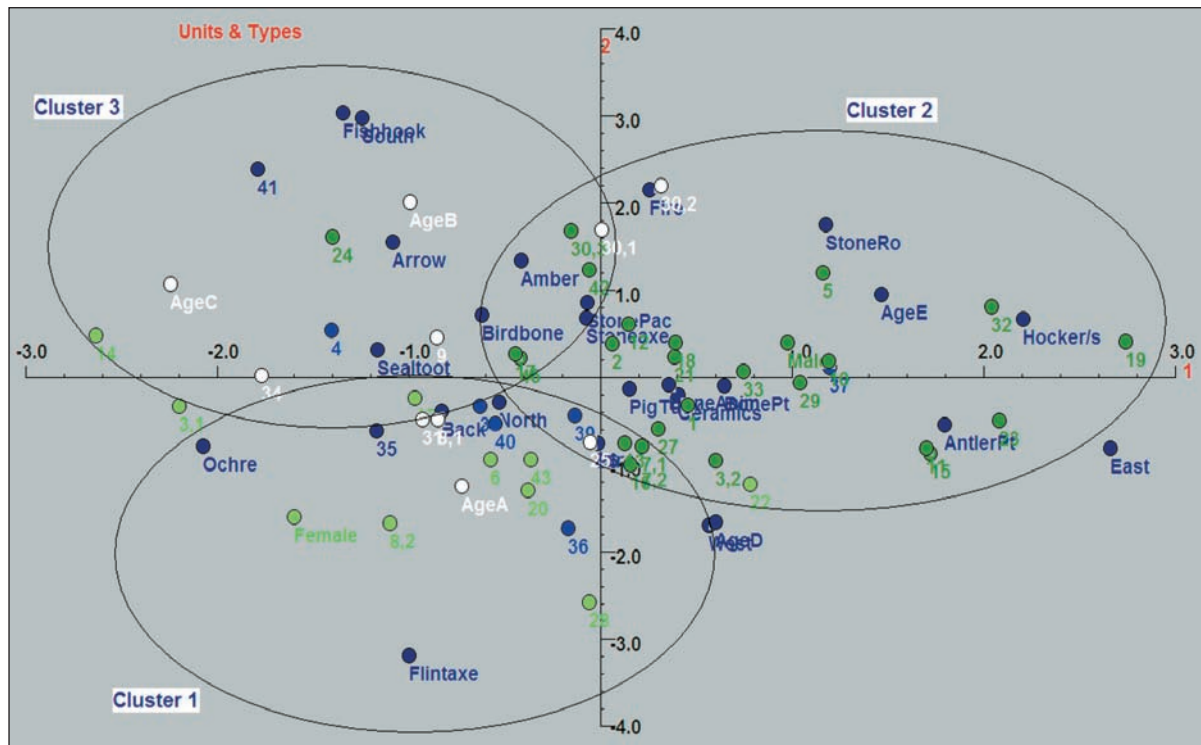


Fig. 3. The correspondence analysis of the Neolithic grave field at Visby. Legend: light green dots – females; dark green dots – males; white dots – children; light blue dots – sex undetermined individuals; dark blue dots – different variables tied to the individuals.

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

The female cluster (Cluster 1)

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

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

The male cluster (Cluster 2)

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

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

The children/juvenile cluster (Cluster 3)

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

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

Correspondence analysis of regional trends

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

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

The central cluster (Cluster 1)

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

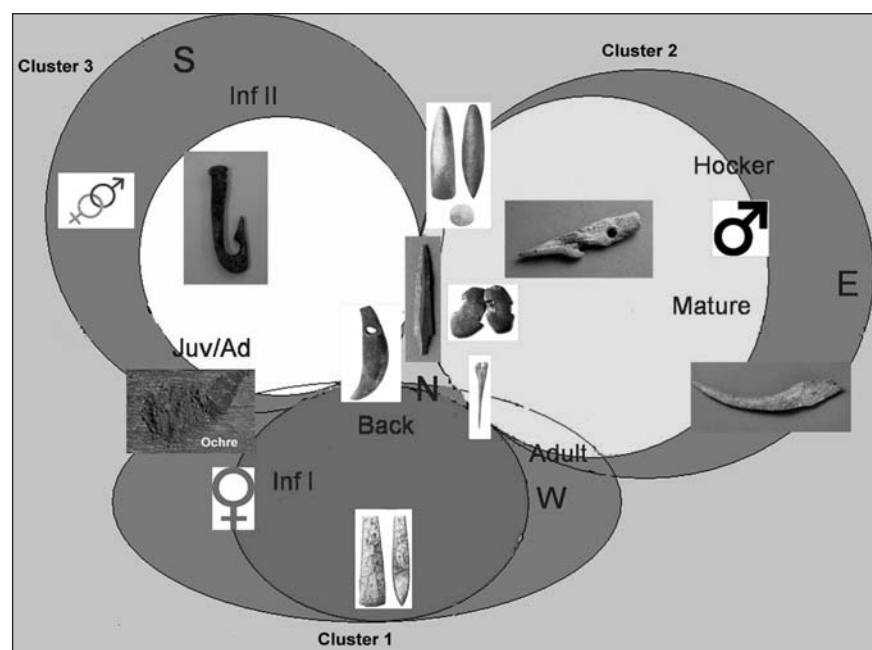


Fig. 4. The interpretative figure of the correspondence analysis of the Neolithic grave field at Visby.

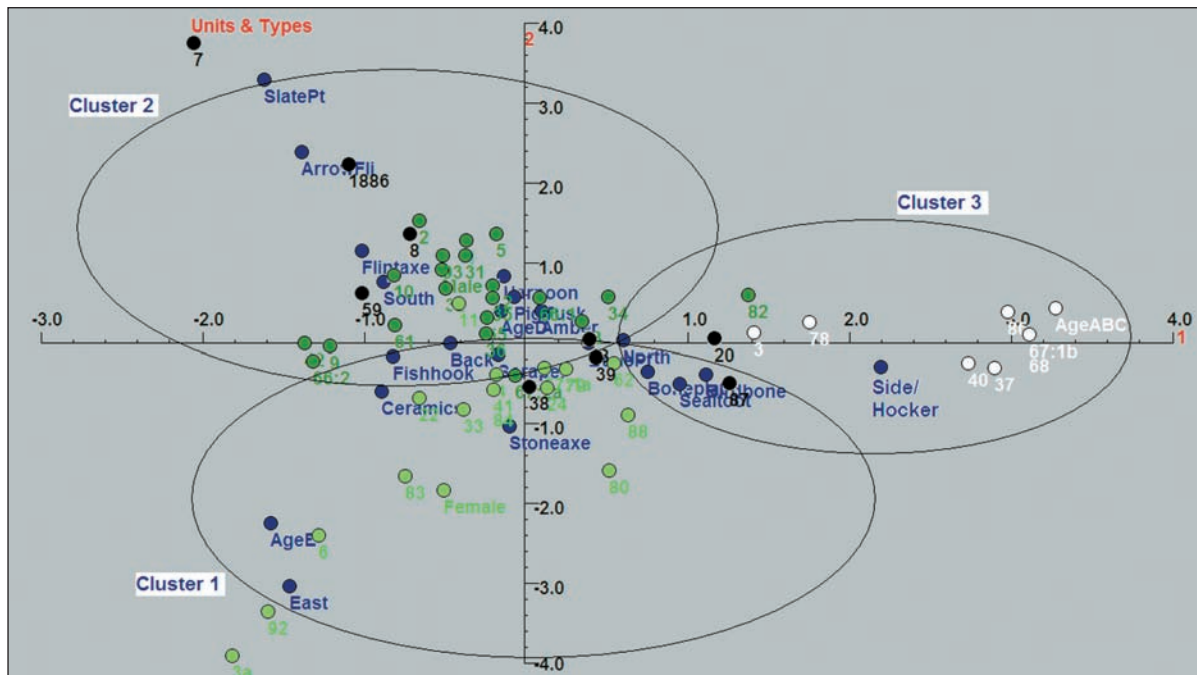


Fig. 5. The correspondence analysis of the Neolithic grave field at Västerbjers. Legend: light green dots – females; dark green dots – males; white dots – children; black dots – sex undetermined individuals; dark blue dots – different variables tied to the individuals.

was found in one mature male burial at Visby. The reverse is the case within western orientations, of eight cases of mixed sex at Visby, and only one child at Västerbjers. This means that there are several distinct oppositions observed regarding how gender in particular was expressed between the two populations. This means that gender was constructed and expressed due to local traditions. In common for the two populations was that the males were associated with harpoons/barbed points for seal hunting/hunting, and that the juvenile individuals, both male and female, were associated with small game hunting and/or fishing. The females may have been associated with domestic settlement activities. At Visby, the females were associated with the smallest children, and at Västerbjers, leather preparation/work and ceramics may have been linked to females. Within this cluster, which included adults of the most productive age, status objects made of imported materials such as flint, amber and slate were found.

The large right-hand cluster: children and juveniles (Cluster 2)

In this cluster, we find children and juvenile individuals. They are generally associated with variables such as stone packing/flat stones, fire, side/hocker position, ochre, orientation to north – but also, significantly, to south and west – and animal bones.

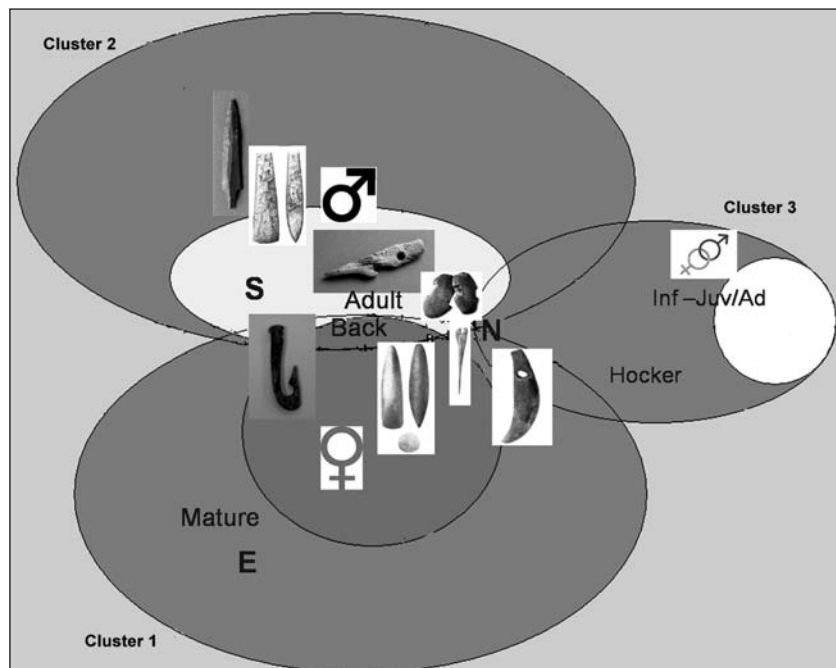


Fig. 6. The interpretative figure of the correspondence analysis of the Neolithic grave field at Västerbjers.

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

The lower cluster (Cluster 3)

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

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

Discussion of regional and local distinctions

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

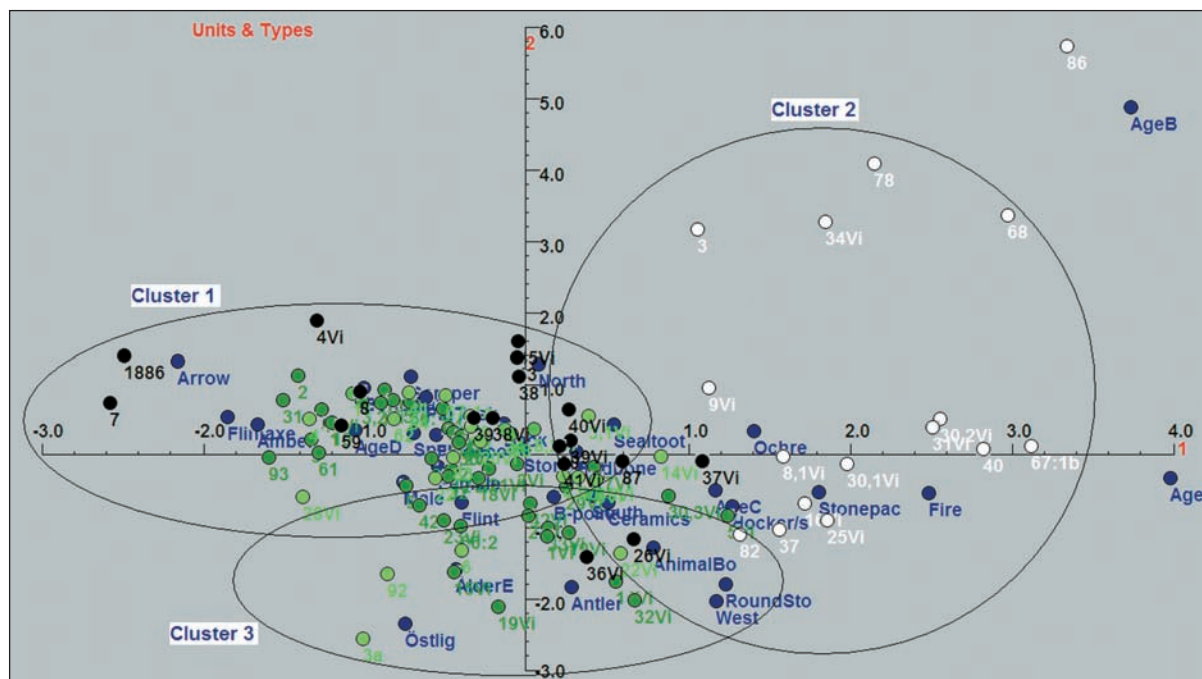


Fig. 7. Regional correspondence analysis of Neolithic grave fields at Visby and Västerbjers. Legend: light green dots – females; dark green dots – males; white dots – children; black dots – sex undetermined individuals; dark blue dots – different variables tied to the individuals.

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

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

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

ACKNOWLEDGEMENTS

My warmest thanks go to Mihael Budja, who arranged a fantastic seminar, with an open and creative atmosphere, and also thanks to Ljubljana University for great hospitality.

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REFERENCES

- BAXTER M. 2003. *Statistics in Archaeology*. Arnold. London.
- BELL C. 1992. *Ritual Theory, Ritual Practice*. Oxford University Press. Oxford
- BENZÉCRI J-P. 1992. *Correspondence analysis handbook*. Dekker. New York.
- BERNARDI B. 1985. *Age class systems. Social institutions and politics based on age*. Cambridge University Press. Cambridge
- BINFORD L. 1983. *In Pursuit of the Past. Decoding the Archaeological Record*. Thames and Hudson. London.
- BOURDIEU P. 1977. *Outline of a Theory of Practice*. Cambridge University Press. Cambridge.
- BOURDIEU P. and WACQUANT L. J. D. 1992. *An Invitation to Reflexive Sociology*. Polity Press. Cambridge.
- BROADY D. 1991. *Sociologi och Epistemologi. Om Pierre Bourdieus författarskap och den historiska epistemologin*. HSL-förlag. Stockholm.
- BURENHULT G. 1999. *Arkeologi i Norden*. Natur och Kultur. Stockholm.
- BÖLVIKEN E., HELSKOG E., HELSKOG K., HOLM-OLSEN I. M., SOLHEIM L. and BERTELSEN R. 1982. Correspondence analysis: an alternative to principal components. *World Archaeology* 14(1): 41-60.
- CLARKE D. L. 1968. *Analytical Archaeology*. Methuen & Co. Ltd. London.
- CONKEY M. W. 1991. Contexts of Action, Contexts for Power: Material Culture and Gender in the Magdalenian. In J. M. Gero and M. W. Conkey (eds.), *Engendering Archaeology. Women and Prehistory*. Blackwell, Oxford.

- FAHLANDER F. 2003. *Materiality of Serial Practise. A Microarchaeology of Burial*. Gotarc Serie B, No. 23. Göteborg University. Göteborg.
2009. Livet efter döden. Hanteringen av de döda. In I.-M. Back Danielsson, I. Gustin, A. Larsson, N. Myrberg and S. Thedéen (eds.), *Döda personers sällskap – gravmaterialens identiteter och kulturella uttryck*. Stockholm University, Stockholm: 35–55.
- FLYG P. and OLSSON A. 1986. *Visbylokalen. Boplats – Gravar*. C-uppsats Stockholms Universitet. Stockholm.
- Van GENNEP A. 2004. *The Rites of Passage*. Routledge. London.
- GODELIER M. 1986. *The making of great men. Male Domination and Power among the New Guinea Baruya*. Cambridge Studies in Social and Cultural Anthropology. Cambridge University Press. Cambridge.
- HODDER I. 1986. *Reading the Past*. Cambridge University Press. Cambridge.
1993. The narrative and rhetoric of material culture. *World Archaeology* 25(2): 268–282.
- JANZON G. 1974. *Gotlands mellanneolitiska gravar*. Studies in North-European Archaeology 6. ACTA Univeristatis Stockholmiensis. Stockholm.
- KEESING R. M. 1981. *Cultural Anthropology. A Contemporary Perspective*. Holt, Rinehart and Winston. New York.
- LEGESSE A. 1979. Age sets and retirement communities: Comparison and comment. *Anthropological Quarterly* 52(1): 61–69.
- MADSEN T. 1988. *Multivariate Archaeology. Numerical Approaches in Scandinavian Archaeology*. Aarhus University Press. Aarhus.
- MALMER M. P. 1975. *Stridsyxekulturen i Sverige och Norge*. Liber Förlag. Lund.
2002. *The Neolithic of South Sweden. TRB, GRK, and STR*. The Royal Swedish Academy of Letters History and Antiquities. Stockholm.
- MONTELIUS O. 1885. *Om tidsbestämningen inom bronsåldern med särskild hänsyn till Skandinavien*. Kongl. Vitterhets Historie och Antiquitetens Akademien. Handlingar 30, ny följd 10. Stockholm.
- RENFREW C. 1973. *Before Civilization. The radiocarbon revolution and prehistoric Europe*. Penguin Books. London and New York.
- SHANKS M. and TILLEY C. 1987. *Social Theory and Archaeology*. Polity Press. Oxford.
- STENBERGER M. 1943. *Das grabfeld von Västerbjers auf Gotland*. Kongl. Vitterhets Historie och Antiquitetens Akademien. Stockholm.
- WALLIN P. 1995. *Gropkeramiska keramikdekoreringsverktyg? Sagt och Shakt*. Riksantikvarieämbetet.
- WALLIN P. and MARTINSSON-WALLIN H. 1992. Studier kring gropkeramisk identitet på Gotland. *Gotländskt Arkiv* 64: 7–26.
- WINBASP at <http://www.uni-koeln.de/~al001/>
- ZAERS J. 2007. Västerbjers Once Again. In U. Fransson, M. Svedin and F. Androschuck (eds.), *Cultural interactions between east and west. Archaeology and human contacts in northern Europe*. Stockholm Studies in Archaeology 44. Stockholms universitet. Stockholm.