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The Embellished Dress in Hunter-gatherer Societies

Tooth ornaments from the graves at the cemeteries of Zvejnieki, northern Latvia

Introduction

Due to the good preservation of certain sites in southern Scandinavia we have a wide knowledge of the tools in bone, antler and wood from the Mesolithic (10,000–4000 BC). Remains of threads, ropes and nets have been found (Kernchen and Gramsch 1989). Even small pieces of textile, in needle-binding technique, have been found at a submerged site south-west of Funen (Denmark) dated to the late Mesolithic (Andersen 1987). However, remains that provide direct information about clothing are still missing. Judging by the considerable variation in the animals that were hunted – including mammals, birds and fish – there was a plentiful supply of skins for making parts of costumes, corresponding fully to the clothes worn for ordinary activities and on special occasions by members of hunter-gatherer societies in similar biotopes in both Asia and North America.

In contrast to clothes, however, if we deal with the embellished or ornamented dress the situation becomes quite different. The preservation of perforated teeth and bones found mainly in graves provides a basis for a better understanding.

In societies with hunting as an important economic contribution, pendants made of animal teeth are often common decorative objects. Tooth pendants are used to adorn the body and decorate clothing. The tooth pendants have a multifaceted meaning. The teeth as pendants are a kind of abstraction of the wild environment. By extracting the teeth from the animals and reshaping them, they are transferred into domestic surroundings. Here, carnivorous and herbivorous animals, and animals from marine and terrestrial environments, are mixed together in an artificial world completely ruled by humans. However, they remain part of the wild world, and their special qualities might be transferred to the wearer. The use of teeth from particular animals may be generally taken to reflect norms and values accepted by individuals living in a shared physical and social environment. The close contacts between humans and animals in a range of everyday contexts could have translated into the selection of a particular animal as a totem (Worbs 1977; Gebauer 1988).

The relationship of the tooth decoration to individual garments has been examined occasionally (Kotova 2010). However, only a few previous studies of tooth pendants have considered social factors (d'Errico and Vanhaeren 2002; Vanhaeren and D'Errico 2002) and other factors, such as the ritual perspective.

During an individual's lifetime, the number and combination of pendants might change due to life-course transitions in age and gender roles, as well as developments in special competences, special social relationships, etc. Throughout life, the dress, adornments and gear would change, be replaced and in turn be complemented. This ought to shape the amount, species composition and wear patterns in the assemblage of pendants associated with the individual.

However, from the perspective of society, the ultimate form of loss of decorative clothing occurs when it is provided as a gift to a dead member of society. Even in that situation, regulations by the society and decisions of a more individual kind regulated what part of the decorative dress, and additional decorative parts, accompanied the buried person.

In a synchronic perspective, social relations tend to be structured by kinship-based affinities as well as other groupings based on age, gender or special

commitments (O'Shea and Zvelebil 1984). In the archaeology of hunter-gatherer societies, such features might be reconstructed based on the study of tooth pendants associated with burials. Further insight would be obtained if these combinations could be followed diachronically, shedding light on the survival of tradition and acceptance of innovations. Material suitable to study these social phenomena is rare. An excellent site for both synchronic and diachronic analyses is the cemetery at Zvejnieki, northern Latvia. The reasons for choosing the graves at Zvejnieki are plentiful. They were excavated in the late 1960s and early 1970s (Zargorskis 2004). The graves are well preserved and were carefully excavated. The large number of graves provides an excellent opportunity to compare ornaments from different age groups and both sexes. The cemetery was used for millennia, from about 7500 cal. BC to about 2600 cal. BC, providing possibilities for diachronic studies (Zagorska 2006). The taxonomic identification of all tooth pendants has been performed (Lõugas 2003, 2006). Thus, it is feasible to study the arrangements of teeth from different animals.

There are about 2400 mammal teeth – both with and without artificial modification – that have a position in the graves indicating a symbolic meaning. The range of species employed for pendants seems to be smaller during the early use of the cemetery, with wild boar, elk, red deer and aurochs most common (Eriksson and Zagorska 2003, 6). A much wider spectrum is present in the later graves, which include brown bear, wolf, dog, badger, otter marten, fox seal, beaver, wild horse and human.

Artificial alterations of the teeth and use-wear

All available tooth pendants have been studied under a magnification of 10X. One goal has been to understand the techniques of pendant manufacture. Another goal has been to identify and classify whether and how use might have affected the pendants – a use-wear analysis. This type of analysis should give an indication of how the pendants were fastened, as well as how different sets of garments were handled and if pendants of different use-wear were combined.

Different modes of shaping the teeth for pendants have been identified: drilling, perforation by making depressions on opposite sides of the root, by cutting grooves and by grinding the root into a square shape (Fig. 1). A more detailed presentation of the analyses is published elsewhere (Larsson 2006; 2009).

Analysis of pendant manufacture techniques in graves dated directly by ^{14}C assays suggests that the types of tooth pendant modification can be partly seriated. In the oldest graves dated to about 7500 cal. BC, associated pendants display traces of the drilling technique. At about 5500 cal. BC, drilling was replaced by cutting depressions on opposite sides of the root.

The use-wear is due to several different and sometimes

Fig. 1. Two different techniques in alteration of the roots of teeth used as pendants, drilling (left) and carving of the perforation (right). The perforations show heavy use (Photo: Bengt Almgren, LUHM).

interacting factors. One is how the pendants were fastened to the dress, belt or other artefacts: whether they were individually sewn to the surface or were they assembled in smaller or larger groups. The amount of use-wear is also related to the intensity of use of the articles of dress. Different parts of the dress might have been used with varied intensity. Parts may also have been obtained on different occasions during the lifetime of the interred individual. According to osteological expertise, the density of the bone in the root of the tooth from different animals should not vary in order to provide different use-wear for different species.

The use-wear has been classified in two groups – light and heavy use-wear. With light use-wear there is clear use polish around the perforation or in the grooves or the notch. In the second group the use-wear is so intensive that most or all traces of manufacture have been lost, as in Figure 1. The fact that there are traces of wear at all on the teeth shows that they were relatively loosely attached to the clothes so that the groups made some noise as the wearer moved.

Graves with pendants

The structure of the adornments has been studied as well as the arrangements of different species that were used as pendants. A few examples are presented:

Grave 170 is one of the oldest graves in the cemetery, with a radiocarbon date to 8150±80 BP (Ox-5969) 7454–6834 cal. BC. It contained a young adult male with a total of 125 pendants. There is a marked spatial distribution in the grave of pendants according to species. The largest number are from wild boar and are linked to the chest in vertical as well as horizontal lines and on regular clusters in two vertical rows along the pelvic region and the extremities (Fig. 2:A). The remaining pendants occur as smaller clusters, including a group of red deer pendants at the lower right side of the chest and a mixed group of wild boar and elk tooth pendants at the right upper chest. An apparent decorative set was arranged as a necklace consisting mainly of elk tooth pendants, with aurochs tooth beads located at the centre. A concentration of pendants at the feet includes elk, wild boar and red deer.

One has to keep in mind that the marking of different species makes the division of species very obvious. This was not possible to recognise unless at a very close approach to the person. However, the special arrangement of teeth from different species proves that it has a special meaning to the wearer and/or the person who made the arrangement of pendants. The most important concern was that people had knowledge about the arrangement, not that it was visible to everyone. The symbolic meanings of the decoration were based upon concepts accepted by the society and did not need to be fully known and visible to people other than those who approved the outfit.

Most of the tooth pendants with identified use-wear are associated with the neck region of the buried individual (Fig. 2:B). Among the sets of wild boar tooth pendants, the wear varies from clusters including no use-wear to those in which all teeth display use-related polish. Because teeth within clusters of pendants tend to show similar amounts of wear (or lack thereof), the different groups of pendants may be interpreted to have been obtained at different stages during the individual's lifetime.

Out of all pendants examined, 38% exhibit use-wear. However, the proportion of worn pendants displays marked variation between different species. One third of the elk teeth, the two pendants from aurochs and just one of the teeth from red deer show use-wear. This difference in wear indicates that sets of ornaments were combined from other probably older sets.

Grave 121 contained a young female adult and is dated to 6145±80 BP (Ua-19883) 5302–4854 cal. BC, which falls within the Early Neolithic according to Latvian chronological nomenclature.[1] The tooth pendant assemblage includes specimens from five species. However, the majority come from beaver teeth. Teeth from beaver are most common on the upper and left part of the woman's body, with teeth of wild boar more common on both sides of the trunk (Fig. 3:A). However, all sets of pendants include more than one species. Two major sets are found at the left chest area and between the femora. Both have a fan-like shape and include beaver, elk and a single tooth pendant of dog. The lower part of the skeleton is badly damaged. Virtually all of the teeth show signs of preparation, with carving being the dominating technique for achieving a perforation.

A rather high number of pendants exhibit use-wear – 39%. Within the pendant cluster located at the lower right arm, all teeth display use-wear. Among the fan-shaped sets, a high proportion of pendants also show signs of wear (Fig. 3:B). As with the other graves described, there is considerable variation among species in the percentage of worn pendants. The two otter teeth and the only example of a tooth from fox show heavy wear. However, 75% of teeth from wild boar, 42% of the teeth from dog, 27% of beaver and 25% of elk teeth exhibit light wear traces.

Pendants and pendant adornments in child graves

Of special interest is also how and when a new member of the society received his or her outfit and

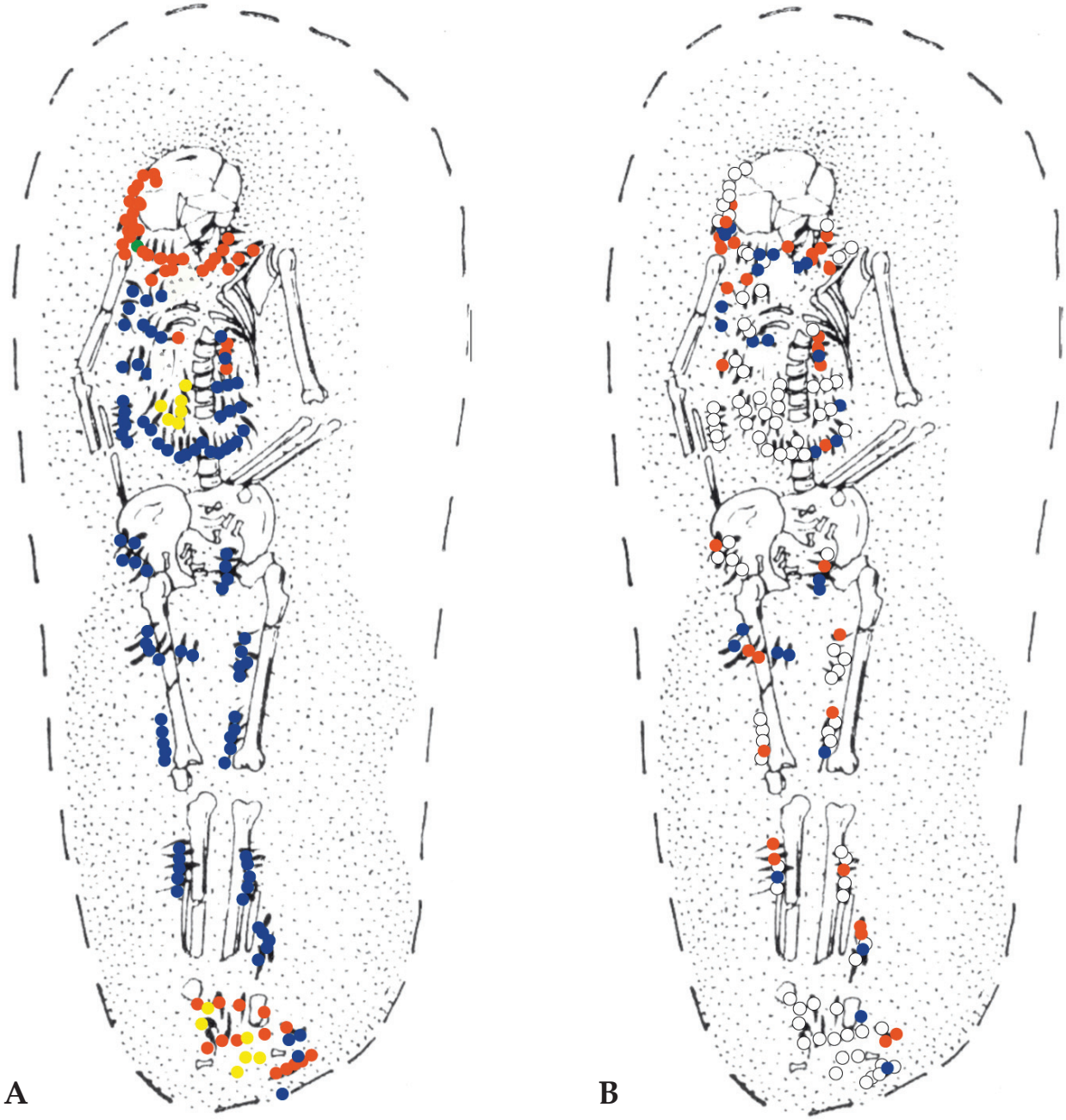

Fig. 2. Grave 170. A: the distribution of pendants according to species, blue: wild boar, red: elk, yellow: red deer and green: aurochs. B: unfilled circle: pendants with no wear, blue circle: pendants with light use wear and red circle: heavy use wear. Shading marks the area covered by red ochre (After Zagorski 1987 with additions).

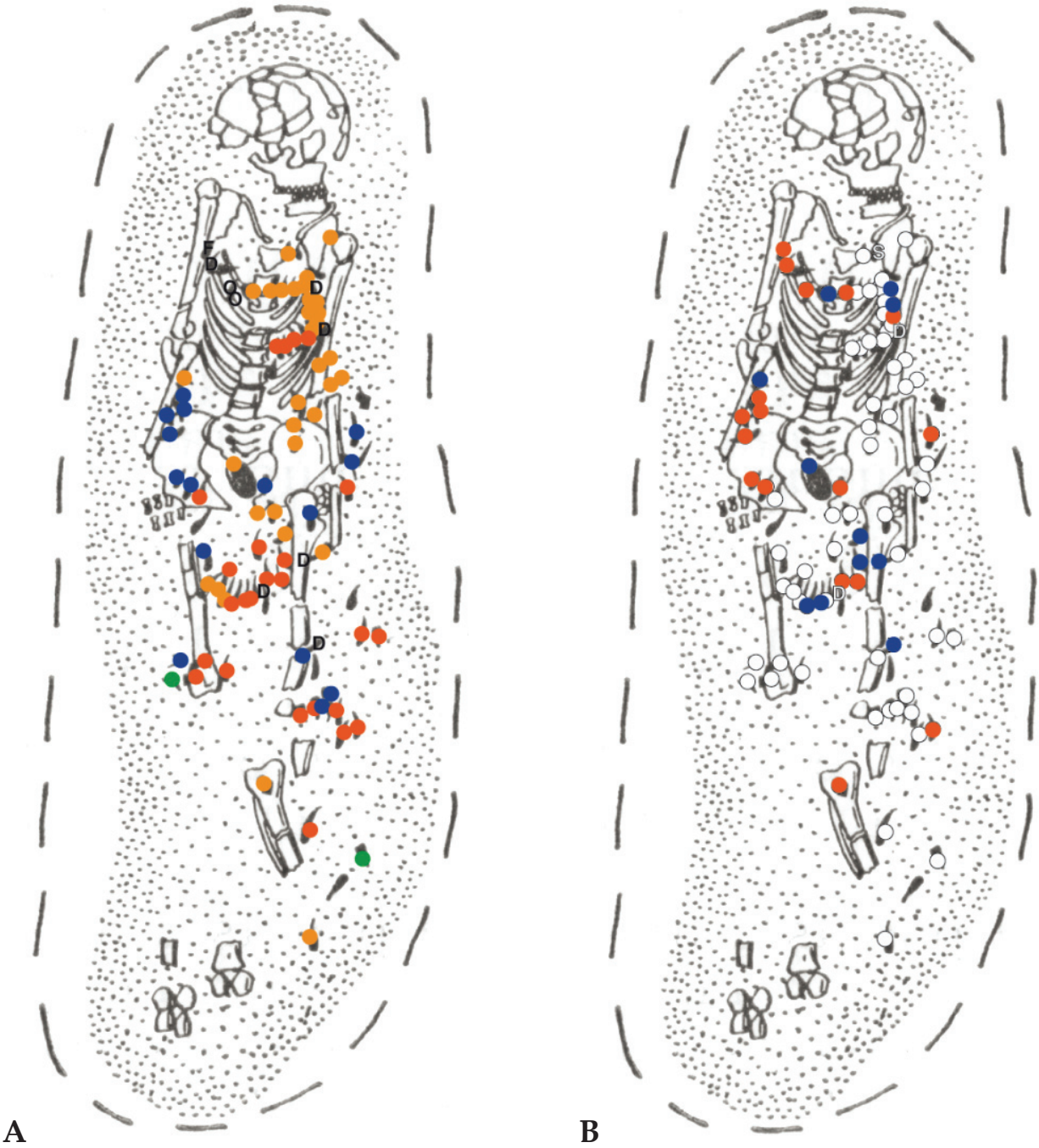

Fig. 3. Grave 121. A: the distribution of pendants according to species, blue: wild boar, red: elk, orange: beaver, D: dog and circle: aurochs. B: unfilled circle: pendants with no wear, blue circle: pendants with light use wear and red circle: heavy use wear. Shading marks the area covered by red ochre (After Zagorski 1987 with additions).

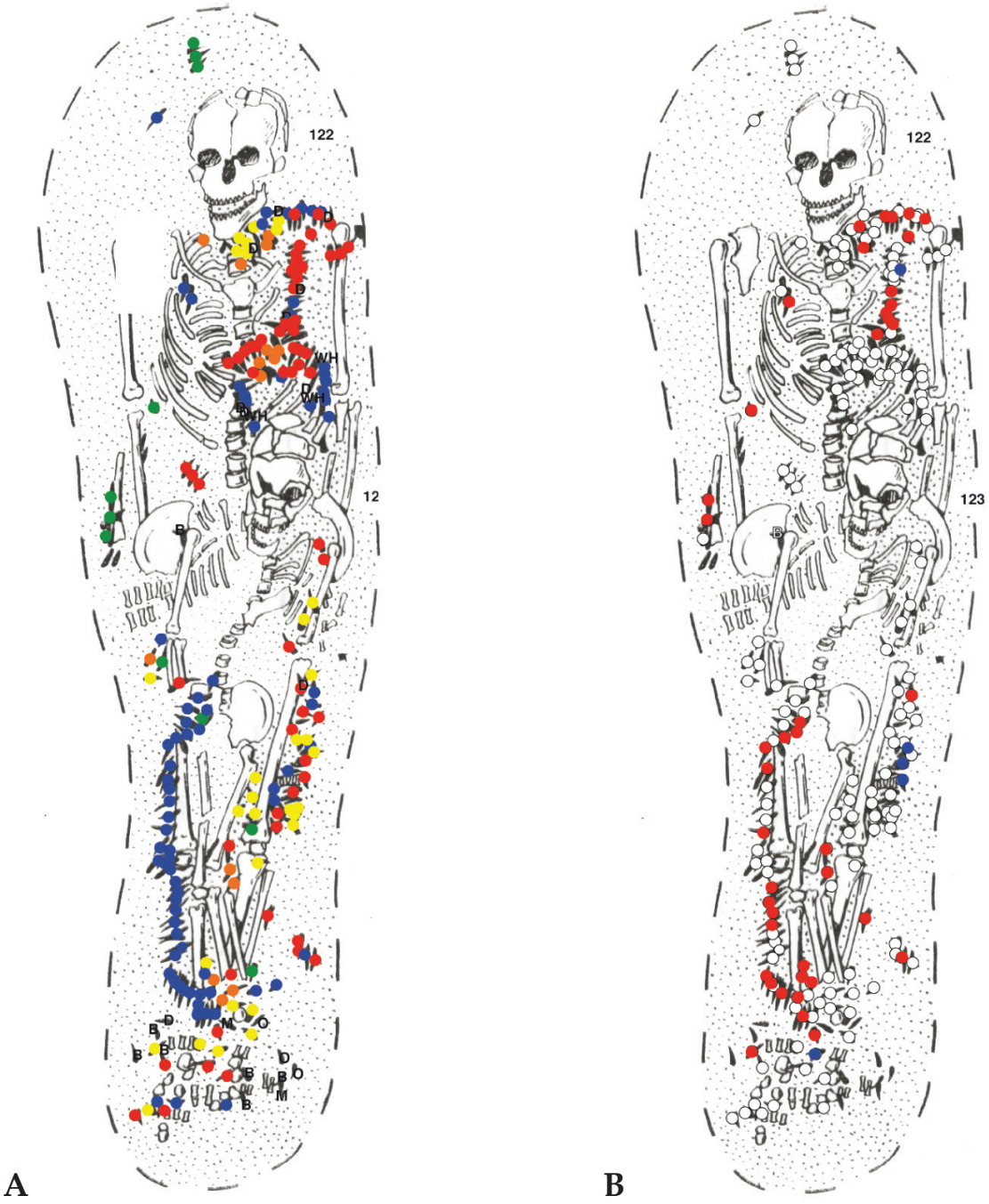

Fig. 4. Graves 122-123. A: the distribution of pendants according to species, blue: wild boar, red: elk, yellow: red deer, green: aurochs, orange: brown bear, B: badger, M: marten, O: otter and WH: wild horse. B: unfilled circle: pendants with no wear, blue circle: pendants with light use wear and red circle: heavy use wear. Shading marks the area covered by red ochre (After Zagorski 1987 with additions).

gear. Two contrasting scenarios are expected. The dress outfit and adornments are specially made for a child entering the society. Alternatively, the child inherits the outfit – or parts of it – from relatives or other members of the community. In the former situation the pendants are newly made, without much or any use-wear. This is the pattern the archaeologist would find if the child died and was buried with its dress. In the latter scenario one would expect to find pendants with use-wear among the pendants for the child. Moreover, because it is unlikely that children's pendants could have developed substantial use-wear themselves, worn teeth in juvenile burials likely represent gifts of used pendants.

As presented above, both patterns are present in child graves at Zvejnieki. In ***Grave 43*** a considerable percentage of the pendants exhibit use-wear. In ***Grave 31*** no pendant exhibits use-wear. In ***Grave 122–123*** there is a spatial distinction between pendants associated with the adult man and those with the child (Fig. 4). The adult pendant assemblage includes worn teeth. The child's assemblage includes no specimens with use-wear.

This variability could be explained by changes through time in cultural practices, both in furnishing a new member of society with clothing and adornment, and also in decorating the dead with pendants. Yet, one might expect that children's social roles changed rapidly with age so that in some cases, the child was presented with new dress or gear, and in other cases, the old items were given as gifts from relatives.

It should be noted that the distribution of wear traces on pendants in child burials can also shed light – in comparative perspective – on the social lives of adults. Most adult graves include pendants with wear. Yet, in a small number of graves, pendants associated with the interred are without wear. Women and men might have been given, or expected to furnish for themselves, a new dress with newly-made ornaments when they were integrated into new families or attained a new status among their own relatives. At death, the dress might even have been entirely newly made for use as a cloak for the dead. The old dress or parts of the dress could have been deposited in the grave besides the interred.

Other forms of dress decoration

It is not solely tooth beads that embellished dress. Several graves had finds of astragali from beavers. These small, almost square bones could occur in assemblages of up to 13 examples. Since they were mostly found along with tooth beads they are perceived as being a part of the embellished dress. Of particular interest are some finds of bird bones. In Grave 164, that of an adult man, there were in total 42 wing bones of jay at the right arm, on the trunk, at the right knee and at the feet (Mannermaa 2006). It should be borne in mind that jay has a patch of blue-and-black barred feathers on the wing which is very distinct and must surely have been highly visible and a good decorative element in the dress.

Final comments

Through detailed study of the tooth pendants from Zvejnieki, an archaeologist can gain an interesting perspective on values, norms and structures constituting the Mesolithic and Neolithic societies that existed in what is now northern Latvia. When dealing with mortuary analyses of hunter-gatherer cemetery sites, exceptions seem to be something of a rule. Indeed, the analyses of the Zvejnieki material identify very few well-defined patterns concerning the manufacture and use of pendants. The observed variability might be interpreted as mirroring a society with an acceptance of a variety of attitudes or norms related to different families or a society with a most intriguing system of norms and therefore very difficult to decipher.

Knowledge about dress in the Mesolithic is virtually non-existent. The few depictions of humans that occur in the form of carvings on bone and antler show hatching on bodies, but it is uncertain whether this is supposed to represent clothes. Reconstructions of dress are either based on the Early Neolithic finds from the frozen man in Ötztal in South Tyrol (Spindler 2001) or on ethnographic information about hunter-gatherer societies in Siberia or North America (Larsson 1988). If it is postulated that the tooth beads found in graves, with the exception of those around the neck, were sewn on to garments, then the costume must have consisted not only of a sleeved jacket but also a skirt that was at least knee-length or some kind of leggings. Some women probably had a broad beaded belt around the hips. Variation in the animal species of the tooth beads at the feet suggests that shoes were decorated. The same also applies to the headdresses worn by certain bodies in the grave.

Notes

1. It should be remembered that there is a difference in terminology between Scandinavia and the Baltic region. In the latter, the introduction of pottery is regarded as the start of the Neolithic, which took place around 5600 BC. In southern Scandinavia it is the introduction of agriculture that marks the change around 4000 BC. In this part of Latvia the change took place around 2500 BC. The graves considered here thus belong to hunter-gatherer societies.

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