

Special Issue: Personal Ornaments in Early Prehistory

Personal Adornments and Objects of Ornamentation: Two Case Studies From Hunter-Gatherer Burials in France (La Vergne) and Argentina (Arroyo Seco II)

LUC LAPORTE

CNRS, UMR 6566 CReAAH «Centre de Recherche en Archéologie, Archéosciences, Histoire» Campus Beaulieu, Bâtiment 24–25 - CS74205, 35042 Rennes Cedex, FRANCE; luc.laporte@univ-rennes1.fr

CATHERINE DUPONT

CNRS, UMR 6566 CReAAH «Centre de Recherche en Archéologie, Archéosciences, Histoire» Campus Beaulieu, Bâtiment 24–25 - CS74205, 35042 Rennes Cedex, FRANCE; catherine.dupont@univ-rennes1.fr

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ABSTRACT

This article presents two case studies from totally distinct geographic sectors and cultural environments—the Arroyo Seco II cemetery, in the Pampas in Argentina (7800–6300 BP and 4800–4300 BP), and La Vergne, in the west of France dated to the Early Mesolithic (9280–9000 BP), on opposite sides of the Atlantic Ocean. These two graveyards correspond to hunter-gatherer populations, where shells are a major component. They present exceptionally well-conserved remains and were attentively and accurately excavated. Burial environments such as these, especially graves in open ground, enable us to discuss the status of decorative and ornamental objects in relation to the deceased, and their position in the tomb. Some of them contain abundant corporal personal adornments, whereas others seem to correspond to the deposition of objects in highly ornate perishable materials; each of which contributes to the funerary arrangements. The comparison of such distant examples compels us to go beyond strictly local contingencies and allows us to better underline similarities. It also provides the opportunity to bring to light different types of human action on materials, including the comparison of natural entities with the shaping of raw materials. With respect to prehistoric personal adornments, this debate is reminiscent of the earlier distinction between shells (skeletal) and shellfish. Within this comparative scheme, a new example—the Germignac grave complex (6090 BP) from the early Neolithic of western France where shells are also a major component of adornments—will then highlight how the first farmers, at least in this case, erased the natural identity of certain elements.

This special issue is guest-edited by Daniella E. Bar-Yosef Mayer (Steinhardt Museum of Natural History and Institute of Archaeology, Tel Aviv University) and Marjolein D. Bosch (McDonald Institute for Archaeological Research, University of Cambridge). This is article #9 of 12.

INTRODUCTION

Elements of personal adornment are an important vector for attempting to understand the emergence of modern human cognitive processes and symbolic thought (d'Errico et al. 2005; Taborin 2004; Vanhaeren and d'Errico 2006). Often, in prehistory, this term refers to small-sized perforated objects, made in durable materials, for which there is no other functional use. From this point of view, and for much more recent periods of prehistory, the example of bone pins with a lateral clapper, of the Luscherz type in Switzerland, is edifying—for a long time, they were classified as

Neolithic personal adornments, particularly in the French literature, although they were identified very early on as needles for repairing nets (Barge-Mahieu et al. 1991). At the present time, some necklaces are still used for praying, others for counting, etc. The identification of these small objects as ornamental elements also depends on the context in which they were found.

Many of these small objects were gathered separately in archaeological layers containing other traces of human activity and interpreting them as elements of personal corporal adornment is not necessarily the result of direct ob-



Figure 1. Location map of the two case studies: A) Arroyo Seco II, Argentina (photograph by L. Laporte), B) La Vergne, France (photograph by Duday/Courtaud).

servation. Only the grave contexts, in particular those corresponding to primary burials in open ground, allow us to evaluate whether or not there is a close association between the elements attributed to personal ornaments and the corpses of the deceased. We will see that sometimes other interpretations are appropriate, linked for example to the deposition of objects in perishable materials in the tomb.

Items of clothing or diverse objects also participate in funerary rituals. Some of them may have been made for the occasion, while others were used beforehand. Only non-perishable personal adornments or objects of ornamentation have been preserved, some of which sometimes bear traces of use, representing indicators of how they were used, unless of course they were successively reused and sewn or attached to different backings. The methods and the degree of shaping of each of these objects also sometimes attest to rather different relationships to materials. We will illustrate these different points through two case studies (Figure 1).

In this paper we will mainly develop two cases studies of shells used in hunter-gatherer graves, and secondly, introduce a third case study corresponding to the very first farmers. At La Vergne (Charente-Maritime, Western

France), more than three thousand perforated shells were discovered in association with Early Mesolithic burials (9280–9000 BP). All of them were individually studied to understand the location of their collection (after their determination), and how they were selected, perforated, used, and associated with objects and bodies. The complete manuscript of this study consisting of some 70 pages of text and as many associated figures, is still unpublished (because of the delay in the monograph publications), except for a short note (Dupont et al. 2014). The nearby Germignac Early Neolithic grave (6090 BP) also provided some three thousand shell beads (Laporte and Gomez 2001), which will be compared to the Mesolithic beads.

On the opposite side of the Atlantic Ocean, the Arroyo Seco II (Argentina) hunter-gatherer graveyard contains at least two or three distinct sequences of funerary practices, spread over a very long time-span (7800–4300 BP). Some five hundred prehistoric ornaments have been discovered there, half of them in shell (Laporte 2014). Such items denote distinct attitudes towards matter, such as the appropriation of “natural”¹ entities or the transformation of raw materials. These objects were deliberately selected by Man in Nature, and most of them were used without

modifications. Therefore, the identity, or even the essence, of the “Natural” entity they come from, will be much more preserved than is the case for raw materials. European examples will be used as a counterpoint for such discussions.

In spite of the geographical distance, both case studies present many common elements allowing for comparisons—shells are a major component of the associated objects; these human populations are hunter-gatherers; the quality of preservation of objects; the possibility to place them in space; etc.

PERSONAL ADORNMENTS OF THE DECEASED

EXAMPLES FROM THE GRAVEYARD OF ARROYO SECO II (ARGENTINA)

The stratified archaeological site of Arroyo Seco II is located near Tres Arroyos in the south of the Argentinian Pampas, about fifty kilometres from the Atlantic coast. The site has been successively excavated by different teams since 1977, over a total surface of about 250m². Stratigraphic Unit Z contained the remains of a very early human occupation (Prates et al. 2013), associated with megafaunal bones. It also yielded human remains from 44 individuals corresponding to individual or collective open ground graves, in the form of primary or secondary deposits. These different graves were observed at different depths, but it was not possible to identify the outlines of the corresponding pits. They are considered to be intrusive and the excavators presume that the pits were dug out in stratigraphic Unit Y (Politis et al. 2016).

Fifty-three radiocarbon dates are available for the whole stratigraphic sequence. They suggest in particular that the site was recurrently used for burials for more than 3500 years. Three chronological groups of burials were defined by the excavators. However, the dates of these graves remained somewhat unclear for a long time on account of the diversity of the results obtained with the radiocarbon method. This situation is clarified in a recently published comprehensive monograph (Politis et al. 2014).

Broadly speaking, a first group of the deepest graves is dated between 7800 and 7600 BP. Some of these are associated with ochre or covered by a pile of blocks which may have flagged the location on the surface. Several others correspond to multiple or secondary burials.

A second group of graves is dated between 7000 and 6300 BP, with the corresponding margins of uncertainty. All the individuals with personal adornments, including canid canines, are part of this chronological group (Figure 2, Sector A).

A third group of burials is dated between 4800 and 4300 BP. All are implanted in Sector B, just outside the cemetery (Sector A). The corporal personal adornments closely associated with these graves (see Figure 2, Sector B) were previously compared to those found under the Malacara tumulus, where one of the peripheral graves yielded a radiocarbon date of around 2500 BP (Madrid and Barrientos 2000). Initially, the Arroyo Seco II graves with this type of personal adornment were thus considered to be contempo-

aneous with groups practising agriculture, settled slightly further north, near Rio de la Plata. However, they now appear to be older.

We presented detailed data concerning the study of the personal adornments from the site of Arroyo Seco II in a previous publication (Laporte 2014). Here, we will summarize these data and focus on the position of these personal adornment objects in the tomb. It is important to note, from the outset, that most of these items were found in close association with the bones of each individual, and, in particular, the individual graves in open ground corresponding to a decomposition of flesh in sealed areas. Some of them undoubtedly participated in the ornamentation of items of clothing, and all of them can clearly be assimilated to corporal adornments. As regards burial practices, two very different attitudes are visible in the different sectors and corresponding periods:

- Sector A: Corporal adornments and highly ornate items of clothing are part of the funerary rites, but only for a very limited number of individuals. They always denote singular events concerning only the young children buried without their mothers at this site. Other graves, including some of the oldest, could also have been flagged on the surface by several piles of blocks. Sometimes, they are multiple or secondary graves. At least four individuals bear marks of a violent death. Here, everything implies that the rich corporal ornamentation contributes to characterizing an event, or a ceremony, as much as the individual. The traces of use on the personal adornments indicate that some highly ornate items of clothing, such as those buried with a young child, for example, could have been worn for a long time beforehand (Figure 3A).
- Sector B: The corporal adornments are positioned in the same place for several different individuals. They are made up of geometric objects with standardized shapes. At Malacara, the individuals with this type of adornment are covered by a monumental tumulus construction, built by a large part of the group. In this case, the personal adornments seem to contribute to characterizing the position of each individual in society. The headdress, for example, may be the vector of strong identity functions relating to a class of age, a clan, or another human group (Figure 3B).

The objects used for making these elements of adornments are always of external origin. This is clearly the case for the shell adornments, but also for the canid canines, as no corresponding species are represented among the fauna gathered from the site. However, depending on the sectors in question, the objects of adornment present in the tomb also point to distinct attitudes towards materials:

- Sector A: These are mainly simply perforated canid teeth, and several discoid shell beads. For the hunter, the animal from which these items come is perfectly identifiable. Moreover, the use of each object is different depending on the species in ques-

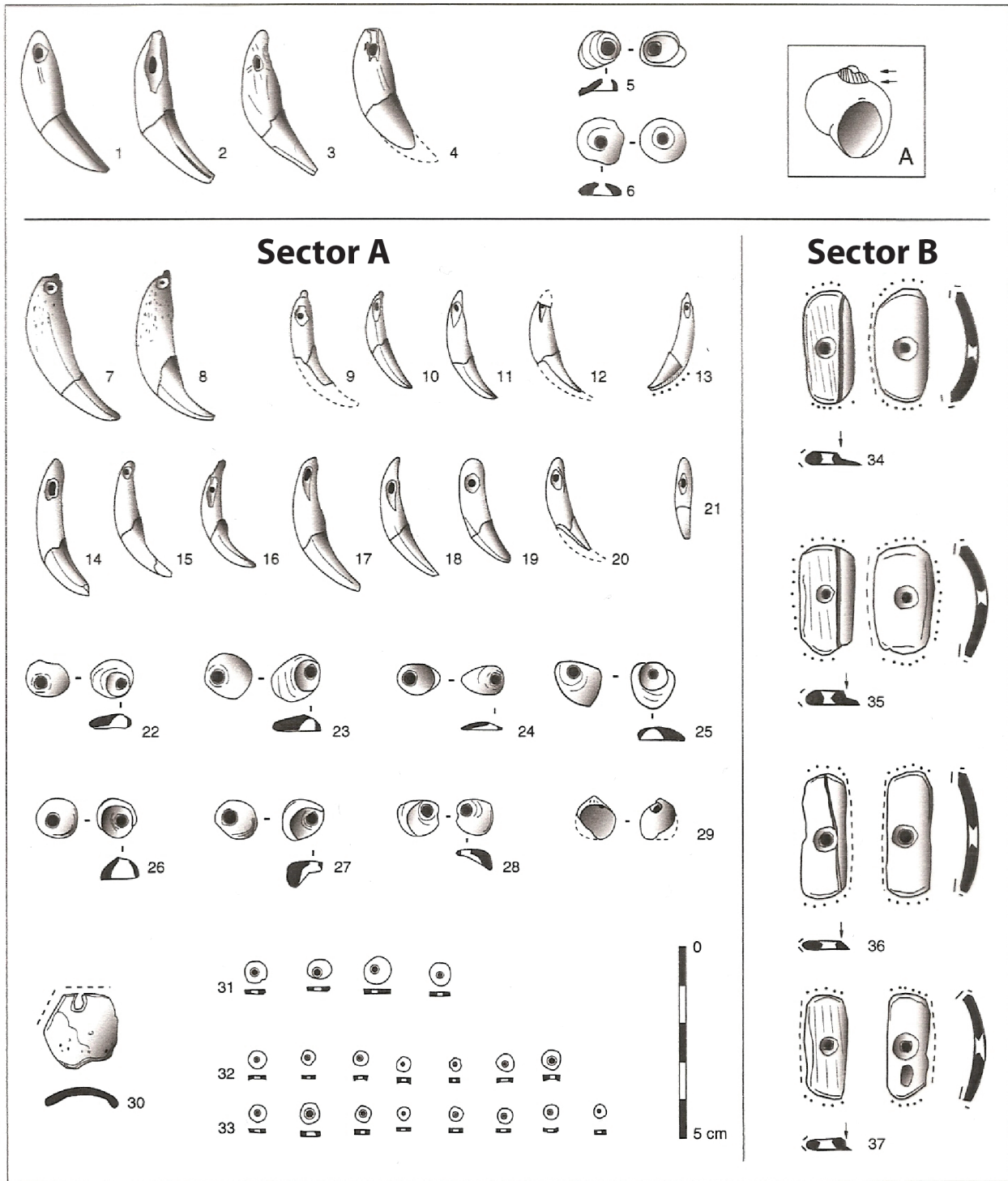


Figure 2. Arroyo Seco II, Argentina (drawings of the adornment objects in the different tombs of the graveyard by L. Laporte).

tion. This may be a way of re-appropriating the inseparable essence of the entity from which the object came; perhaps also for some of them, from the qualities of the corresponding living being.

- Sector B: Each object has a geometric shape, very rarely observed in nature and totally independent of the shape of the entity from which it derives. We will use the term raw material for this specific case.

The technical operations (grooving, perforation using a semi-rotating drill, polishing of surfaces, etc.) are, however, not very different from those used for fashioning natural entities. This distinction thus goes beyond the mere scope of the technical sphere.

Within a same human group, the re-appropriation of natural entities or the shaping of raw materials are not two exclusive attitudes, as is clearly shown, for example, by

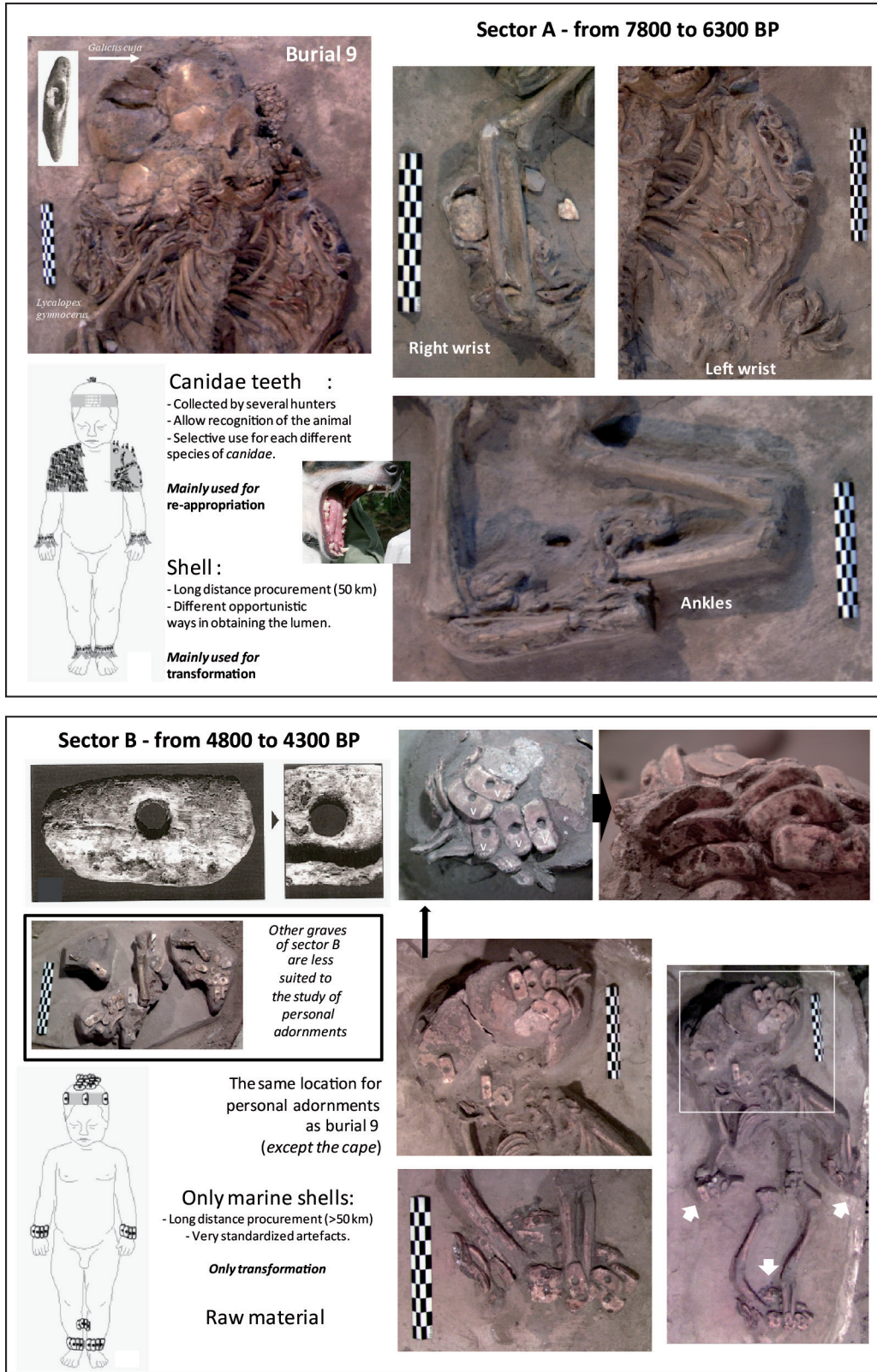


Figure 3. Arroyo Seco II, Argentina: The corporal adornments for these two individuals from the same age class (respectively from Sectors A and B) have more or less the same location. Nevertheless, the objects mainly result from an appropriation of natural entities, in one case, and transformation of raw material, in the other (photographs by L. Laporte, CAD by L. Quesnel).

the combined presence of discoid shell beads and perforated canines in several of the oldest tombs of the graveyard. However, in the long term, we cannot deny that the second attitude towards materials takes on an increasingly important role, which is often solely related to the technical knowledge of the different populations under study. A second example will enable us to observe the terms of this debate in more detail.

OBJECTS OF ORNAMENTATION AND FUNERARY ARRANGEMENTS

EXAMPLES FROM THE GRAVEYARD OF LA VERGNE (FRANCE)

On the other side of the Atlantic Ocean, several graveyards from the Mesolithic period also yielded considerable quantities of personal adornment objects. These are individual or multiple burials in open ground, sometimes with secondary bone deposits. On the French coast of Brittany, some of these (Téviec and Hoëdic) are capped by several piles of stones—we do not have the spatial distribution of ornaments within the graves excavated during the first part of the 20th century. Further south and further inland, the burials of La Vergne enable us to better understand the place of these objects in the tomb.

The Mesolithic graveyard of La Vergne was discovered in 1995, during rescue excavations carried out in the locality called “La Grande Pièce.” It consists of ochred pits carved into the limestone substratum containing open ground graves attributed to the Early Mesolithic period, between 9280 and 9000 BP (Duday and Courtaud 1998; Duday et al. 1998). The orientation of each object uncovered by H. Duday and his team was noted and the object was sometimes determined. All of the sediments were sieved with a 1 mm mesh (Duday et al. 1996).

Among the different data gathered during the study of this graveyard, we will focus here on those related to the position of the 3298 personal adornment objects in shell in each tomb, as well as several perforated teeth. In all cases, the natural entity has not been transformed or only slightly transformed. The shaping of the shell items is confined to a perforation, when the latter does not result from a natural action. The distribution of these objects in the Mesolithic tombs of La Vergne is very disparate (Figure 4A). Three grave pits (Structures 3, 7 and 10) contain 95% of the studied objects and other structures are more recent pits. Half of these objects are in Structure 7, and nearly two-thirds, if we add Structure 10. Structure 3 also contained abundant personal adornment objects, but the superficial levels were truncated by subsequent digging. Each of these three complexes can be clearly differentiated by the type of species represented—75% of the perforated netted dog whelks (*Tritia reticulata*) are from Structure 7, whereas 60% of the tusk shells (*Dentalium* sp.) are from Structure 3 (Dupont et al. 2014).

At first sight, the perforated shells are so abundant in each of these graves that they appear as an almost continuous layer of dots throughout the whole volume of the cor-

responding pits (Figure 4B). This same difficulty was also noted during the excavation of the Mesolithic graves of Téviec and Hoëdic. Marthe and Saint-Just Péquart indicated that the skeletons of two children in anatomic connection deposited in Grave C of Hoëdic were “literally stuffed with perforated *Littorina*, to such an extent that the number of gathered shells attained 2 900”. However, “it is impossible to observe the objects and the shell ornaments in position belonging directly to each deceased individual. We must just content ourselves with gathering the abundant elements scattered everywhere around and among the bones” (Péquart and Péquart 1954: 35). At least at La Vergne, the quality of the available information will enable us to go a little further.

Structure 3, and the related Grave 3, contained the remains of three individuals in connection. An adult woman and a young man were first of all simultaneously deposited in a seated position. Only the lower left leg and part of the pelvis of the young man, and part of the right leg and pelvis of the adult woman underwent detailed excavation. Eight hundred and twenty-five personal adornment objects in shell are exclusively associated with these first two individuals. A third individual was subsequently buried in a pit overlapping the previous one.

The study of the spatial distribution shows that the adornments were laid out on the left leg of the young man, and on the right leg and the pelvis or the feet of the adult woman. In the first case, we observe the presence of many large-sized netted dog whelks, *Tritia reticulata*, while in the second, heaps of *Dentalium* sp. tusk shells are particularly frequent. Several rare objects are closely interlinked with the vertebrae of the adult woman. These clearly appear to be corporal personal adornments. Among these objects, some stand out on account of a very specific shaping method, with preparation for perforation by grooving.

We then mapped the objects located under the two bodies, using altimetric spits. Each time, it appeared interesting to distinguish the distribution of the tusk shells and the netted dog whelks from the other shells, which are often much larger in size. In this way, a new organization of the remains emerges. We can advance the working hypothesis that both individuals were deposited seated on the same mat, or on another object in perishable materials, decorated with abundant tusk shells (Figure 5A). This mat would have rested against the adult woman’s feet and the left leg of the young man. The high proportion of tusk shells in this tomb could thus be explained by the presence of a richly ornamented object in perishable matter.

Higher in the filling, the netted dog whelks are clearly divided into two units (Figure 5B). One is made up of small-sized objects that seem to correspond to the presence of a circular-shaped object below the buttocks of the adult woman. On the other hand, much larger netted dog whelks are closely linked to the young man’s lower left limb. In addition, three large gastropod shells are aligned along the calf. These different objects completely envelope the leg, with a high concentration just above the ankle, terminated by the presence of several small mammal bones. Opposite

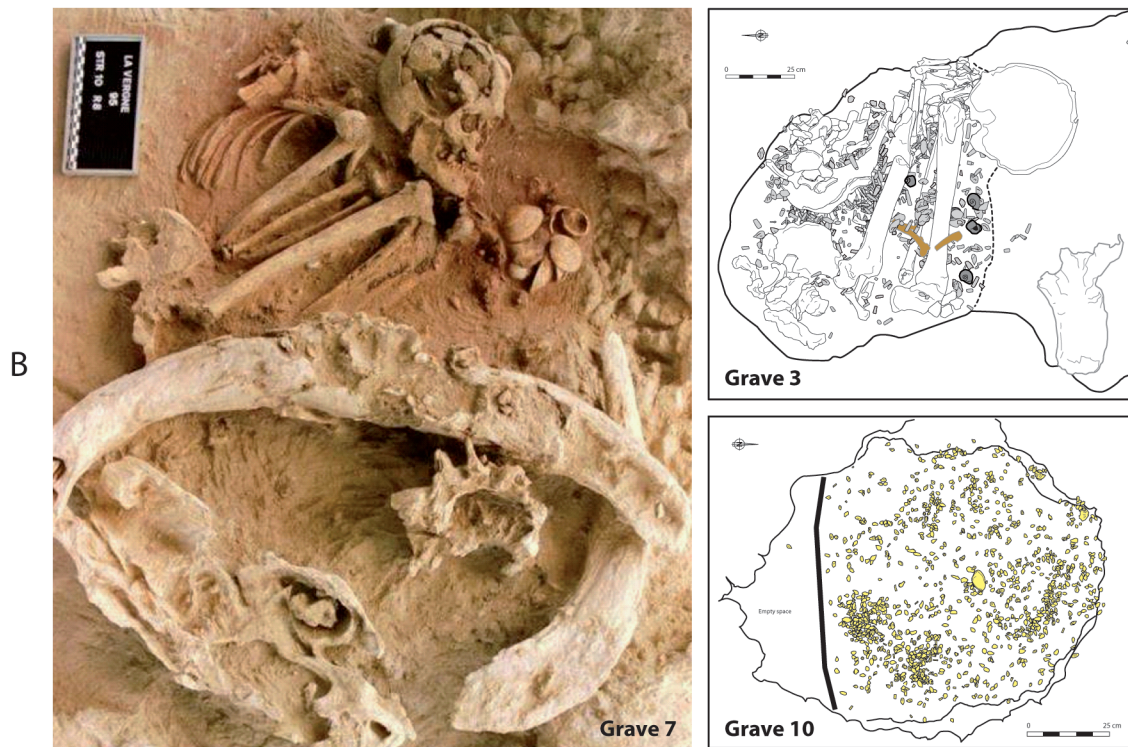
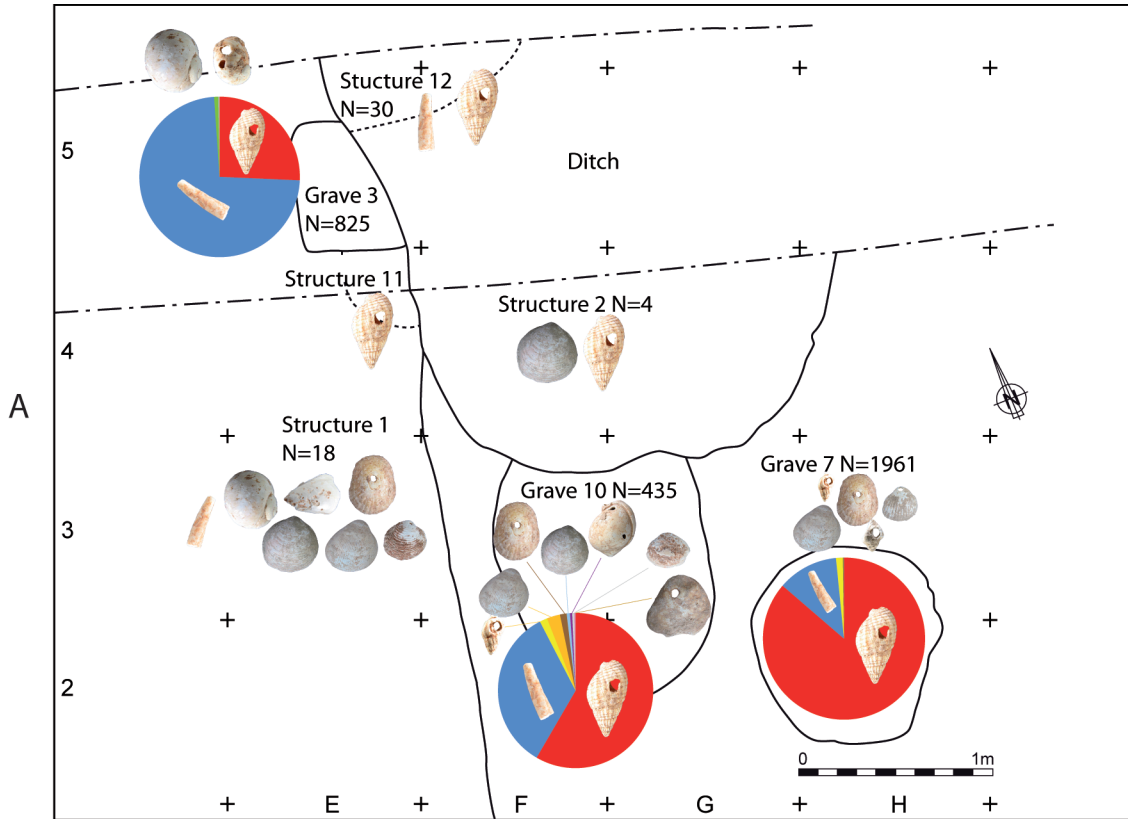


Figure 4. La Vergne, France: A) In spite of the binary composition of the adornments, each tomb can be clearly identified on the basis of the type of represented shellfish species (CAD by C. Dupont and L. Quesnel); B) On the other hand, the distribution of elements of adornment or ornamentation in each tomb could initially be considered to be rather random: example of Tombs 3, 7, and 10 (photographs by P. Courtaud and H. Duday, CAD by L. Laporte and L. Quesnel).

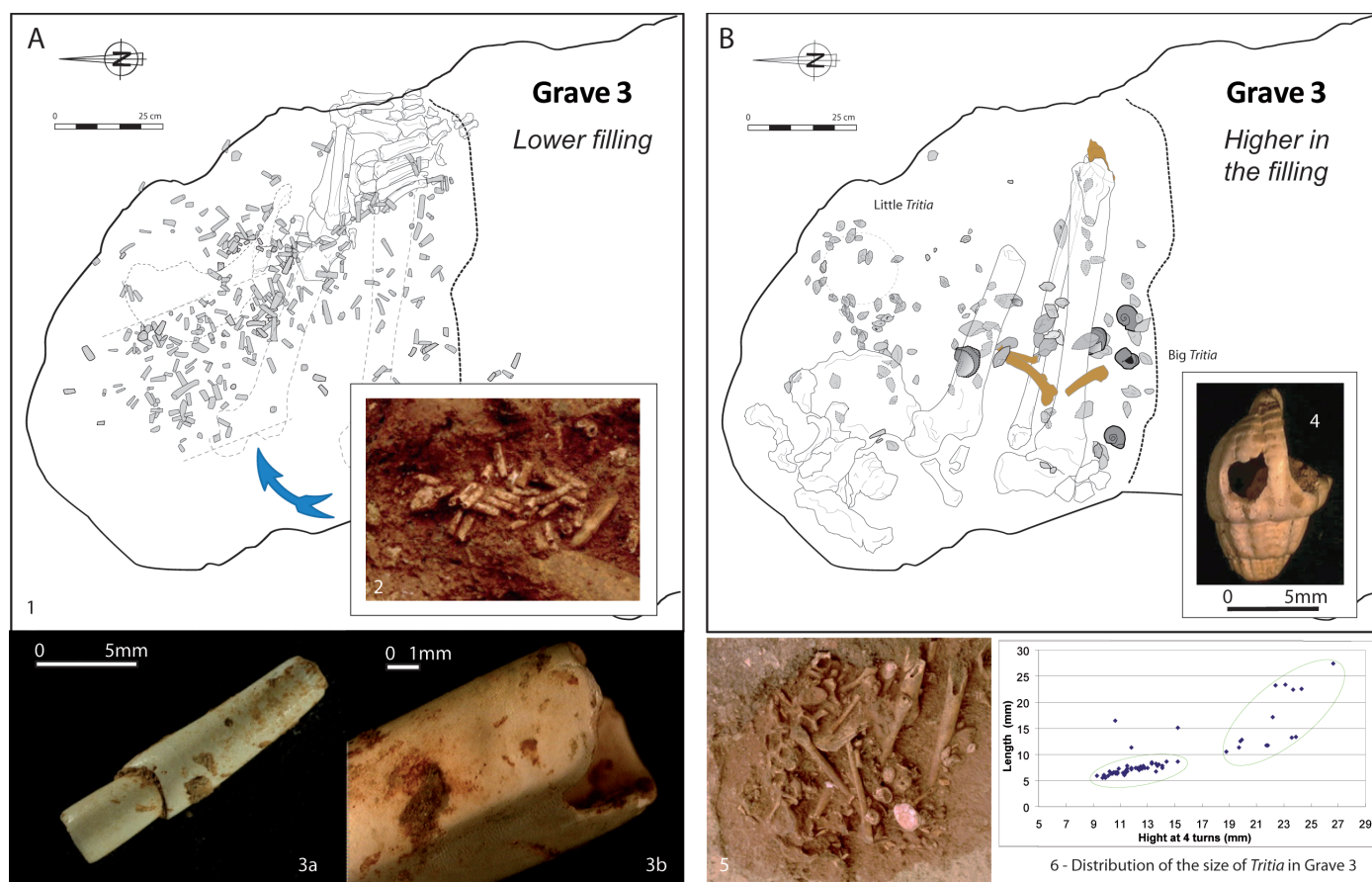


Figure 5. La Vergne, France: Grave 3: A) Distribution of *Dentalium* at the base of the filling (1 - CAD by L. Laporte, 2 - photographs by H. Duday and P. Courtaud, 3 - photographs by L. Laporte); B) Distribution of *Tritia* higher up in the filling (4 - CAD by L. Laporte, 5 - photographs by H. Duday and P. Courtaud). Inset images 2 (nested *Dentalium*); 3 (traces of usewear on the face of a tusk shell); 4 (anthropogenic perforations on a *Tritia*); 5 (dismantling stage corresponding to plan B); 6 (small and large *Tritia* shells).

this, a perforated canine is located at knee level, and then a similar concentration is situated at thigh level. It is thus reasonable to advance the hypothesis of elements of personal adornment on an item of clothing, such as leggings.

The spatial analysis of traces of wear supports this hypothesis. Near the young man's left leg, for example, the perforation of a whelk is aligned with the opening of an adjacent tusk shell (Figure 6). They could have been attached by the same tie. Other netted dog whelks seem to be associated in pairs and may either have been attached by the same single tie, or attached to each other separately. Some of the tusk shell sections are interlocked, perhaps attached by the same single tie. Lastly, nearly three-quarters of the tusk shells presenting traces of lateral abrasion (11 of 16) are also clustered together here. Some of the items of clothing or decorated objects thus seem to have been worn or used for long periods before being deposited in the tomb.

Structure 10 (or Grave 10) is undoubtedly the best conserved structure discovered in the cemetery. It contained the remains of an adult and a child associated with 435 shell objects. Just below the upper levels of the infilling, a first concentration of personal adornment elements is closely associated with the bones of the child deposited against the

adult's back, lying on the left side in a contracted position. A bucranium is deposited above the feet of the latter, also associated with several scattered perforated objects.

The bones of the child and the associated shells are located in a space with a roughly rectangular cross-section, where both of them are sometimes intertwined. Some of the perforated shells are aligned on the longest side of this volume, as if they were placed on the sides of a container: most of the items deposited on the south side are tusk shells, whereas the latter are absent from the north side of the volume in question. On the other hand, in the center, a group of netted dog whelks is closely mixed up with the human bones. The bones of the child, perhaps associated with elements of corporal adornment, thus seem to have been laid out in a container in perishable materials with a rectangular cross-section, and which was itself decorated with abundant shells (Figure 7A).

At the same level, a rather loose scattering of perforated objects (shells) covers the upper part of the bucranium, as though they had been attached to a backing in perishable matter covering the bucranium. We observe that a limpet *Patella* sp. is placed in an axial position. A small group of shells follows the curve of the underlying aurochs' horns

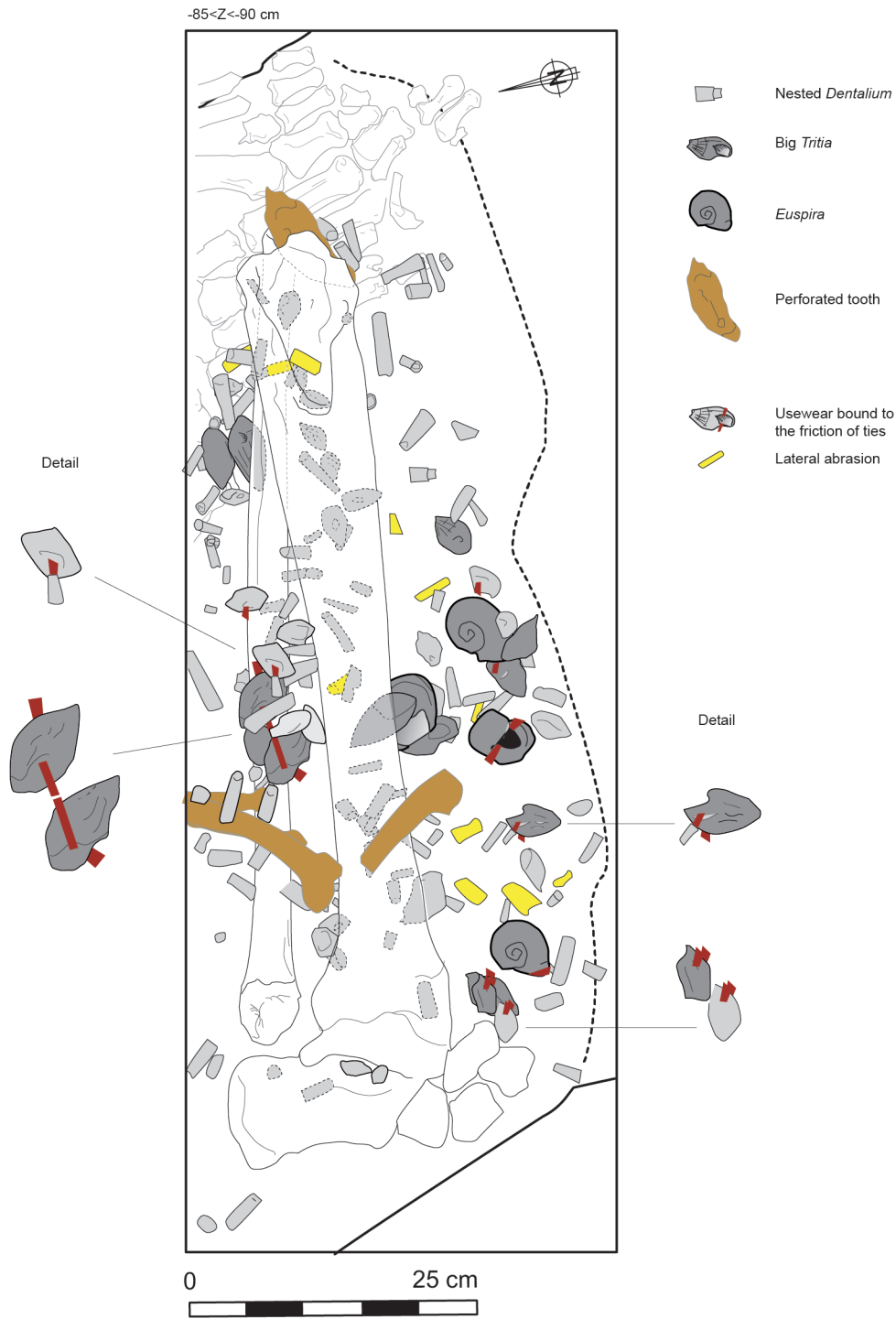


Figure 6. La Vergne, France: Grave 3: A detailed record of the position of the elements of adornment in relation to the corporal volumes sometimes provides indicators of the existence of items of clothing (CAD by L. Laporte).

from a slaughtered animal, at one end of the latter. The point of the horn could have been wrapped in a specific ornamentation? The whole element could have been part of an adornment intended for the slaughtered beast? In any case, it is clear that this item was used with the two spectacular superposed bucraniums, when the deceased was laid in the tomb (Figure 7C).

At this level, only a much larger than average netted dog whelk is placed against the skull, on the frontal bone of the adult. A Norway cockle valve, *Laevicardium crissum*, lies just below the netted dog whelk, also placed against the frontal, with its internal surface following the curve of the frontal. Several centimetres lower down, two other clamped *Laevicardium crassum* valves, opposed by their

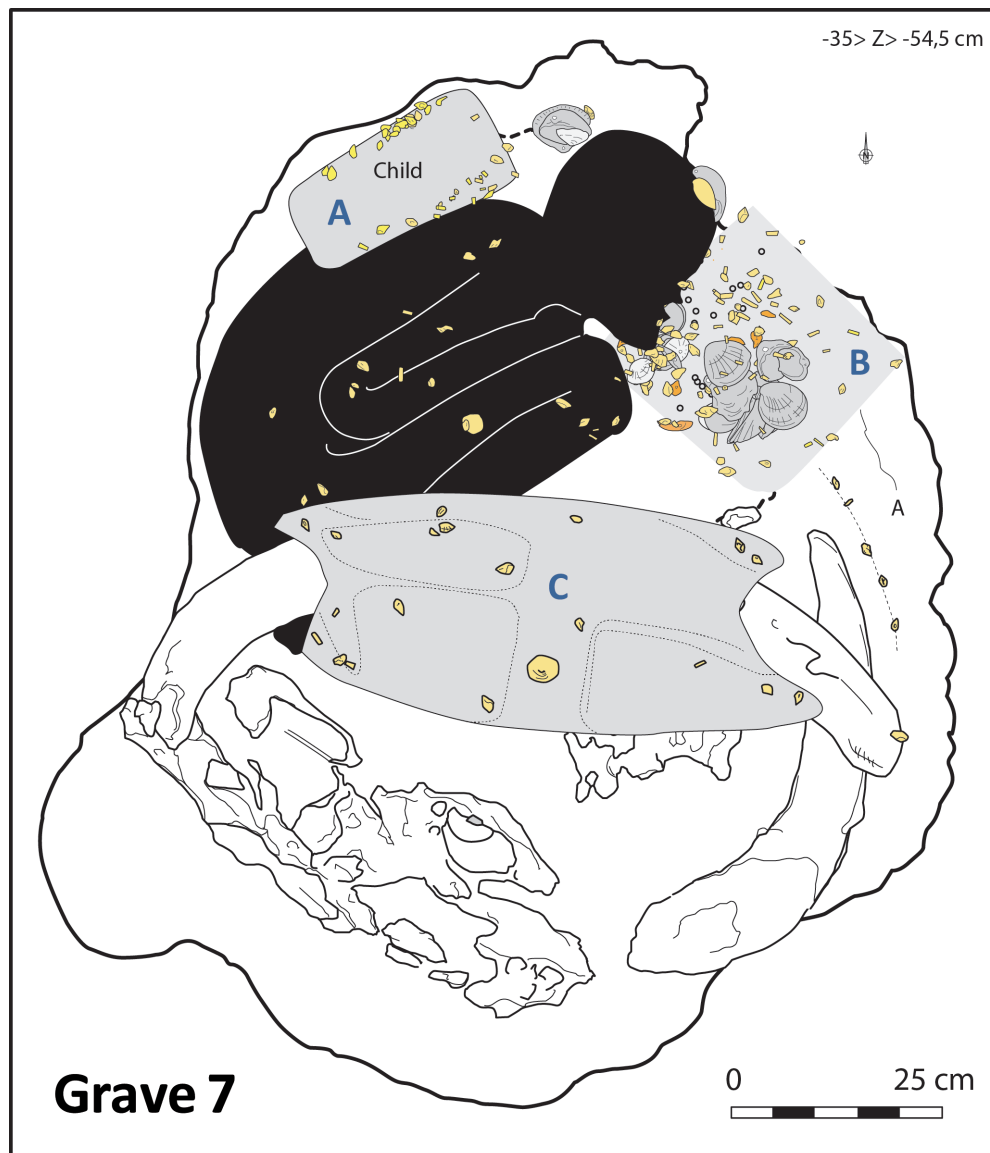


Figure 7. La Vergne, France: Grave 7: Many ornated objects were deposited in the grave, but relatively few personal adornments (photograph by H. Duday and P. Courtaud, CAD by L. Laporte). A) An ornated box containing the bones of a child; B) Ornated objects in front of the face of the adult; C) An ornated mat over the bucranium.

hinge with the perforation oriented upwards, are located near the occipital. They are capped by a limpet shell *Patella* sp., and could have been suspended on a cord. The limpet is perforated at the top and presents a deformation caused by use at the edge of the shell compatible with this hypothesis. Perhaps these shells were attached to the hair and were part of the individual's headdress.

In the northeast corner of the pit, under the skull of the adult and in front of the face, there is another concentration of large-sized shells (Figure 7B), divided into four distinct clusters. Each one of these different clusters presents similar layouts where several valves interlocked with bivalves are opposite an isolated valve. The traces of use and localized deformation of the surface indicate that they were suspended by one or several, often vertical, cords. Sometimes, there is a gastropod shell inside the concave side of the in-

nermost valves. It may be a large *Semicassis saburon* type shellfish or a small netted dog whelk. The whole component is sometimes capped by a limpet, perforated at the top and presenting traces of use on one or two opposite edges. It is thus clearly not coincidental if we find all or part of each of these elements in each individual cluster. However, it is difficult to propose a reconstitution of the corresponding objects as all the organic parts have disappeared.

Lower down at the level of the corpses, a *Spisula* sp. valve is present in front of the girdle area and a limpet lies on the right thigh. A rather loose scattering of whelks and several rare tusk shells cover the whole body. Some elements slipped inside the rib cage, while others were blocked between the bones of the right and left limbs, at the level of the arms and legs. A more limited number of shells lies on the base of the pit. The whelks associated

with the corporal spaces of the adult present much more accentuated use-wear than all the others in the same tomb (Figure 8). Nearly two-thirds of the objects in question bear these types of marks, and they are particularly accentuated on one-third of them. On the other hand, only several rare traces of use were observed on the objects closely associated with the child's bones. They are nonexistent for the whelks attached to the container in perishable matter covering the latter.

Besides the headdress, the personal adornments worn by the adult when it was laid to rest in the tomb comprise about sixty perforated shells at the most, mainly netted dog whelks, some rare tusk shells, a *Spisula* valve and perhaps a limpet and another lamellibranch valve. This only represents a small part of the 435 perforated shells deposited in the tomb. Most of these, like the perforated canines, seem to correspond to the ornamentation of diverse objects in perishable materials accompanying the deceased.

Structure 7 (or Grave 7) contained 1961 shell elements associated with the remains of two individuals in connection and with the remains of a child, mixed up with several burnt bones. At the base of the infilling, a rather clear wall effect isolates a zone with a high concentration of shells, which corresponds to a step in the digging of the grave pit in the center and the north (Figure 9A). The shells are located at different altimetric levels on the same vertical plane, and could correspond to an envelope, undoubtedly in perishable materials, placed against the walls of the pit (such as elements sewn onto hide, for example). Two corpses in a very contracted position were buried in this delimited space, with two concentrations of perforated shells in the free space at their feet (see Figure 9A). In the first cluster, located to the east, we observe the presence of abundant *Dentalium*, whereas they are practically absent from the second cluster (Figure 9B). In parallel, we observe that the individual located to the east seems to be associated with a lot more *Dentalium* than the second individual deposited against his back (see Figure 9B). A more detailed study of the altimetric distribution of the objects making up each of these two clusters enables us to propose a reconstruction of the shape of the two distinct objects in perishable materials, which could each have contained two child's bones associated with one or two perforated teeth, respectively (Figure 9C and 9D). Or, these children's bones could also correspond to a particularly altered deposit in connection.

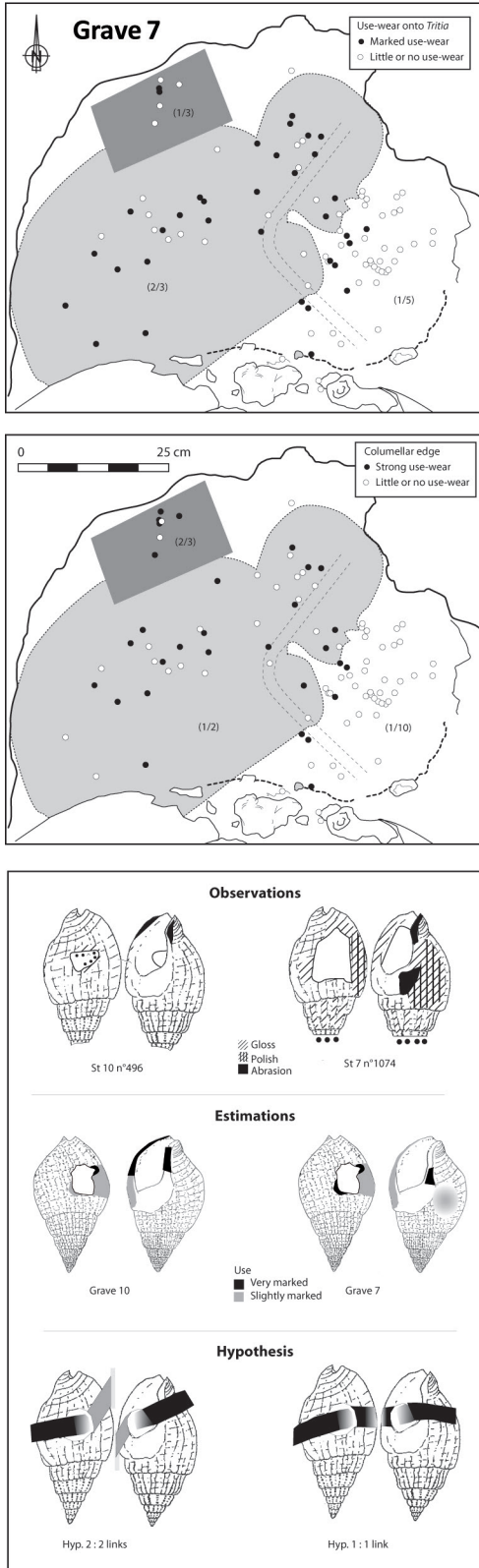
At the location of the two individuals in connection, well above the corporal volume of the deceased, Individual n°1 seems to be covered by a rather loose scattering of small shells. On the other hand, Individual n°2 hardly contains any. A large lamellibranch valve is also laid out above the back of Individual n°1. The vast majority of the objects situated lower down in the infilling are associated with the corporal volumes of the deceased. The latter were deposited on the left side in a highly contracted position. Individual n°2 was placed against the back of the previous corpse, encircling it between its bent legs. In both cases, their shoulders pressed against the pit walls, to such an extent that the corpses were not deposited horizontally, but were very

tilted. The two skulls are missing, as they were partly destroyed by mechanical stripping. However, the mandible of each individual is present. All these elements influence our way of processing the spatial organization of the shell adornments in this tomb.

The simultaneous dismantling of the shells and the main bones of the skeleton, based on the precision and the reliability of the plots and information gathered in the field by H. Duday's team, enables us to make several additional observations (Figure 10A). The shells laid out on the right side of each individual are concentrated in a wide band covering the back and the right arm. This layout is particularly clear for Individual n°1, and more diffuse for Individual n°2. We can advance the hypothesis of the existence of a cape or a strip of material maintaining the arms in a folded position against the chest. Some corresponding shells seem to have slipped between the ribs, during the decomposition of the intrathoracic guts and the flattening of the thorax, to accumulate inside the rib cage. A small cluster of shells situated under the right scapula of Individual n°1 also suggests the presence of ornamentation, at least on the upper chest. The same applies to a small set of personal adornment elements situated on the internal surface of the left arm folded against the chest of Individual n°2. Another significant cluster of shells runs along the external part of the left arm of Individual n°1, also in a folded position (Figure 10B). This accumulation could at least partly correspond to a vertical migration of elements situated on the two forearms of this corpse. It is positioned between the left arm and the left thigh, in a similar layout to that observed on the right side. All this would be consistent with the hypothesis of a strip of material, hide, or a mat decorated with a series of small sewn-on shells, covering the back of the deceased and maintaining its upper limbs against the chest. This element was then covered by the legs maintained in a highly contracted position.

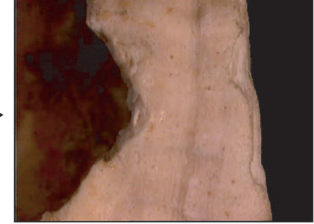
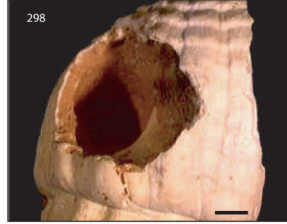
Numerous shells were also gathered from the lumbar region or from the pelvis of the two individuals in connection. In both cases, the iliac wings are open and slightly offset, with the individual lying on the left buttock. It is thus very difficult to reconstruct the original position of the elements in this space. Given the tilted position of the corpse, the downward migration of objects of adornment placed on the abdomen can be envisaged. A concentration of shells can be observed in the lumbar region of Individual n°2, whereas they seem to be mostly situated on the left iliac wing and between the legs of Individual n°1. This latter concentration is the continuity of the concentration along the left arm and on the left thigh of the latter. Most of the tusk shells associated with Individual n°1 are also located here. The hypothesis of a belt in one case or a loincloth in the other would not be in contradiction with these observations. Lastly, it is important to cite the presence of two perforated limpets situated respectively at the knee and the calf of the left leg of Individual n°2. The different hypotheses formulated earlier must be considered with caution on account of the position of the corpses and their imbrication.

Many of the perforated shells gathered during the

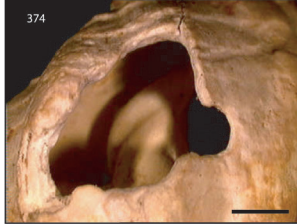


Several examples of use-wear traces

Use-wear of the perforation lip



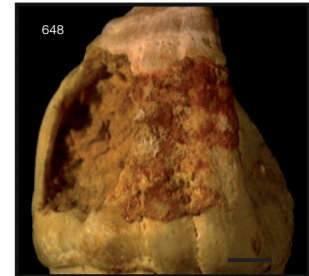
Scales



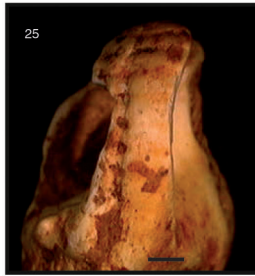
Indentation



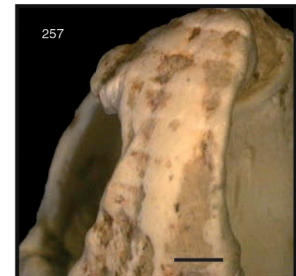
More pronounced polish between the labrum and the perforation



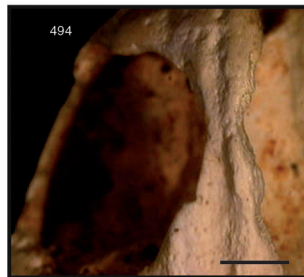
Trace of a tie marked with red ochre



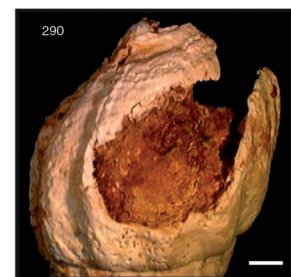
Polish and beginning of bilateral use



Curve of the labrum lip



Narrowing by bilateral use



Break

Figure 8. La Vergne, France: Grave 7: Traces of use-wear are more pronounced for the objects directly associated with the corporal volumes of the deceased, in particular in this case—as regards the use of the columellar edge. The right column presents several examples of such use-wear traces. The bottom left box illustrates the method used for evaluating these different use-wear traces, for the same shellfish species (photographs and CAD by L. Laporte).

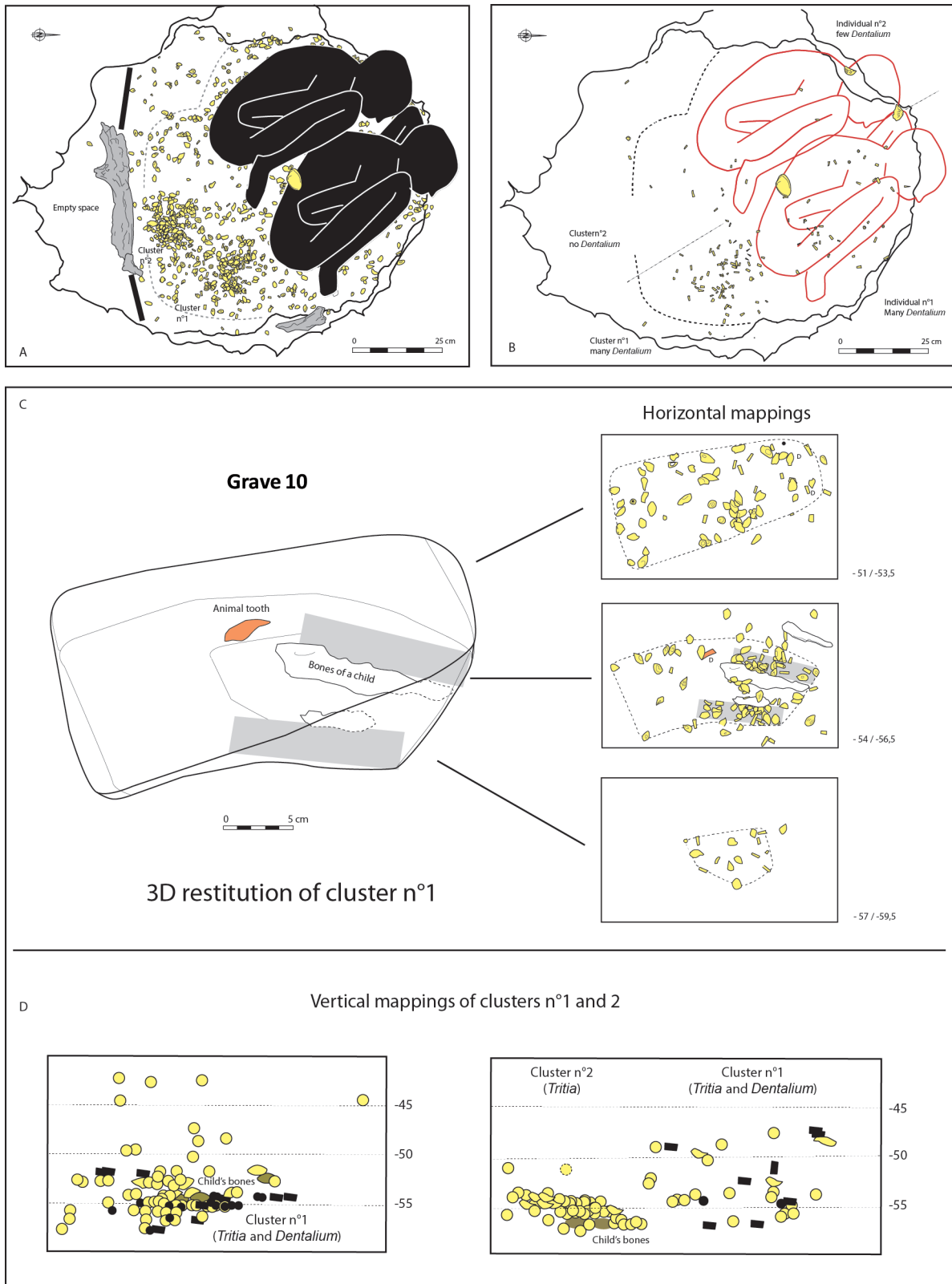


Figure 9. La Vergne, France: Grave 10: Structuring of the deposits in the tomb. A) Two clusters of whelks are clearly visible at the feet of each of the two individuals, B) whereas the tusk shells are preferentially associated with individual n°1 and the corresponding deposit. C) The virtual dismantling using altimetric spits enables us to reconstruct the volume of a decorated object containing several child's bones, and, D) the section projections enable us to dissociate the volume of each of the two decorated objects. Shaded rectangles in C represent concentrations of items.

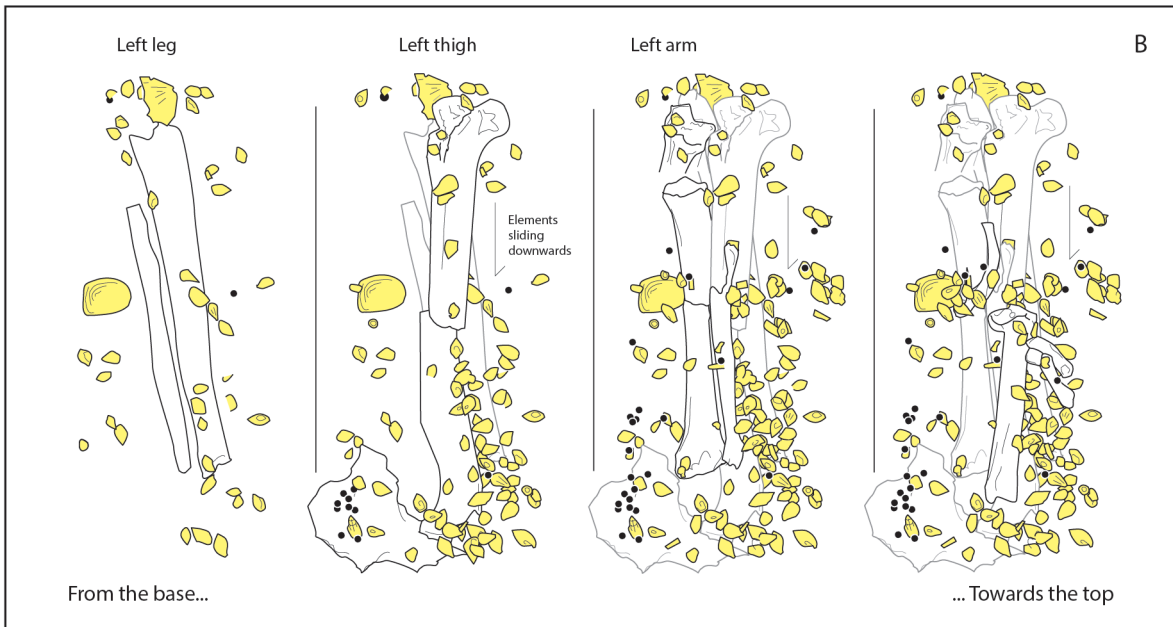
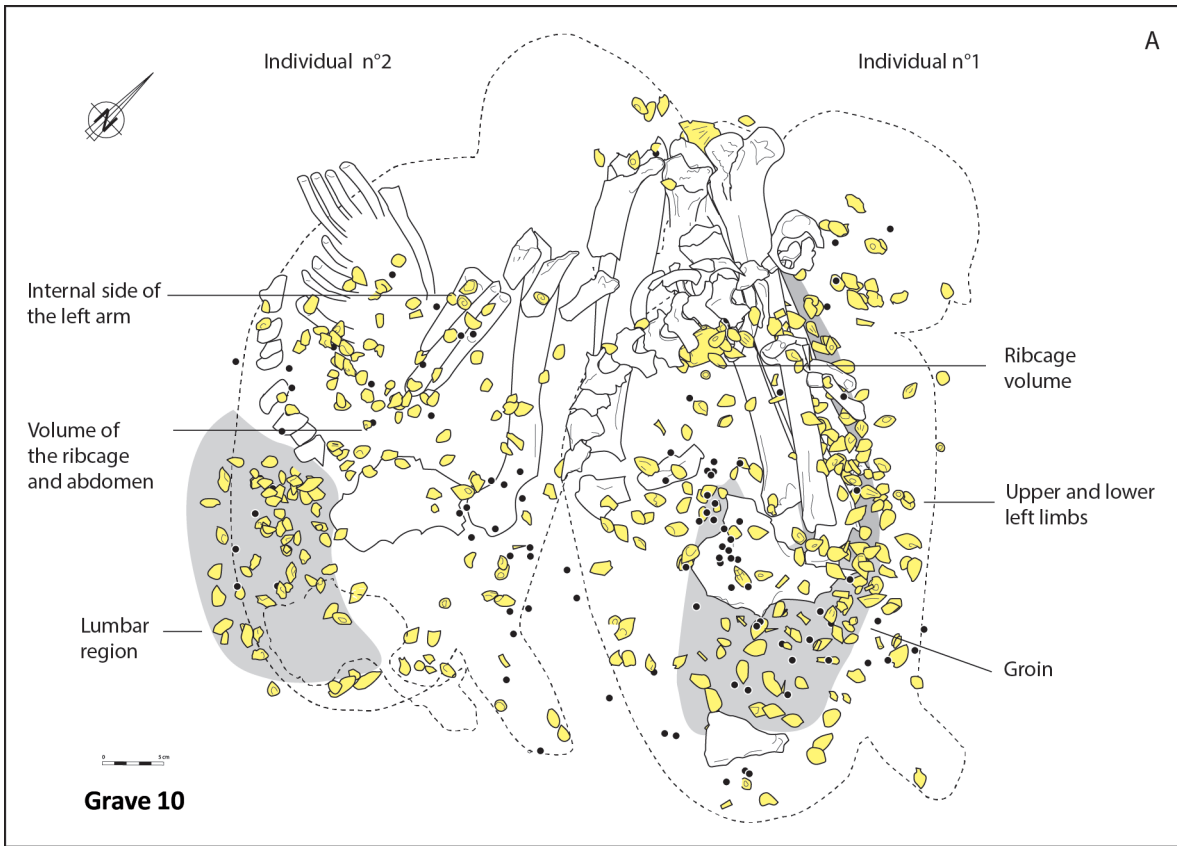


Figure 10. La Vergne, France: Grave 10: A) Distribution of the shell adornments directly associated with the corporal volumes of the two individuals; B) Example of the virtual dismantling of the human bones and objects of adornment, for the left limbs of individual n°1: the concentration of objects of adornment begins between the legs and passes between the arm and the left thigh (CAD by L. Laporte).

excavation of the graves of La Vergne thus seem to correspond to the deposition of very ornate objects, probably composed of shells and perishable materials. These are not corporal adornment, although some clothing may also have been deposited separately from the corpse. All this contributes to the funeral arrangements. The use-wear traces on shells seem to indicate that at least some of the perforated shells, and possibly some of the related objects, were used beforehand. When the bodies of several individuals are buried at the same time, which is almost systematic here, we must also examine the causes of death of each of them. This is also linked to the status of the adornments in the tomb. Admittedly, a limited number of elements may be unquestionably associated with corporal zones. But, in Structure 10, for example, they represent less than a quarter of the perforated shells. During the collection of the shells, each shell seems to have been individually chosen in order to limit any subsequent human action (naturally perforated shells, for example). On the other hand, the juxtaposition of many similar objects on the same backing seems to somewhat detract from the uniqueness of each element.

DISCUSSION:

NATURAL ENTITY AND RAW MATERIAL

For the rest of the discussion, we will introduce a last complex, from the early Neolithic Germignac grave (6090 BP²), in Charente in the southwest of France (Gaillard et al. 1984; Laporte and Gomez 2001; Pétrequin et al. 2017). Like the Mesolithic tombs of La Vergne, located less than 100km away, it yielded an impressive number of shell adornments. At Germignac, these adornments are 3288 discoid beads in lamellibranch shells associated with two large rings in green rock (Figure 11). These personal adornment elements are the result of a standardized *chaîne opératoire* that tends to erase any visible traces of the natural entity from which they come. The finished product thus takes on a geometric shape rarely observed in nature—for the personal adornments in shell, these are discs, which are perfectly circular in more than 60% of the cases, with a diameter of 14mm to 15mm. The two rings in green rock—with carefully polished surfaces—show a similar approach. Locally, the contrast with the Mesolithic tombs of La Vergne is striking in terms of action on matter.

A little further north in the Paris Basin (Bonnardin 2009, 2012), or a little further south in the South of France (Barge 1982; Zémour et al. 2017), an abundant shell ornamentation is often associated with the individual graves in open ground of the first farmers and breeders in this part of Western Europe. The position of the adornments in the tomb enables us to affirm that they often come from very ornate clothes. Like in Germignac, this shell ornamentation is mainly made up of manufactured objects, often with very standardized geometric shapes. The singularity of each natural entity is thus erased so that it becomes just a raw material, the physical properties of which are used to obtain the intended finished product using various actions.

Implicitly, many authors link this difference in the ornamentation of the last hunter-gatherers to the newfound

relationship between Man, who had become a farmer, and his environment (Dupont et al. 2014). However, on the Atlantic seaboard of France, during the ensuing period, which corresponds to the full development of the Middle Neolithic, we observe the (provisional) reappearance of numerous simply perforated animal teeth and shells, alongside several increasingly elaborate manufactured objects, among the ornamentation and, more generally, the viaticum associated with the deceased in the tomb. After that, during the subsequent millennia, little by little and concomitantly with an increased mastery of the arts of fire, shells and animal teeth with perforations almost totally disappear from this type of funerary context (Laporte 2009).

Here, the Middle Neolithic is the period during which the construction of imposing funerary monuments becomes widespread, partly made up of very large stones moved, erected, and assembled by Man—megaliths (Laporte and Scarre 2016). In the Paris Basin, after 6000 BP, the early stages of this monumental funerary architecture were associated with the Cerny culture, which was often interpreted as a resurgence of standards characteristic of the last hunter-gatherers on account of other aspects of material culture, in populations generally practicing agriculture and breeding. As regards ornamentation, a particular valorization of hunting activities was highlighted for a long time (Bailloud 1974; Sidéra 2003).

At this stage of our article, focusing mainly on very small objects in shell, why introduce elements linked to architectures made of stones that sometimes weigh several dozen tons? For the simple reason that it seems to us that the relationship to matter here shows a similar duality to that highlighted in the preceding paragraphs (Figure 12). We know that in Western Europe, the large assembled stones making up these dolmens correspond to the funerary chamber of monuments with a façade often built in dry stone³. At first glance, many of these blocks remind us of the shape of a natural outcrop, although in reality, most of these materials underwent diverse human actions. This paradox is related to the rudimentary character often attributed to this architecture (Fergusson 1872). It was initially considered as the sign of exclusively human ingenuity, as only humans were capable of mobilizing apparently immovable natural entities with extremely reduced technical means.

In reality, a number of signs point towards the idea that each of these large blocks may also have been chosen for the properties attributed to the outcrop, the chaos, or the cliff from which they came, rather than just the mere physical properties of the material. The use of engraved blocks initially left in the open-air, fragments of parietal art from dismantled sanctuaries, is just one of the many elements that tends to accredit this hypothesis—considering all of them is not the aim of this article (Laporte et al. 2011). Then, within the construction, each large block was individually placed and assembled depending on its characteristics. The irregular crude aspect of these megalithic assemblages thus contrasts with the rigorously planned geometry of the monument in which they are positioned.

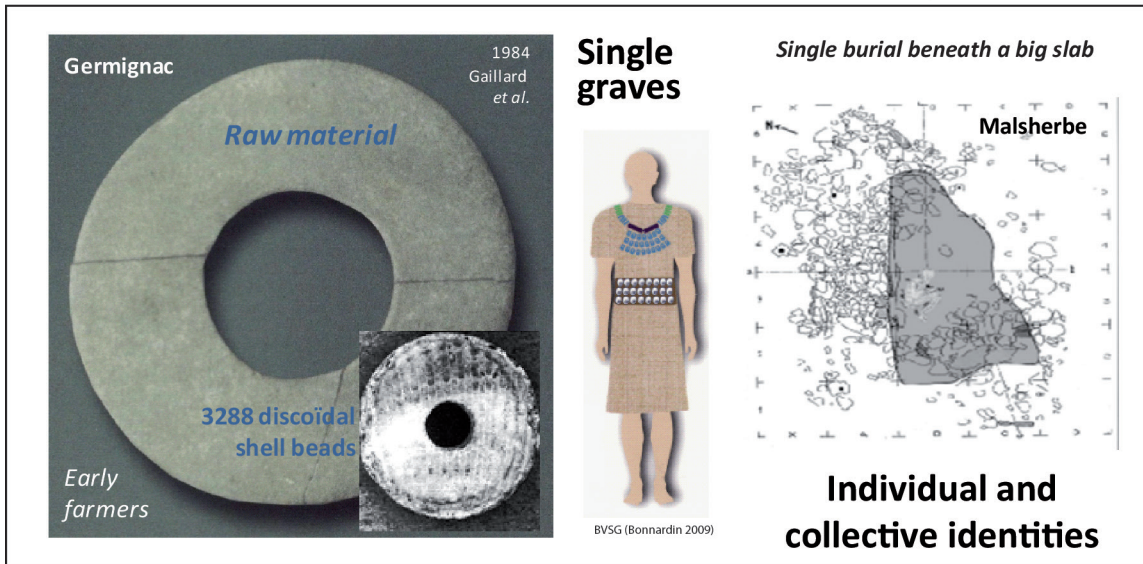
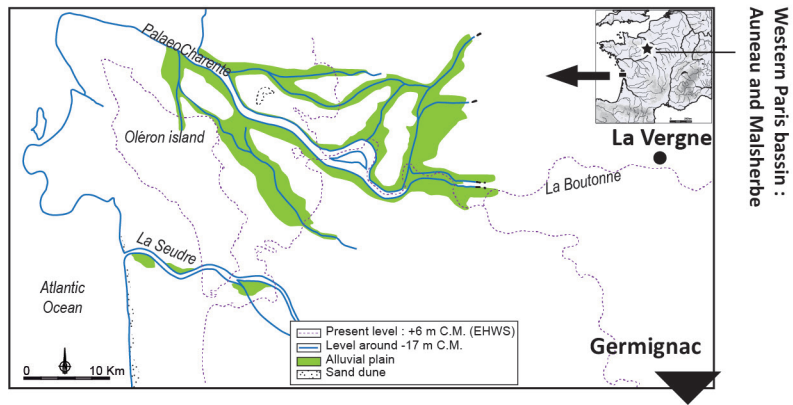
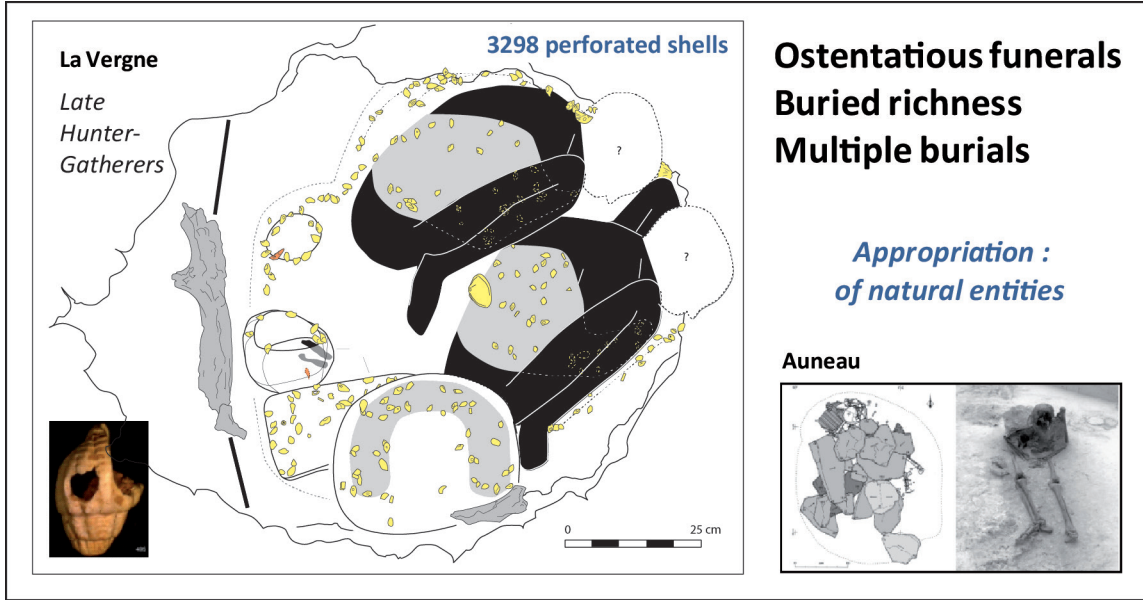


Figure 11. Adornment of the last hunters and the first farmers in the west of France. The first elements at the top use the original shape of the shells, the second ones at the bottom totally modify the original shape of the mollusk (after Bonnardin 2009; Dupont et al. 2014; Gaillard et al. 1984; Verjux et al. 1998).

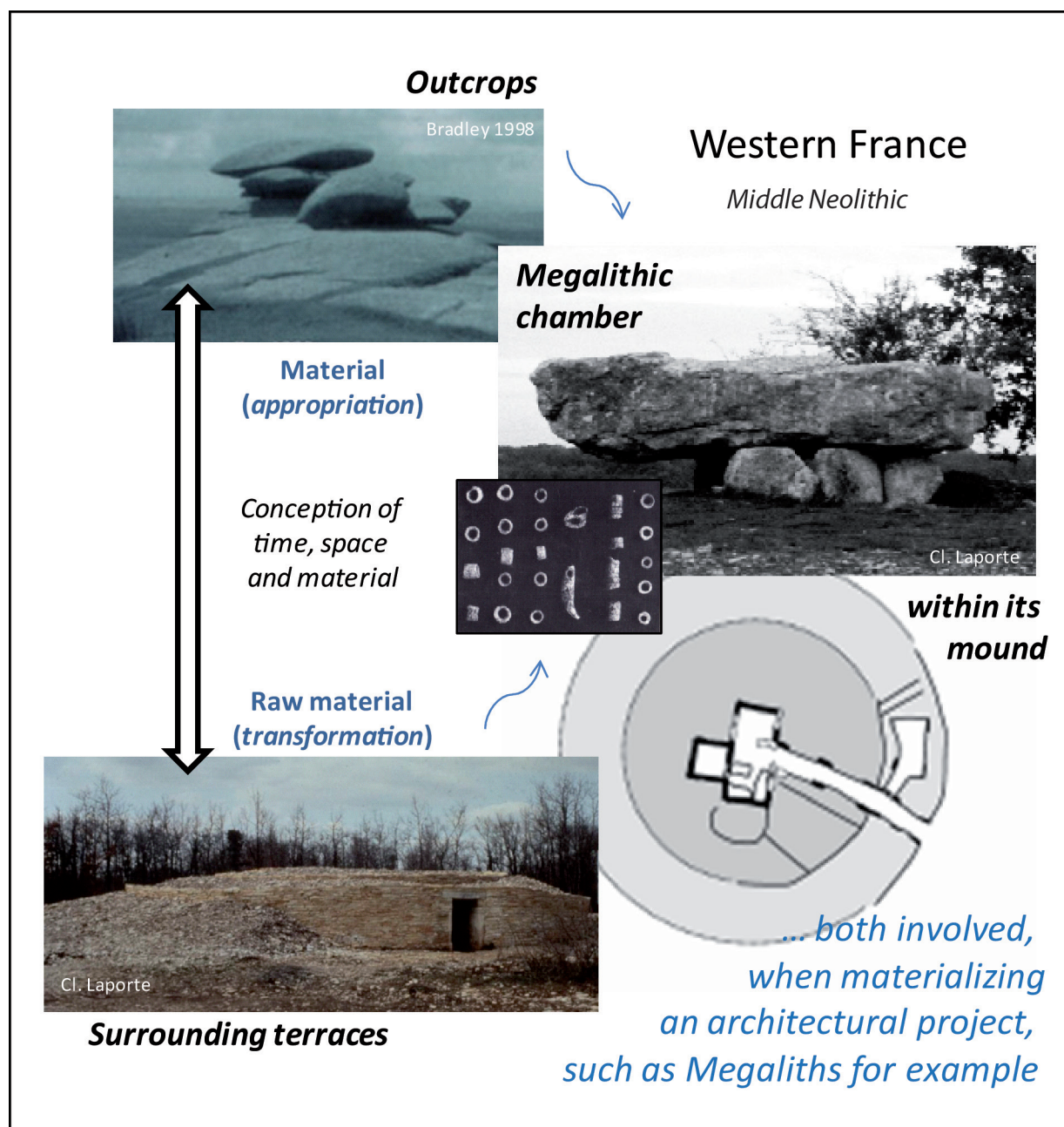


Figure 12. Megaliths in the west of France: the use of big and “crude” stones, often reminiscent of the shape of the outcrops, could be seen as some sort of appropriation of such natural entities. These are integrated within a “monument” mainly built with dry stones, which transforms them into raw material.

In sum, what was often interpreted as just an opportunistic attitude guided by the constraints of rudimentary knowledge, is perhaps rather the result of a certain type of re-appropriation of “natural” entities, which are colossal in this case. The minimalist or discreet action of humans on matter would denote in this case preoccupations going way beyond the mere framework of technical constraints. On the other hand, the corresponding blocks are inserted in a construction involving a veritable raw material, although they are of similar “nature,” to materialize geometric shapes, or representations, which demonstrate an entirely different attitude (Laporte 2015). This duality, which is so

obvious in each megalithic monument that it was largely ignored, was revealed by reflections stemming from the study of objects of adornment. We will now try to explain our line of reasoning.

If we confine our discussion to the European Atlantic seaboard, the first duality that comes to mind is this same distinction between the last groups of hunter-gatherers and the first farmers. The displacement of very large slabs of stone above the graves of several individuals contributes to staging their funerals, in the same way as the highly ornate objects deposited beforehand in the tomb (see Figure 11). The individual graves below slabs in open ground in

the Paris Basin are among the oldest expressions of this type for the Neolithic, whereas the Mesolithic grave of Auneau was sealed by nearly 300kg of stones (Guilaine 1998). During the 1930s, the excavations carried out by M. and St. Just Péquart on the islets of Tévéc and Hoëdic, in Brittany, revealed several Mesolithic tombs associating rich shell adornments with the presence of large stone blocks laid out around and especially above the tomb (Boulestin 2016; Péquart and Péquart 1954; Péquart et al. 1937). But graves simply covered by stones also existed still earlier in Paleolithic times, and the most recent detailed research struggled to identify any element of continuity between the first development of Neolithic megaliths and these expressions of a much earlier Mesolithic (Marchand 2014, 2017).

Broadening our perspective will enable us to lay the foundations for the discussion from another angle. Thousands of kilometres from there, the example of the Arroyo Seco graveyard serves as a counterpoint. As a first approach, we could assume that the Group 3 graves, which are the most recent, correspond to populations who would at least have been in contact with several groups of farmers. The recently obtained dates, which are older than initially envisaged, tend to render this hypothesis increasingly improbable. Like for the earlier burials at this site, these are the graves of groups of hunter-gatherers.

When we look more closely, there are many counterexamples around the world that jeopardize the simplistic and unidirectional idea that consists in associating each of these different attitudes to materials just with hunter-gatherers or the first farming communities. For example, the famous tombs of Sungir in Russia date from the Upper Paleolithic—they yielded thousands of carefully shaped small objects of adornment in bone and in ivory. In Eastern Asia, the production of discoid beads in shell seems to be much older, while other more or less contemporaneous sites prioritize the gathering of barely transformed shells (Wei et al. 2016; 2017). Each of these two attitudes towards materials thus seems to be present at a very early stage; with one trying to re-appropriate part of what the living being represented (or any other entity only referred to as “natural” for convenience), and the other shaping a raw material to such an extent that it was stripped of any traces of the natural entity from which it came.

However, this duality should perhaps be somewhat moderated, even if it clearly emerges from both of the complexes exposed in the scope of this article. An experienced contemporary stone knapper would willingly say, at least in spirit, that his own gestures reveal the potentiality of each individual block, in so far as he shapes it. For lithic industry in prehistory, the theoretical discourse developed by E. Boëda (2013) also involves this empirical perception of human action on matter. Our own field work, particularly in Africa, has sometimes led to exchanges with animist populations with traditional ways of life: without seeking—in any way—to transfer the results of these exchanges on the way of thinking of past populations. It is clear, in any case, that a form of re-appropriation of entities already present in the world around them seems to be broadly consistent

with their own way of conceiving a number of actions on matter. In fact, albeit in a very different way, this is not very different from the approach of certain contemporary artists who regain the control over nature. Nonetheless, we must be cautious in the interpretation of all these artifacts associated with prehistoric graves (Figure 13).

Accordingly, for prehistoric populations, retrospectively limiting the minimalist or seemingly opportunistic character of human actions on the entity initially taken from the world around us to technical progress could sometimes turn out to be a misinterpretation. It is in fact more than mere economy, and first and foremost the expression of a choice; for adornments, as we have just seen, as in many other domains.

CONCLUSION

In this presentation, we chose to compare the results of two hunter-gatherer cemeteries, located on two different continents, rather than discussing the data from other equally interesting work on the same subject in Europe, for example Boric (2016) Perlès and Vanhaeren (2010), and Rigaud (2011). This approach has its limits. But it also provides a counterpoint, in a different light, based on similar data, for archaeological contexts that ultimately present many points of convergence.

In this way, our reflection focused on several general ideas, liable to go beyond the specific contingencies of each particular case. The action of humans on matter was a subject dear to A. Leroi-Gourhan (1971), who laid the foundations for several concepts—which have been largely developed since. The discussion was thus based on what the term “matter” conveyed, when it was fashioned by Man. Objects of adornment are appropriate subjects for this type of discussion, as the aesthetic aspect that we bestow on them removes them—in a certain way—from any strictly functional dimension. We thus proposed to distinguish the choice of singular “natural” entities, as an alternative to any human action on matter, a raw material.

We need sufficiently solid records to attempt to back up or illustrate such developments. A perforated shell is never, in itself, an object of adornment. However, its destiny often begins when it is gathered from the shore. The many reused natural perforations at La Vergne show that they are linked to the backwash action of the sea or to Lithophaga. In the same way, the fact that humans selected species living below the level of the sea, and they did not see them when they were alive is certainly no coincidence. The opposition of these shells with the shellfish consumed during the same period also demonstrates separate and well-differentiated activities in the daily life of these hunter-gatherer populations (Dupont 2014). This article completes and mitigates the line of reasoning that for personal adornments, the natural entity in its own right also contrasts with shell, which is used as a raw material (Laporte 2009).

Indeed, these natural entities are choice technical and symbolic vectors. On a symbolic level, masculine or feminine principles are often highlighted, for example, for tusk shells or the shape of gastropod shells—the fluids (Héri-



Figure 13. “Vierge au Cyprès” / Virgin with cypress (CEM). The appropriation of natural entities as still occurs today, for example, through contemporary art. Such an object would be very difficult to interpret in archaeology.

tier 2003) flowing from the “viscous” living creature in this shellfish contribute just as much as the vulva-shaped mouth to the feminine principle often bestowed on it. Perforated shells and shellfish only become adornments when they are attached to the end of a cord, sewn onto an object, an item of clothing, or attached to hair. Burial contexts are particularly conducive to such observations. It is a pleasure to point out that those presented here come from particularly pertinent excavations—for which we were not responsible. Discussions of the status of these adornments in the tomb, and the evocation of possible reconstructions of the corresponding objects, were an indispensable prerequisite to this article.

ACKNOWLEDGEMENTS

We wish to thank all those who participated in the excavations of the graves for which we analyzed the adornments, particularly H. Dudaud and P. Courtaud for the graves of la Vergne; G. Politis and R. March who enabled us to study the graves of Arroyo Seco II as part of the ECOS south programme and the artist CEM for the agreement to reproduce her work.

ENDNOTES

¹We sincerely thank C. Perlès who suggested the choice of this term. The word “natural” will be used with quotation marks, as for many societies “supernatural” entities have exactly the same real existence—

to a certain extent, both can sometimes join or be involved through what scientists would only describe as a material object.

²Uncalibrated. Which would be around 6900 cal. BP. In European Recent Prehistory, calibrated radiocarbon dates are currently cited as BC.

³Approximately between 6000 and 4000 uncalibrated BP, otherwise radiocarbon dates for the European Neolithic are currently presented in cal BC: which would be here from the 5th to the 3rd millennium cal. BC. Examples referred to in this paper are mainly from the second half of the 5th millennium cal. BC.

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