

Skeletons in Motion, Ancestors in Action: Early Mesolithic Collective Tombs in Southern Belgium

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Collective tombs are a characteristic feature of Neolithic societies of Western Europe. Some recent studies have suggested that they originated from an earlier tradition of individual burials at the Mesolithic–Neolithic transition. The concept of collective burial involving movement and manipulation of bodies and body parts is, however, entirely different. The former tries to preserve the integrity of the bodies and does not acknowledge the stages of metamorphosis of the corpse. The latter by contrast involves observation and assistance in the dissolution of the body. Recent discoveries of Early Mesolithic collective tombs in southern Belgium have underlined the fact that collective burials are far from restricted to Neolithic contexts in Western Europe. They themselves, however, are not merely a potential point of origin for Middle and Late Neolithic collective tombs but form part of a long-standing tradition reaching back into the Upper Palaeolithic.

Two Early Mesolithic collective tombs have recently been excavated in southern Belgium, inside caves along the Meuse river, not far from the French border. The first, the Grotte Margaux, was excavated in 1985–86 (Cauwe 1998); the second, the Abri des Autours, in 1992–93 (Cauwe 1994; 1995). These excavations established the great antiquity of a type of funerary practice previously thought to have begun only with the first farmers of Western Europe. One of the main lessons of these discoveries is hence the lack of connection between collective tombs and a particular way of life. It is now possible to explore some of the links between the last hunter-gatherers and the first farmers.

The Grotte Margaux

The Grotte Margaux (Fig. 1) is situated within a small ravine cut into limestone cliffs on the eastern flank of the Meuse valley. The ravine is usually dry, save after exceptional storms, and the small river that flows into it is quickly swallowed by a karst which

discharges directly into the Meuse. The Grotte Margaux opens from the top of the ravine, not far from the plateau overlooking the Meuse valley.

The cave is 50 m long and 14 m wide (Fig. 3), increasing in height from only 0.6 m at the entrance to 5 m in the rear chamber (Fig. 4). This space represents only a small part of the original volume of the cave, however, since the cavity is partially filled by accumulated deposits. The large Holocene deposit in the outer chamber has indeed blocked the entrance, but deeper within the cave this Holocene deposit rapidly diminishes, and it is clear that the latest sedimentary activity in the inner chamber dates to the beginning of the late Ice Age. This inner chamber has a level stalagmitic floor, formed more than 70,000 years ago, and it was on this that a collective tomb was built during the ninth millennium BC (Fig. 5).

Radiocarbon dates from the Grotte Margaux have suggested that the Mesolithic tomb was used in two distinct episodes, at the beginning and the end of the ninth millennium respectively. This two-phase use is not supported by any archaeological evidence,

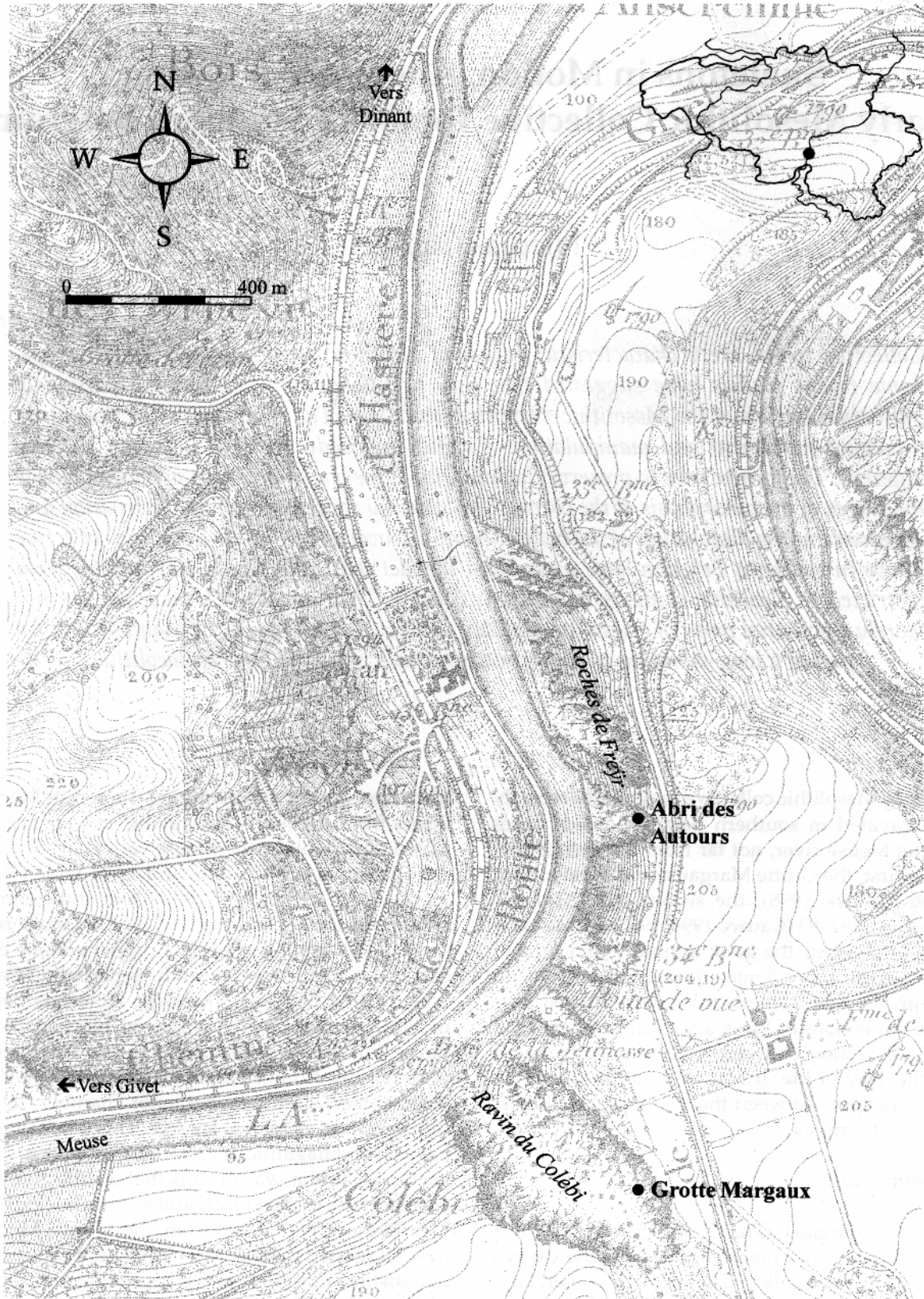


Figure 1. Location of the Grotte Margaux and the Abri des Autours.



Figure 2. *The Grotte Margaux, showing the accumulation of Holocene sediments at the entrance. (Photo: Dominique Coupé.)*

however, the architecture indicating that the grave was built in a short time. Furthermore, the human bones are spread in one homogeneous level, and there is no spatial correlation between the samples used for dating and the distribution of the dates. The separation between the dates may instead be attributed to the fact that the calibration curve shows an irregularity around the period 9600–9500 BP.

Architecture

The tomb consisted of a small pit partly surrounded by a dry-stone wall and a pavement. These constructions were covered by a stone roof (Fig. 6). The pit could not contain all ten bodies found in the grave since it is only 0.20 m deep and 1 m in diameter. Furthermore, the adjacent pavement covers only 2 m², and the restricted dimensions of the tomb seem to have been specifically designed to bring the ten disarticulated bodies into close spatial association. Moreover, considering the available space within the cave (Fig. 3), the accumulation of human remains within such a limited area must be viewed as an intentional act.

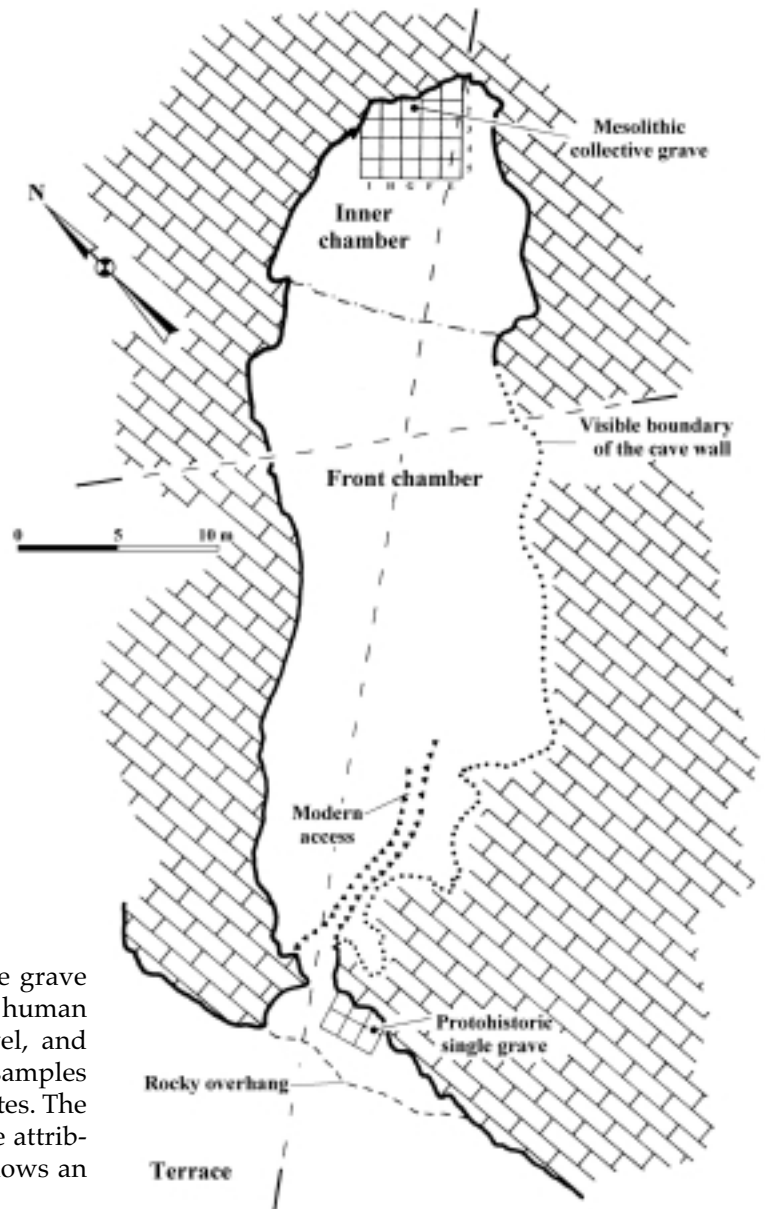


Figure 3. *Plan of the Grotte Margaux. (Drawing: Philippe Lacroix & Benoît Vanhoebroek.)*

Mesolithic activity at the site began with the construction of the pavement in the northeast corner of the future tomb. At the same time, or perhaps a little later, a pit was dug at the opposite side and surrounded by small stones (Fig. 6). The greater part of the human remains was then buried inside the pit and the rest placed on the pavement (Fig. 6). Finally, when the decision was taken to stop using the grave, both pit and pavement were covered over with large stones (Fig. 6).

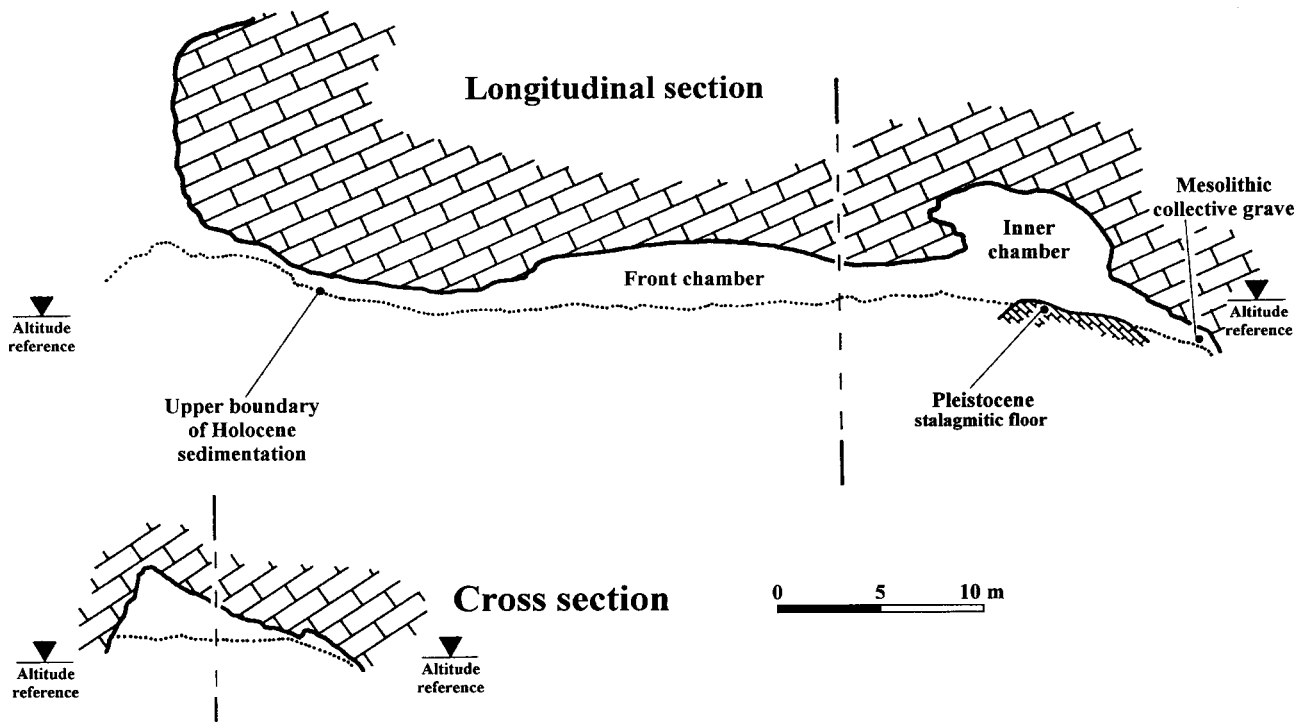


Figure 4. Sections across the Grotte Margaux. (Drawing: Philippe Lacroix & Benoît Vanhoebroek.)

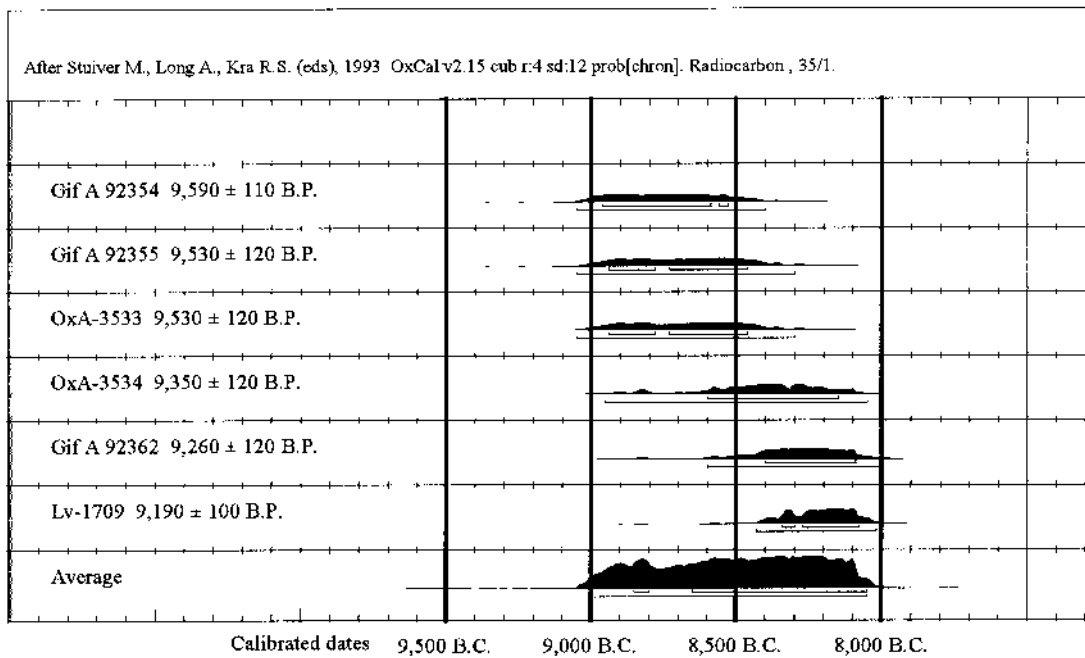


Figure 5. Grotte Margaux: radiocarbon dates for the collective grave. Material: human bone. Dates from Gif-sur-Yvette and Oxford each concern only one individual and were provided by the AMS method; the sample used for the last date (Lv, conventional method) is a mixture of ribs from different individuals.



Figure 6. *Grotte Margaux: plan of the Early Mesolithic tomb.* (Drawing: Benoît Vanhoebroek.)

Mortuary practices

Among the skeletal remains in the grave, anatomical connections are absent save for parts of the skeleton where the ligaments are strongest, such as the base of a vertebral column or an atlas (first cervical vertebra adhering to a skull). This suggests the practice of secondary burial, which is supported by other evidence. The spatial distribution of the human remains is chaotic (Fig. 7), and certain elements are missing; taphonomy cannot explain all these absences. Furthermore, none of the skeletons is entire and each is incomplete in its own particular way.

Another observation in favour of secondary burial is the distribution of ochre in the grave. All the human remains are covered by ochre, as is the case in many hunter-gatherer burials. But the floor of the Grotte Margaux grave shows no sign of ochre. If the bodies had decomposed in the tomb, the ochre would have spread widely from the skeletal remains, and its absence suggests therefore that the bodies were disarticulated outside the tomb.

The distribution of the skeletons between the

two parts of the grave (the pit and the pavement) seems to refer to another kind of manipulation, after burial in the cave. All the human remains found on the pavement belong to the incomplete skeletons preserved in the pit. The converse, however, is not found; only a portion of all the bodies that were included in the pit were represented on the pavement, suggesting that perhaps the latter served as an outlet for the funerary pit.

Age and sex of the remains

The demography of those buried in the Grotte Margaux is interesting. The grave contains no children or adolescents. We recognize the difficulties in determining the sex of the adult skeletons, especially when there is no reference population, as is the case for the Early Mesolithic of Europe. The skeletons in the Grotte Margaux do however exhibit great morphological uniformity and, from an anthropometric point of view, have a characteristic slenderness. These facts indicate the sex of the skeletons; it is most likely that the collective tomb of the Grotte Margaux contains only adult females. Moreover, many of the same anomalies (non-metrical traits) are present on all the skeletons (Toussaint 1998), correlating perhaps with genetic relationships. The women may hence all have belonged to the same family, although these kind of anomalies can also be the result of specific marriage practices. For example, the men of a certain group may have always taken a wife from the same group over several generations (Masset 1997). We must be cautious in our conclusions at this stage as the anatomical study is not yet concluded and we have not determined precisely the process of transmission of the anomalies.

In conclusion, the individuals represented in the grave have been selected, certainly according to age, probably to sex and possibly to family relationship. This situation is without known parallels in the European Mesolithic. For example, at Ofnet, in Bavaria, 33 human skulls were discovered in two pits (Orschiedt 1998), but this population included men, women and children, without any apparent selection according to age or sex. Sometimes women, men and children were buried in the same grave, as in the cemetery of Téviéc in Brittany (Péquart *et al.* 1937). In Scandinavian cemeteries, the graves were reserved in most cases for individual women or men, but in some there were two adults or an adult with children (Larsson 1989; Brinch Petersen *et al.* 1976).

Since only adults of the same sex were placed in the grave of the Grotte Margaux, the selection cannot represent either a normal demographic curve

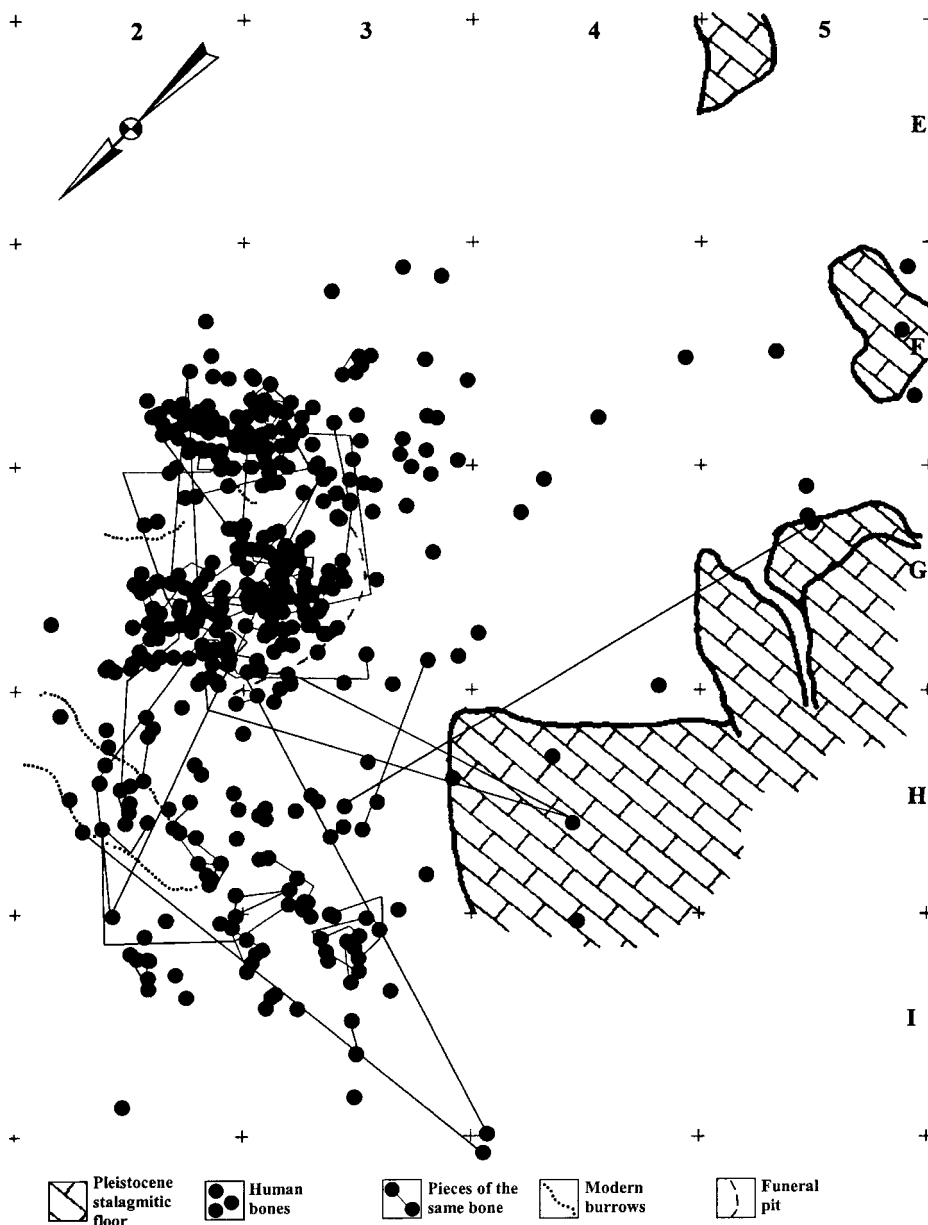


Figure 7. *Grotte Margaux: distribution of human remains in the tomb. (Drawing: Benoît Vanhoebroeck.)*

or a tragedy, such as a war or epidemic. The criteria for selection derive rather from the requirements of rituals or from social and cultural obligations, or perhaps all of these factors together. Nevertheless, we do not know what funerary treatment was accorded to the children and men of the same community. For this reason, it is impossible to propose a more definite interpretation for the unusual demographics in this grave.

The treatment of the dead
 Beyond the homogeneity of the population buried in the Grotte Margaux, we find that not all the individuals received the same treatment. The accumulation of ten women and the dislocation and mixing of their skeletons throughout the tomb does not indicate that they were all treated equally in death. For example, several skeletons are very incomplete, probably as a consequence of some setting-apart of bones before or after the burials. One skeleton is less dislocated than the others. Thus, different categories existed in the treatment of the dead at the Grotte Margaux. Men and children were excluded from the tomb, but there are also distinctions between the women who were buried in the cave.

Moreover, cut marks are visible on one skull (Fig. 8) and they appear in different places: on the upper part of the forehead, on the zygomatic bones and on the occipital condyles. The cut marks on the occipital condyles and the zygomatic bones indicate that the skull was intentionally separated from the rest of the body, and the mandible from the skull. The cut marks on the forehead could have been made whilst cutting off of the flesh in order to display the skull.

Anthropophagy is a possibility to be considered when studying these cut marks. Cannibalism may be accepted or refuted by archaeologists depending on their own sensitivities, but the idea cannot be rejected in principle and there are examples of dislocated skeletons in prehistoric Europe for which cannibalism seems to be the best explanation. In Western Europe the most famous case comes from the Fontbrégoua cave in the south of France, in an Early

or Middle Neolithic context (early fifth millennium BC) (Villa *et al.* 1986). There are also instances of cut marks on human remains from Mesolithic contexts. In the Grotte des Perrats at Agris, in west-central France, human and animal bones dating from the seventh millennium show butchery marks (Boulestin & Gomez de Soto 1995). Humans and animals have been cut up, the flesh scraped away and burned (Boulestin 1999). A similar discovery was made at an open-air site at Noyen-sur-Seine (Seine-et-Marne) dating to the same period. There too, human bones were accompanied by faunal remains, and displayed cut marks made by flint tools; some of them had also been burned (Auboire 1991). Among the Epipalaeolithic artefacts of Gough's Cave in Somerset (Leroi-Gourhan & Jacobi 1986) several human bones with cut marks were mixed with fauna.

Cut marks on human bones do not, however, meet the minimum criteria for some form of cannibalism to be accepted, especially when in a funerary context such as the Grotte Margaux, or in similar examples from the Magdalenian (Le Mort & Gambier 1991), and possibly the Mousterian (Le Mort 1986). In these cases, we must first consider the specific treatment of the dead. At the Grotte Margaux the funerary nature of the context is certain, and is not complicated by the presence of animal remains. Moreover, the Grotte Margaux grave contains the remains of ten bodies, but only one of them has cut marks on the skull. This seems to point to mortuary treatment rather than cannibalism.

In summary, the Grotte Margaux contained a structured tomb within which were accumulated the remains of ten or eleven women. The skeletal remains of these women indicate that some elements had been set apart, before or after inhumation in the cave, and that the practice was clearly one of secondary burial. Cut marks appear on only one skull, indicating again that part of the mortuary treatment occurred outside the grave. The human bones brought into the cave were placed in a small pit, and some were then removed and placed on a pavement next to the pit. There were no accompanying grave goods. Finally, when the use of the grave came to an end, a stone covering was constructed over the tomb.

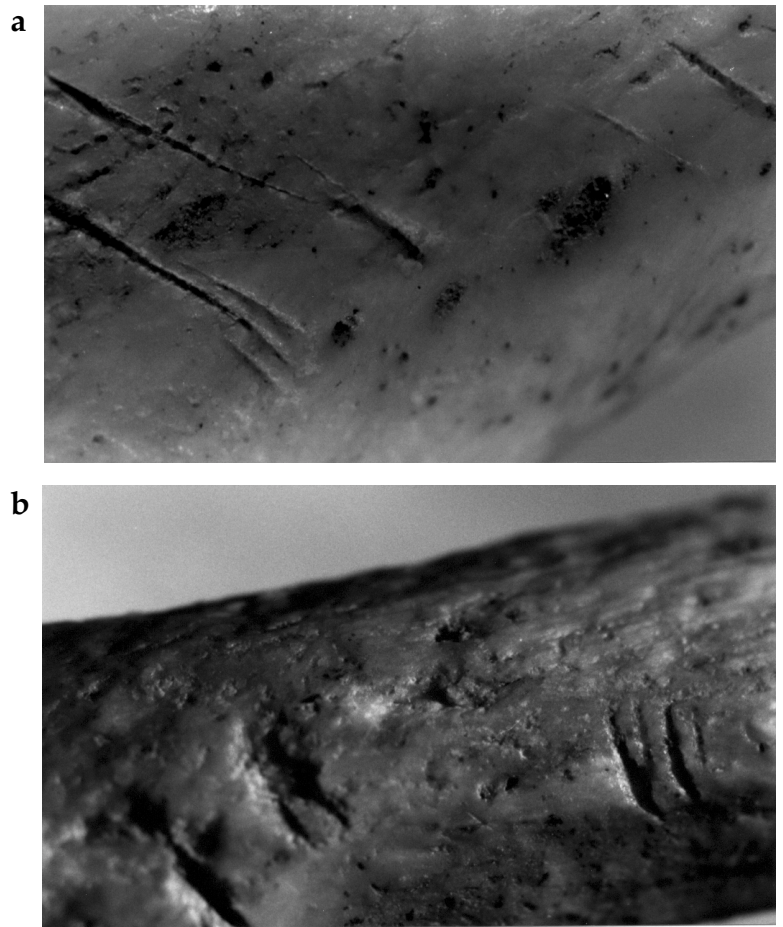


Figure 8. Cut marks on skull from the Grotte Margaux. a) left zygomatic bone; b) right zygomatic bone. (Photo: Michel Toussaint.)

The Abri des Autours

Facing towards the southwest, the Abri des Autours¹ is located at the top of a limestone cliff overlooking the Meuse valley (Fig. 9), only 800 m from the Grotte Margaux (Fig. 11). Internally it measures 20 m long and 5.5 m wide, and is today some 3 m high at the level of the rock overhang. During the Mesolithic period, the internal dimensions may have been a little larger, but the Autours rock-shelter has never been spacious. The vault slopes sharply downwards towards the rear and this will always have limited the internal space, whatever the impact of sedimentation accumulation. The sedimentary processes of the Abri des Autours are simple, and take the form almost exclusively of deposits eroding from the plateau above and of frost-induced exfoliation of the limestone. This simplicity of processes leads, however, to a complex stratigraphy of sloping deposits

and complex alternating strata.

This small cave held two human bone assemblages dating from the Early Mesolithic, with no stratigraphic connection between them. The older is an individual tomb of a woman covered by ochre



Figure 9. *The Abri des Autours, at the top of a limestone cliff overlooking the Meuse valley. (Photo: Dominique Coupé.)*

and without any grave goods. The second is a collective tomb that belongs, like the Margaux grave, to the ninth millennium (Fig. 10). Four non-retouched flint bladelets are the only grave goods to have been found among the human bones of this collective grave. Above these deposits there were also human bones belonging to the Middle Neolithic Michelsberg culture (fourth millennium BC).

The Early Mesolithic collective tomb

This tomb consisted of a small pit and a closing wall separating the tomb from the rest of the cavity. Despite this absence of architecture, however, the tomb is of considerable interest for the study of the funerary practices, allowing palaeodemographic analysis (Figs. 11–12).

Treatment of children and adults

The grave contained at least 5 adults and 6 children (Tables 1–3). The adult remains were dispersed throughout the tomb: some laid inside the pit, in the southern corner of the rock-shelter; others next to the pit; and some bones were left along the cave wall in the northern part of the cavity. In contrast to this widespread distribution, the child remains were only found in this last northern sector (Figs. 11–12).

Age at death seems to have been culturally significant. The distinctive spatial distribution of the adult and the child remains are well adapted to the topography of the cave. The northern sector, where were found all the child remains and some adult bones, is an open area without good natural protection. There is easy access to this part of the grave and the human bones are spread alongside the cave wall.

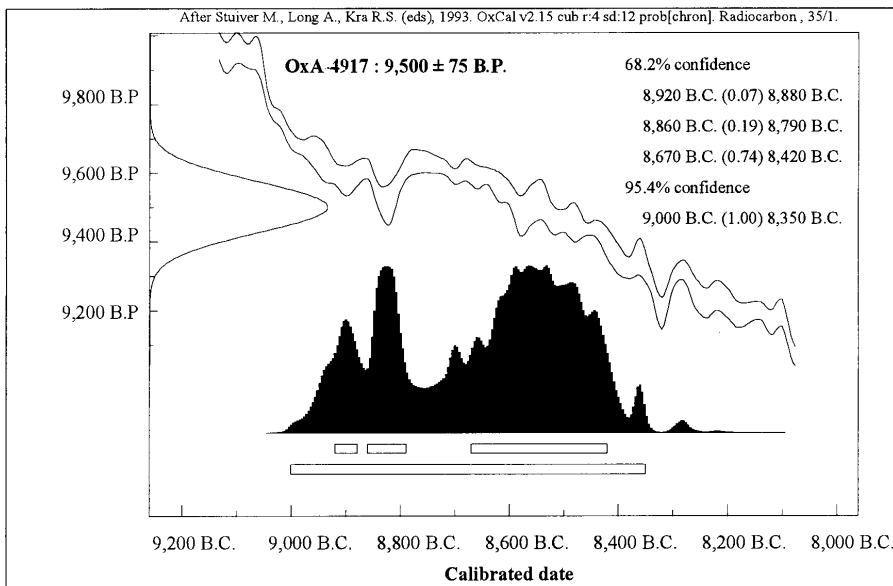


Figure 10. *Abri des Autours: radiocarbon dates of the Mesolithic collective grave. Samples: human bone; AMS method.*

Table 1. Estimation of age at death of the children from the Abri des Autours. (After C. Polet, Royal Institute for Natural Sciences of Belgium, Laboratory of Anthropology.)

Age (years)	Category	Method & authors
1 2–3	infant	dimensions of the bones (Alduc-Le Bagousse 1988)
2 3–4	infant	comparisons with reference to juvenile skeletons
3 6–7	young child/ juvenile	dimensions of the bones (Alduc-Le Bagousse 1988)
4 7 ± 2	juvenile	cutting and calcification of teeth (Ubelaker 1989, 71)
5 9 ± 2	juvenile	cutting and calcification of teeth (Ubelaker 1989, 71)
6 >15	subadult	comparisons with reference to juvenile skeletons

Table 3. Estimation of sex of the adults and juveniles from the Abri des Autours. (Only two adult pelvises and two juvenile ilia are sufficiently preserved to allow determination of sex; after C. Polet, Royal Institute for Natural Sciences of Belgium, Laboratory of Anthropology.)

Bone	Method	Authors	Results
pelvis 1 (adult)	morphological	Ferembach <i>et al.</i> 1979	female
	metric	Gaillard 1960	female
pelvis 2 (adult)	morphological	Ferembach <i>et al.</i> 1979	male
ilium 1 (juvenile)	morphological	Schutkowski 1993	male
ilium 2 (juvenile)	morphological	Schutkowski 1993	female

Table 2. Estimation of age of death of the adults from the Abri des Autours. (After C. Polet, Royal Institute for Natural Sciences of Belgium, Laboratory of Anthropology.)

Bone	Method	Authors	Results	Estimation of the age
pelvis 1	auricular surface	Lovejoy <i>et al.</i> 1985	stage 7	50–59
pelvis 2	auricular surface	Lovejoy <i>et al.</i> 1985	stage 3	30–34
pelvis 3	auricular surface	Lovejoy <i>et al.</i> 1985	stage 4 or 5	35–44
pelvis 4	fusion of the iliac crest	Brothwell 1963, 60		<23
pelvis 5 (cremated body)	fusion of the iliac crest	Brothwell 1963, 60		<23
mandible	wear of teeth	Lovejoy <i>et al.</i> 1985	stage I	45–55
isolated teeth	wear of teeth	Lovejoy <i>et al.</i> 1985	stage G	30–35
- I ₁ , M ₁			stage E	20–24
- C				
- M ₂ x M ₂ ² , I, C, 2 x M ₂ ²			stage H at least	>50

The southern sector, where the majority of the adult remains were discovered, but no children's bones, is the most protected part of the rock-shelter: there is an angle in the wall of the cave, the vault is low, and it is here that the funerary pit with the greatest proportion of the adult remains was dug.

What was the status of children in this society? We do not know, but, clearly, children were not treated equally with adults at the time of death. To this may be added the observation that there were no children in the Grotte Margaux; there, too, children and adults were treated differently.

Incompleteness of skeletons

Incomplete skeletons are common in collective tombs. We suspect, however, that the dead were more often placed on the ground surface than inhumed in this kind of grave. These conditions would certainly explain a large proportion of the damage found on human bones from collective tombs. In the Abri des

Autours, however, preservation was globally good, as indicated by the survival of several milk teeth and child sternums. It follows, therefore, that the absence of some bones is not simply a consequence of natural damage. Moreover, it is obvious that certain choices have been made, since the absent bones do not include all anatomical categories. Children are not represented by any part of the skull, except for some teeth, and we have only two or three fragmented crania for the five adults present in the tomb. The repeated absence of femora, tibiae and fibulae is especially to be noted. Processes of natural taphonomy cannot be invoked to explain the absence of the same bones from several bodies, save for bones that preserve badly, which is not the case with those here.

The absence of a large part of the skeletons may be due to the selection and removal of bones. Supporting this impression, we must note that the large number of teeth, patellae and tarsal bones preserved



1) adult bones; 2) burned adult bones; 3) children's bones; 4) pits;
5) wall of the cave; 6) area destroyed by earlier excavations; 7) stones of the closing-wall of the grave

Figure 11. *Abri des Autours: plan of the Mesolithic collective grave.*

indicates that legs and heads were at one time present in the grave, but that some removal occurred after burial. However that may be, the Mesolithic community was apparently interested in retaining some bones, especially skulls and leg bones, for an activity which we have not ascertained, but which took place outside the grave.

Several cases of reduction of bodies by removal of bones are known from the Mesolithic of north-west Europe, the most spectacular being that of Petit-Marais at La Chaussée-Tirancourt in the Somme

(Ducrocq & Ketterer 1995). In these instances, the bones of the limbs, the pelvis and the skull were conserved. In the Autours case, the pattern was probably the opposite: the elements we found are those that often are missing elsewhere.

Since the same bones were not missing from all the bodies, there is evidence once again for the existence of different categories of burial treatment. To the dichotomy between children and adults may be added the distinction between two groups of adults, according to selection of skeletal elements. We do not know why the Mesolithic people took bones from some individuals and not others, but we may note that the choice did not depend on sex, or age at the time of death.

In addition, the distribution within the tomb of the two categories of mortuary treatment is not the same. The skeletons from which complete bones have been removed are not found in the pit, while parts of the others were buried in it (Fig. 12). In other words, the most complete adults occurred everywhere in the tomb, the skeletons which were intentionally incomplete were excluded from the pit, and the remains of children are only found in the northern sector.

The adult leg bones partly conserved in the pit are fragmentary, but the arm bones, which are not inherently more likely to survive than those of the legs, are better preserved. Moreover, both anatomical categories are distributed in the same way. It is possible that long bones of the legs were intentionally broken, but this hypothesis is not supported by any evidence, such as percussion marks or spiral fractures, on the bones themselves. Additionally, fragments around the breaks are missing: attempts to rejoin several fragments of the same bone were unsuccessful, and it was as if the bones had been divided into fragments in order

to remove certain specific elements.

It seems as though for some adults entire bones were removed, whereas for others the selection of fragmentary pieces sufficed. The same observation applies to the skulls. There were no skulls or skull fragments outside the pit, though the pit itself held several fragments. The relics that were taken away were thus almost the same for all the adults, but the circumstances in which they were removed was not the same, some removals being made from bodies in the funerary pit, others next to it.

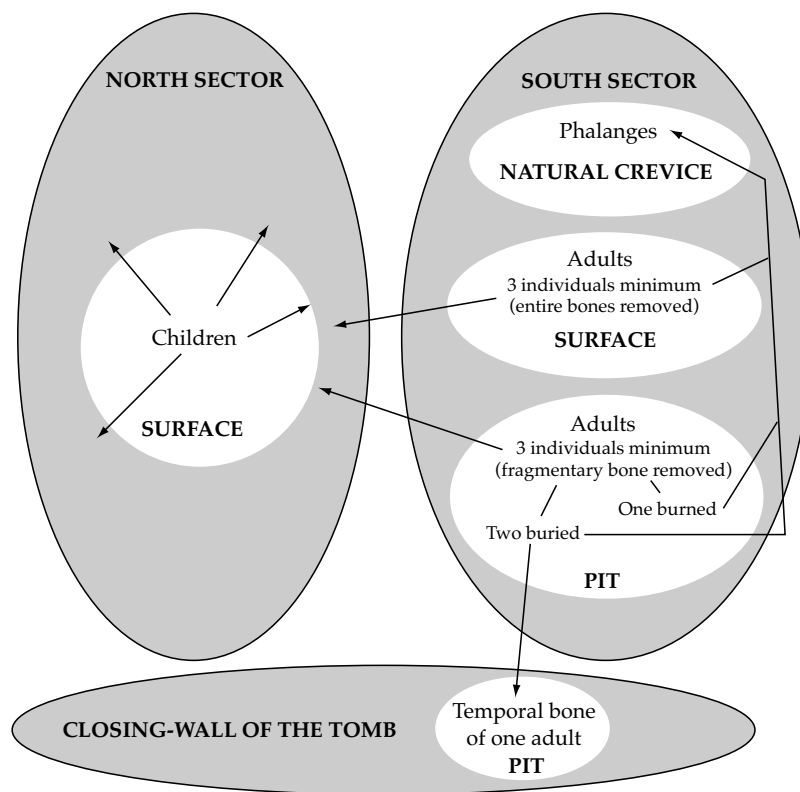


Figure 12. *Abri des Autours: organization of the Mesolithic collective grave.*

The cremation

An adult, too incomplete for sex to be determined, had undergone a cremation in which the level of combustion was relatively high. The deposit is obviously secondary, since not the slightest trace of fire could be seen in the rock-shelter. Thus the absence of some bones of this cremated individual does not necessarily indicate their removal after burial, as selection could have occurred before the body was brought to the shelter. The phalanges of the feet are missing, together with most of the skull, which is represented by only three or four very small fragments.

Did head and feet extend beyond the fire, so that it did not seem useful — or necessary — to collect them? That is possible, especially as one tibia and a few skull fragments show a lower level of combustion than the rest of the skeleton. But we must remember that removal of skulls was not an unusual practice among these Mesolithic societies. Furthermore, the phalanges were deposited in a particular way. Together, these considerations lead to caution in interpreting the incomplete presence of the cremated individual.

Movement of bones within the tomb

In the southeastern corner of the grave, the rock wall is crossed by a crack several centimetres long. This contained 32 phalanges (Fig. 12). All the foot bones come from a single individual, but the hand bones belong to a minimum of three individuals, including the one who was cremated. This particular concentration of phalanges clearly indicates the intentional movement of bones within the tomb.

In the grave as a whole, very few anatomical connections were observed. Only the base of a vertebral column and the pelvic girdle of one individual were preserved in their natural order; the skeletons of the children and the other adults were disarticulated. It is likely that these dislocations were in part the result of intentional acts. If not, it is hard to explain why the children's remains are more closely grouped than those of the adults. It would also be impossible otherwise to account for the absence of anatomical links between the remains in the pit and those left immediately around it.

The treatment and manipulation of the dead was systematic and complex. On one hand, the tomb was divided into sections allowing classification of the dead; while on the other, the movement of bones allowed links to be made between the categories of the dead. The adults, cremated or inhumed, underwent removal of whole or fragmentary bones and were deposited either in the funerary pit or along its edge, but they were linked into one community by the bones of their hands. The children were not left alone in the northern sector: with the exception of the cremated individual, the remains of the six adults overlapped with those of the children. Difference and assimilation worked at the same time to ensure the unity of the grave. Categorizing the dead was balanced by the creation of links between the individuals.

One further element indicates clearly the intentional removal of bones. In front of the tomb a low wall was built (Figs. 11–12), which covered an earlier small pit. In this pit was found the temporal bone of an adult which belonged, in all probability, to one of the adults represented in the funerary pit already described. This temporal shows no trace of cut marks, and we can therefore be certain that its

removal to the final burying place occurred after the natural decomposition of the flesh. This action illustrates once more how the dead admitted to the tomb were treated individually.

Phalanges placed in a natural crevice; movement of bones within the tomb; introduction of a cremated body; selective bone removal after inhumation — the dead of the Abri des Autours certainly did not rest in peace and quiet!

Primary or secondary burial?

Distinguishing between primary and secondary deposition in collective graves is never easy. Indeed, as we have seen, the bodies from the Abri des Autours had undergone several manipulations such that their condition at the moment they were admitted to the tomb is difficult to determine. The two adults who were not cremated, but deposited in the pit, shared several preserved anatomical connections. They may have been placed in the rock-shelter as primary burials, but subsequently certain parts of the skeletons were intentionally removed. Secondary burial, on the other hand, is indicated for the cremated individual given the absence of traces of burning within the rock-shelter.

This leaves the children and the three adults whose skeletons are only represented by very small fragments. The absence of larger elements and the disarticulation of the remains tell a complicated story. We can imagine entire bodies being introduced in the tomb and afterwards relieved of their most significant bones, with the smaller or less important fragments being pushed to one side. This would explain their distribution along the edge of the shelter wall or around the pit. But that is only an impression and not a conclusion based on solid evidence.

In conclusion, therefore, the Mesolithic collective tomb of the Abri des Autours cannot be classified as either primary or secondary, but is sometimes primary, and other times secondary, according to the individual case. Each individual was treated differently, and the final pattern is certainly not the result of stereotyped behaviour.

Discussion

Mesolithic collective tombs in northwestern Europe

At the time of discovery, the Mesolithic collective tombs of the Grotte Margaux and the Abri des Autours were without parallel, and it was therefore considered better to assume that these deposits were atypical, than to propose some general hypothesis about the mortuary behaviour of the last hunter-

gatherers. An understanding of the past cannot be constructed by reliance only on exceptional evidence. This began to change with the discovery some years ago of a third collective tomb, also dated to the ninth millennium, in the Bois Laiterie cave at Profondeville (Otte & Straus 1997), some kilometres downstream along the Meuse from Margaux and Autours. Bois Laiterie displayed the same treatment of skeletons as Margaux and Autours.

Today, the corpus of Mesolithic collective tombs includes at least ten examples, divided between Belgium and the southwestern part of England (Cauwe 1996–97). With the exception of the deposits already described, however, the other discoveries are known only from ancient or unscientific excavations, which give less detail about the exact conditions of discovery and too little to enable a precise understanding of the funerary context. The antiquity of these excavations does not allow the number of bodies deposited in each cave, the sequence of interments or their possible manipulation to be established. Nevertheless, these sites indicate that placement of the dead in natural caves was a frequent practice in northwest Europe during the ninth and eighth millennium.

Whatever the quality of the excavations, these sites taken together show that the Margaux and Autours collective tombs were part of a much broader pattern. Collective burial was not, however, the only mortuary rite practised during the Mesolithic in northwest Europe. There are also individual primary interments and fragmentary human remains within settlements (Newell *et al.* 1979). It is important nonetheless to note the presence of collective tombs as early as the Early Mesolithic.

If we enlarge the discussion to include other regions of Mesolithic Western Europe, it should be noted that manipulation of the dead, and gathering the remains in a selected location, are frequent, even if the details of those activities are not necessarily equivalent to those seen in collective tombs *sensu stricto*. Such practices are seldom noted in other regions of Europe, however, and the Mesolithic collective tombs seem therefore to be part of a distinctive West European pattern. Until the Late Mesolithic, scattered human remains are more numerous than those coming from graves. Some twenty years ago, Rozoy was among the first to recognize the importance of the phenomenon of disarticulated corpses in France (Rozoy 1978). The same feature is prominent in the inventory by Newell *et al.* (1979) of Mesolithic burials in Western Europe as a whole.

Primary burials and protected bodies in Central and Eastern Europe

Mesolithic funerary rites in other regions of Europe are also diverse. They include cemeteries and isolated tombs, individual graves and multiple (simultaneous) burials, inhumations and cremations. Overall, Central and Eastern Europe do not seem to differ from Western Europe, but the frequency of the various practices is different. In contrast to the Portuguese, Scandinavian and Breton cemeteries, Eastern Europe does not have superimposed burials nor graves in which earlier burials had been pushed aside. Collective tombs filled on a single occasion were preferred in Central and Eastern Europe, and disarticulated remains are virtually absent from non-funerary contexts. Normative burial treatment involves primary inhumation, which respects the natural organization of the body. The burials of the Grotta dell'Uzzo in Sicily (Borgognini Tarli *et al.* 1993) and the Danube gorges (Boroneanţ 1970; Srejović 1972); the isolated graves of the Alpine regions (Leonardi & Tomasi 1968; Guerreschi & Gerhardinger 1988), Corsica (Magdeleine 1991) or Germany (Grünberg 1996; Grote 1990; Grote & Schröder 1989); and the cemeteries of Karelia in Russia (Gurina 1956; Price & Jacobs 1990), all testify to the same respect for the integrity of the bodies and the absence of collective burials. The tombs are placed side by side, and are far removed from the accumulation of corpses in burial chambers that are regularly seen in Western Europe. Quite different traditions prevailed in the Eastern and Western parts of the continent. Manipulating the corpses or hiding them away, knowing how they naturally degrade, are attitudes that belong with quite different views about death, even if we cannot precisely determine their meaning.

The diachronic perspective

The behaviours practised in the Grotte Margaux and the Abri des Autours are consistent with traditions that are reproduced everywhere in Western Europe during the Early Holocene. The search for prototypes for collective burial is, however, more difficult than that for other aspects of the burial treatment. Collective burial becomes common in later periods, but the chronological hiatus between the Mesolithic collective tombs and those of the Middle Neolithic is at least three or four millennia.

Magdalenian populations are represented by nearly 300 skeletons, mostly fragmentary. Only three per cent of them received a burial (Gambier 1992). Most of those discovered outside formal graves present traces of cut marks or working (Le Mort &

Gambier 1991; Garralda 1992; Mazière 1986; Bégouën *et al.* 1937). This indicated that the bodies underwent a more elaborate treatment than simple abandonment in a given location. What was the status of these dead? Outcasts, enemies offered in sacrifice, persons of low social status (or the opposite)? That formal graves are found during some parts of the Magdalenian certainly does not justify the rejection of research into Magdalenian human remains found in other contexts merely because we cannot directly verify their funerary context.

Several types of intervention have been noted on the dispersed Magdalenian skeletons: cut marks, shaping and engraving (Le Mort & Gambier 1991; Buisson & Gambier 1991; Orschiedt 1997; Malvesin-Fabre *et al.* 1954). Traces of dismemberment by cutting and scraping are the most frequent, and almost all of them are concentrated on the skull. The most important examples come from Isturitz and Le Placard (in France) and Brillenhöhle (in Germany). Finally, we must point out that there are human bones, dismembered and worked, to which engraved decoration has been added (Buisson & Gambier 1991).

Most of the Magdalenian deposits displaying evidence of the manipulation of corpses contain multiple individuals. At Isturitz there were 43 individuals (probably 31 of them adult), mostly represented by their skulls (Buisson & Gambier 1991). At Le Placard, the number of dead varies between 34 and 54, according to different estimates. Eight or eleven of them are children (Le Mort & Gambier 1991). At Maszycka in Poland, the human bones belonged to a minimum of 16 individuals of whom half were adults (Kozłowski *et al.* 1995). At Lachaud in France, eight skeletons had been manipulated and spread across the site (Cheynier 1965), while within the cave of Saint-Germain-la-Rivière were found the partial and scattered remains of five individuals, apparently without any relation to the famous burial discovered at the same site (Blanchard *et al.* 1972). Three cremated bodies were abandoned in a pit at Brillenhöhle (Orschiedt 1997).

West vs east: diversity in Upper Palaeolithic mortuary practices

As in the Mesolithic, so also in the Late Upper Palaeolithic the treatment of the dead varies between Western and Central Europe. In the West, inhumations are uncommon: disarticulation or dismemberment and working of skeletons is normal and the disposal of the dead only happened after these manipulations. Elsewhere, for instance in Italy during the Epigravettian, the dead were systematically in-

tered, and where several dead are found at the same site they are buried in small ‘cemeteries’ (Mussi *et al.* 1989; Palma di Cesnola 1993; Grifoni Cremonesi *et al.* 1995). During the Italian Epigravettian, the corpse was left unmoved in the tomb, whereas in the Western Magdalenian it was integrated into the activities of the living. The Epigravettian societies appear to have been careful to preserve the physical integrity of individuals, whereas Magdalenian groups were much more interested in collection of ‘pieces’ taken from several skeletons. We do not wish to suggest that the manipulation of corpses during the Magdalenian period had the same meaning as those observed during the Mesolithic. The dichotomy between east and west observed in the funerary rites of the European Mesolithic seems, however, to be the continuation of traditions well-established during the Late Upper Palaeolithic.

Mortuary practices: the first Western European farmers

The manipulation of corpses is a characteristic of the Late Upper Palaeolithic and Mesolithic of Western Europe, and the tradition appears also to include collective tombs. The same phenomenon persists during the Neolithic of Western Europe, in which megalithic chambers, burial caves and hypogea contain collective interments. Occasional exceptions do not alter this general tendency (Masset 1997). The excavation of a collective grave cannot be undertaken without considering the mortuary practices and the history of the monument, and research into the architecture and the rituals must therefore be accompanied by an approach that goes beyond typological classification. This new approach to the treatment of the dead and the funerary architecture must reconsider their genesis. Traditionally, this supposes an evolution from the individual to the collective, from the simple pit to the monumental funerary space (Boujot 1996). In early megalithic monuments that often include multiple chambers, as for example La Hogue in Normandy, the dead are sometimes buried individually and at other times collectively (Caillaud & Lagnel 1972). Treatment varies from one chamber to another: some bodies are manipulated, others have preserved their physical integrity. The heterogeneity of these different rites was already long established during the Mesolithic of the Atlantic region: some graves were left intact, some were revisited, while others were reused on several occasions.

Close association with the dead, even if in the form of disarticulated fragments, had a certain value. Throughout the Mesolithic and the Neolithic, the co-

existence of several treatments of the dead in the same tombs or in groups of graves linked by a common architecture shows that the suggested transition from individual to collective burial is an illusion, probably originating from the assumption that simple things always precede more complex ones. In fact, the Neolithic collective tomb was the theatre of funerary practices that were varied and unsystematic but, as during the Mesolithic, generally involved manipulation of the dead. In Western Europe, there are significant similarities in this respect between the last hunters and the first farmers. Neither were concerned with the conservation of the corpse; nor did they seek to maintain the individuality of most of the dead; everywhere they practised post-inhumation disarticulation of the skeleton, returning to the grave and often modifying the architecture of the tomb while still in use (Cauwe 1996–97).

In the Neolithic, as earlier, the West differed from other regions of Europe. In Central Europe, Neolithic burials were in individual graves, and the dead — or the living — valued peace (Jeunesse 1997). The first farming societies of Central Europe were responsible for the introduction of the Neolithic economy to the western part of the continent, but neither the form of Atlantic monumental tombs, nor the treatment accorded to the dead, find precedents in the earlier European Neolithic. It seems therefore that during the Neolithic transition in western Europe, only agriculture was adopted, without significant modification of the traditions of the former hunter-gatherers.

But there is need for caution: continuity across the Neolithic transition was associated with important changes in the treatment of the dead. The funerary rites of the Atlantic Neolithic were transformed from those of the Mesolithic period. We only have to consider the rise of funerary architecture. The introduction of agriculture obviously had an important impact, but the reaction may have been one of the local populations to new circumstances rather than one adopted from earlier European farming groups.

Conclusion: a West European continuity of mortuary practices

The problems in discussing the origins of the Neolithic collective tomb probably reside in the definition of the concept. Intuitively, the collective tomb is, first of all, a grave, that is to say a place specially organized to receive the dead. Since the corpses are successively brought to the tomb, the term ‘collec-

tive' is used, indicating the distinction from individual graves or from tombs in which several bodies were buried at the same time. The discussion usually focuses on 'when', 'how' and 'why' some populations switched from individual graves to the regular use of collective graves.

The collective tomb is still often considered as an evolution of the individual tomb or of the collective tomb with simultaneous burials. Indeed, it is the case that the earliest prehistoric graves often contained only one corpse, or sometimes several buried at the same time. In broad chronological terms, placement of several inhumations inside the same burial chamber is a relatively recent phenomenon which only appears on a supraregional scale during the fifth millennium BC. The documentation, including the earlier literature, allows us, however, to distinguish two important categories of treatment of the dead. Some societies sought to preserve bodies in the best state possible; whereas others integrated their dead into a dynamic processes and gave them what could scarcely be called eternal rest. In other words, there were those who prevented any further contact with the corpses, and others by contrast who retained material links with the dead.

These two approaches to a corpse — one static, the other dynamic — are quite different. Representing the relationship between the living and the dead, the first tries to preserve the integrity of the bodies and does not acknowledge the stages of metamorphosis of the corpse, while the other manipulates relics and pays visits to the grave. Dismemberment, secondary inhumation and removal of bones are the opposite of immediate and definitive inhumation. Archaeology cannot explain why some societies preserved the bodies while others observed and assisted the dissolution of the body; anthropologists have shown that it is impossible to posit an unequivocal relationship between the observed events and their interpretation.

Primary inhumation ensures the integrity of the skeletons, whereas West European collective tombs were the theatre for numerous manipulations and hence belong to another mentality. In collective tombs, the corpse is viewed like a jigsaw, the pieces of which may be scattered. Thus it is with the manipulators of corpses that we have to search for the origins of the Neolithic collective tomb. From the Early Upper Palaeolithic until the end of the Neolithic period, West European societies engaged in the manipulation of corpses, even though it must be recognized that the relative homogeneity of funerary practices was accompanied by significant transfor-

mation of the sepulchral context — in the architecture of the tomb itself. Magdalenian societies, famous for their cave art, did not usually construct formal graves for their dead, but at the end of the Ice Age, when art became more discreet, the Mesolithic dead became more conspicuous. Bones were still abandoned on settlements but the number of graves increased, collective tombs appeared, and cemeteries were created. Following the Neolithic transition and the establishment of a new social order the dead became even more important, housed in tombs of monumental scale, with art once again regularly present but now in a funerary context.

Thus, the Mesolithic graves of Margaux and Autours do not provide a potential point of origin for Middle and Late Neolithic collective tombs, but themselves form part of a long-standing tradition. The Early Mesolithic tombs may appear anachronistic if we consider them simply as the antecedents to megalithic burial practices. The comparison, however, is inappropriate, since both Mesolithic and Neolithic burials were characterized by innovations that are related to traditions, the persistence of which can be observed over a very long time. The obvious similarities that collective tombs of the Mesolithic have with those of the Middle and Late Neolithic are not entirely coincidental occurrences; nor, however, do those convergences imply a close continuity. It is shared perennial idea of the relationship between the living and the dead which these practices imply, and not the persistence of a particular form of burial chamber, that must be the focus of a fuller understanding.

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Notes

1. An autour is a goshawk (*Accipiter gentilis*).

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