

# The Neanderthal dead: exploring mortuary variability in Middle Palaeolithic Eurasia

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## **Abstract**

Recent discussions about Neanderthal mortuary behaviour have tended to polarise around opinions that they did, or did not, bury their dead. Gargett, in particular, has forwarded a largely unconvincing critique of Neanderthal burial, but most scholars agree that at least some Neanderthals, at some times, treated the dead body. This article demonstrates that Neanderthal mortuary activity was a real phenomenon that requires exploration and interpretation and examines the nature and extent of variability in mortuary behaviour. In the later Middle Pleistocene Neanderthals may have been caching the dead in unmodified natural surroundings. After 70 ka BP some Neanderthal groups buried infants, or parts of them, in pits, infants and adults in shallow grave cuttings and indulged in primary corpse modification and subsequent burial. It may have been on occasion too that certain enclosed sites served as mortuary centres, and that their function as such was perpetuated in the memory of Neanderthal groups either through physical grave markers or social tradition. In all it would seem that at least in some Neanderthal groups the dead body was explored and treated in socially meaningful ways.

## **1 Introduction**

The question of whether or not Neanderthals buried their dead has received considerable attention over the last few decades and has played a central role in exploring the similarities and differences between Neanderthals and early anatomically modern humans. This is particularly so in Europe, where the Middle to Upper Palaeolithic transition has been seen by many scholars as relatively abrupt (eg, White 1982; Stringer & Gamble 1993; Pettitt & Schumann 1993; Mellars 1996; Gamble 1999; papers in Mellars & Stringer 1989; papers in Mellars 1990). It is probably fair to say that most scholars accept that *some* Neanderthals received deliberate burial after death, and that such burials appear not to have included grave goods or any other form of

elaboration visible in the archaeological record. Gargett, however, (1989; 1999) has argued that we have no one convincing example of burial. Whilst a number of surveys over the last two decades are generally favourable to the notion, reviews tend to make generalisations of the 'Neanderthals did bury their dead' variety. Such a generalisation over Upper Pleistocene time and space may not be justified, and certainly merits closer inspection. The purpose here is to examine the available data in terms of potential variability of mortuary practice among at least some Eurasian Neanderthal communities. Mortuary belief and ritual is, needless to say, remarkably complex among modern human populations (eg, Chamberlain & Parker Pearson 2001), and there is no *a priori* reason why the same need not apply to the Neanderthals. The issue

relates to several areas of importance, from the simple behavioural and technical to the metaphysical. Kolen, for example (1999), has argued convincingly that Neanderthals in life ordered space from their bodies outwards and I have argued that the nature of their bodies played an important social role (Pettitt 2000). If this is the case, did they return that organisation to centre upon the body in death?

## **2 Context: chronology and nature of Neanderthal remains**

### *2.1 Fragmentary Neanderthal remains*

The 'archaic' skeleton of Skhûl 9 may be the oldest burial known as yet (Stringer 1998) although it is conceivable that the Tabun C1 Neanderthal is as old as 120 ka BP (eg, McDermott et al 1993; Grün et al 1991) and in any case the dating of the entire Tabun sequence is a fiercely-debated issue (eg, Millard & Pike 1999) <sup>1</sup>. With the exception of the Sima de los Huesos sample from Atapuerca, it is only from the substages of OIS5 that near complete human remains are found on enclosed sites in Eurasia, and only from late OIS3 and OIS2 (ie, the Mid Upper Palaeolithic) that they are found on open sites. Prior to this, as Gamble (comment to Gargett 1989) has noted they are 'truly bits and pieces'. The existing database indicates that the earliest burials are of anatomically modern humans at the gate of Africa (Hublin 2000). For the Neanderthals specifically, with the possible exception of La Quina and La Ferrassie, all burials for which there is chronological data<sup>2</sup> post date c 60 ka BP, ie, belong to OIS3 (Defleur 1993). For example, the Amud 1 skeleton has a *terminus post quem* of 50-80 ka BP<sup>3</sup> and the Kebara skeleton is securely dated to c 60 ka BP (Schwarcz et al 1989; Valladas et al 1998). Clearly a new depositional phenomenon came into play in OIS5, at least among early anatomically modern humans, which by early OIS3 was also practised by the Neanderthals. Despite caution about taphonomic factors this is usually taken to indicate the origin of formal burial. The fact that Neanderthals only developed the practice

of burial later than anatomically modern humans may well be significant (Hublin 2000).

Fragmentary human remains, however, do not disappear from the archaeological record with the arrival of burial. On the contrary, the greater part of the Neanderthal hypodigm is comprised of highly fragmentary remains, which probably account for approaching 500 individuals. Gamble (1984; 1986; 1999) has explored the relationship between Neanderthal and carnivore remains and has noted that the abundance of fragmentary Neanderthal remains at sites in France and the Near East is correlated with low carnivore frequencies, whereas, by contrast, in the northern Balkans it is the abundance of the two that is correlated. He interprets these patterns as reflecting differing carnivore coping strategies across differing regions of Europe, and forwards a taphonomic factor that may relate to this, ie, that in areas where carnivore activity is relatively sparse they are far less likely to disturb and destroy Neanderthal remains. This, however, does not explain the high correlation of the two, at least, in the Croatian sites of Vindija and Krapina (see Gamble 1999:311).

By contrast, Mussi (1988; 1999), discussing the relatively few Neanderthal remains recovered from Italy, has suggested that, '...when Neanderthals were in control of the situation, corpses were carefully removed [from enclosed sites]' (1999:55) and that the presence of fragmentary bones may be due to carnivore activity. This has also been suggested more widely for the Mediterranean region by Gamble (1999:311). Clearly, some effects on the deposition and preservation of Neanderthal remains were brought about through interaction with elements of the ecological community.

### *2.2 Arguments against burial*

Gargett (1989, 1999) has put forward a literature-based critique of Neanderthal burial based on sedimentology, stratigraphy and taphonomy. He drew attention to the 'double standards'<sup>4</sup> applied to Palaeolithic research in that '...it is simply assumed that ...[anatomically modern] human

remains discovered in an archaeological context were placed there purposely' (ibid 157) given that the criteria for recognition of purposeful burial were ill-defined due to the ubiquity of burial in later prehistory, history and the ethnographic present. With Neanderthals, as he notes, the proportion of fragmentary Neanderthal remains is considerably higher in the Upper Pleistocene record than for modern humans, which has led to the assumption that preservation of more complete Neanderthal remains which stand out is due to deliberate burial.

While Gargett is right to stress processes of sedimentation in enclosed sites as potential factors in the preservation of skeletal remains, his critique of possible burials at 11 sites is largely unconvincing. Recent interpretations of Neanderthal burial are certainly more conservative than previous because a number of dubious examples have been eliminated as part of a wider critique of Neanderthal 'ritual', such as the Drachenloch and Regourdou 'cave bear cults' (Bächler 1921; Bonifay 1964)<sup>5</sup>, and claims for cannibalism at Krapina, Croatia and the Grotta Guattari, Italy (see below). More recent estimates, however, still vary considerably, from 36 burials spread over 16 sites (Harrold 1980); 34 (Defleur 1993:216, who notes that 22 adults and 12 infants retain at least a degree of anatomical connection); to more inclusive counts at c 60 (Smirnov 1989), and a cautious reading of the evidence by Bar-Yosef (1988) putting the number at 12-14 for Europe and about 20 in western Asia, and Otte (1996) who notes 20 burials for the European continent split into western and eastern groups and 12 for the Near East. In all, then, excluding Smirnov's optimistic account, it would seem that scholarly opinion converges on c 32-36 convincing indicators of burial. Whilst most scholars would probably agree, therefore, that Neanderthals, at least on occasion, buried their dead, this still only amounts to well under 100 individuals for the late Middle and Upper Pleistocene overall, even if one includes possible 'caching' of Neanderthal remains (see below). On the basis of this it is certainly premature to make simple conclusions such as 'Neanderthals buried their dead'. As with

apparently modern human Aurignacians, burial may have been a very rare event for the Neanderthals.

My opinion that Gargett's attempt to deny any Neanderthal burials is largely unconvincing obviously requires justification. Many of his specific and literature-based readings of the data have been questioned by original excavators (see responses to Gargett 1989) and other specialists (eg, Belfer-Cohen & Hovers 1992), and will be further explored below. In addition, the logic of Gargett's approach, particularly in his second paper (1999) can be criticised. In this, Gargett sets himself five main questions as a prelude to examining possible burials at five sites from France to the Near East. While there is no space to examine fully Gargett's methods and conclusions here, I list and discuss some salient criteria used by Gargett to 'identify' or reject burials. Gargett's five questions are:

1 what constitutes evidence of purposeful protection of the corpse?

Gargett suggests that simple recognition of cuttings, pits and depressions that happen to contain Neanderthal remains is not enough to identify purposeful burial. Rather, he suggests that 'unless a new stratum can be distinguished, there is no logical way to argue that the remains were purposely protected' (ibid 33). He derives this argument from the notion that the new (ie, overlying) stratum is 'the key to discerning *unequivocally* that purposeful burial has occurred' (ibid 33, his emphasis). To Gargett, 'if the overlying sediments are part of a more extensive deposit that includes the "fill" of the "pit", this greatly weakens the argument that the overlying sediments were the result of purposeful burial' (ibid 33). It is difficult to find any logic in this statement. By their very nature – excavations into existing sediments eventually filled by those same sediments that were excavated in the first place, there is no reason at all why one need invoke the deposition of new sediments above the grave fill. This is certainly no grounds for rejecting potential burials.

2 what is the probability of natural burial in caves and rockshelters?

Gargett's alternative explanation that Neanderthal skeletons may often be the result of rockfalls or natural deaths while sleeping relies on cryoclastic depositional environments. Noting that such sites are '...inherently variable, inherently complex...which obviate the use of simplistic models of site formation and bone preservation' (ibid 38) he suggests nevertheless one monolithic explanation, that materials may often accumulate favourably against cave walls or among boulders. If this is so, then delicate bones, and bones in articulation, will tend to be preserved better in such protected locations. Taking into account various taphonomic factors, animal behaviour and spatial patterning, this conclusion is a gross simplification. There is no *a priori* reason why such locations should be 'more protected' than more central areas: streams, debris flows, mud flows, burrowers and denning carnivores are no respecters of low roofs and 'out-of-the-way places' as Gargett refers to them. In addition, the available spatial data from sites where burials do occur indicate that the density of archaeological materials *overall* does not cluster in such locations, so simple favourable preservation surely cannot be held likely.

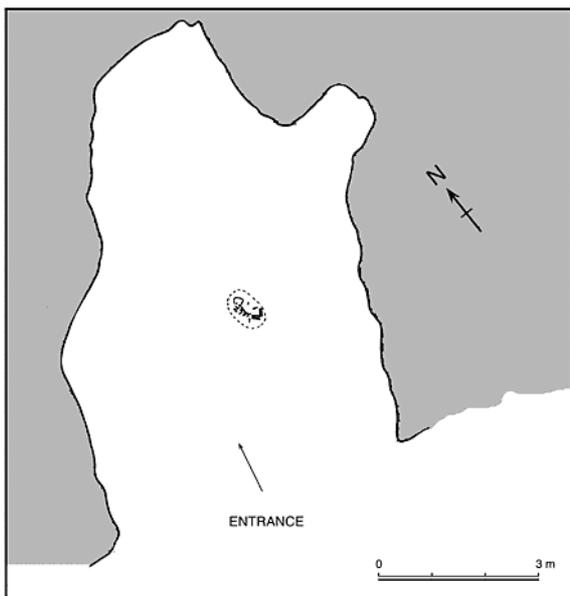


Figure 1 The Roc de Marsal infant burial, after Turq (1989)

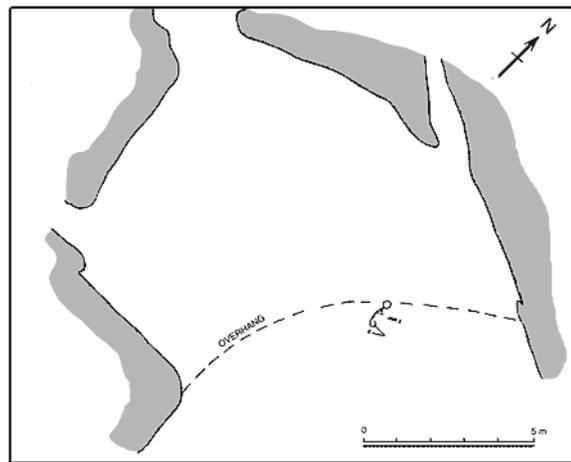


Figure 2 The Amud 1 burial, after Sakura (1970)

Burials can and do occur in very central locations; for example, the child at Roc de Marsal was recovered from almost the absolute centre of the cave and under 3m from the cave mouth (figure 1). While sedimentological data is still ambiguous as regards deliberate burial, as Turq (1989) has noted it certainly cannot be used to argue against burial. The Amud 1 virtually complete skeleton (figure 2) was also recovered 4m from the cave wall and right below the cave's overhang line, hardly a protected position (Sakura 1970). The Kebara 2 skeleton (figure 3) was emplaced in a central position where the interstratification of hearths was most intense, ie, a 'high activity' area (see below). This area, named the *décapage*, was an exceptionally rich cluster of large mammalian bones (Speth & Tchernov 1998).

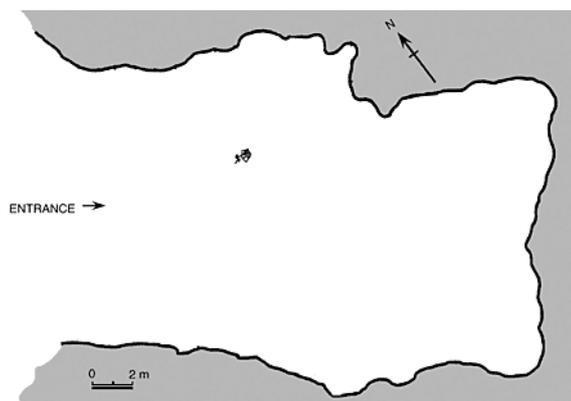


Figure 3 The Kebara KMH2 adult male burial, after Bar-Yosef et al (1992)

Even if one took this criterion at face value, one might expect a far higher incidence of relatively

complete animal remains, especially of denning animals, against walls. This is obviously not the case, as Bar-Yosef (2000) has noted. In fact, denning carnivores do not always deposit the bones of other cave users: as Aldhouse-Green (2001:116) has noted, Neanderthal remains are extremely rare in Britain despite a profusion of caves with evidence of carnivore activity and a respectable Middle Palaeolithic artefactual record. In fact, the same applies across Europe, ie, carnivore remains and archaeological indicators of human activity in caves are abundant from the Lower Palaeolithic onwards, despite apparent increased use of such caves from the later Middle Pleistocene (Fosse 1999). If a simple carnivore activity/hominid bone accumulation correlation were ubiquitously in effect, one would expect a far richer Middle Pleistocene hominid fossil hypodigm. Nor need this be a depositional bias: carnivores depositing human remains cannot even be held to deposit remains mainly towards the sides of caves. For example, the fragmentary Neanderthal remains bearing traces of hyaena processing found in OIS5 deposits at the Rochelot cave, Charente, were '... découvertes dispersés le long de la galerie' (Tournepiche 1994) and almost definitely represent one individual dragged into the cave by hyaenas (Tournepiche & Couture 1999). At the Subalyuk Cave in Hungary several remains pertaining (probably) to one adult and one immature Neanderthal were discovered spread over more than twenty square metres (Pap et al 1996). Although the original excavator was unable to ascertain the precise reason for such dispersal, enough animal modification of the bones, eg, on the manubrium of Subalyuk 1 (ibid 244) exist to make bioturbation a likely cause.

3 what is the prior probability of preservation under any circumstances?

Noting that most Middle Palaeolithic human remains are known 'only from fragments of skeletal elements' (ibid 38) Gargett observes that caves and rockshelters tend to preserve bone better than open air sites<sup>6</sup>, and that almost all Neanderthal skeletons recovered from such enclosed sites are incomplete.

From this, Gargett believes that '... it is reasonable to suggest that equal weight be given to alternative explanations to account for the presence of articulated skeletal elements...' (ibid 39), ie, such locations where favourable preservation is more likely as discussed above. Thus, Gargett suggests that in 'out-of-the-way places' one not only finds greater preservation of bones per se, but greater preservation of small and articulated bones. Many such 'out-of-the-way places' are natural depressions in the floors of enclosed sites, and Gargett's reasoning that unless the depressions in which Neanderthal remains are found can be demonstrated to have been artificially excavated for the purpose of containing a body then they are not convincing indicators of burial, is teleological. Natural features may obviously be used to dispose of the dead, and features excavated for other original reasons such as storage may in time be employed for burial too. True, the issue is confused, but to use natural features to argue *against* the skeletons found within them being deliberately buried is as simplistic as taking every near-complete Neanderthal skeleton as a deliberate burial.

4 what is the importance of articulation?

Gargett suggests that '... all things being equal, the species dying in greater numbers [in enclosed sites] would naturally preserve in greater numbers' and that the dearth of skeletal preservation among the hominids of earlier times, such as *Homo erectus* (Gargett's attribution) may simply indicate that the latter spent less time in caves than Neanderthals. True, archaeological indicators of frequent use of enclosed sites only pick up from the later Middle Pleistocene. However, archaeological assemblages from enclosed sites dating to before OIS5 are often rich in both lithics and fauna, eg, several caves at La Chaise de Vouthon, Charente (Débénath 1988); La Caune de l'Arago, Baume-Bonne (De Lumley 1976a; 1976b) and Orgnac 3 (Moigne & Barsky 1999) in southern France; the Acheulian of Kudaro Cave 1, Caucasus (Baryshnikov 1999) and even the nine Acheulian assemblages of Combe Grenal (Bordes 1972). Logic determines, as Hayden

(1993:121) has noted, that depositional and taphonomic factors have remained similar in enclosed sites through the Lower, Middle and Upper Palaeolithic. One cannot therefore infer, as Gargett does, that the preservation of Neanderthal skeletons in enclosed sites relates simply to increased use of these sites, and one must remember the caution of Bar-Yosef (1988) that humans do not always bury their dead on their habitation sites. If this were so, they must surely be littered with near-complete skeletons of animals. In addition why are they restricted to only three geographical clusters as Defleur (1993) has noted<sup>7</sup>, despite the occurrence of rich Middle Palaeolithic archaeology in many caves across Europe? To subscribe to Gargett's view one would also have to explain the absence of convincing Aurignacian burials (anywhere), the paucity of Gravettian burials in enclosed sites and rarity of Solutrean and Magdalenian. By his own criteria, Upper Palaeolithic communities, who clearly used enclosed sites more heavily than Neanderthals, must surely have also wound up in natural features and become preserved by accident. Where are they?

5 what is the variability in rates of decomposition, disarticulation sequences and the likelihood of disturbance?

Gargett points to the variable rates of destruction of anatomical elements by disarticulation, disturbance and decomposition. His conclusions that, '...the vast majority of Middle Palaeolithic hominid remains succumbed to some form of physical disturbance, since there are so few skeletons' (ibid 46) is hardly threatening to the notion of burial. It is difficult to see his point here. Furthermore, his conclusion that '...postmortem disturbance, of whatever kind, need not, and I would argue did not happen in every case' seems to contradict his own view. From this it would seem that Gargett's point is that some other factor must be invoked to account for missing anatomical elements. Again, this is a separate issue from modes of deposition.

I turn now to specific examples addressed (and

rejected) by Gargett. At La Chapelle-aux-Saints, southwest France, the near-complete skeleton of an adult Neanderthal was recovered from a roughly rectangular depression 145 x 100 cm in plan and c 30 cm deep, within stratum 5 (figure 4) (Bouyssonie et al 1908).

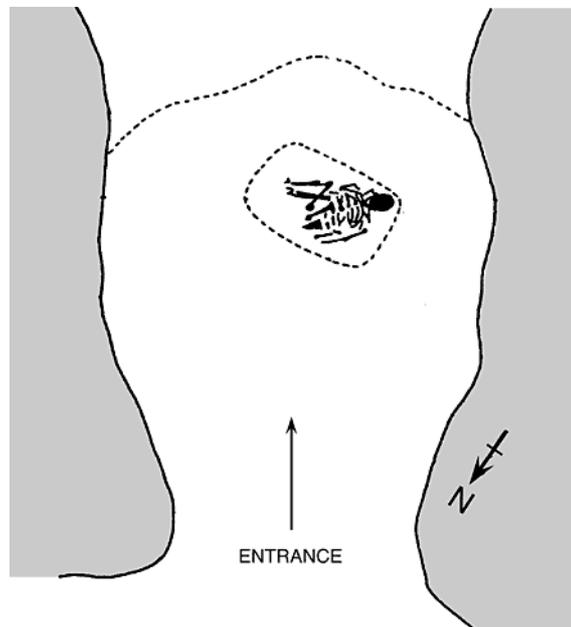


Figure 4 The La Chapelle-aux-Saints burial, after Bouyssonie et al (1908)

Gargett rejects this, on the basis of stratigraphic data and the fact that the ceiling of the cave at the time of burial was not high and would therefore have required crawling, a situation Gargett believes '...sounds more like a [carnivore] den' (ibid 163). This latter point is dubious: if we were to discount burial because 'access to his grave might have required a crawl of some metres' then by the same argument we would have to discount many examples of Upper Palaeolithic parietal art, or for that matter Neolithic collective burial in megalithic tombs. In any case, the ubiquitous archaeology in stratum 5, which Gargett cites as evidence against burial, indicates that Neanderthal activity of other forms certainly occurred at this broad time, and that a low ceiling was no obstruction to this. Gargett suggests that the depression in which the skeleton was found could have occurred through stream action, pointing to other depression features discovered by Peyrony which probably formed in

this way. One of these contained fragmentary remains of a Neanderthal infant, now lost. These are, however, found in stratum 1, not 5, and are of different shape and size to the 'burial' depression (they are circular, 50 - 80 cm in diameter and 40 - 50 cm deep), and I see no *a priori* reason to invoke the same causative process. The likelihood that this represents a true burial is emphasised by Frayer and Montet-White who question Gargett's reconstruction of the stratigraphy and note that they, '...know of no example of a naturally produced rectangular, straight-walled, flat-bottomed pit in the middle of a karstic shelter. That such a natural phenomenon would have occurred and a skeleton would have found its way into it is so unlikely as to make it impossible to consider seriously that the pit sunk into the marl was not the result of deliberate human activity.' (comment to Gargett 1989:180).

It is difficult to disagree with their opinion, that this represents a 'strong indication of intentional burial'.

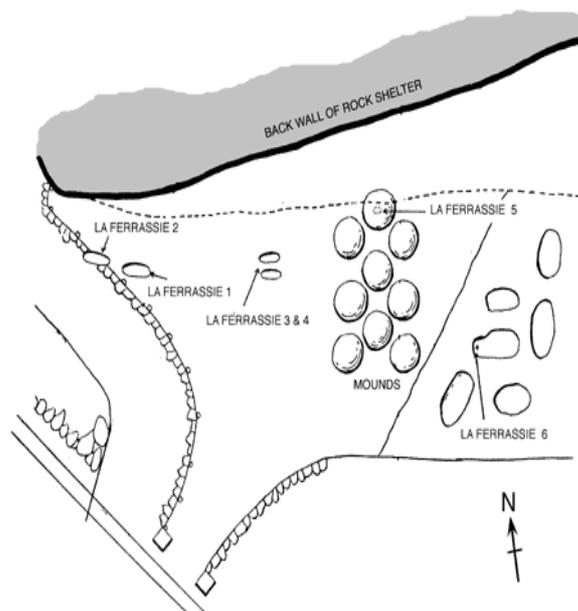


Figure 5 Plan of La Ferrassie showing burials, pits and mounds, after Peyrony (1934)

The La Ferrassie rockshelter in the Dordogne, yielded seven Neanderthal skeletons (figure 5). Two of these (La Ferrassie 1 and 2) were nearly complete, an overall quantity and circumstance that might be '...too extraordinary to accept as

accidental' (Ossa, comment to Gargett:183). One of the almost-complete remains – La Ferrassie 1 – of an adult male, was located towards the back of the shelter. Although not placed in an apparent grave cutting, given the spread of faunal and archaeological remains at the site, the morphology of the shelter and known activities of small carnivores, it is difficult to agree with Gargett's conclusion that, '...the location of the skeleton, on a sloped surface near the back wall of the shelter, may have contributed to its preservation' (ibid 166). His argument that it is not *tightly* flexed as the excavators suggested is irrelevant to the issue of burial. If natural processes lead to the almost-complete preservation of the adult male, then one must assume they also lead to the preservation of the La Ferrassie 2 adult skeleton found close to the first (head to head in Capitan and Peyrony's view).

Less clear are the more fragmentary Neanderthal remains pertaining to five individuals found in a total of four pits in the Mousterian strata (La Ferrassie 3, 4 and 4a, 5, 6). Gargett (ibid 166-167) has advanced unconvincing stratigraphic arguments against these being deliberately excavated pit graves. However, as Bricker (comment to Gargett) has noted, his argument against these 'pit burials' is weakened by an ambiguous statement that one pit was 'refilled with a mixture of about equal parts of the black earth of the Mousterian layer located above and of the underlying gravel' in the original report of the commission who in 1912 witnessed their excavation (Peyrony 1934) and who noted clearly that each pit was an artificially excavated feature. Gargett's translation and interpretation of this statement are questionable, and do not in any case provide a clear argument against these being artificially excavated features. Certainly I find Gargett's use of what he in retrospect calls 'stratigraphic anomalies' (ibid 165) unconvincing. In all, with the exception of La Ferrassie 5 and 6 which may well have been emplaced in naturally formed depressions there is little reason to doubt that at least the two pits containing La Ferrassie 3 and 4/4a were deliberately excavated by Neanderthals.

That said, the evidence of funerary markers, in the form of a series of nine sediment mounds, one of which apparently overlay the pit containing La Ferrassie 5, is dubious. Gargett (ibid 167) is correct to point to the numerous natural agencies – not least of which are periglacial – that may produce these. In addition, as nine such mounds were excavated in the site, only one of which apparently yielded a burial underneath, one would have to explain the function of the remaining eight. It would be pushing interpretation to invoke isolated taphonomic factors destroying eight further burials, or the relation of all nine to the one burial, or even ‘cenotaph’ functions. I agree with Gargett here, in that the mounds probably bear no relation to funerary activity at the site. However, I would not follow Gargett that a natural cause for the formation of the mounds implies that La Ferrassie 5 is not a burial.

The partial and fragmentary postcrania of two Neanderthal adults from Shanidar, Iraq (Shanidar 8 & 9) have, to my knowledge, never been interpreted as burials. Gargett, though, has criticised the sample of seven more complete adult Neanderthal skeletons recovered from the site. At least six are near complete (Shanidar 1-6; Trinkaus 1982). On sedimentary grounds, these individuals were deposited on separate occasions over at least 15 ka, ie, from c 45-50 ka BP (Shanidar 1 and 5), to perhaps considerably before 60 ka BP (Shanidar 4, 6-9). What is the likelihood that seven adult Neanderthals were, *on separate occasions over at least 15 ka*, all ‘killed and buried by ceiling collapse’ as Gargett (1989:18) has argued? True, the deliberate placement of flowers has now been convincingly eliminated<sup>8</sup>, but on grounds of parsimony it seems more likely that the individuals were deposited here deliberately by their kin groups. That the practice of burial occurred here over such long periods of time may indicate that some markers – whether physical such as the limestone blocks associated with the burials, or group memory – was in operation (see below).

Whilst it seems undeniable that at least 30 Neanderthals came to be buried by their kin over some 30 ka or more in three regions of Eurasia, it is certainly timely to decouple simple ‘estimates’

of the number of ‘burials’. As will be seen below, Neanderthal mortuary phenomena, while perhaps not common occurrences, were varied, and it is probably incorrect to view this as one monolithic ‘burial’ phenomenon. Furthermore, the issue of corpse-disposal is central to interpretations of mortuary activity. If we assume that removal of the dead from occupation sites is an important activity not least because it minimises the risk of attracting carnivores and unpleasant saprophages, then the apparent presence/absence of corpses may inform *per se*. Were Neanderthals in control of the fate of their own remains? As noted above, Mussi (1988, 1999:55) has suggested that corpses were carefully removed from occupation sites when Neanderthals were in command of situations, although the implications of this is that whatever their fate, burial was probably not the main means of disposal, at least in the Italian Middle Palaeolithic.

### 3 The dead of the Palaeolithic

For heuristic purposes, I distinguish between six deliberate mechanisms for the disposal of the human body, of which 5 are potentially relevant to Neanderthals.

#### 1 *Non-burial means of disposal*

Burial is not necessarily the apogee of sophisticated mortuary behaviour and our picture of mortuary activity in the past will remain biased towards means of disposal well suited towards skeletal preservation. It will not be pursued further here.

#### 2 *Caching of bodies or body parts*

By this I refer to the act of *deliberate placement* of bodies (or parts of them) in certain unmodified locations in the physical environment, with very little or no effort in modifying that physical environment. This category would possibly include the samples of Neanderthal remains at the Sima de los Huesos at Atapuerca, Spain (Bermúdez de Castro & Nicolás 1997), Pontnewydd Cave, Wales (Aldhouse-Green 2001), and Krapina, Croatia (Radovèiæ 1988).

### 3 *Simple inhumation, apparently without grave goods (OIS5)*

By this I refer to the simple placement of a body (or parts of one) in a deliberately excavated feature, be it a shallow grave or pit. In addition to Neanderthals discussed above and below, this category would include the earliest anatomically modern humans burials, eg, Taramsa, Egypt, Skhûl and Qafzeh, Israel and Lake Mungo 3, Australia.

### 4 *Elaborated primary activity*

By this I refer to the placement of a body (or parts of one) in a deliberately excavated feature, with addition of apparent attitude of the body (eg, tight flexion) and/or inclusion of grave goods. In addition, the marking of mortuary space, either as information (tradition) or physically (eg, grave markers) would belong to this category.

### 5 *Elaborated secondary activity*

By this I refer to defleshing activities and/or subsequent burial. The re-excavation and removal of buried bodies and body parts would also belong to this category.

### 6 *Ritualised burial*

By this I refer to elements defining category 4, which may take on a more formal element, eg, formalised placement of grave goods ("structured deposition"), bodily ornamentation, obvious marking of graves, cenotaphs, burial of insolated and/or ochred body parts in association with other burials, emplacement of later individuals in pre-existing grave cuts, etc. There is no convincing evidence of this category until c 27 ka BP, ie, the mid Upper Palaeolithic.

#### 3.1 *Caching the dead: the origins of mortuary ritual?*

The sample of >32 individuals from the 200-300 ka BP shaft deposits of the Sima de los Huesos (Bermúdez de Castro & Nicolás 1997; Andrews & Fernandez-Jalvo 1997) represents in all probability the deposition of complete human bodies, with a mortality profile skewed heavily towards prime adults (Bermúdez de Castro & Nicolás 1997). The

remains have been identified as *Homo heidelbergensis* but with morphologies clearly foreshadowing the European Neanderthals (Arsuaga et al 1997b). Intriguingly, the breakage patterns on the hominid bones are too great to be accounted for by falls down the shaft alone and it is plausible that postdepositional movement and carnivore activity have added to the breakage pattern. As Arsuaga et al. (1997a) have suggested, the accumulation could be anthropic in origin, and if so this would represent the deliberate placement of human bodies in the dark recesses of a cave, possibly in proximity to the deep shaft. There are difficulties: it remains possible that the shaft originally opened up to daylight and therefore originally formed quite a different depositional phenomenon than is now seen, although this of course doesn't necessarily eliminate deliberate deposition. It should be noted, however, that the age distribution of the hominids here suggests that a catastrophic (natural) deposition cannot be ruled out (Bocquet-Appel & Arsuaga 1999). I have referred to the deliberate deposition of human bodies in otherwise unmodified locations as 'caching'. A similar possibility can be found, intriguingly around the same (very broad) time, on the northwestern periphery of the early Neanderthal world. The partial remains of at least five and possibly up to 15 Neanderthals were deposited at Pontnewydd Cave, Wales somewhere before 225 ka BP, ie, in OIS7 (Aldhouse-Green 2001). They were mostly male and under 20 years of age. Aldhouse-Green reasons that it is pushing interpretation to see carnivores depositing this amount of human material, and is '... more inclined, therefore, to see these remains at Pontnewydd as arising from a conscious deposition of the dead in the dark recesses of the cave' (ibid 116).

Mortuary caching may account for the preservation of skeletal parts at other sites where Neanderthal remains are fairly numerous. Notable among these are La Quina, Charente, and Krapina, Croatia. At La Quina, the remains of individuals were recovered over several excavations (Oakley et al 1971; Defleur 1993). Most of these are partial, and mainly cranial elements, although one (H5)

contains many bones of the upper body at least<sup>9</sup>. While it is unclear that H5 was intentionally buried, the recovery of many parts of the upper body and apparent lack of carnivore gnawing adds weight to a deliberate deposition of this body. Otherwise, the proliferation of parts and an MNI of 5, with the probability that the actual number of individuals represented is much higher as with Pontnewydd, make La Quina a likely focus for caching of bodies or their parts, somewhere in mid OIS3 on the basis of available radiometric data.

Similarly, the proliferation of highly fragmentary bones at Krapina, Croatia must represent deliberate deposition in the main. Russell (1987) has interpreted the distribution of cut marks on many of these bones as being indicative of defleshing, although one cannot fully eliminate the possibility that a catastrophic natural event deposited the remains (Bocquet-Appel & Arsuaga 1999). Currently, Krapina might be said to provide the most compelling evidence for secondary processing of Neanderthal bodies (my category 5), and potential evidence for the caching of the processed dead (my category 2).

Taking these four sites at face value, they belong to two broad periods, ie, OIS7 and OIS3. If Arsuaga et al and Aldhouse-Green are correct, then their observations are most important, as they not only indicate the potential origins of mortuary deposition of the dead, but by implication also indicate the use of persistent places as foci for the deposition of *multiple* individuals. Needless to say, the database is too poor and ambiguous to make any clear statements, but the re-emergence of the tradition in two distinct regions obviously requires explanation.

### 3.2 Simple inhumation

As discussed above, there are no clear reasons for concluding that the La Chapelle-aux-Saints individual was not deliberately buried and may well represent the burial of an adult Neanderthal in low-ceilinged cave which, at other times at least, saw intense occupation. The remains of an infant interred in the centre of the cave of Roc de Marsal,

France (see above) also seems a convincing case of burial, as do the two adult skeletons recovered from the terrace at Spy, Belgium (Otte 1997). Above and beyond these, the excavation of a grave cutting and deliberate interment of an adult Neanderthal (KHM2) at Kebara Cave, Israel, is in my opinion beyond doubt. The lower limit of the grave cutting had clearly cut obliquely through two hearths in the underlying level. The eastern and northeastern limits of the pit were easily observable, the pit sediments (yellow-brown) were easily distinguished from those of Unit XII (black) into which the grave was cut, and most anatomical connections – including the hyoid bone – were still intact and there was no displacement of the bones beyond the initial volume of the body (Bar-Yosef et al 1988; Bar-Yosef et al 1992:527-8). Based on these clear observations, the excavators' conclusion was that '...the body decomposed in a filled grave...' (Ibid 528).

The skeleton was lying on its back, and the preservation and orientation of the intact bones suggests that the right side of the body was lying against a wall of the pit. The position of the upper limbs suggests that the body was deposited before rigor mortis set in, ie, rapidly. The absence of the cranium – apparently removed in antiquity – is intriguing. The positioning of the atlas between the branches of the mandible, tilted towards the vertebral column, suggests that the head originally leaned forward. The morphology of the grave pit indicates also that the head lay at a higher level than the rest of the body against a steep side of the pit. This relatively high position and posture indicates that the head may well have been easily exposed on the surface. The excavators, however, rule out the possibility of carnivore removal after burial on the grounds that the mandible, hyoid and a right upper molar were recovered from their correct anatomical positions. Instead, they feel that the evidence points to removal of the cranium after the complete decay of the atlanto-occipital ligaments. This is, in their view, '...the first clear cut case recorded in a Mousterian context for later human intervention in a human burial' (Ibid 529). This would seem to indicate that elaborated secondary activity (my category 5) was practised here. The implication of this will be discussed below.

In addition to Kebara, Amud Cave has yielded the virtually complete skeleton of an adult Neanderthal, found in a fairly central position and lying on its left side in a contracted position (Sakura 1970). The skeleton was interred immediately below the drip line of the cave and, given this and its central location in a cave that saw frequent animal and hominid use including the apparent excavation of numerous pits, it is difficult to view this as anything but a deliberate burial. Similar must be said for the adult individual interred at Tabun (Garrod & Bate 1937; Defleur 1993) and the child at Roc de Marsal (Turq 1989).

In addition, the relative completeness and excellent state of preservation of the Neanderthal 1 skeleton from the Kleine Feldhofer Grotte in the Neander Valley 13 km east of Düsseldorf, to which material has been added from recent excavations of the original spoil-heap (Schmitz & Thissen 2000), may well indicate that this was originally a burial, and the recovery of remains of a second individual, as indicated by a duplicated right humerus, may suggest that more than one individual was buried at this site somewhere around 40,000 BP. Both of these interpretations, of course, must remain speculative. If adopting the argument that the recovery of relatively complete Neanderthal skeletons may indicate deliberate burial then one might also include material excavated from Spy, Belgium as burials themselves (Harrold 1980; Defleur 1993).

The partial skeleton of a Neanderthal foetus or <2 month newborn<sup>10</sup> recovered from the lowest Mousterian level (Layer 3) at Mezmaiskaya Cave, northern Caucasus, is thought to represent an intentional burial despite the lack of sedimentological indications of a clear burial cutting (Golovanova et al 1999). It would seem that the body was laid on its right side: the left scapula, humerus and radius and much of the vertebral column and ribs were in anatomical position, although the skull was damaged in the facial area and displaced and the legs had been severely displaced. In the Crimea, an adult Neanderthal, probably male, was buried in an artificially widened natural hollow in the floor of the lower layer at Kiik-Koba (Stepanchuk 1998).

Where information on the spatial configuration of Neanderthal remains is available, the case for burial, on occasion, may appear questionable, especially if the remains of a single individual are distributed in an unnaturally tight cluster. One might include in the inventory of burial that of an adolescent in the Lower shelter at Le Moustier (figure 6), although Hauser's apparent re-burial and 're-excavation' of the skeleton in front of an invited 'tribunal' of academics (Trinkaus & Shipman 1993:176-7) does not inspire confidence and one has to treat this with caution.



Figure 6 Possible burial from Le Moustier, after Hauser (1909)

Taking Hauser's description at face value it is plausible that Le Moustier 1 represents a deliberate burial laid partially contracted on its side (Hauser 1909) although the relatively confined space, as with Teshik Task and St Cézaire (see below) does make it open to question. As Gargett (1989) notes, the skeleton of an 8 - 10 year old boy at Teshik Tash, in Uzbekistan near the Afghan border, is an unconvincing indicator of burial. The boy's remains, partial as they are, were recovered from a restricted spatial area and formed along with small limestone *eboulis*, the well-known ibex horns and a hyaena coprolite, a circular spread with little vertical definition. In addition, erosion was noted in the area of the burial (Defleur 1993). Similarly dubious are the partial remains of at least 22 individuals at La Quina, only four teeth of which are in articulation, although the possibility of caching of the dead at La Quina has been discussed above.

### 3.3 Primary and secondary activity

Stone tool cutmarks have been found on a number of Neanderthal bones. While these examples are few, they need to be explained, and offer a limited indication that, at least on occasion, Neanderthals were processing the soft tissues of the dead.

While claims for cannibalism have never quite gone away, these are now usually interpreted as reflecting defleshing rather than cannibalism per se. Most recently, however, cannibalism has been suggested as the cause behind modifications to a number of the 78 fragments of Neanderthal bones (MNI=6) from level XV of Moula Guercy Cave in Southeast France (Defleur et al 1993; Defleur et al 1999). Here, as with many of the ungulate remains with which they are spatially associated, the Neanderthal bones bore traces of cutmarks, percussion impact scars, anvil striae, and internal conchoidal scars indicative of defleshing before smashing with a hammerstone and anvil. Defleur et al (1999:131) infer that 'qualitative and quantitative studies of modifications to the hominid and nonhominid faunal assemblages from Moula-Guercy level XV demonstrate parallels in processing', and furthermore point to cutmark evidence for '...successive strokes of the same implement in defleshing and percussing', concluding that individuals were defleshed and disarticulated. There would be no reason to use this data to separate the treatment of the Neanderthal body here from that at Krapina, but the case for cannibalism *of sorts* is presented by the subsequent smashing of bones to expose the marrow cavity. The authors conclude that 'the Moula-Guercy fossils... are now the best evidence that some Neanderthals practiced cannibalism' (ibid 131). But how extensive is this? The cutmarks reveal the severing of tendons and the temporalis muscle, which are consistent with defleshing. The more robust evidence for cannibalism relates to the removal of a tongue as indicated by cutmarks on the lingual surface of a juvenile mandible, and some removal of thigh musculature and possible disarticulation of the shoulder on other individuals. Given the ambiguity between evidence of defleshing

and cannibalism, and the lack of a comprehensive account of the data as yet, it is best to treat the Moula Guercy data as preliminary.

The security of the Kebara 2 burial and potential secondary removal of its head after the decay of the atlanto-occipital ligaments has been noted above. Peyrony suggested that the infant buried in a pit at La Ferrassie (burial 6) had been decapitated and had its face removed, on the basis of bone preservation and location (1934:35), and the secondary processing of numerous Neanderthal remains at Krapina, Croatia, apparently for defleshing (Russell 1987) is well known. In addition, cut marks on Neanderthal bones from Engis, Belgium, Marillac and Combe Grenal, France (Le Mort 1988; Defleur et al 1993; Le Mort 1989) may also relate to defleshing, and one cannot eliminate the possibility that incomplete remains of infants – notably those found in pits (see below) reflect the inhumation of body parts originally defleshed, whether naturally or artificially, elsewhere.

Whatever the real reason, or reasons, behind the removal of soft tissues from dead Neanderthals, the cut mark evidence at least must be taken as a very clear and unambiguous indicator of interest in the dead body among at least some Neanderthal communities. The question is, of course, whether this interest in and exploration of the body was practised primarily through a concern for subsistence (ie, cannibalism) or other 'life-based' reason we do not understand, or a concern about the dead body. The nature of the evidence as it stands urges caution, and it is simply noted here that this *may* present some evidence for my category 5 mortuary activity.

### 3.4 Pits

The disposal of the dead – or parts of them – in pits must on occasion have been important, as in a number of cases the excavation of these has profoundly altered the palaeotopography of occupation sites such as at La Ferrassie and La Chapelle aux Saints in France and Dederiyeh, Syria. Human remains recovered from pits are usually published as burials – even an empty pit

has been published as a burial (see below) – but it is worth examining the phenomenon of ‘pit burial’ in detail.

Capitan and Peyrony (1912:439-40) identified two burial pits at the base of the Mousterian level C/D at La Ferrassie. Each of these was roughly circular in plan, about 70 cm in diameter, about 30 - 40 cm deep, and ‘half-spherical’ (ie, bowl-shaped) in section. One of these contained the remains of a c 10 year old (La Ferrassie 3) lacking the trunk and lower limbs, the other containing the humerus and femur of a foetus (La Ferrassie 4) and a neonate skeleton (La Ferrassie 4a). A further pit, containing La Ferrassie 5, was 30 - 40 cm in diameter and as it was not recognised as a pit feature until some way through its excavation its depth is unknown (>5 cm). Although it is difficult to believe that a sedimentary mound formed above the pit was a funerary marker, one does appear once again to be dealing with the deliberate deposition of at least the partial remains of a foetus at the bottom of a pit of the usual dimensions. In addition, a very large pit, probably of natural origin, contained the partial skeleton of a child (La Ferrassie 6) apparently covered with a limestone block engraved with small cuplike depressions on one surface which Peyrony believed were of Neanderthal manufacture (ibid 33-36). One might also count as a ‘pit burial’ the young child recovered at Le Moustier Lower Shelter (Peyrony 1930).

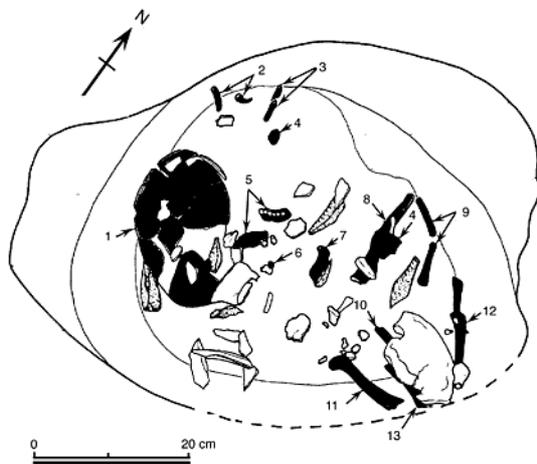
That said, Neanderthal pit burial has on occasion been suggested on the flimsiest of evidence. One unlikely example is an irregular subcircular pit 80 x 70 cm in plan from Locus 1 of recent excavations at La Quina, Charente. Two lacteal human teeth were recovered on the periphery of this pit, which has therefore been viewed as ‘...la possibilité d’une sépulture’ (Debénath & Jelinek 1998:37). As the excavators suggest the function of the pit may not have been primarily funerary, and while they are correct in that there is no a priori reason to discount a burial, in my opinion two lacteal teeth on the periphery of a small pit is hardly a convincing indicator of mortuary behaviour, particularly on a site where fragmentary human remains are relatively numerous. Similarly,

Bordes (1972:135) suggested that a pit dug into Level 50 at Combe Grenal had a funerary function, even though no human remains were recovered from it! He reasoned that this must have been the burial of a child, the bones of which are more susceptible to decay thus explaining their absence. One might, however, wonder why teeth or more robust bones didn’t survive here and it is sensible to discount this pit as mortuary evidence.

In addition to a possible adolescent burial discovered by Hauser and for which surviving data is ambiguous (see above), the Lower Shelter at Le Moustier, Dordogne, yielded the near-complete remains of an infant within a small pit in stratum I (Peyrony 1930). This pit, actually one of two the other of which was empty apart from three limestone blocks near its surface, was roughly circular in plan, about 50 cm in diameter and c 40 cm deep, as opposed to 70 - 80 x 60 cm for the ‘empty’ pit. Even Gargett (1989:164) is forced to conclude that ‘the evidence constrains us to accept that this pit was purposely dug.’ He questions, rather, whether the pit was deliberately dug to contain a burial. As Gargett notes it is impossible to distinguish between various hypotheses due to insufficient data, although it has to be said that if the pits were excavated well after the deposition in the cave of the ‘cranium, mandible and post cranial bone’ of an infant (Oakley et al 1971:150) the chances of one of two pits being dug down directly onto the only surviving infant remains are necessarily slim. If, on the other hand, infant remains were placed in the pit in the later Middle Palaeolithic, then the issue of why only partial remains were recovered must be addressed. This can be seen elsewhere, notably at La Ferrassie, Dordogne and Dederiyeh in Syria, the latter of which is worth elaborating here.

The Dederiyeh cave, situated 450 m above sea level, has yielded two infant burials which are as yet undated beyond a broad OIS3 attribution. The first of these (Burial 1) has been estimated at two years at death on the basis of dental formation. The excellent preservation, recovery of much of the postcrania including small bones such as phalanges and a high degree of articulation, supports the notion that this was a deliberate burial

(Dodo et al 1998). The second infant was recovered in situ in Layer 3, in the context of intermittent occupations during which time numerous hearths were utilised preserving plant remains in which hackberry (*Celtis* sp) was dominant (Akazawa et al 1999). This partial skeleton of a ~2 year old<sup>11</sup> was recovered from a 70 x 50 x 25 cm deep pit dug into Layer 3, filled with a fine-grained brown sediment and associated with 14 Mousterian flint implements, 100 pieces of debitage and numerous animal bone fragments including a large piece of tortoise shell (figure 7). Table 1 presents an inventory of recovered skeletal parts.



**Figure 7** 'Burial' 2, Dederiyeh Cave, Syria, after Akazawa et al (1999). Key: 1 skull, 2 right clavicle, 3 rib fragment, 4 vertebral body, 5 mandible, 6 right upper 1<sup>st</sup> milk molar, 7 left ilium, 8 left femur, 9 left fibula, 10 bones of the foot, 11 right femur, 12 left tibia, 13 right tibia

Clearly much, but not all, of a Neanderthal infant came to lie in this feature. Three clear hypotheses may be forwarded to explain this feature.

*Hypothesis A:*

a 'pit' was excavated and at some stage a complete infant corpse lain within it. Subsequent geological or animal activity disturbed the burial, removing certain parts of the body. Associated stone tools, debitage and faunal remains either represent deliberate 'grave goods' or fortuitous inclusions.

*Hypothesis B:*

a 'pit' was excavated and at some stage the remaining parts of a corpse originally disposed/ stored elsewhere was lain within it, with some respect to anatomical relations between surviving parts. Stone tools and fauna as Hypothesis A.

*Hypothesis C:*

the 'pit' was used to clear redundant items – stone tools and animal parts – from the occupation floor. The parts happened to include those of an infant Neanderthal.

**TABLE 1** Skeletal part representation of Dederiyeh Cave 'Burial' 2, after Akazawa et al 1999

<b>Cranium</b>	squama & right lateral parts of occipital bone right temporal bone & petrous part of left temporal parts of the right and left parietal bones the frontal bone the right nasal bone the right zygomatic bone part of the alveolar process of the maxilla the mandibular body with deciduous teeth
<b>Dentition</b>	right maxillary 1 <sup>st</sup> deciduous molar right maxillary 2 <sup>nd</sup> deciduous molar left mandibular 1 <sup>st</sup> deciduous molar left mandibular 2 <sup>nd</sup> deciduous molar
<b>Axial skeleton</b>	four vertebral bodies three fragments of vertebral arches three rib fragments
<b>Limb bones</b>	right clavicle with damage to sternal end metacarpals (4) hand phalanges (8) left ilium both sides of femoral shafts left femoral distal epiphysis both sides of tibiae left fibula metatarsals ('several')

Although this has been published as a burial (ie, the excavators could be said to favour Hypothesis A), it is worth examining this possibility in greater detail. The excavators point to the non-duplication of skeletal parts, identical developmental stages and similar preservation to suggest that all pertain to one individual, and this is certainly convincing. The fact remains, however, that skeletal representation is partial and breakage of some

represented parts has occurred. As an explanation for this the excavators suggest that, '...physical agencies such as water activities and scavenging by the various cave animals could be considered.' (ibid 131). Overall, they conclude that, '...the available data could indicate that the body had been intentionally buried' (ibid 131) and note that '...the pit could suggest the evidence of burial customs and the isolated human bones found in the pit might be the remains of an intentional burial later disturbed' (ibid 130). More generally, neonate and infant Neanderthal remains are usually partial, and one has to consider that this may relate to the differential conservation of fragile body parts. Certainly, the recovery of a complete infant skeleton would amply support a burial interpretation, but we may not be justified in eliminating cases of burial because of such factors. Nor may we be justified interpreting all cases of partial skeletal element survival as reflecting 'later disturbance', particularly in cases where sedimentological evidence of such disturbance is not forthcoming. This seems to be the case for the Dederiyeh infant, as the fill of the grave pit appears to be relatively homogeneous. If post-depositional disturbance did occur, then it left no visible sedimentary evidence. Given the general sedimentary context of the site as a whole one might expect the pit to be filled with the 'black, white and brown ashy deposits' of Layer 3 if it were disturbed within the occupational 'life time' of this layer. Alternatively, if it were disturbed during a later geological phase then one would surely see stratigraphic evidence of this rather than the clear indication that the feature was dug from the lower part of Layer 3. On the basis of the available evidence it seems sensible to conclude that the pit was probably not subject to post-depositional disturbance after it was dug and filled some time during a relatively early stage of the formation of Layer 3.

The 'burial pit' occurred in the context of other surface modification of the Dederiyeh Cave. Layer 3 contained a series of hearth deposits, probably reflecting numerous occupations of the cave. These were basin-shaped, and 30 – 40 cm in diameter, associated with ashes, flints and bone fragments. There is a marked similarity between the general

planform of these and their associations and the pit in which the infant remains were found. This is irregular in shape, and roughly 70 x 50 cm in dimension, and is therefore 10 – 20 cm larger than the hearths and with similar archaeological associations. Being c 25 cm in depth it cannot be regarded as a deep pit, and one suspects that the excavation of this feature into a sedimentary floor comprised mainly of ashes, brown sediment and fresh limestone gravel was not particularly difficult. A behavioural 'template' – of relatively shallow basin-shaped 'scrapes' can therefore be said to exist for this feature and, one might suggest, indicates that it originally served a purpose other than that of containing a burial.

The remains of the infant within the feature were not in articulation, and have been described by the excavators as 'isolated' (ibid 130), ie, within the feature. Assuming, as suggested above, that the infant's remains were not subject to post-depositional sorting, scrutiny of exactly which parts of the infant's body were deposited in the feature may be informative. From table 1 it can be seen that the parts deposited in the feature were much (but not all) of the head, the mandible (retaining only some teeth), some finger parts, and much of the legs and feet. With the exception of a few vertebral parts and four rib fragments most of the axial body is missing. Assuming first that a complete infant corpse was laid in the shallow pit (Hypothesis A), disturbance would have selectively removed the axial body, much of the arms and selective parts of other represented body portions in addition to removing the epiphyses of the lower limbs. Whilst this cannot be ruled out on the grounds of anatomical representation, I find it most unlikely that an entire thorax could be removed by water or carnivore activity leaving behind only four rib fragments and a handful of vertebral parts. In addition, one must explain the presence of a great amount of lithic waste as well as formal tools and animal remains. Either fragmentary animal remains and lithic waste carried symbolic or funerary meaning – which I find implausible – or the community burying the infant did not care that it was buried with rubbish. For these reasons I find it

unlikely that one is dealing here with the deliberate burial of an entire corpse with subsequent disturbance responsible for the destruction or removal (and deposition off site) of select skeletal parts.

Alternatively, the infant may have originally been deposited and probably defleshed elsewhere, after which his/her remaining parts were scooped up and deposited in the pit (Hypothesis B). The distribution of the recovered parts within the pit is informative here. These generally respect their relative anatomical position, with some abduction of smaller parts such as clavicular and rib fragments for which one cannot exclude small animal burrowing. This distribution is consistent with the infant's head lying to the west and the legs and feet to the east. If a deliberate deposition in this way were the case then one must invoke either a relative degree of existing articulation at the time of (re)burial, which is unlikely given the absence of most vertebrae, ribs and pelvic parts, or some concern with placing body parts where they *should* go, at least in a general sense. With Hypothesis C, ie, that the feature represents a 'scoop' later used to dispose of rubbish, with its implications that the Neanderthal infant was in this case rubbish also, one might expect a more random distribution of the anatomical parts than is the case.

Overall, I suggest that Hypothesis B is the most likely scenario on the basis of sedimentological, archaeological and anatomical data. It may well have been that, during one brief occupation of the cave during 'Tabun B or C' times the remains of an infant – its head, fingers, legs and feet and little else – was deposited with some concern in a shallow pit, along with discarded tools, knapping waste and animal parts. The abundance of lithics and animal remains in the fill of the feature suggests that either litter was also incorporated into the feature as a general clearance, or that no concern was given to remove such waste from the sediment removed to form the scoop or pit. In either case, the infant came to be associated with the rubbish that comprised much of the feature's fill.

Twenty-four cranial fragments of a Neanderthal between one and two years old at death were recovered from a small pit of 40 x 20 cm and 50

cm deep in layer 2 at Mezmaiskaya Cave, northern Caucasus (Golovanova et al 1999). The pit was overlain by a limestone block, but it is unclear whether the pit itself was excavated by Neanderthals and/or deliberately covered with the block (*sensu* La Ferrassie) or whether the pit was caused by a natural process such as the deposition of the block from above. The latter might account for the great degree of fragmentation (the pieces represent only the frontal and left and right adjoining parietal bones) and a degree of postdepositional deformation of the curvature of the fragments, although it is hard to see how a rock fall could create a relatively well-defined pit containing skull parts. It seems, therefore, that this is another example of the deliberate deposition of body parts – possibly originally a complete skull – in a naturally occurring or deliberately excavated subsurface feature.

Perhaps the relatively high frequency of Neanderthal infant remains recovered from pits is not surprising. A small subcircular pit is the most economical feature to excavate to contain a small body. Pits and scoops were, in all probability, excavated by Neanderthals for other purposes such as for setting hearths and possibly for storage and the pit 'template' could presumably be exapted easily for mortuary use.

### 3.5 Mortuary centres

A small number of sites are exceptional in preserving multiple inhumations. One must include in this category the early anatomically modern human burials at Skhûl and Qafzeh. In fact, three categories of multiple individual recovery can be identified.

First, it is a plausible, although at present untestable, hypothesis, that human bodies were being cached in or by entrances to caves as early as OIS7. Secondly, from OIS5 (or probably later) a small number of sites preserve the highly fragmentary remains of large numbers of Neanderthal individuals which clearly stand apart from other sites which have yielded Neanderthal remains. It is tempting to view these as sites where bodies were processed in mortuary ritual: as

cutmarked Neanderthal bones are not common overall in a hypodigm of c 500, one might plausibly conclude that cutmarked Neanderthal bones, where found, do not simply reflect the mundane defleshing of their bodies in the context of cave habitation. The rarity of this activity suggests a more exclusive activity. Thirdly, from OIS5 (again probably later) a small number of sites stand out as they preserve the fairly complete remains of several Neanderthal individuals which have convincingly been *interred*. At the fissure site of L'Hortus an MNI of 20 individuals are represented among whom young adults feature significantly (de Lumley 1972); at least 25 individuals are represented by the highly fragmentary remains at Krapina (Trinkaus 1995), and at least 22 fragmentary individuals at La Quina, Charente (Defleur 1993). The seven individuals represented at La Ferrassie form a particularly interesting case in that three of these are foeti/neonates, two are children and only two are adults. At least nine individuals are represented at Shanidar, and while old notions of 'flower burials' have now been discounted it seems that at least five individuals were buried in the cave over a period of time of 10 ka or more (see above). It is tempting to interpret limestone blocks found in apparent association with burials as grave markers, although this remains of course speculative.

Whatever the case, clearly a mortuary function was given to these caves, and this function extended beyond the life and death of single individuals. At Shanidar this function appears to have been extended considerably over time, and indeed it is difficult to imagine that the great number of individuals recovered from La Quina, L'Hortus and Krapina died in a very close period. It is therefore tempting to conclude that at least some transmission of mortuary tradition occurred among some Neanderthal groups, centred around a fixed point in the landscape which could be used, if not exclusively, to hide, process and bury the dead. Whether or not such use of a node in the landscape reflects social reference to group-land relationships even bordering on concepts of 'land tenure' (Belfer-Cohen & Hovers 1992:469) is debatable. Such an hypothesis is, however, worth consideration, as the

relatively small and repetitive nature of Neanderthal landscape use, at least as reflected by lithic raw material movement (eg, Geneste 1989) could well have engendered a sense of territoriality among at least some Neanderthal groups. As with other categories of Middle Palaeolithic mortuary activity however, such cases should not be exaggerated, but do contribute towards an emerging picture of variability in Neanderthal mortuary practice and even potentially interaction between the spheres of life and of death.

### 3.6 *Grave offerings and mortuary variability*

A number of examples of apparent grave goods in Neanderthal burials have been forwarded, although most scholars would now agree that these are not convincing, as the objects recovered from within grave cuts never differ in form from those recovered from the sediments into which graves themselves were cut (eg, Klein 1999: 467-470). For example, Peyrony (1934: 31-32) notes the apparent placement of three flints with the La Ferrassie 5 burial, although given the ubiquity of lithic artefacts in the level concerned it is difficult to accept these as deliberate grave offerings. Bouyssonie et al (1908) drew attention to several bovid remains associated with the adult burial at La Chapelle-aux-Saints, some long bones of which were recovered above the head, several flint artefacts within the grave, two of which were found near the nasal aperture, and articulated reindeer vertebrae found in the grave's proximity, suggesting that these were deliberate grave goods emplaced in this small 'tomb'. As with La Ferrassie, given the ubiquity of faunal and lithic remains in stratum 5 this should be taken with caution and, as Gargett (1989:162) has observed, most of these were found at a level above the head of the interred Neanderthal the notion that grave goods were deliberately emplaced here is dubious. Lithic items and a few animal bones were recovered from the burial pit of Kebara KMH2, although in the excavators' opinion their distribution '...would not indicate any explanation other than that they were part of the refill of the pit, which was dug into layers rich in

artefacts and bone' (Bar-Yosef et al 1992:529). The confined spatial extent and circular shape of the Teshik Tash 'burial' render the goat horn inclusions highly dubious, like the burial itself (see above).

In short, there are no convincing indications of grave good emplacement. Given the apparent degree of variability in treatment of the Neanderthal body in death, should we be surprised at this lack? Not necessarily so. The treatment and exploration of the corpse *post mortem* is a logical extension of the social role of the body in life and, as suggested above, a number of behavioural templates already existed in the Middle Palaeolithic to incorporate into an emerging mortuary ritual. The emplacement of anthropogenic objects in grave cuts need not relate at all to this dialogue between the living and the dead body. Grave goods may or may not relate to metaphysical notions of an afterlife or bodily extension; they probably speak more of self-expression and concepts of ownership. It may well be that neither existed in Neanderthal societies. As suggested elsewhere, perhaps society hinged upon the body as its main focus. If objects played a role in social negotiation, as suggested by Gamble (1999) perhaps one might be entitled to expect grave goods. The lack of convincing examples of them suggests to me that they played no role beyond the immediate physical tasks for which they were made.

#### 4 Implications and conclusion

The possibility that pre OIS5 humans used certain areas of the landscape to dispose of the dead without involving artificial modification (my category 2) has been suggested by certain scholars, although it is difficult to evaluate these hypotheses with the data currently available. Logically perhaps it may be expected, and it takes only a small conceptual step from such behaviour to the excavation of features specifically to contain a corpse. As with the Dederiyeh 'scoops' such a template might have existed in at least certain Neanderthal groups, eg, for the simple construction of hearths, sleeping scoops or even storage pits.

Up to 30 indications of category 2, ie, simple unaccompanied inhumation, exist for the Eurasian Neanderthals. It is unclear whether the burial context was always excavated deliberately for burial, although in a few cases it seems likely that natural features or those excavated to serve other functions in the first instance could be employed for burial. As all possible examples of the inclusion of grave goods in Neanderthal burials (and those of modern humans prior to c 27 ka BP) are always open to other, simpler explanations, it must be acknowledged that no convincing example of grave goods is known from Neanderthals. On the other hand, the occasional secondary processing of body parts, eg, at Krapina, Kebara and of a number of infants in all three groups of burials, indicates that other manifestations of category 3 mortuary practice were at least practised on occasion. They cannot be said to have been common, however. What this does demonstrate, though, is that at least some inter and even intra-regional differences can be found in the treatment of the dead in Neanderthal societies. Clearly then, we cannot treat the Neanderthals as one monolithic, behaviourally redundant archaic species.

Gamble and Roebroeks (1999:11) have suggested that 'the creation of place and the embodiment of this quality can be traced through [Late Mousterian] burials'. True, it would certainly seem that certain sites, such as Shanidar and La Ferrassie may at least retained some persistent meaning for mortuary behaviour, in the case of Shanidar possibly for several millennia. But it seems to me that the focus of Neanderthal social life was the body: it was the body that created individual relations in life (Pettitt 2000) and it is therefore no surprise that it is the body that is explored and treated, at least on occasion, in death. True, we may not agree with broad-brush attempts to deny Neanderthal burial, but likewise we must not make simple conclusions that 'Neanderthals buried their dead'. Given the large amounts of space and time one is sampling here, it is wholly possible that Neanderthal burials were a brief epiphenomenon in their behavioural

repertoires of dealing with the living and the dead. If there was any general means of disposal of the dead in Neanderthal society we shall never recapture it as it is obviously archaeologically invisible. Almost all of the Neanderthals that ever lived are now dust, and it is to them that this article is dedicated.

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<sup>1</sup> Although there are serious arguments which challenge the c 120 ka BP antiquity of Tabun C1, not least because Garrod was uncertain of its stratigraphic attribution (see Bar-Yosef 2000).

<sup>2</sup> Defleur (1993) uses five dated Neanderthal burials (La Chapelle, Le Moustier, La Quina, La Roche a Pierrot (St. Cézaire) and Kebara. It is questionable whether the Neanderthal remains at La Quina were deliberately buried: if one assumes they are they may date burial either to OIS3 or OIS4 on sedimentological and archaeological grounds, although the scanty dating evidence suggests an age between c 48 and 75 ka BP. The La Ferrassie remains are also undated, at least to anything more precise than a similar 'second stage of early Last Glacial' period, although if technotypological schemes such as those of Mellars (eg, 1996) are correct one might expect the burials to belong broadly to OIS5 given that the association is with a Ferrassie Mousterian variant and therefore would predate the Quina variant of OIS4. In any case, five apparently dated burials are obviously no grounds for considering Neanderthal burials to be well dated.

<sup>3</sup> I incorporate here both early and late uptake models for U-Series results, reading each at two sigma. These agree well with the Thermoluminescence terminus post quem of 50-60 ka BP (Schwarcz & Rink 1998).

<sup>4</sup> Such double standards in the way archaeologists are paradigmatically drawn to Neanderthal and modern humans, are still in force. Roebroeks and Corbey (2000), for example, have drawn attention to my own double standards, contrasting my interpretation of Neanderthal spatial patterning and site use (Pettitt 1997) with an interpretation of modern human use of Paviland Cave, Wales (Aldhouse-Green & Pettitt 1998). The point is well taken.

<sup>5</sup> Although it should be noted that Hayden (1993:121) upholds the possibility of the intentional placement of '...at least some of the bear bones...' at Regourdou. More modern claims for 'bear cults' are also open to question: For example, 'some uncertainty surrounds' the recovery of bear skulls covered by leg bones and elongated limestone pieces from the Mousterian levels of Upper Cave near Kataisi, Eastern Georgia (Lubin 1997:146).

<sup>6</sup> This notion obviously breaks down from at least 27 ka BP, for several millennia after which some anatomically modern humans were buried in open-air settlements in which bone artefacts were exceptionally well-preserved. It is an obvious point to state that many Middle Palaeolithic open sites preserve bone, and that human remains are rare on them. On such Middle Palaeolithic open and open sites where relatively complete animal carcasses are found, eg, Mauran, Haute-Garonne (David & Farizy 1999), La Cotte, Jersey (Scott 1986), La Borde and Coudoulous, Lot (Brugal 1999), Wallertheim, Germany (Gaudzinski 1999), one would by Gargett's logic expect to find Neanderthal skeletons.

<sup>7</sup> ie, Western European (French), Central European (Croatian) and Near Eastern (Israeli) groups. One might add a fourth Central Asian group, ie, including Kiik-Koba, Mezmaiskaya Cave and Teshik Tash.

<sup>8</sup> A recent examination of the microfauna from the strata into which the grave was cut suggests that the pollen was deposited by the burrowing rodent *Meriones tersicus*, which is common in the Shanidar microfauna and whose burrowing activity can be observed today (Sommer 1999).

<sup>9</sup> According to Oakley et al (1971:162) they are of an adult female, and include: cranium, mandible, cervical vertebrae I-VI, two scapulae, two clavicles, two humeri, one ulna and two femora. It has been suggested on palaeopathological grounds that the bones may belong to more than one individual, although on the basis of the similar sizes of the lower epiphyses it is likely that they do belong to one individual (Defleur 1993:94).

<sup>10</sup> Estimated on the basis of dental development using 14 crowns of deciduous teeth. Formation of the occlusal surface of the second deciduous molar was incomplete and the remaining teeth do not exhibit neck and root development (Golovanova et al 1999:81).

<sup>11</sup> This has been estimated on the basis of cranial and postcranial fusion and dental traits.