

Symbolism, Complexity and Intentional Burial Among the Neanderthals

First Runner Up, Social Sciences

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In the academic study of prehistory, Neanderthals have occupied and continue to occupy a prime area of interest. This distinct taxonomic group existed primarily within the confines of the Middle Paleolithic, the period lasting 200,000 to 40,000 years ago (Price 2007: A-7), during which time they co-existed with anatomically modern humans before disappearing from the archaeological record somewhere around 30,000 years ago (Jankovic 2004: 387). Where exactly Neanderthals stand in the course of human evolution, and whether or not they represent a direct ancestor to anatomically modern humans, has been a matter of debate (Jankovic 2004: 379-381). Despite this uncertainty, Neanderthals generally are considered to have arisen in Europe and Western Asia around 200,000 years ago (Jankovic 2004: 387), most likely evolving from local *Homo erectus* populations and their direct descendants (Price 2007: A-7).

Of particular interest is the question of whether or not Neanderthals were capable of complex and symbolic behaviour, and if so, were they capable of intentional burial of their dead? This matter has been a popular topic of debate and continues to be a highly contentious subject. Demonstrating that Neanderthals were capable of complex and symbolic behaviour is important in substantiating the suggestion that they were capable of purposive burial of their dead, though showing evidence of the latter in the archaeological record is more difficult than the former. In their study of Middle and Upper Paleolithic burials, Riel-Salvatore and Clark (2001) demonstrate the role of complexity by stating that, "although often implicit, this controversy [over intentional burial] is linked to perceptions of the respective cognitive capacities of Middle and Upper Paleolithic hominids and thus deeply imbedded in the controversy over the origins of modern humans" (449).

In putting forth the argument that Neanderthals were capable of symbolic and complex behaviour and through extension of this idea, of intentional burial of their dead, this paper will firstly compare the cognitive and symbolic capacities of Neanderthals with anatomically modern humans, and secondly provide evidence in support of Neanderthal symbolic and complex behaviour through discussion of their social organization and technology. Finally, this paper will present an overview of the evidence for Neanderthal purposive burial by specifically examining the burials at Amud Cave and applying Smirnov's (1989) criteria for intentional burial.

At this point it is important to put forth a definition for both complex and symbolic behaviour. In their study of complex and symbolic behaviour of Neanderthals, Langley *et al.* (2008), quoting McBreaty & Brooks, define symbolic behaviour as "the ability to represent objects, people, and abstract concepts

with arbitrary symbols, vocal or visual, and to reify such symbols in cultural practice" (McBrearty & Brooks as cited in Langley *et al.* 2008: 291). Langley *et al.* (2008) state that although evidence of symbolism is difficult to infer from the archaeological record since symbolic acts often do not leave tangible traces, "figurative art, notational pieces, use of pigments, ornamentation, burials, and body modification" (291) can serve as symbolic indicators. Symbolism is a component of complex behaviour, which Langley *et al.* (2008) define as:

That which requires successive cognitive components that demand the actor to plan several consecutive steps (such as those used in the manufacture of multi-component artifacts) before the execution of the first step, or which require deep understanding of the operation of variables and their complex interplay as well as their reactions to deliberate manipulations by the actor (291).

Of particular importance for this paper, Langley *et al.* (2008) specify that manufacturing processes and modification of raw materials as well as burial practices and associated grave goods likely constitute evidence of Neanderthal abstract thought concerning cosmology and interpersonal relations (291).

It has been implied by several scholars that the cognitive capacities of Neanderthals were at a level that closely approximated that of anatomically modern humans (Langley *et al.* 2008; Hayden 1993; Riel-Salvatore & Clark 2001; Belfer-Cohen & Hovers 1992; Wynn & Coolidge 2004). In equating the cognitive capacities of these groups, it then becomes likely that Neanderthals possessed the potential to exhibit behavioural complexity and symbolism on similar levels that are known to be associated with anatomically modern humans (Hayden 1993), though perhaps on a less widely distributed or intensive scale.

Hayden (1993), in his discussion of Neanderthal art, proposes that the emergence of more sophisticated art forms in the later parts of the Upper Paleolithic by anatomically modern humans was due not to cognitive advances on the part of the latter, but due to better opportunities for advancement to take place (123-131). In substantiating this argument, Hayden (1993) compares Middle Paleolithic Neanderthals to "generalized hunter/gatherer societies", characterized by low population densities, lack of status formation, and limited abilities to exploit natural resources, and Upper Paleolithic anatomically modern humans to "complex hunter/gatherer societies", characterized by high population densities, expanded abilities to exploit natural resources, as well as increased sedentism and wealth and status formation (125-126). With a much better ability and opportunity to exploit natural resources along with increased levels of competition, Hayden (1993) proposes that the emergence of elaborate art in the Upper Paleolithic was to serve the function of symbolizing societal wealth and power (128-130). As such, it was not the case that Neanderthals lacked the cognitive capacity for this complex and symbolic behaviour, but that they simply lacked the resource base of Upper Paleolithic anatomically modern humans, which allowed the latter to develop economically complex societies.

Comparing burials of anatomically modern humans with what are believed to be intentional burials among the Neanderthals further helps to equate the cognitive capacities of the two groups. Belfer-Cohen and Hovers' (1992) comparison of the burials of Natufian anatomically modern humans of the

Upper Paleolithic with supposed Neanderthal burials of the Middle Paleolithic, and Riel-Salvatore and Clark's (2001) comparison of Middle and Upper Paleolithic burials, shows that there is a great deal of continuity of burial practices between the groups and time periods. Since evidence of symbolic and complex behaviour can be inferred from burials, this notion of continuity between the Upper and Middle Paleolithic and between anatomically modern humans and Neanderthals suggests that the two hominid groups may not have differed greatly in their cognitive capacities for this behaviour (Belfer-Cohen & Hovers 1992: 468; Riel-Salvatore & Clark 2001: 459).

In their discussion of burials of the Middle Paleolithic, Riel-Salvatore and Clark (2001) state that both Neanderthals and anatomically modern humans of this period buried their dead infrequently, and when burial did occur, grave goods were often not included (451). Similarly, Belfer-Cohen and Hovers (1992) note that in the most typical Natufian burial, grave goods are often not associated with the remains (468). Further, Belfer-Cohen and Hovers (1992) state that typical Natufian burials resemble supposed burials of the Neanderthals in the matter of a flexed skeleton located within a simple shallow grave (468). While Natufian burials of this nature are usually considered to be conclusive evidence of intentional burial, and thus of symbolic and complex behaviour, comparable Neanderthal burials are not, which Belfer-Cohen and Hovers (1992) claim is the result of an undue bias (468).

Finally, while grave goods do occur in association with what are believed to be intentional Neanderthal burials, the practice of including these items with the deceased increases substantially during the latter parts of the Upper Paleolithic (Riel-Salvatore & Clark 2001: 459). Instead of seeing this as evidence of a cognitive leap on the part of anatomically modern humans, Riel-Salvatore and Clark (2001) view the practice as simply a continuation and expansion of an idea started in the Middle Paleolithic (459). In connection to this, research conducted by Langley *et al.* (2008) on Neanderthal symbolic and complex behaviour has indicated that over the course of their existence, Neanderthals began to exhibit increasing levels of behavioural complexity and symbolism, particularly between 60,000 and 40,000 years ago (300). With such advancements, Langley *et al.* (2008) conclude that Neanderthal behavioural evolution may have been similar to that of anatomically modern humans (302). Thus it seems quite possible that Neanderthals were not significantly cognitively inferior to anatomically modern humans.

The existence of social structure can be considered to be an important indicator of complex and symbolic behaviour. Specifically, the existence of social structure can be related to the definition of complex behaviour proposed by Langley *et al.* (2008) as a component of "[an] understanding of the operation of variables and their complex interplay" (291). In this case, the variables would be individuals and their interactions with one another. Hayden (1993) provides evidence from a variety of Neanderthal as well as Preneanderthal sites that indicate physical barriers were constructed within living spaces, thus giving insight into how these individuals divided their physical environment according to social practices (132-137). Hayden (1993) describes the existence of specific areas within various Neanderthal habitation sites that exhibit unique ground staining as well as a richness of artifacts that then appear to be abruptly separated from adjacent areas of the living space, suggesting the existence of perishable physical

barriers (133-135). Significantly, Hayden (1993) states the following in regard to the organized use of physical space:

Structures, both temporary and permanent, provide more than simple shelter: they partition space, create boundaries between social groups within communities, signify important bonds between individuals within the same bounded space and provide tangible evidence of the most important cooperative behaviour and social distinctions operating in communities (136).

Physical barriers then, in this light, also have a symbolic component, symbolizing the nature of Neanderthal social structure and interpersonal relations.

Following along similar lines, Pettitt (2000) proposes that since Neanderthal life cycle involved such high levels of physical trauma, it would have played a significant role in Neanderthal social structure. According to Pettitt (2000), with a lack of significant material culture, Neanderthals may have then structured their society upon the physical fitness of the body and its interaction with other individuals in the group (360). Social status would have been brought out from one's ability to contribute to the group, with physical disability and trauma being associated with a loss of status (360-361). This theory thus complements the definition of complex behaviour proposed by Langley *et al.* (2008) in regard to an understanding of the relation between distinct variables as well as their definition of symbolic behaviour with physical fitness being representative of social status (291).

Probably one of the best examples demonstrating that Neanderthals were capable of complex behaviour was their stone-based technology. This aspect perfectly fits the definition of complex behaviour proposed by Langley *et al.* (2008), who explicitly state that complexity requires planning before the execution of a series of steps (291). The stone tool industry of the Neanderthals is termed Mousterian and is closely associated with the Levallois technique of producing stone flakes (Jankovic 2004: 389). However, the Levallois technique is not totally unique to Neanderthals and has been known to have been utilized by preceding generations of hominids as well as by anatomically modern humans (Jankovic 2004: 389; Wynn & Coolidge 2004: 473).

Wynn and Coolidge (2004), in their analysis of Neanderthal expert behaviour and cognition, provide an in-depth analysis of the Levallois technique. Based on the concepts of working memory proposed by Baddeley, and long-term working memory proposed by Ericsson, Wynn and Coolidge (2004), through analysis of the Levallois technique, suggest that Neanderthal application of these aspects of cognition were no different from those applied by modern humans. As such, this proposition corresponds well with the above theory concerning lack of a significant difference in cognition between anatomically modern humans and Neanderthals.

According to Wynn and Coolidge (2004), the Levallois technique involved a complex series of three steps: preparation of a core, preparation of a striking platform, and removal of flakes following the striking of the core (473-474). Hayden (1993), in connection with this discussion, states that "striking

angles, orientation, and force must be carefully controlled for the successful detachment of a Levallois flake" and that "production of these Levallois flakes requires a high degree of precision, intelligence, and training" (118). Similarly, Wynn and Coolidge (2004) state that the knowledge of Levallois knapping and control of fine motor skills takes many years of practice and that each step of the process appears to be governed by visual images and feedback from the results of these steps (475). Following Ericsson's model of long-term working memory based on retrieval cues and retrieval structures, Wynn and Coolidge (2004) state that Neanderthal knappers would have committed aspects of the Levallois technique to memory in the form of cues, and later through experience, have organized them into structures to actively guide the knapping process (475-476). As such, "from this perspective Neanderthal [*sic*] expert technical cognition is indistinguishable from that of modern humans" (Wynn and Coolidge 2004: 476). From this assessment of the Levallois technique it can be seen that Neanderthals were capable of formulating and actively carrying out a preconceived plan as well as organizing this plan into a series of steps, thus providing evidence that they were capable of complex behaviour.

From the above discussion it appears that Neanderthals were quite capable of complex behaviour and at least partly capable of symbolic behaviour. With Neanderthals' ability to grasp aspects of complexity comparable to that of anatomically modern humans, the idea that Neanderthals would have been capable of intentional burial becomes much more realistic. Perhaps the best evidence that Neanderthals were capable of symbolic behaviour is from the nature of Neanderthal burials themselves, an aspect that Langley *et al.* (2008) claim is an indication of symbolic behaviour in the archaeological record (291). While the presence of grave goods does provide good evidence of symbolic behaviour, the fact that Neanderthal burials, when they do occur, often lack such goods may not indicate a lack of symbolic or complex behavioural capabilities since it can be observed that modern societies, with similar levels of social complexity, often differ in their mortuary practices (Belfer-Cohen & Hovers 1992: 470). The nature of intentional burial on its own, with or without grave goods, may be seen as symbolic of a Neanderthal cosmology (Smirnov 1989: 202), and as Belfer-Cohen and Hovers (1992) state, "once Middle Paleolithic burials are accepted as intentional, it is difficult to deny their symbolic significance" (469).

There are a variety of criteria that tend to be associated with intentional burials. Smirnov (1989) defines intentional burial as "a series of actions to transfer the corpse from the primary, or natural, environment to the secondary, or nonnatural, one" (211). In this sense, intentional burial may be seen as inherently imbued with symbolism involving a distinction between two different environments, one associated with life and the other associated with death. First and foremost, Smirnov (1989) declares that a mortuary structure, whether constructed or naturally occurring, is of critical importance in defining intentional burials and that the presence of this structure can lead to preservation of the inhumed remains (211-212). Thus, good preservation of the remains may be an indicator of intentional burial. In line with this reasoning, though not stated directly by Smirnov, is the criterion of articulation, which has often been used as an indicator of intentional burial since it would be unlikely for exposed skeletons to remain articulated (Belfer-Cohen & Hovers 1992: 469; Hovers *et al.* 1995: 52). Smirnov (1989) further notes that evidence of bodily position can be used as a criterion of intentional burial, but may be most applicable in cases in which the remains appear to have been modified before burial (213). Finally, while Smirnov (1989) provides some criteria for judging whether or not items found within or in association

with the grave are indeed grave goods, the presence of grave goods is not absolutely necessary in defining an intentional burial (214-216).

Using Smirnov's (1989) criteria for an intentional burial, some of the Neanderthal burials found at Amud Cave, Israel, may be analyzed for evidence suggesting that Neanderthals were capable of intentional inhumation of their dead. Hominid remains were first discovered at Amud Cave following excavations performed there in the 1960s (Hovers *et al.* 1995: 47). Since that time, and with renewed excavations occurring at the site from 1991 to 1994, sixteen hominid individuals have been recovered (Hovers *et al.* 1995: 48). Out of these sixteen individuals, only three could accurately be classified as Neanderthals: Amud I, Amud II, and Amud 7 (Hovers *et al.* 1995: 48-51). While Amud 9 could not definitively be classified as Neanderthal, this individual has been treated as most likely bearing a taxonomic classification of *Homo neanderthalensis* for reasons stated below (Hovers *et al.* 1995: 53-55). Further, dating techniques of the hominid-bearing sediments at the site have yielded an approximate date of 50,000 years ago (Hovers *et al.* 1995: 54), a period that encompasses the later part of Neanderthal existence.

In a recent reexamination of the excavations performed at Amud Cave, Hovers *et al.* (1995) claim three Neanderthal burials as constituting intentional burial, these being Amud I, Amud 9, and Amud 7 (52-53). Amud II, though classified as a Neanderthal, was not included in this category since it is represented only by a fragment of its right maxilla and was found in a disturbed context (Hovers *et al.* 1995: 51 & 53).

Amud I was judged to have constituted an intentional burial on the basis of the skeleton's high level of articulation and flexed positioning (Hovers *et al.* 1995: 52). While this individual meets the often-cited criterion of skeletal articulation and partly meets Smirnov's (1989) criterion of evidence of intentional body positioning, evidence of a burial structure was not found (Hovers *et al.* 1995: 52). With a lack of evidence of Smirnov's (1989) all-important burial structure, the classification of this burial as intentional is in doubt. However, due to the fact the Amud I is preserved as a nearly complete skeleton (Hovers *et al.* 1995: 48) seems to suggest that a burial structure may have existed, but was missed during the excavation. Gargett (1999), though highly suspicious of the notion of intentional burial, states that "discoveries of skeletal remains will not always be in sediments that lend themselves easily to distinguishing a new stratum. Indeed, even in what are clearly modern human cemeteries, burial strata as I have defined them are not always evident" (34). Thus Amud I may be considered partial evidence of purposive burial.

Amud 9, consisting only of an articulated foot and leg, was considered by Hovers *et al.* (1995) to have been intentionally buried based on this articulation (52). Though this individual couldn't with certainty be classified as a Neanderthal due to a lack of relevant anatomical parts, its remains were found within a similar archaeological context with known Neanderthal remains, supporting this conclusion (Hovers *et al.* 1995:53-55). Further supporting this designation, Hovers *et al.* (1995) suggest "territorial shifts"

between Neanderthal and anatomically modern humans were unlikely at Amud Cave, thus allowing for the possibility that Neanderthals may have been the only taxonomic group to utilize it (53-55).

Amud 9 was discovered under a collapsed section of the cave roof, though burial due to this collapse was ruled out since 10 centimeters of soil containing Mousterian stone lithics were found separating the remains from the cave ceiling debris (52). Analysis of the soil surrounding the remains confirmed that chemical changes in the soil as caused by the collapse did not dissolve the bones that were unaccounted for (53). Burial of only a portion of the remains may constitute evidence of body modification before burial, therefore possibly meeting one of Smirnov's (1989) criteria for purposive burial and one of the indicators of symbolism in the archaeological record proposed by Langley *et al.* (2008: 291). However, a basis of purposive burial on this criterion along with the level of articulation of the foot alone is highly dubious.

The nature of the burial of Amud 7 appears to be the best candidate of purposive burial in its meeting of some of Smirnov's (1989) most critical criteria. Amud 7 was a partial skeleton, but with those undisturbed elements remaining in articulation (Hovers *et al.* 1995: 52). Hovers *et al.* (1995) state that this disturbance was most likely not due to carnivorous animal activities since no evidence of teeth marks was found on the bones (52). Thus it may be possible that the body received some mortuary treatment. Most importantly, Amud 7 was found to be located within a burial structure, thus meeting one of Smirnov's (1989) most critical components of purposive burial. This burial structure consisted of a "natural niche" within the cave wall (Hovers *et al.* 1995: 52). The level of articulation and relatively good level of preservation of the remains may be inferred as being due to this burial structure. Most interestingly, Amud 7 was found in association with a grave good, a red deer maxilla, located upon its pelvis (Hovers *et al.* 1995: 56). Hovers *et al.* (1995) suggest this as prime evidence of symbolism (56) and Smirnov (1989) makes it clear that such bone elements as maxillae, which contain very little flesh, cannot be attributed to "food stores" or "funerary feast debris" (215). As such, Amud 7, with its level of preservation, articulation, and presence of both a mortuary structure and grave good, appears to constitute good evidence of purposive burial, further demonstrating that Neanderthals were capable of both symbolic and complex behaviour.

The proposition that Neanderthals lacked the capacity for complex and symbolic behaviour appears to be unfounded. Comparisons of the cognitive and symbolic capabilities of Neanderthals with anatomically modern humans has shown that the groups most likely had similar levels of cognitive sophistication. This was illustrated through a discussion of Hayden's (1993) theory that anatomically modern human cultural advances were due to better access to a bountiful resource base and development of a competitive economy rather than a cognitive advancement. Support for this argument was also brought forward through a discussion of the evidence illustrating that supposed intentional burials of Neanderthals and early anatomically modern humans were largely similar in nature. Evidence showing that Neanderthals were capable of generating social structure as indicated through the physical division of space, and through Pettitt's (2000) theory of the importance of physical trauma in affecting one's group status, further indicates that Neanderthals were capable of complexity as well as symbolic

behaviour. Probably the best example portraying Neanderthal capacity of complex behaviour is exhibited through their lithic technology, specifically the Levallois technique of the Mousterian industry. Such technology demonstrates the capacity for planning, organizing that plan into a series of steps, and carrying out that plan in a manner that is similar to the abilities of anatomically modern humans, thus providing further evidence of a lack of a significant cognitive difference between Neanderthals and anatomically modern humans.

With good evidence that Neanderthals were capable of complex behaviour, and at least partly capable of symbolic behaviour, the notion that they intentionally buried their dead is much more plausible. As previously stated, Neanderthal burials themselves perhaps provide the greatest evidence of a capacity for symbolic behaviour. Through analysis of the Neanderthal burials at Amud Cave and application of Smirnov's (1989) criteria for a purposive burial, it appears that Neanderthals were indeed capable of intentional burial. This was particularly demonstrated with reference to Amud I, Amud 9, and especially Amud 7. Hopefully, with future discoveries and/or through reanalysis of previously excavated sites, the popular myth that Neanderthals were backward, unintelligent brutes will be put to rest.

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