Micoquian engravings from Oldisleben, Germany

By ROBERT G. BEDNARIK

The habit of denying all pre-Upper Palaeolithic peoples the ability of symbolling (or any other form of what some commentators define as 'modernity') has always been based on lack of familiarity with available archaeological information. This fad of the past few decades has survived through the rejection of any early engraving as either natural or fortuitous, and by promoting the falsity that to be symbolic, a marking has to have been made repeatedly. The crucial property of a symbolism is that it represents a form of storage of human knowledge external to the brain (Donald 1993), a point most Pleistocene archaeologists failed to appreciate. Here I present three bone fragments of the Eastern Micoquian that bear incised lines which even the most hardened opponents of early symbolism may find hard to reject.

Oldisleben, north of Weimar, Germany, is located in the Saale drainage basin, i.e. in the region where Pleistocene geochronology is perhaps better established than anywhere else. It is one of the Lower and Middle Palaeolithic occupation sites in that region that remain largely unknown outside Germany. The finds described here are from substantial Eem sandy gravel deposits overlain by Weichselian loesses, covered by a weathered soil horizon and capped by a humus layer. The finds described here were recovered in late 1986 and early 1987 from almost 12 m below present ground level. They were accompanied by a suite of well-made lithics of distinctive Eastern Micoquian characteristics, with thinly worked, well-trimmed bifacial points and handaxe-like implements of fine cherts and quartzite, found with more archaic, Lower Palaeolithic types. Some of this material was slightly worn by fluvial transport, some is unworn. This typology, free of distinctly mousteroid or acheuloid characteristics (Fig. 1), is well documented from several other Micoquian sites in the region. Some of them, such as Neumark-Nord near Merseburg, date from about 80 000 BP, the fossiliferous seam at Oldisleben (exposed also at other sites, such as Wiehe) is thought to be somewhat earlier (Bednarik 2006a). These finds occur with remains of a typical Eem fauna.

The three specimens described here show unequivocally purposeful decoration, comprising evidence of numerous tool applications arranged in pre-meditated organisation of engraved marks. One of the objects is in all probability the world's oldest currently known example of two-dimensional iconography. These objects are therefore of considerable relevance to the study of hominin cognitive and symbolic evolution. In terms of the quality of preservation and detail of surviving microscopic diagnostic evidence the Oldisleben pieces are almost unique (for details of their microscopic analysis, see Bednarik 2006a). Like the accompanying lithics, the bones include both worn and unworn specimens. The combination of unworn and slightly worn material might suggest that the occupation site was on a gravely riverbank, and that some of the finds have been transported a short distance.

Oldisleben 1

This in section distinctly wedge-shaped fragment of a scapula of an undetermined species is 166 mm long, with a maximum width of 38.2 mm and a thickness of up to 16.4 mm. It bears twenty-one engraved grooves on one side, the other side is unmarked (Fig. 2). The flat surface of the bone is largely coated by a greyish carbonate deposit, some

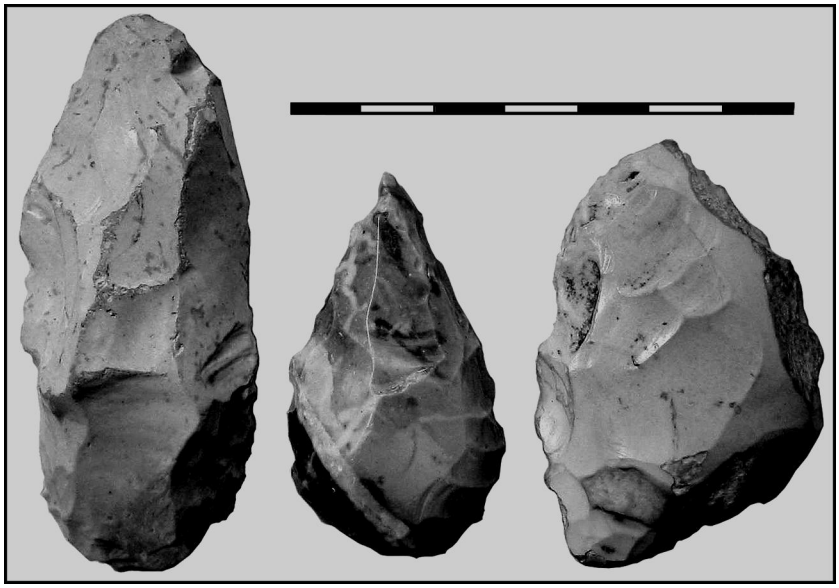

Figure 1. Some of the Eastern Micoquian stone artefacts found together with the engraved bone fragments of Oldisleben 1. The tiny 'handaxe' in the centre is rolled, the two other objects are unworn. Scale in cm.

of the grooves still contain securely lodged quartz grains and they are as heavily corroded and patinated as the surrounding surface. Therefore the possibility of this being a modern fake can be excluded.

The engravings form two discrete groups. On the right is a set of thirteen sup-parallel lines, roughly perpendicular to the thin edge, on the left a set of diagonally arranged lines connecting to the 'lower' margin. The grooves forming the first group are up to 24.4 mm long and of such distinctively similar morphology that it is highly likely that they were made in one sitting, by one person, with one tool. Most of them have short subsidiary markings to the right of each groove, adjacent to the bone's thin margin. While these secondary markings are relatively shallow, the depths of some of the long grooves relative to their widths are quite extraordinary. All grooves are clearly the result of repeated tool applications, apparently up to four or five.

The second set of markings in this arrangement of linear grooves is that of the eight 'diagonals'. They appear to have been made in sequence from right to left, and again from the edge of the panel inwards, therefore the bone would have been turned between the executions of the two sets. However, there is no evidence here of the subsidiary markings observed in the first set.

Differences in groove morphology are minimal and in all sections the distinctive narrowness of the point's furthest end is always evident. However, the degree of asymmetry is somewhat less pronounced in the 'diagonals', which is likely to be the result of the stone tool point having been applied at a slightly different angle relative to bone surface. The subsidiary marks are remarkable, particularly as their great similarity suggests a very distinctive, deliberate process. These short subsidiary markings seem to indicate that the maker either hesitated, or spaced out the markings before choosing the precise course of each main groove of the perpendicular set. It is even possible that the layout was planned first by placing all the subsidiary markings along the margin of the fragment, as if to balance or plan the spacings before the actual grooves were made. Either way, the procedure would confirm what is already amply evident from the several repeated tool applications in the grooves: that these cannot possibly be randomly executed, thoughtlessly placed engraved lines. They were made very deliberately indeed, even though this tells us nothing about purpose, meaning or motivation.

Oldisleben 2

The second find from the same site and deposit is in a cognitive sense even more significant, because it conclusively refutes a long-held view of many commentators on the cognitive evolution of hominins — that no evidence is available of structured symbols prior to the Upper Palaeolithic. A structured arrangement of five lines forming a recognisable graphic form (Fig. 3) occurs on a partially preserved shoulder blade of unknown attribution. The bone is 153 mm long and maximal about 103 mm wide, and its surface bears two taphonomic markings. The engraved design is placed much in accordance with the extant margins, but one of the five lines connects to the edge and runs slightly over it, so at least this margin predates the

Figure 2. The engraved bone fragment No. 1 from the Oldisleben site.

engraving. The design's central line is 51.5 mm long and, at one of its ends, where it extends just slightly beyond the point of meeting two other grooves, is about 700 microns deep. This is by far the deepest part of the five grooves, most of the groove depths range from 250 to 500 microns. All five lines were made with a particularly sharp stone point, and clear evidence of reworking (second application of tool) is lacking. None of the grooves contains any remaining striations, and all of them are relatively symmetrical in section. The heavily weathered surfaces of all engraved grooves and the absence of striations safely exclude the possibility of a recent fake. About 5 mm from the end of the central line, slightly offset to its general direction, occurs a small pit whose artificiality could not conclusively be established because of weathering. Although it lacks evidence of tool rotation, it resembles marks occasioned by stone tool impact and can tentatively be regarded as artificial. Similarly, the two curved lines on both sides of this dot are so worn and corroded that secure identification as anthropic is not possible.

The five lines forming this motif connect to others, yet they were clearly executed in separate actions. Each time a line was completed, the tool was raised from the surface, however slightly, and turned to face a new direction. The similarity of the groove sections indicates not only that a single stone tool was probably used, but also that it was very likely turned for each groove to be applied in the same direction. Therefore the five grooves were arranged deliberately, they were meant to meet the end of another line and connect with it. Indeed, in two instances three separately incised lines meet up at the same location. The probability of such a construction occurring in a pattern of five randomly placed lines on a given area is almost nil. This in not merely a question of probability of connecting, but also a probability that four short lines and one long line would form a symmetrical arrangement by chance. This engraved motif is therefore a pre-conceived design and a fully developed graphic symbol. As a scientist I have no desire to speculate about its meaning or purpose, the creation of archaeological myths is the domain of archaeologists. Several possible explanations come to mind, but if this motif occurred in rock art, it would certainly be described as a human figure, and indeed as a male human figure. The depiction of such anthropomorphs with detached 'head' shown by a pit (or dot) certainly does occur often in rock art.

Figure 3. *The engraved bone fragment No. 2 from the Oldisleben site.*

Oldisleben 3

The third engraved object from the Micoquian of Oldisleben is a flattish, rounded and heavily worn fragment of a large long bone of an undetermined species, 78.1 mm long, maximal 31.4 mm wide and 8.1 mm thick. The bone's compactness and superb state of preservation have helped to preserve the set of engraved grooves on its convex outer surface. Beginning from the left (Fig. 4) there are two short grooves whose orientation or spacing do not conform to that of the markings in the main body of engravings. The remaining six marks show distinctive traces of multiple tool applications, the deepest being the last (160 microns depth at 200–220 microns groove width). The stone tool used was not very sharply pointed but extensive splintering in all grooves prevents reliable determination of its cross-section in most places. From left to right, the point of commencement at the top of the grooves is progressively raised to extend into the rounded margin of the bone. At the same time, there is an increasing degree of curvature towards the right with each consecutive tool application. These two factors convey the impression that the markings were produced in their order from left to right, in the sequence of their increasing 'conventionalisation'.

The characteristics of these engraved marks suggest that they were made in one sitting from left to right, drawn from top to bottom. After some hesitant initial markings, a pattern was established of equally spacing these grooves, and although there are morphological changes from left to right, these are progressive, and each mark offers formal aspects of the previous mark. Therefore this set of engravings is not just a set of sub-parallel grooves, each mark was made carefully, deliberately and with an overall outcome in mind,

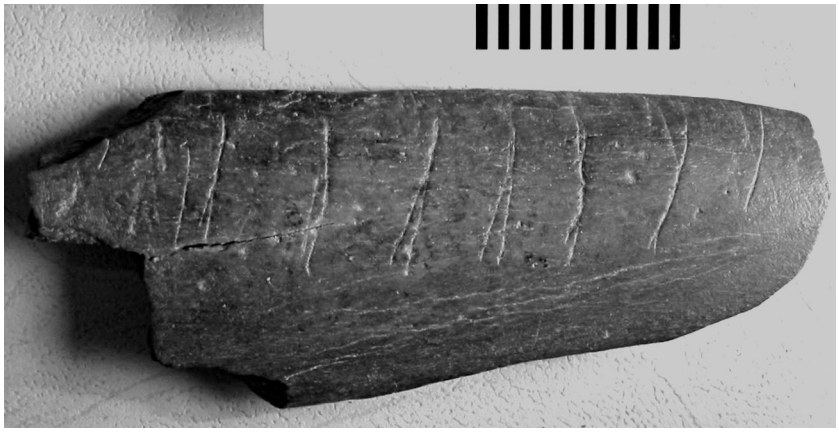

Figure 4. *The engraved bone fragment No. 3 from the Oldisleben site. Scale in millimetres.*

with increasing confidence and determination. The extensive fluvial wear that occurred after the marks were made excludes the possibility that these are modern fakes.

Discussion

It has often been argued that Lower and Middle Palaeolithic line markings made with stone tool points were not made deliberately, but are in fact incidental results of some utilitarian activity, notably where bone surfaces were used as cutting boards (e.g. Davidson 1990; White 1995; cf. Marshack 1991). The three Oldisleben specimens, however, provide unequivocal evidence that all three were 'decorated' deliberately and purposefully. The patterns engraved on objects 1 and 3, with their numerous repeated tool applications and pre-meditated organisation of individual marks already show this most adequately. The motif engraved on object 2 is the structurally most complex motif so far found in a European Middle Palaeolithic context, consisting of five deliberately interconnected lines. They form what is in all probability the oldest currently known iconographic composition. Irrespective of its iconic status, the motif's structure could not realistically be attained without a preconceived idea of its form, i.e. without a prior mental construct or template of what this symbol was to comprise (as is also the case with the Mousterian Tata nummulite; Bednarik 1992).

The Oldisleben engravings are not the only Micoquian palaeoart objects known from the specific region (I will consider others separately). They suffice, however, to refute not only the common claim of pre-Upper Palaeolithic absence of symbolism, but apparently also the long-held view that iconicity is lacking in such early graphic markings. The dominant archaeological dogma that recognisable and repeated patterning does not occur prior to the Aurignacian is decisively falsified by these finds. This dogma has always been part of a simplistic mindset based on the belief that the Aurignacian is the culture of the 'invading moderns', a belief that itself is probably just as false. There is no evidence linking the so-called Aurignacian to the so-called modern humans, but there is adequate evidence that the Aurignacian, and all other Early Upper Palaeolithic traditions up to the Gravettian, belong to Neanderthaloid robusts (Bednarik 2006b). Therefore the orthodox model is at the point of collapse, and Pleistocene archaeologists repeating the old mantra are anachronisms.

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