The Berekhat Ram figurine: a late Acheulian carving from the Middle East.

by Alexander Marshack

A small figurine found at Berekhat Ram on the Goland Heights in the early 1980s suggest that modern humans living during the Middle Paleolithic in what is now the Middle East recognized natural forms and shapes suggesting categorical forms. The pebble excavated dates back to the Late Acheulian and was found to have been intentionally modified to give it human features, such as a head and neck.

The human capacity for recognizing categorical forms and their defining characteristics extends to a recognition of natural forms and shapes that may suggest these categories. The issue is raised below by the analysis of an archaic figure from the Levant in which a natural form was apparently intentionally modified to produce an enhanced human image.

Early symbolling capacity

There is analytical evidence for imagery apparently made by modern humans in the Levant during the Middle Palaeolithic at c. 54,000 b.p., 15-20,000 years before modern humans began manufacturing imagery in Europe (Marshack 1996a). There are reports of a bone flute from Sloevina (Turk et al. 1995), of manufacture of beads by Neanderthals during the Chatelperronian at Arcy-sur-Cure, and the recent suggestion of evidence for an apparent Neanderthal visit, carrying fire, to the cave of Bruniquel, France, to build a stone 'structure' that contained a burnt bear bone, at c. 46,000 b.p. (cf. Balter 1996; Berkowitz 1996). There is the recent report of an anatomically modern human presence, including the presence of rock art and ochre, in northwestern Australia at c. 75,000[greater than]100,000 BP (Fullagar et al. 1996).(1) Suggestions for early symbolling or image-making in different parts of the world have increased in recent years (Bednarik 1991; 1993; 1995; Bahn 1991; 1996; Mania & Mania 1988) though the reports have been largely descriptive rather than analytical. The accruing suggestions do, however, document a growing effort to argue for a range of 'archaic human' and/or early pre-Upper Palaeolithic symbolling capacities and behaviours of a type that I have advocated for some decades (cf. Marshack 1976; 1981; 1988; 1989; Duff et al. 1992). There have also been arguments against an early symbolling capacity, either on grounds of a species difference or the uncertain validity of the evidence being offered (cf. Chase 1991: 200; Stringer & Gamble 1996: 207).

Within this on-going debate there has been little archaeological or theoretical discussion concerning a possible level or range of early symbolling capacity, either linguistic and/or visual and behavioural, among 'archaic' human groups migrating out of Africa with diverse and developing Acheulian technologies. One reason is that the hominid dispersal has been tracked primarily by lithic and skeletal evidence; the limitation in this evidence has discouraged discussions of 'symbolling,' except for noting an early African and European use of 'ochre' (cf. Marshack 1991) and a beginning for intentional 'burial' in the Middle Palaeolithic.

Hominids began migrating out of Africa as early as c. [greater than] 1.8 million years ago, carrying an 'Oldowan' and 'Clactonian' technology, while later groups left carrying developing Acheulian technologies. Archaic humans may also have crossed into southern and eastern Asia prior to the African development of an Acheulian industry (Huang et al. 1995; Wood & Turner 1995; Larick & Ciochon 1996a; 1996b).

Given this, analytical evidence for an early symbolling capacity would be as important for understanding developments during hominization as the data concerned with measurable skeletal morphologies and tool typologies. The possibility would be important on theoretical and evolutionary grounds since it was probably from some level or range of extant early capacity that selection occurred for a subsequent increase or differentiation of that capacity. If there was evidence for a range of symbolling capacity in the 'Acheulian' broadly defined, there may have been selection for an increase or retention of that capacity among the Neanderthals in Europe (cf. Marshack 1988; 1989), while selection for a variant increase may have occurred in Africa or the Middle East near the time of the 'branching' of anatomically modem humans.

An Acheulian technology reached 'Ubeideiya in the Levant, Israel, c. 1.4 million years ago and Dminisi in Eurasia, Georgia, within that time range. Later human groups entered the Levant corridor from Africa carrying increasingly evolved Acheulian traditions and finally entered carrying a late Acheulian industry containing a Levalloisian technique (Goren-Inbar 1995; Goren-Inbar & Saragusti 1996). The earliest evidence of human image-making so far known occurs in the Levant within a late Acheulian context containing a Levalloisian technique. This evidence, dated at c. 250,000 BP, is 100,000 to 150,000 years earlier than the proposed mtDNA dates (c.

The Berekhat Ram figurine: a late Acheulian carving from the Middle East.

100,000-200,000 BP) for the appearance of an African 'Eve', the supposed genetic 'mother' of anatomically modern humans. It may, therefore, represent a level of symbolling capacity from which selection occurred.

The Berekhat figurine

A small figurine [ILLUSTRATION FOR FIGURE 1 OMITTED], 35 mm in length, was excavated at Berekhat Ram on the Golan Heights in 1980-81 (Feraud et al. 1983; Goren-Inbar 1986) in a level sealed between two basalt flows. The occupation level contained an evolved late Acheulian Levantine lithic assemblage with a strong Levallois content (Goren-Inbar 1985). The upper basalt, the Upper Keramim, is dated by 40Ar/39Ar to 233,000[+ or -]3000; the figurine was found significantly below this basalt. The lower basalt is dated at c. 800,000 years ago (Feraud et al. 1983; Goren-Inbar 1986; Goren-Inbar et al. 1986). The Late Acheulian layer containing the figurine is therefore estimated to date to c. 250,000-280,000 BP.

By conventional assumption, there should be no depictive imagery at this date. An archaeological suggestion was therefore made - without studying either the figurine or all the relevant archaeological publications - that since the pebble was a volcanically ejected scoria it had probably acquired its 'aerodynamic' shape and grooving when it was ejected and/or impacted as a molten material (Pelcin 1994). My microscopic study, made before the suggestion by Pelcin, indicated that the pebble had been intentionally modified (Marshack 1995). As a result of that study, the pebble was further examined by Dr Sergiu Peltz, a vulcanologist and pyroclastic specialist at the Geological Survey of Israel, who declared that, despite Pelcin, it was definitely not a scoria but was an intentionally modified fragment, a fine-grained agglomerate matrix of 'basaltic lapilli tuff' that incorporated scoria clasts (Goren-Inbar & Peltz 1995). The agglomerate nature of the material is evident in the accompanying photos.

My study suggested that because of the pebble's size and the scale of the modifications, it could not easily have been modified by use of an Acheulian 'hand axe', but it could have been by use of the more specialized lithic forms found at the site. The Acheulian industry at Berekhat Ram contained a significant element of modified 'Levalloisian' flake-tools that were incipient to forms that would be used in the following Middle Palaeolithic of both anatomically modern humans and the Neanderthals (Belfer-Cohen & Goren-Inbar 1994; Goren-Inbar 1985; Goren-Inbar & Saragusti 1996). These included 'burins', 'engravers' and 'cutters', as well as the 'end-scrapers' and 'side-scrapers' which would become highly developed, specialized tool types in the later Upper Palaeolithic [ILLUSTRATION FOR FIGURE 2 OMITTED] when they would be used, among other things, for the making of 'art'. It is probable that many of the Berekhat Ram tools were used for preparing skins or working wood, but they could also be used for other purposes (cf. Goren-Inbar 1985).

The natural surface

The figurine is a dark yellowish-brown but contains areas encrusted with black, glass-like granules. The tuffic material below the surface is a bright high-red, apparent where a recent spalling or crack reveals the inside. According to Goren-Inbar & Peltz (1995: 131), the brown-yellow colouring is the result of impregnation and coating of parts of the stone by iron and sulphur-like minerals; the surface, additionally contains 'white-coloured' opal and/or calcite (Goren-Inbar & Peltz 1995: 131).

An ancient flake that spalled from the 'head' at left [ILLUSTRATION FOR FIGURE 3 OMITTED] has the same colour and texture as the figurine and probably spalled near the time it was discarded. A large pebble is embedded on the left shoulder [ILLUSTRATION FOR FIGURE 4 OMITTED], and a number of deep vascular holes are found around the figure. These holes, lined with black volcanic glass, are pristine, containing no accumulations of sand or soil; it was my impression that some may have been opened when a mould-making material was applied to make a copy.

Microscopic analysis

Microscopic study revealed both intentionally made and natural morphological differences on each side and in each area of the figurine. These are totally unlike the grooving or aerodynamic forms that Pelcin (1994: [ILLUSTRATION FOR FIGURES 1 & 2 OMITTED] indicated could be produced in hot, soft, ejected scoria.

1 Right side

The right side [ILLUSTRATION FOR FIGURE 1 OMITTED] shows a slightly rounded head at the rear but a relatively fiat 'face' in front. The back descends abruptly from the neck. The right shoulder is a scraped, flattened plane that extends horizontally from the groove of the neck. The chest or breast drops at an angle from the neck; it arcs halfway down, suggesting a large-bosomed female. A thick 'arm', bent at the elbow, is carved on the side.

In this right-side view, the neck groove angles downward from the rear towards the front in a slight arc, helping to create the impression of a 'face'. The angle made by the groove of the neck in the rear is wide, unlike the narrow angle that would be created by downward pressure on a hot, viscous scoria material, or upon impact (cf. Pelcin

The Berekhat Ram figurine: a late Acheulian carving from the Middle East.

1994: [ILLUSTRATION FOR FIGURES 1 & 2 OMITTED]).

In this side view there is an unexpected bulge at the side of the face, in the area of a possible 'cheek'. This protuberance forms the upper material of the neck groove at this point [ILLUSTRATION FOR FIGURES 3, 5 & 6 OMITTED]. The right profile suggests a crude, strong, female contour.

2 Left side

The left side [ILLUSTRATION FOR FIGURE 4 OMITTED] - dramatically different - has a pebble on the 'shoulder', at the position where a 'shoulder' plane had been scraped on the right side. A comparable plane could not have been scraped over the pebble. The rounded head has, again, a long, flattened 'face' in front; the groove of the neck again angles downward from the rear towards the front. The neck grooves at the front and rear are quite wide, suggesting a bevelling rather than pressure folding; the plane of the chest drops at a steep angle from the neck groove; the back, slightly rounded, descends more abruptly than in front. The area of the spalled large flake on the head has the same 'weathered' colouring as the figure.

There is no 'arm' on this left side. A study of the surface reveals that it contains intrusions of different types, including black glass-like granules and encrustations which would have made scraping or carving difficult. Compare the surface texture here to that on the right side [ILLUSTRATION FOR FIGURE 7 OMITTED]. The mass or amount of tuffic material constituting this left side is measurably less than on the right side [ILLUSTRATION FOR FIGURE 3 OMITTED]: there was simply not enough material on this side for carving an 'arm'.

Though the left side was not carved or worked in the same manner as the right side, the profile is, once again, strongly that of a human 'female'.

Close-up of the right side

A three-quarter, close-up view of the right 'arm' [ILLUSTRATION FOR FIGURE 7 OMITTED] photographed with a single light projected from the rear and at a slight angle, reveals the fine-grained, easily worked tuffic material on this side. The 'arm' consists of planes and grooves incised and scraped at different angles. One groove, which forms the upper part of the arm, descends to the bend of the elbow. Another groove is incised under the arm. The arm itself is separated from the chest by a fiat, relatively wide, scraped plane. The grooves and planes show evidence of scraping and bevelling.

3 The rear

The rear is visually dominated by the apparently straight line of a horizontal neck groove and the unusual width of the 'head' [ILLUSTRATION FOR FIGURE 8 OMITTED]. A crack in mid-body descends from upper right to lower left. At right, a small crack occurs on the groove of the neck, producing a flake that is about to spall. The neck groove, which seems at first to be a straight line, actually curves intentionally upward at the right and downward at left.

An extreme close-up of the end of the neck groove at far right, photographed with the figurine lying at an angle and using a single light [ILLUSTRATION FOR FIGURE 9 OMITTED], shows that the end of the neck groove from the rear arcs upward and passes over the neck groove coming from in front, which angles downward. This type of productive mismatch is quite common in early three-dimensional carving but it does not occur in Pelcin's example of scoria folding [ILLUSTRATION FOR FIGURES 11A, 11B, 12 OMITTED].(2)

A wider view of the rear neck groove [ILLUSTRATION FOR FIGURE 10 OMITTED], photographed with a single light held high and a few degrees in front of the groove, shows an added, deeply incised straight groove that was incised downward, to meet the groove and the shoulder plane coming from in front. In addition to the anomalies at each end, the fiat planes of the rear neck groove and the wide angle created by the upper and lower bevel-ling are apparent, as is the flake about to spall at the right. The photo indicates that the lower plane of the neck groove, smoothed by scraping, is texturally unlike the irregular granular surface below it; it also has a lighter colour than the surface below. The plane of the upper bevel-ling is visible in the shadow.

4 Front view

The front view [ILLUSTRATION FOR FIGURE 3 OMITTED] reveals two unusual forms: the head has wide, arced, hanging masses at each side; the plane of the chest descends to a triangular point before arcing under to a large hole or vacule lined with black volcanic glass, in the approximate position of a 'navel'. If this hole was visible on the original unworked pebble, it may have contributed to the impression of a human form. 'The front view clearly indicates the presence of more material on the right side, which allowed for the carving of an arm; by contrast, the relatively fiat, slightly concave plane on the left side provided little material for carving.

'The slightly sinuous line of the neck in the front differs from the straight line of the neck groove in the rear, though that groove turned at each end. The spalling on the left

The Berekhat Ram figurine: a late Acheulian carving from the Middle East.

side of the head is apparent. Prior to this spalling, the left side was probably as rounded as the right. Examination of the front of the head with a moving probe light indicated a slight convexity at the center of the mass where a 'face' would be. In the centre, this convexity descends with a slight arc to the neck, suggesting a 'chin'. The masses at the side of the head are behind this convexity. The deteriorated state of the surface did not allow a precise measurement of the depth of the convexity (it could be measured by computer enhancement and digitization).

The dark crack below the head at right is the point at which the figurine broke when it was dropped some time after its excavation; the crack and the fragmentation around it are bright red. This crack rises to the neck, runs along the neck groove, then descends abruptly in the rear [ILLUSTRATION FOR FIGURE 8 OMITTED]. When the head separated from the body, it was along this crack. The figurine probably broke at the neck because this was its weakest point; that weakness is apparent in the ancient spalled flake on the head and in the rear where another flake is about to spall.

The head has the same width as seen from the rear where it sat on a relatively straight linear neck groove. The difference is the rounded pro-tuberant masses on each side of the head, as well as the slight convexity in the centre and the downward arcing of the neck, suggesting a chin.

The right protuberance was carefully shaped by bevelling. The left protuberance, apparently once matching it, retains only remnants of the original material due to the ancient spalling and the more recent breakage. The outline of the head suggests that a rounded protuberance existed on the left as well.

Care was apparently taken in bevelling the protuberance at right [ILLUSTRATION FOR FIGURE 5 OMITTED] and in producing the slight arcing of the neck that suggests a chin. The dark gash below the protuberance is the point at which the figurine broke. An extreme close-up of the protuberance, photographed with a single side light [ILLUSTRATION FOR FIGURE 6 OMITTED], shows the carving, the plane of bevelling, and the differences in surface textures.

Some hypotheses and thoughts

The slight modification of natural forms to heighten a resemblance is so common in human culture that it hardly needs elaboration. It occurs in the Upper Palaeolithic caves and among the mobiliary materials (cf. Marshack 1996b: 262); in the Levant it occurs on pebbles in the pre-agricultural Natufian [ILLUSTRATION FOR FIGURES 11A, 11B OMITTED] (Weinstein-Evron & Belfer-Cohen 1993; Marshack in press), the pre-pottery Neolithic [ILLUSTRATION FOR FIGURE 12 OMITTED](2) and the early Neolithic at Catal Huyuk (Mellaart 1967: figure 69). The human capacity to see or recognize a suggestive form in nature is derived from enculturation and the capacity for categorization. Among the Australian indigenes the geography, topography and natural forms of the landscape were commonly named, 'read' and used in myth and ritual. Such recognitions and minimum modifications of a form may not create statistically relevant depictive 'styles' but they do suggest one beginning for 'art' (cf. Marshack in press).

Given the ubiquity of the process, one should not be surprised by the modification of a pebble with a slightly human form within a Late Acheulian culture with a late Levalloisian technology in which tool forms could be extracted from a flint nodule by a sequence of complex, visually-mediated two-handed skills (cf. Marshack 1996a). It was certainly technologically feasible. It is possible, therefore, to make a tentative and hypothetical contemporary 'reading' of the Acheulian Berekhat Ram figure and head.

If, in a test, one places an oval over the central area of the head where there is a slight convexity [ILLUSTRATION FOR FIGURE 13 OMITTED], one creates the impression of a head with an encompassing 'coiffure' or head of hair. When this is done, a viewer may hereafter tend to 'see' the figurine with its surmised 'face' and what seems to be a mass of 'hair' at each side of the head even without the oval. While hypothetical, the attempt poses an interesting problem; while the human form is generic, managed hair is cultural.

Questions of culture and 'style'

Anatomically modern humans, and probably earlier 'archaic humans', had lost their heavy primate body hair, apparently as an adaptation for temperature modulation. Free-hanging head hair, however, continues to grow from childhood to adolescence, when it may become an annoyance; in many hunting-gathering cultures the hair is tied, twined, twisted, banded, cut, netted, or capped. Even the barefoot, near-naked indigene Australians, when first contacted, were managing their hair. In the Upper Palaeolithic of Europe the coiffure, hair-net, head-band or cap are depicted from the Russian plain westward to Moravia, Italy and France - differently in various periods and regions. Hair management is a simple and ubiquitous form of human personal self-awareness, self-management and self-decoration. The late Acheulian inhabitants of Berekhat Ram could technologically prepare skins and cut thongs; there is Acheulian evidence for a use of ochre,

which may have been used for body marking and/or the preparation of skins (cf. Marshack 1981; in press).

At one level, therefore, an Acheulian 'management' of the hair was feasible. Would it, however, be depicted? The modification of a near-human form in the Acheulian, with an apparent indication of a 'head', 'neck', 'arm', 'shoulder', 'bosom', 'hair' and an indication of 'femininity' would suggest a shared communication of cultural categories and behaviours. It also suggests the possible presence of potentially variable capacities that may have been selected for adaptive, genetic increase at the hypothesized crossing of the anatomically modern mtDNA rubicon, sometime after the period of Berekhat Ram. The ramifications of these theoretical problems will be addressed elsewhere (cf. Marshack in press).

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1 Among the Australian indigenes, periodic ritual body marking was as important, and perhaps more important, than the periodic ritual production of 'rock-art'. It is, therefore, likely that body marking, given the evidence for an early Australian use of ochre, was also important at Jinmium.

2 The evidence for such 'mismatches' in three-dimensional carving is so common among early archaeological materials that it is noted here as part of the evidence for intentionality. I encountered such mismatches, for instance, among the incised Chatelperronian beads from Arcy-sur-Cure. In this regard, a question has been raised concerning the small size of the figurine, implying that incising at this scale would be difficult for an 'archaic' human. The Chatelperronian beads from Arcy-sur-Cure, ostensibly made by Neanderthals, range in size from 29 to 55 mm high (A. & A. Leroi-Gourhan 1964: 40, 48) yet each has a groove incised around the top or 'neck.'

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The Berekhat Ram figurine: a late Acheulian carving from the Middle East.

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