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PALAEOLITHIC ORIGINS OF SPIRITUALITY

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Introduction

Spirituality is usually associated with the system of religious beliefs and related rituals. In more general terms, this involves "the powers of nature, the personal quest of the soul, the acts of daily life, the solidarity of the tribe, all were religious, and were sustained by dance and ritual" (Miller 1997). Consequently, the 'spiritual behaviour' may be defined as the creation of an artificial 'ritual landscape' encompassing the totality of the observable universe and aimed at maintaining a constant dialogue between all its elements.

The origins of spirituality are usually sought in the realm of religion and, in more general terms, in ritual and symbolic behaviour. Elements of symbolic behaviour and vocal communication are recognised among primates. The essential question is, at which point this symbolic behaviour acquired human-like characteristics. Amongst these are usually mentioned the emergence of language, the advanced ability of manufacturing and the use of tools, and ability to plan for the future.

This also includes the emergence of "a regular, patterned and symbolic behaviour", with the use of nonutilitarian "symbolic" artefacts. This also implies the occurrence of recognisable material manifestations of spiritual culture, i.e. primitive forms of art, which are usually ascribed to early modern humans (as distinct from "archaic" modern humans, or Neanderthals). Both archaeological and molecular genetic evidence suggest that the AMH emerged in eastern and southern Africa at 130-100 ka ago.

Considerable difficulties stemmed from the fact that the discernable material manifestations of significant behavioural changes became apparent in archaeological records only at the time roughly coeval with the Last Glacial maximum (OIZ 2), 24-14 ka ago (Clark 1997). This general conclusion remains valid despite recent discoveries of slabs of engraved ochre and an engraved bone at Blombos Cave in the southern Cape Province in South Africa in the "Middle Stone Age" layer with optically stimulated luminescence (OSL) dates in the order of 75-70 ka ago (Henshilwood & Marean 2003).

The apparent controversy may be overcome with use of concepts developed in semiotics (Gottdiener 1994). Since its earlier development by Peirce, semiotics viewed the *sign* as "something which stands to somebody for something in some respects or capacity". Peirce further classified the signs available to human consciousness into icons, indices and symbols. Peirce defined the *iconic sign* "a sign determined by its dynamic object by virtue of its own internal nature". The iconic sign represents its object by means of similarity or resemblance; the relation between sign and interpretant is mainly one of likeness, as in the case of portraits, diagrams, statues, and on an aural level, onomatopoeic words. Peirce defined the *indexical sign* as a "sign determined by its dynamic object by virtue of being in a real relation to it". An indexical sign involves a causal, existential link between sign and interpretant, as in the case of a weathercock, or of a barometer or of smoke as signifying the existence of fire. A *symbolic sign*, finally, involves an entirely conventional link between sign and interpretant, as is the case in the majority of the words forming part of "natural languages". Linguistic signs, that is to say, are symbols in that they represent objects only by linguistic convention. These kinds of symbolic behaviour which are exclusively inherent to AMH species, massively contributed to the rapid increase of the human brain and the vastness and complexity of human cultural superstructure (Deacon 1977).

In the following paragraphs we will examine the early evidence of symbolic human behaviour.

Initial settlement

Africa was the likely source of the human mitochondrial gene

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pool 90,000-180,000 years ago (Cann *et al.* 1987). This hypothesis is supported by the finds of early forms of AMH in Africa, such as Omo Lubish 1 Ethiopia, Klasies Cave, Border Cave and Florisbad in South Africa, Guomeda (Kenya) and Jebel Irhoud (Morocco), attributable to Oxygen Isotope Stage 6, between 260 and 130 ka (Stringer & Mackie 1996).

Early AMH reached western Asia at 100,000-80,000 years ago (Stringer *et al.* 1998). This implies the coexistence of early AMH with the late Neandertals. In the Levant the Neandertal burials were found at several cave-sites, which included the Tabun, Kebara, Amud and Dederiyeh Caves. The date of 60 ka obtained for the Neandertal skeleton at the site of Kebara 2 suggests a prolonged temporal overlap of both sub-species of *Homo* within a geographically restricted area (Stringer *et al.* 1998).

Traditionally archaeologists link up the emergence of AMH with the Upper Palaeolithic (UP), the core-and blade technique being considered as its momentous attribute. In view of recent observations, the association of AMH with this technique cannot be viewed as absolute. Blade manufacture has been observed in several Lower and Middle Palaeolithic industries in Africa, Western Asia and Europe. This became particularly obvious in the Near East where blade-dominated assemblages were found in various cultural contexts (Amudian, Pre-Aurignacian and others) in levels ranging between OIS 8 and 5 (Meignen 1998). The remains of both Neandertals and AMH at the time of their apparent coexistence in the Levant were found in the context of essentially similar industries, the "Levantine Mousterian". Both human subspecies shared broadly similar subsistence patterns and cultural features that included burial practices. One finds only minor distinctions in mobility, resource acquisition strategies and industrial subtypes (Lieberman 1998).

The fully developed UP assemblages are referred to as Aurignacian, an umbrella term which encompasses several blade-based industries, some of which share common features with the "classical Aurignacian" in Europe (Kuhn 2003). Apart from that, the Levant includes at least two distinct early Upper Palaeolithic complexes predating the Aurignacian: the initial UP (Emiran or "transitional") and Ahmarian (Kuhn 2003). The available radiometric dates suggest the age of 50-40 ka for the former, and 42-30 ka for the latter, possibly partly overlapping with the early Aurignacian (Bar-Yosef 2000). The IUP assemblages combine Levallois blade technology with UP forms. The Ahmarian industries which are generally viewed as the local development of the IUP, are rich in blades produced from prismatic cores.

The earliest appearance of the AMH in Europe is documented by the finds in level 11 of the Bacho Kiro Cave in Bulgaria which has yielded a radiocarbon age of >43 ka (Kozlowski 1998). Yet the general view prevails that the "classic Aurignacian" appeared in Europe not older than 36.5 ka (Zilhao & d'Errico 1999). Existing radiometric dates firmly establish the existence of Neandertal groups in France until ca 34 ka and ca 33 ka on the Iberian Peninsula. The AMS measurements for Neandertal mandibles at Vindija in Croatia (28-29 ka) provide evidence for an even later presence of Neandertal groups in that area of Europe (Smith *et al.* 1999).

The so-called transition from Mousterian to UP industries is identifiable in Europe for the time-span between 40 and 30 ka. These industries are known in France (Châtelperronian), Italy (Uluzzian), Central Europe (Szeletian and Bohunician) and Russia (Streletzkian). They all include archaic elements apparently inherited from the Mousterian tradition. The same industries attest a range of typically UP features, the tools such as burins and end-scrapers manufactured on blade blanks as well as tools and personal ornaments made of bone and antler.

Judging from the radiocarbon dates, the early stage in the spread of Upper Palaeolithic on the East European Plain lie in the time-span of 35-40 ka (Sinitsyn *et al.* 1997). The sites were evenly scattered across the entire area; they are known in Western Ukraine, Moldavia, Crimea, Pontic Lowland, Kostenki on the River Don, in the Ural Mountains and even in the extreme North-East, including the sites north of the Polar Circle.

In a cultural sense these early UP sites belong to at least three distinct traditions: Streletskian, Aurignacian, and "Protogravettian" (Sinitsyn *et al.* 1997:42). The Streletskian inventories were initially identified at several sites in the Kostenki area. Later, similar industries were found on the Severski Donets River in the Ukraine, in Central Russia (Sungir') and also on the Kama River in the Urals (Bradley *et al*. 1995). All these sites include typical Mousterian side-scrapers and points (triangular bifacial points with concave bases being particularly common). These archaic elements were combined with typical Upper Palaeolithic tools. By contrast, both the Aurignacian, and "Protogravettian" industries featured a fully developed Upper Palaeolithic "core-and-blade" technique with a variety of tools manufactured on blade blanks.

A reliable series of radiocarbon dates indicates a group of early sites in the Altai Mountains. This group includes several open-air and cave sites: Kara-Bom, Okladnikov, Strashnaya, Denisova, Kara-Tenesh, Anui 2, and Ust-Karakol (Derevyanko *et al.* 2001). Radiocarbon dates, both conventional and AMS, show the age between ca 40 and 30 ka; and even 42 ka (Kara-Tenesh) and 43 ka (Kara-Bom). All dated sites were located in the Mountainous Altai, usually on the lower and medium elevation levels, within the river valleys belonging to the River Ob' catchment. The sites vary in thickness of archaeological deposits, presuming variable duration, seasonality and intensity of their habitation. In most cases, the sites were stratified and included the levels attributed to the Acheulean, Mousterian, UP and later periods. The sequence of the site of Kara-Bom (Derevyanko *et al.* 2000) includes two levels deemed Mousterian and six levels considered as UP. Yet the upper Mousterian and lower UP

levels yielding statistically indistinguishable dates (>44 ka and 43200±1500 respectively). These levels included identical animal remains and the pollen indicative of a steppe with rare occurrences of broadleaf trees. Both Mousterian and early UP levels include the same categories of artefacts: Levallois-Mousterian, notched-denticulate and Upper Palaeolithic. The main distinction consists in an increased rate of "elongated blades" observable in the early UP level. Derevyanko *et al.* (2000:47) note that the common elements in these two levels outweigh their distinctions. The Okladnikov Cave yielded human remains: five teeth and three postcranial skeletal fragments. Alexeev (1998) has concluded that all fragments except one tooth bear no deviations from the morphology of modern humans. Only one molar found in the third level shows an "archaic trait". The animal remains combine extinct species (wholly rhinoceros) with presently existing animals adapted to forest biomes (brown bear, wolf, bear), and steppe (wild horse, kulan wild ass, gazelle). Significantly, the portable works of art (three perforated pendants made of mammal bones and teeth) were recovered from "layer 6" of the Kara-Bom site, for which radiocarbon dates in the order of 34-32 ka BP are available (Derevyanko & Rybin 2003). In view of all this evidence, the Palaeolithic sites in the Altai Palaeolithic may be considered as left behind by modern humans.

The existing radiocarbon dates indicate the wide spread of Palaeolithic sites further into northern Eurasia occurring during Isotope Stage 3 (Dolukhanov *et al*. 2003). Such sites are known in the Baikal Lake area of southern Siberia. The sites are also known in Yakutia (Ust'-Mil: 33 ka) and the Maritime Region (Geographical Society Cave: 32.5 ka).

Palaeolithic sites in the Altai Mountains in Southern Siberia radiocarbon dated to c. 40 ka and older are considered as Mousterian, due to the strong presence of Levallois technology. If one looks further east, archaic elements are abundant in sites of similar age in China and Mongolia. The inventory of the Salawusu site on the Ordos Plateau in Inner Mongolia, dated to 50-37 ka, contains pebble cores reduced by 'direct percussion' as well as flake tools (Lanpo & Weiwen 1985). The same level reportedly yielded the remains of *Homo sapiens* (Xinzhi & Linghong 1985). The femur and tibia of a child at the site of Yamashita-cho on the Okinawa, with the radiometric age of >32 ka are considered as belonging to AMH (Trinkaus & Ruff 1996).

Discussion

Based on the stratigraphic evidence of Saint-Césaire and Arcy-sur-Cure in France, the scholars tend to ascribe the authorship of the Châtelperronian industry to the Neandertal humans. Two hypotheses became crystallized in the ongoing debate. The first views the observed UP elements in the generally archaic industries as the product of contact, trade, interaction, transfer of technology, resulting in the 'acculturation' of the Neandertals under the impact of AMH (Mellars 1999). The second argues that this was an independent and autochthonous invention of local Neandertal groups (Errico *et al.* 1998).

As stated above, there are several reasons to consider the Palaeolithic sites in the Altai Mountains as belonging to the AMH. Since, either on the East European Plain, in Siberia or China, archaic-looking industries have ever been found in clear association with the remains of Neandertals or other pre-*sapiens* humans, one may advance a reasonable suggestion that all these industries were manufactured by groups of AMH. Their advancement proceeded from the west to the east, covering the entire East European Plain and further leading into Southern Siberia, Mongolia, Northern and Central China and the Russian Far East. As land bridges linked the Siberian mainland with Sakhalin Island and Hokkaido, one may suggest an occasional penetration of early AMH to the Japanese Archipelago at that stage. The most plausible scenario implies a gradual spread of AMS from Africa into Western Asia between 200,000 and 100,000 BP, and then into northern Eurasia (including Europe and Siberia) between 50,000 and 40,000 BP. The occurrence of AMS sites in the caves of the Altai Mountains with an age in excess of 42,000 BP may be due to better conservation of organic material in that area. Similarly old samples might not have survived further west, perhaps because of differences in the post-depositional environment.

Existing genetic evidence places the Neanderthals both from the Caucasus and Germany in a group distinct from modern humans, suggesting that their mtDNA types have not contributed to the modern human mtDNA pool (Golovanova *et al*. 1999; Ovchinnikov *et al*. 2000). In other words, the groups of modern humans expanding from Africa were not interbreeding with local groups of Neanderthals.

Archaeological evidence shows the absence of any rigid links of the advancing groups of AMS with any specific industrial tradition; this may be Mousterian facies, the "archaic" UP with strong Mousterian elements or fully developed "core and blade" technology. Archaeological assemblages may be rather conceptualized as iconic and indexical signs symbolizing the groups' adherence to a certain spiritual entity. Since with the AMHs were already in control of fully developed human-like speech, one may reasonably suggest the emergence of symbolic signs forming "natural languages" already at this early stage.

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