

Homo symbolicus: The Dawn of Language, Imagination and Spirituality

Christopher S. Henshilwood and Francesco d'Errico (eds.)

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Reviewed by PAMELA R. WILLOUGHBY

Department of Anthropology, University of Alberta, Edmonton, Alberta T6G 2H4, CANADA; pam.willoughby@ualberta.ca

Over twenty years ago, when geneticists and paleontologists confirmed the early evolution of *Homo sapiens* in Africa, a new major problem emerged. If anatomical modernity emerged by around 200,000 years ago in the continent, where do the cultural innovations of the Later Stone Age (LSA) / Upper Paleolithic come from? These innovations, framed under the label of behavioral modernity, include modern symbolic and cognitive achievements, presented as the basis of our own success as a species. But what were they? The editors of this volume point out that we are still not certain of how the modern mind developed. These innovations appeared either late in human evolution and quickly (with the Upper Paleolithic and/or LSA around 40–50,000 years ago), earlier and more gradually (over the course of the African Middle Stone Age or MSA), or discontinuously, but rooted in both the African MSA and the Eurasian Mousterian. The last would argue that not only did early African moderns have a role, but also the Neanderthals and other archaic humans in Europe or Asia.

This book reports on the research of an interdisciplinary network dealing with issues of how the human mind evolved. By the time they met at a conference in Cape Town in 2009, they had corresponded on a number of topics. The group includes a number of individuals from a wide variety of specializations. Their initial work and the conference were both supported by a number of institutions, including the John Templeton Foundation, which usually supports research on religion and belief systems. This is presumably why they included the word spirituality in the sub-title. The group aims to integrate new perspectives from a variety of disciplines, including archaeology, anthropology, primatology, philosophy, evolutionary biology, religious studies, paleoanthropology, and linguistics. Their aim is to link genetic, neural, cognitive, and behavioral development in order to understand the evolution of modern humans and their behavior. This aim is outlined in an introduction; otherwise, individual authors attempt to deal with these questions from their own disciplinary perspective.

The first chapter is written by William McGrew, the primatologist who has spent his career documenting chimpanzee material culture across many populations in Africa. He reviews ape models for understanding human origins, and questions whether or not there can be something like a *Pan symbolicus*. While field studies of apes show that their communication and cognitive capacities are much greater than originally thought, it is still quite different from ours.

In the second contribution, Sue Savage-Rumbaugh and

William M. Fields review issues relating to the fossil evolution of humans. They remind the readers that geneticists continue to see the remarkable biological similarities of chimpanzees, bonobos (formerly pygmy chimps), and humans. They discuss the behavior of great apes in nature, but also ones raised and socialized by humans. They review key findings about Kanzi, the bonobo who was raised by humans as well as by his biological mother, thereby absorbing a degree of human and ape culture.

The fossil record of apes is pretty limited at the presumed time of split of the hominoid trichotomy (chimpanzees, gorillas, and humans). As a result, we still are not sure what the last common ancestor of the three actually looked like, as each of the great apes share some characteristics with humans that the others do not. It used to be assumed that knuckle walking came first, as it is the means of locomotion shared between gorillas and chimpanzees. The authors point out that bonobo and chimpanzee infants are not initially adapted to knuckle walk; the characteristic skeletal and muscular changes in the hand and wrist only appear with use. Savage-Rumbaugh and Fields conclude that the key differences relate to carrying infants. Among mammals, only primates carry their offspring. Like some other primates, ape infants cling to their mothers with all four limbs; on the other hand, human infants have motor patterns that prevent this. Humans carry their babies; this gives them continuous face time with adults, time in order to learn.

In the first of two entries, Francesco d'Errico and Christopher Henshilwood review evidence for the origin of symbolically mediated behavior in Africa and Eurasia. D'Errico comes at this research from a background dealing with symbolic objects in both Middle and Upper Paleolithic contexts in Western Europe. Henshilwood, of course, is the South African archaeologist who has made such outstanding discoveries in MSA contexts at Blombos Cave. Their collaborative research has led to the conclusion that Paleolithic archaeologists and paleoanthropologists need a unified theory of the emergence of modern symbolic behavior. There are still traits that are characteristic of modern behavior—intentional burial, abstract designs, personal adornment, figurative representations and bone tools. For them, signs of modern behavior are present in Africa by at least 150,000 years ago, in the Middle East after 100,000 years ago, and probably by 60,000 to 50,000 years ago in Europe (presumably made by Neanderthals). Clearly there is no single package or “human revolution”

involved. They make the intriguing suggestion that beads are present well before 70,000 years ago in South Africa, North Africa, and the Middle East. But then they disappear between 70,000 and 40,000 years ago, only to reappear almost everywhere. It would have been instructive to know how many sites there are in this time range, as it is generally associated with a hiatus in human occupation in much of the continent of Africa. Not only beads disappear, but all signs of humans. Could demographic changes have been a trigger for cultural evolution throughout the Old World? Or were Pleistocene climate shifts? They note that there is much need for new fieldwork, more dates, more environmental data, and the development of innovative research methods. They conclude with one of the most important statements—researchers must move away from antagonistic models to create a collaborative work environment for all.

In their second contribution, Henshilwood and d’Errico discuss the evidence for MSA engravings and their significance for debates about the origin of symbolic behavior. Engravings are a special category of modern culture; when they are applied to ostrich eggshells, they clearly are intentional designs. But when similar incisions are applied to ochre pieces, this cannot be absolutely confirmed. They illustrate this with a discussion of ostrich eggshell decorations from Diepkloof Cave and ochre engravings from Blombos.

Diepkloof is located north of the modern city of Cape Town. The deep MSA cultural deposits here include a sequence of Pre-Stillbay, Stillbay, Howiesons Poort, and post-Howiesons Poort lithic assemblages. Along with the stone and other artifacts, the excavators recovered a number of pieces of engraved ostrich eggshell from the MSA deposits. While ostrich eggshell is quite common, there are no ostrich bones in faunal collections, showing that the animals were not used as a food source. Yet, in ethnographic contexts, the contents of eggs were regularly consumed, and the shells were used as containers for liquids. There are also many examples of decorating ostrich eggshell containers in many places in Africa. While the incised lines were intentionally made for visual display, the status of engraved or incised pieces of ochre in MSA levels at sites like Blombos remains controversial. The authors point out that 1,934 ochre pieces over 10mm in length have been recovered at Blombos, mostly from the M3 or deepest MSA level; their total weight adds up to 5,581 grams. So ochre has an important role. But were the scratch marks applied to some pieces merely functional, or did they have a symbolic role too?

Lyn Wadley, who has also made notable discoveries relating to MSA behavioral modernity, takes on the case of the mental steps required for the production of compound adhesive manufacture at this time. One notable innovation of the late Acheulean or MSA is the hafting of stone projectiles onto organic handles. The stone inserts could have

been used as spears, or even possibly as arrowheads. She notes that many of the South African MSA ones are segments (what other researchers call crescents or lunates), and that many are stained by red ochre. She thinks that the ochre might have been an adhesive, and conducts a series of replication experiments to test this idea. She concludes that the production of this adhesive involved a mixture of compounds, and clearly takes planning in order to produce.

João Zilhão returns the archaeological discussion to Europe, and focuses on the general issue of the emergence of language, art, and symbolic thinking. For him, both Neanderthals and MSA Africans were cognitively modern, something that d’Errico also would propose.

David Sloan Wilson reviews a series of transitions in human evolution that can be related to the emergence of modern language, imagination, and spirituality. The first thing he sees as important is the transition which allowed within-group cooperation to increase. Later on, there is the change which produced modern cognition and culture. He argues that both involve cooperation and group life, which is the key to understanding our remote history. Paul Pettitt presents an argument that both living people and their physical remains are symbols, and that this is how one studies the origin and purpose of intentional burial. He too stresses the need for consistency in basic definitions and concepts. George Ellis discusses the biology and mechanisms underlying the origin of language, while Benoit Dubreuil presents a research agenda for addressing questions of the inter-relationships between brain and cognitive evolution. Justin Barrett discusses the notion of a *Homo religious*; in other words, can there be a cognitive science of religion and its evolution? Using an evolutionary psychological approach, he thinks that biology, religion, and culture can be linked in a functional way.

Generally, this edited volume is a good introduction to issues about the evolution of the modern mind. For paleoanthropologists, some of this may be familiar. But the discussions of brain and cognitive evolution, and on the emergence of religious beliefs, may be new to some readers. The editors and contributors to this volume should be congratulated for their success in introducing novel concepts and approaches to the study of what makes modern humans unique—our brains and their cognitive baggage. But they also make it clear that modern *Homo sapiens* may not have been as unique as some of us paleoanthropologists would prefer. Clearly we have a long way to go before we can determine what made us, as Robert Foley (1987) said so long ago, another unique species, but one which is aware of its own history.

REFERENCES

- Foley, R. 1987. *Another Unique Species: patterns in human evolutionary ecology*. Harlow: Longman Scientific & Technical.