

## **Cognition and symbolism in human evolution**

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### **Course Description**

The issue of the cognitive evolution of hominin species, much neglected or misinterpreted by archaeology, is considered in a philosophical and scientific perspective in this course. Human constructs of reality, it is proposed, have been created since self-referential consciousness began governing human thought. The most promising potential sources of information about the intellectual advances heralding human consciousness are very early intentional markings and other manifestations of culturally mediated human awareness. They are presented in this course. Beads, for instance, are likely to be key markers of early human constructs of the self. This course presents an account of the currently available hard evidence of this nature, which should be the basis of any speculation about the origins of human cognition as we define it today. Another avenue explored is the neurophysiological background of the developments that may have facilitated advanced cognition and the use of symbols. In this context, the empirical evidence for the use of complex communication systems in the human past is also explored.

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### **Course Outline**

The study of non-physical human evolution is based on evidence from several different disciplines, ranging from neuroscience, cognitive science, psychology, primatology, ethology, physical anthropology and archaeology to philosophy and epistemology. This course reviews critically the performance of orthodox archaeology in defining the cultural and cognitive evolution of hominids, and in describing their Pleistocene cultural sequence. It is shown that archaeology has largely failed in this, and has instead sought to focus on the technological and skeletal evolution of humans. It can therefore only provide an inadequate empirical basis from which to speculate about the origins of symbolism. A more suitable basis is established by examining the limited available hard evidence for early symboling. It leads to the recognition of a significantly longer and slower development of semiotics during the Pleistocene than traditional archaeology can accommodate. The course begins by setting the scene, explaining first the archaeological and palaeoanthropological background of human evolution, then the contradictions and inconsistencies in this background and its significant shortcomings. It then resolves these by presenting the best available empirical evidence that a more carefully considered archaeology is capable of providing. Next the emerging model is related to the evidence provided by a variety of other disciplines, specifically those dealing with communication, animal behaviour, the operation of the human neural system, specifically the visual system, and the function of symbolic systems. From this emerges an attempt to present a theory of the cognitive and semiotic beginnings of human culture.

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#### **Lecture No. 1. The palaeoanthropological and archaeological context**

Before any aspect of human evolution can be considered in a meaningful fashion, the currently available evidence of the processes that are presumed to have led to the appearance of the only extant human species needs to be reviewed. This is attempted in the first lecture.

#### **Lecture No. 2. Short-range versus long-range theories**

The second lecture will present the two opposing models of human cognitive, cultural, technological and intellectual evolution and their relative merits. It will establish that the dominant model is in all probability false, and list the numerous reasons for this.

#### **Lecture No. 3. The evidence of paleoart**

The principal raw material in considering the evolution of cognition and symboling is provided by the phenomena that are collectively described as paleoart. This lecture offers a comprehensive review of all that is currently known in this respect.

#### **Lecture No. 4. Beads, symbolism and self-awareness**

The fourth lecture will focus on one specific category of archaeological finds that lend themselves to speculation about the social and cognitive abilities of early human societies, and about the existence of self-awareness in hominins.

#### **Lecture No. 5. The evidence of language origins**

This lecture will review the various strands of currently available but limited empirical evidence for the emergence of human language and speech, and the recent hypotheses seeking to explain the process responsible for this development.

#### Lecture No. 6. **Neurophysiology and palaeoart**

As research into cognition and brain functioning continues apace, the need to assimilate its findings in relation to palaeoart becomes imperative. This exciting new development is considered in the sixth lecture.

#### Lecture No. 7. **Towards a theory of cognitive origins**

In this lecture, we will begin to apply what we have learned about the cognitive evolution of hominins, to determine to what extent our limited knowledge about it could be applied to formulating a tentative theory. This will be accomplished by an application of epistemology to the perceived record, addressing particularly the philosophical dimension involved.

#### Lecture No. 8. **The evolution of symbolism**

The final lecture will address the difficult question of the beginnings of human symbolizing practices and their role in becoming human.

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#### **Aims of the Course**

This course is recommended for people who already possess a good understanding of Pleistocene archaeology. It has several interconnected aims. The first of these is to demonstrate that the existing dominant model of human evolution is not only inappropriate for exploring the subject of this course, it is also largely false. The second aim is to show that such complex issues should not be addressed with the traditional, single-discipline approach, and that a holistic approach embracing all relevant disciplines is required. Thirdly, this course aims to engage the most current empirical information we have of relevant archaeological evidence, the volume of which has increased exponentially since about 1990. It also draws on various other disciplines to help fill some of the huge gaps inherent in all archaeological data. The general aim of this course, however, is to show that human evolution was not a process dominated by physical changes. Humans are just one of hundreds of primate species of the past, and what has set them apart from all of them has little to do with skeletal changes or changes of size or bulk. The human species became human because of its extraordinary process of encephalization, which can only be explained in terms of the uses our oversized brain was applied to. In other words, human evolution is the story of the cognitive and symbolic developments selected for, and has very little to do with genetics, skeletal architecture or soft tissue (other than neural tissue). Even though this should have long been self-evident, it has been severely neglected by orthodox archaeology — a shortcoming this course aims to remedy.

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#### **Preliminary Reading**

The lectures will be heavily referenced, for the convenience of those who wish to pursue specific issues in much greater depth. Those who have only limited knowledge of Pleistocene archaeology would profit from preliminary reading of one or two of the numerous general works on that subject. I would not recommend any of them, in terms of veracity; most books on Pleistocene archaeology have significant shortcomings, primarily because they reify consensus views. It is easier to obtain sound information from one of the refereed journals on cognitive archaeology, by scanning them for relevant articles. *Current Anthropology*, *Cambridge Archaeological Journal* and *Rock Art Research* all contain published debates, which are very useful in finding information that is more balanced. One of the few books that, in some sense, addresses the issues dealt with in this course is T. Wynn's *The evolution of spatial competence*, University of Illinois Press, Urbana, 1989. Also useful would be M. Donald's *Origins of the modern mind: three stages in the evolution of culture and cognition*, Harvard University Press, Cambridge (MA), 1991.