

Citing Mithen (1996), Humphrey suggests that towards the end of the Ice Age, in human populations already widely dispersed across the globe, the internal walls previously blocking off the mind's modular components from one another at last fell away. Simultaneously — from Australia to Alaska, from sub-Saharan Africa to eastern Europe — humanity at this point saw the light. Rather more parsimonious is the major competing hypothesis, according to which a population ancestral to all contemporary humans emerged in Africa some 100,000 years ago already in possession of well-integrated minds and fully symbolic culture (Knight *et al.*, 1995; Power & Aiello, 1997). Evidence for the mining and treatment of red ochre can be discerned in southern Africa way back in the Middle Stone Age (Watts, 1998). An account identifying the origins of 'modern' linguistic and cognitive capacities with the emergence of anatomically modern *Homo sapiens* has the advantage of consistency with what is known about contemporary human genetic and linguistic diversity (Cavalli-Sforza *et al.*, 1994).

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The fundamental postulate of this article, of a formal similarity between the paintings of Chauvet and the drawings of Nadia, is compelling, and Humphrey's characteristically elegant prose forces a re-interpretation of prehistoric painting. The central theoretical problem is what these paintings tell of early human cognition.

Humphrey suggests the unknown Masters of Chauvet 'had distinctly pre-modern minds'. Does that make sense though? Their products indeed resemble the drawings of present-day savants, who typically have low intelligence and poor linguistic skills. But if lower intelligence and poor language are prerequisites, then surely such paintings would be expected over hundreds of thousands of years of early human evolution, when similar conditions applied. Instead these pictures appear late in human evolution (and similar pictures continue to be produced, albeit on paper). An alternative hypothesis is that these artists are not pre-modern but post-modern, in the sense that their specific skills required the prior existence of the modern mind. Occasional disruptions of normal cerebral architecture, perhaps for genetic reasons, could then produce savants (whose intelligence is indisputably human rather than an atavistic intellectual throwback). To use an analogy from the visual arts, when Marcel Duchamps exhibited a signed urinal as an *objet trouvé*, this was not pre-modern, in the sense that it required none of the accumulated technical skills of the visual arts, but was post-modern precisely in that it was built upon and could only be understood in the context of a society in which urinals were mass-produced, and objects were exhibited in art galleries. This work of art therefore immediately informs us about the 'state of mind' of the society from which the object was produced. The paintings of Chauvet may likewise tell us, indirectly, that at this time the modern mind had indeed evolved, even if the artists themselves may have been highly atypical examples of those minds. Why then only at occasional sites such as Chauvet? Perhaps merely because of the simultaneous low probabilities of suitable canvas and medium, of preservation, and genetic mutations.

On a more technical note, it is perhaps worth questioning whether the fact that Nadia is autistic is central to her drawing abilities (and autism is in the title of the arti-

cle). Undoubtedly many cases such as Nadia's have been autistic. The drawing skills of unselected autistics, however, show minimal differences from controls (Eames & Cox, 1994; Charman & Baron-Cohen, 1993; Lewis & Boucher, 1991), although non-graphically gifted autistics have problems in drawing imaginary and unreal objects (Scott & Baron-Cohen, 1996) and produce overlapping and fragmented human figures (Fein *et al.*, 1990), but are better at representing the third dimension (Golomb & Schmeling, 1996). Autistics with drawing talents do though have more flexible input-output routines (Hermelin *et al.*, 1994), and perhaps deficits in integrating global and local features (Mottron & Belleville, 1993). Overall it seems unlikely that the core symptomatology of autism is directly related to graphic ability, since most autistics, like most other humans (somewhat surprisingly: Snyder & Thomas, 1997) cannot draw very well. Perhaps what is needed is a general theory of artistic talent.