

BOOK REVIEW

Making sense of modern Darwinism

Sense and Nonsense: Evolutionary Perspectives on Human Behaviour

K Laland and G Brown

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Reviewed by KL Sifferd

Despite the high profile of evolutionary explanations of human behaviour, their status remains highly disputed. Are all evolutionary explanations of human behaviour sensational 'just so' stories, or is there a proper science of sociobiology? *Sense and Nonsense* provides an answer to this question by assessing the legitimacy of a range of evolutionary approaches to human behaviour.

Kevin Laland, a prominent researcher in animal behaviour, and Gillian Brown, a primatologist, begin by providing an excellent historical account of the application of evolutionary theory to human beings, from Darwin's *Origin of the Species* in 1859 (which mentions human evolution only in its final pages) to human ethology and sociobiology, which gained prominence in the 1960s and 1970s.

This historical review explains many of the rifts between modern evolutionary approaches to human behaviour. As one reviews Laland and Brown's careful assessment of human sociobiology, human behavioural ecology, evolutionary psychology, memetics and gene-culture evolution, it becomes clear that the differences between them can be largely explained by the different disciplines that researchers were located within. For example, evolutionary psychology uses the methods of hypothesis generation and data collection of psychology, and this is similarly the case with human behavioural ecology and ethology, and gene-culture evolution and genetics and mathematics. (Despite appearances, however, the authors conclude that the approaches are largely compatible).

Generally, the authors are honest in their portrayal of the different approaches and fair in their critique. In addition, the book is immensely accessible and well organised. The 'Key Concepts' and 'Further Reading' sections, and the table comparing the five approaches, were particularly helpful.

Yet there are two puzzling aspects of the book. First, Laland and Brown treat memetics on par with the other approaches. This seems strange given that the view they ascribe to the approach – that human behaviour

is largely the result of memes (cultural bits of information), and that evolved genetic predispositions have *nothing to do with* meme adoption – has very few proponents. (It may be that the authors were forced to formulate memetics in this way to distinguish it from other approaches. But the result is a view almost no one would believe.) Plus, memetics has not yet produced a research programme. As the authors note, '...memetics is not yet a science. Memetics is a social club in which Dawkins and Dennett fans put on their meme's-eye view goggles and entertain each other with fanciful evolutionary stories' (p 323). Given this, an entire chapter describing the approach seems unnecessary.

Second, the critical evaluation of evolutionary psychology – the most politically controversial of the four approaches – doesn't meet the high standards set by the rest of the book. Although the chapter names a long list of evolutionary psychologists doing good empirical work including Tooby and Cosmides, Gigerenzer, Daly and Wilson, Miller, and Nesse and Williams, the authors conclude the chapter by claiming that the discipline is 'marred' by studies that 'do nothing more than use a Pleistocene stereotype to contrive a "just so" story'. (p 195). But no substandard work is actually discussed, and so these general criticisms seem unwarranted.

Further, at one point Laland and Brown just plain misunderstand evolutionary psychology. The authors argue that the claim that the human mind was fashioned in the Pleistocene must 'at best' be only partly true, because if human beings were not at all adapted to the modern world 'we would not be able to exist' (p 181). But evolutionary psychology doesn't claim that all adaptations selected for in the Pleistocene must currently be *maladaptive*. Many problems solved in the Pleistocene (and before) are similar enough to those solved in the modern world for adaptations that solve those problems to still be adaptive. Examples might include the problems of seeing objects, recognising faces and cheats, and nursing infants.

In sum, however, Laland and Brown succeed in parsing sense from nonsense. And they show that while each approach discussed has its strength and weaknesses, taken together they form a well-developed science of evolutionary explanations of human behaviour.

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