

## The Quarterly Review of Biology

**THE APE THAT UNDERSTOOD THE UNIVERSE: HOW THE MIND AND CULTURE EVOLVE** By Steve Stewart-Williams. Cambridge: Cambridge University Press. \$27.99 (paper). xii + 350 p.; index. ISBN: 978-1-108-42504-9. 2018

--Manuscript Draft--

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<b>Article Type:</b>	Invited Book Review
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What explains the distinctive features of human behavior? In this book, Stewart-Williams aims to answer this ambitious question. This book is an engaging addition to the already long list of recent attempts to provide an evolutionary explanation of human uniqueness. It is organized into six chapters, plus two appendices. These chapters address several key topics in evolutionary theory, sex differences and sexual behavior, altruism, and cultural evolution, albeit with varying degrees of detail and depth. These topics include sexual selection, kin selection, Hamilton's rule, reciprocal altruism, costly signaling theory, group selection, gene-centered views of evolution, inclusive fitness, proximate and ultimate evolutionary explanations, inbreeding avoidance, the Westermarck effect, jealousy, sperm competition, mating and parenting effort, cumulative cultural evolution, imitation and learning biases, evolutionary mismatch theories, and more.

The volume opens with a thought experiment: How would an extraterrestrial scientist understand the peculiarities of human behavior? Answering this question is the aim of the book. Although there is little doubt that human behavior is different in important respects from other species, the motivation behind this question seems to be some form of human exceptionalism: "This book is about the strangest animal in the world – the animal that's reading these words and the animal that wrote them: the human animal." (p.1) Many comparative researchers will find this starting point somewhat problematic. We can claim to be the strangest or the weirdest creatures on earth only by projecting our own values onto nature.

Rather than aiming to offer a new evolutionary perspective on human nature, the author relies on different insights from evolutionary psychology and cultural evolutionary theory to carry out this endeavor. The book stands out, instead, for his overarching approach. Unlike any other book in the recent literature, *The Ape that Understood the Universe* relies on a robust commitment to a gene-centered view as a foundational approach to evolutionary theory. It also strongly advocates for a memetics approach to cultural evolution. In a nutshell, according to this view, natural selection operating on genes gives rise to gene machines, while natural selection operating on memes give rise to ideas and ideologies that transform human gene machines into meme machines.

Readers sympathetic towards the ideas of Richard Dawkins and Daniel Dennett will find it a stimulating book targeting a broad audience. However, this is not a book for all readers. It navigates a complicated niche of theories and ideas ('memes' in Stewart-Williams' words) that is currently dominated by authors such as Joseph Henrich (*The Secret of Our Success: How Culture Is Driving Human Evolution, Domesticating Our Species, and Making Us Smarter*. Princeton, NJ: Princeton University Press), Richard Boyd (*A Different Kind of Animal: How Culture Transformed Our Species*. Princeton, NJ: Princeton University Press, 2018), Cecilia Heyes (*Cognitive Gadgets: The Cultural Evolution of Thinking*. Cambridge, MA: The Belknap Press of Harvard University Press, 2018), and Michael Tomasello (*Becoming Human: A Theory of*

Ontogeny. Cambridge, MA: The Belknap Press of Harvard University Press, 2019). In this highly competitive world, *The Ape that Understood the Universe* does its best to survive and replicate at a time where gene-centered views of evolution and memetic accounts of culture are under fire, if not completely dismissed.

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