Two Book Reviews in One of 'Figments of Reality' & 'As We Know It'

David L. Wilson

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FIGMENTS OF REALITY: THE EVOLUTION OF THE CURIOUS MIND.

By Ian Stewart and Jack Cohen. Cambridge and New York: Cambridge University Press. \$24.95 (hardcover); \$16.95 (paper). xiii + 325 p; ill.; index. ISBN: 0-521-57155-3 (hc); 0-521-66383-0 (pb). [Originally published in 1997. First paperback edition published in 1999.] 1999.

AS WE KNOW IT: COMING TO TERMS WITH AN EVOLVED MIND. By *Marek Kohn. London: Granta Books.* £17.99. x + 326 p; index. ISBN: 1-86207-025-3. 1999.

Stewart and Cohen have written a wonderful book about how mind has evolved through brains grappling with complex environments. It was originally published in 1997, and a less expensive paperback version just appeared. The book is an entertaining work of art, written with humor about difficult subjects. The authors do not hesitate to draw on science fiction for insights, or to invent new words, or meanings of words, to express difficult concepts. For example, "complicity" expresses the process of two complex systems interacting by way of mutual feedbacks, so that both evolve together. Complicity is their model for the way that mind and culture coevolved.

What contributes to the persuasiveness of the authors is their wide-ranging knowledge. They are able to take reductionist perspectives, as well as more generalist viewpoints, and emphasize the need for different approaches to fully understand mind and consciousness. Although criticizing those who promote only a reductionist view of life and consciousness, they are able to recognize the usefulness of the approach. At times the authors appear a bit overconfident that they have all the answers (or reasons why there aren't answers) to problems of mind and consciousness, but they certainly make a strong case for maintaining multiple perspectives and approaches to the problem of what humans are all about.

Marek Kohn's book examines Darwinian perspectives in archaeology and anthropology. He explores the strengths and limits of evolutionary psychology in understanding how humans came to be. Kohn makes it clear that many in the social sciences, struggling against old biases against evolutionary explanations, are still coming to grips with the fact that the mind evolved. He does a goodjob of blending knowledge from animal behavior, archaeology, and anthropology. Many hypotheses about hominid history and mental evolution remain speculative because of limited data. The temptation is to stretch each fact into a story. Kohn points to the litter of no longer believed stories in these social sciences, but that does not stop him from creating or championing a few speculations of his own. Kohn uses data about hand axes to produce a model of the minds of the ancient hominids that made them. Among his conclusions is that the million-year-long history of hand axe production was strongly influenced by sexual selection.

Kohn contrasts the violent, male-dominant chimpanzee society with a more egalitarian and sex-oriented bonobo society, and uses the contrast as evidence for humans having social options. More recent evidence suggests, however, that some of the differences between chimp and bonobo behavior in the wild may not be as great as the earlier studies of bonobos, mostly done on captive populations, would indicate. In his last couple of chapters, Kohn tries to make the case that the introduction of evolutionary thinking in the social sciences need not play into the hands of political conservatives, and that those on the left can point to evidence that cooperation and equality may contribute to healthier societies. For science, the question is whether evolutionary thinking will provide better theories, independent of tests of political correctness.

There are many contrasts that could be drawn between these two books on the evolution of human minds. Stewart and Cohen take a natural sciences approach, while Kohn is focused on the social sciences. Consider their treatment of the issue of free will in humans: Stewart and Cohen leave one with an understanding of how the feeling of freedom of choice arises in a largely deterministic world, while Kohn writes of free choice opposing the idea of determinism, without any deep insight. But, contrasting these two books is a bit unfair. Kohn has written a good book with insights into the history and prehistory of *Homo sapiens*. The book by Stewart and Cohen simultaneously entertained and enlightened me more than any other book I have recently read.

DAVID L WILSON, Biology, University of Miami, Coral Gables, Florida

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