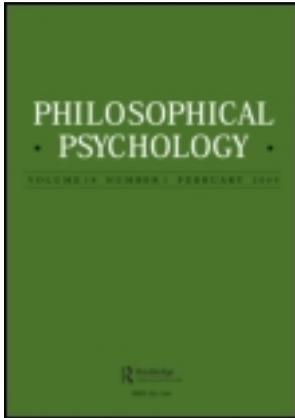


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Evolution and Human Behavior: Darwinian Perspectives on Human Nature

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Book review

Evolution and Human Behavior: Darwinian Perspectives on Human Nature

John Cartwright

Cambridge, MA: MIT Press, 2008

448 pages, ISBN: 0262533049 (pbk); \$36.00

John Cartwright's book provides a valuable introduction to the field of evolutionary psychology. The breadth of the book makes it ideal reading for those looking to acquire a general understanding of the richness and diversity of the field. Moreover, readers familiar with some of the scientific and philosophical controversies surrounding evolutionary psychology will appreciate Cartwright's evenhanded and patient exposition of the scientific basis of evolutionary psychology.

The book is organized into three broad sections, which are themselves subdivided into seven parts. The first section, comprising roughly the first third of the book, provides an introduction to the disciplinary history of evolutionary psychology, a general introduction to the basics of evolutionary theory, and a survey some of the best available scientific theories describing the evolution of *Homo sapiens*. The second—and by far the richest and most interesting—section contains discussions of the theories advanced by evolutionary psychologists, intended to explain, inter alia, the architecture of the mind, cooperation and conflict in humans, mate choice, and mental disorders. The final, shorter section enters more speculative ground, as Cartwright discusses a number of recent attempts to provide evolutionary treatments of human culture and ethics.

Cartwright introduces evolutionary psychology as a research strategy that, by explicitly adopting an evolutionary approach that attempts to “Darwinize” human nature, may have the potential to finally unify psychology into a single scientific paradigm. Cartwright concedes that, so far, results have been mixed. He writes that at present, “it is probably fair to say that the evolutionary approach has not yet unified psychology in the way its protagonists hoped it would, and mainstream psychology remains in a state of... ‘conceptual pluralism’” (p. 26). Still, as Kuhn noted, textbooks are one of the primary ways in which a paradigm stabilizes itself and allows normal science to proceed. If evolutionary psychology is to become the dominant approach in psychology, it will most likely require textbooks like Cartwright's.

So, what then is the evolutionary approach? Different evolutionary psychologists offer slightly different answers to what, in detail, this approach consists in, other than an attempt to apply “Darwinian reasoning” to human nature (pp. 71–91). But one of the strengths of Cartwright’s book is that his presentation of the various different research projects that are currently at the center of evolutionary psychology serves to reveal the existence of a fairly broad methodological consensus. The basic methodology of evolutionary psychology seems to be this: for some human phenotypic trait (usually a behavior), generate both a proximate explanation and an ultimate explanation of the trait (pp. 89–90). A proximate explanation of the trait specifies “the physiological mechanisms” (i.e., developmental pathways, neurological structures, outcomes of learning routines, etc.) that are responsible for producing the trait at the individual level (p. 89). An ultimate explanation of the trait identifies the evolutionary mechanism (usually a specific kind of selection, but also potentially referring to forces such as genetic drift, migration, etc.) that is responsible for stabilizing the trait in the environment of evolutionary adaptedness, or EEA (p. 89). The EEA is the period in the evolutionary history of a particular species during which the forces of natural selection operated to produce many of the characteristic traits of that species. The human EEA is usually taken to coincide with the start of the Pleistocene, and Cartwright indicates that it was the period “during which the mind and body plans of humans were shaped and laid down by natural selection to solve survival problems operating then” (p. 378). Once an ultimate explanation and a proximate explanation of a particular trait has been produced, then evolutionary psychologists attempt to produce evidence intended to confirmation that the hypothesized ultimate and proximate explanations for the trait in question are correct. One has successfully “Darwinized” the relevant trait or behavior once there is compelling scientific evidence favoring a particular pair of proximate and ultimate explanations for the trait/behavior.

The bulk of the middle section of Cartwright’s book is composed of an eminently readable account of different hypotheses concerning the proximate and ultimate mechanisms responsible for a variety of human traits and behaviors. One of the most interesting lessons that emerges from this discussion is that evolutionary psychologists—and, notably, their critics—routinely have no trouble identifying multiple scientifically plausible proximate and ultimate explanations for any one of the various aspects of human nature that they are interested in explaining. Cartwright’s discussion of Wilson and Daly’s work on child abuse provides a good illustration of this point. Daly and Wilson found that a young child’s risk of suffering abuse or homicide was higher when living in a family with one step-parent than when live with both “biological” parents, and they offer the following proximate explanation of this finding.

Child-rearing is a costly, prolonged undertaking. A parental psychology shaped by natural selection is therefore unlikely to be indiscriminate. Rather, we should expect parental feeling to vary as a function of the prospective fitness value of the child in question to the parent . . . We thus expect feeling to be more readily and profoundly established with [their] own offspring than in cases where the parent

offspring relationship is artificial. When people are called upon to fill parental roles toward unrelated children, we may anticipate an elevated risk of lapses of parental solicitude. (Daly & Wilson, 1985, p. 197)

Cartwright notes, however, that Daly and Wilson's initial findings do not rule out other alternative proximate explanations (p. 220). These alternative explanations include, for instance, the hypothesis that parents will become more easily annoyed with step-children than biological children, since they will usually have spent more time bonding with their own biological children than with any step-children who come into their care; or the hypothesis that step-children may be less tempered when interacting with a new care-giver who is replacing the role of a previous caregiver with whom the child had already formed a bond. Until these alternative theories are scientifically disconfirmed, it is premature to conclude that Daly and Wilson have correctly described the proximate mechanisms responsible for the cluster of child-abuse behaviors they are interested in explaining.

What emerges from Cartwright's discussion is the impression that most evolutionary psychologists only seriously consider proximate explanations which posit relatively innate and relatively non-malleable psychological faculties. They also prefer ultimate explanations which refer to selective forces. However, what seems to be systematically overlooked is the real possibility that, for nearly all of the behaviors of interest to evolutionary psychologists, if these behaviors occurred in the EEA for humans, there are plausible proximate explanations of these behaviors in the EEA that *do not* posit innate and relatively non-malleable psychological faculties. To wit, frustration will work just as well as a plausible proximate explanation of some instance of child abuse both within and outside of the EEA. Importantly, natural selection won't normally care about what proximate mechanisms are responsible for causing the relevant adaptive behaviors—it will operate all the same whether or not the adaptive behaviors in question are caused by learned or innate psychological mechanisms. So, the preference for proximate explanations that posit innate and relatively non-malleable psychological faculties seems hard to justify, at least *prima facie*, on the basis of general evolutionary considerations. But it also seems at odds with more specific scientific developments; see in particular the emerging interest in social learning and behavioral plasticity in behavioral ecology (West-Eberhard, 2003). It would therefore be worthwhile for any future editions of Cartwright's textbook to clarify the grounds for evolutionary psychology's preference for innate and non-malleable psychological faculties.

There are two other, smaller, critical points that I'd like to make. First, many philosophers of science will notice the absence of any serious discussion of the scientific and philosophical criticisms of evolutionary psychology that have been pressed against the field over the last three decades (see, e.g., Silvers, 2007). While I don't think that this omission is intentional or reflects some kind of hidden bias, it is nonetheless odd given that Cartwright says that he has a "strong conviction" that "science has a history and a philosophy worthy of study and does not take place in social isolation" (p. xxiv). Cartwright has the nice ability to clearly and charitably

describe the basics of views that he does not agree with; it would be nice if future editions remedied this oversight.

Second, the penultimate chapter of the textbook wades head-on into meta-ethics, where Cartwright attempts to explain what a properly “naturalistic ethics” should look like. Cartwright ends up endorsing a kind of Humean approach as the position favored by people of a “Darwinian” persuasion. Unfortunately, his discussion of a variety of ethical and meta-ethical concepts and distinctions—such as the fact–value dichotomy—is appreciably crude, especially when compared to the sophistication of the preceding chapters. Even worse, Cartwright fails completely to mention, let alone present, the views of any of the most influential contemporary ethical naturalists (e.g., Blackburn, 1998; Gibbard, 1990; Sturgeon, 2006), nearly all of whom are in some sense or another signed-up Darwinians. This is a very unfortunate oversight that, as with the others I have mentioned, I hope will be corrected in future editions.

In sum, though, this is a very good textbook that will serve as an excellent introduction to evolutionary psychology for students in both philosophy and science. It was a pleasure to read.

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