

## Evolutionary Psychology

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### Book Review

#### The Evolution of the Evolution of Human Behavior

A review of Agustin Fuentes, *Evolution of Human Behavior*. Oxford University Press, New York, 2009. 300 pp., US\$39.95, ISBN 978-0-19-5333358-9 (paperback).

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Evolutionary approaches to human behavior have their own intellectual trajectory. Fuentes' book synthesizes a battery of historical approaches to the evolution of human behavior, including ones capitalizing on the latest interdisciplinary evolutionary theory. These are the great strengths of this book, and the reasons why it may have an impact. On the other hand, there are also major weaknesses. In a number of patches, laundry lists of ideas take the place of data and people. Sometimes the people get lost in evolutionary concepts.

The aim of *Evolution of Human Behavior*, as proclaimed in the preface, is to non-dogmatically present an integrative approach to the evolution of human behavior. It succeeds admirably. Here, a reader can find one of the most succinct, clear and current accounts of evolutionary approaches to human behavior. Following a brief Chapter 1 (The Relevance of Understanding Human Behavioral Evolution), we take a tour in Chapter 2 (Why We Behave Like Humans: Historical Perspectives and Basal Assumptions) from Darwin to Dawkins (Fuentes' phrase) along the intellectual path of deciphering human behavior. This is a concise, pointed historical overview. Stopping points include The Modern Synthesis, Washburn's New Physical Anthropology, and Trivers' theory of Reciprocal Altruism. Like much of the writing throughout, this chapter is accessible yet uncompromising in its explanation of complex topics.

Chapter 3 (Modern Perspectives for Understanding Human Behavioral Evolution: A Review of Basic Assumptions, Structures, and Practice) presents brief synopses and illustrative cases for five different approaches. As detailed in the text and in a summary table, each of these provides a different way of getting at our behavioral evolution, but all share an emphasis on adaptive frameworks. Quickly touching on "Basal Sociobiology," the chapter then covers in turn the central tenets, typical data sets, and so forth of Human Behavioral Ecology, Evolutionary Psychology, Dual Inheritance Theory, and Memetics. The comparison of these approaches is succinct and clear. The examples illustrating the approaches also put some data on them—Human Behavioral Ecology illuminated with

discussion of costly signaling theory and hunting, and Evolutionary Psychology with David Schmitt's International Sexuality Description Project data from his target article in *Behavioral and Brain Sciences*. A reader seeking a primer on these perspectives can find it here.

Chapter 4 (Basic Bones and Stones: What Do We Know About the Record of Human Evolution (as of 2008)) covers comparative primate social behavior and the fossil and archaeological record of hominin lifeways. There is nothing new in this chapter that could not be found in an introductory biological anthropology text. Yet the inclusion of this material in a text of this type serves several important roles: helping ground our evolutionary past in our shared (homologous) legacies with our primate cousins, and specifying some of the derived evolutionary specifics since we last shared a common ancestor with chimpanzees and bonobos. As Fuentes reminds us early in this book, this was the type of evolutionary approach Darwin himself took, grounding our evolution in the wider context of life (e.g., mammalian homologies) and respectful of our uniqueness (e.g., moral instincts).

Chapters 5 (A Survey of Hypotheses and Proposals of Why We Behave Like Humans) and 6 (Discussing the Proposals) are built around a set of 38 proposals meant to capture why we behave as we do. Fuentes identifies some commonalities among these proposals, which he boils down to six categories: Cooperation, Conflict, Food, Environmental and Ecological Pressures, Sex and Reproduction, and Specific Behavioral Factors. As an illustration of one of these proposals—"The mating mind"—he gives the main citation (Geoffrey Miller's book of that title), a summary of the idea, and the main points of it. A lengthy set of six tables covering 11 pages suggests the kinds of themes, such as conflict, underlying each proposal. These are the chapters of the laundry lists. One idea after another after another. But why?

Many books focusing on human behavior break down the broad subject into topics treated separately across sections, if not chapters. Chapters on mating, aggression, language and the like provide ways to conceptually link a wider set of ideas and data into smaller chunks that can be clearly folded back into the wider project of understanding human behavior. The sequence of these—such as tackling sex differences in behavior, followed by mating, followed by childcare, and so forth, often have a sensible progression. I did not find that this 38-proposal format functioned similarly. Instead, it felt like a barrage of ideas were haphazardly thrown into the air, with some suggestions for how they were intertwined, without making sense of the interconnections among them. The result is painful.

Chapter 7, however, (Twenty-First Century Evolutionary Theory/Biology and Thinking about the Evolution of Human Behavior) cleanses any wounds from the previous two chapters. It pulls together some concepts long-lingering in an evolutionary mindset, and other more recent arrivals, to show how they collectively advance contemporary evolutionary theory. Here, we begin with Jablonka and Lamb's (2005) four dimensions of evolution, a rejoinder that inheritance is not equivalent to genes but rather genes and epigenetics and behavior and symbolic elements. We revisit Tinbergen's four biological questions, using ontogeny as a window into broader discussions of phenotypic plasticity, developmental systems theory, niche construction, and biocultural approaches. A summary table reveals the key elements of these perspectives. Within this chapter one finds, clearly and succinctly summarized, many of the most recent concepts helping spur exciting and

integrative approaches to human behavior. This is a wonderful place to find these concepts accessibly explained. They show how theory itself remains lively, itself evolving.

Chapter 8 (A Synthesis and Prospectus for Examining Human Behavioral Evolution) begins strong, but twists back into list after list of ideas (revisiting the 38 proposals from earlier). Starting with seven modest proposals for characterizing human evolutionary behavioral trends and underlying concepts, Fuentes makes a good case for assertions such as “Niche construction is a core factor in human behavioral evolution” and “Feedback rather than linear models are central in human behavioral evolution.” These proposals help illustrate the application of contemporary evolutionary thinking that differ from the days of yore (such as during the “Modern Synthesis” of the 1930s).

Then we begin the recount of proposals, this time updated with further reflections. For example, under “Food Sharing—Hunting,” we are given fossil and comparative data, paradigmatic views of the topic (e.g., how Evolutionary Psychology would approach this topic), Fuentes’ thoughts, and comments on Testability. There are some nuggets of interest in these sections but I was left with the overall sentiment, once again, of a poorly integrated list of ideas. This after-taste is partly removed with Chapter 9 (Problem of Being a Modern Human and Looking at Our Evolution) and a brief Epilogue.

So where does this treatment of the evolution of human behavior leave us? The book’s strength is its accessible yet rigorous intellectual synthesis of various approaches to the evolution of human behavior. A number of ideas floating in the literature, at conferences, and within scholars’ heads are concisely and clearly represented in this book. Some of the theoretical directions that evolutionary approaches are likely to take can also be found here.

But *Evolution of Human Behavior* does a lackluster job of revealing actual human behavior. Where are the people rather than just the ideas of people? Where are the data revealing patterns in our behavior? Where are the figures enabling a reader to see patterns in a data set, including sample sizes, along with more context on the methods used to generate the data? There are no images of people in this book, and only a few black and white images of a few nonhuman primates. The result is that human behavior literally is hard to visualize in this book. It succeeds as a conceptual guide to understanding human behavior, but fails in its presentation of the richer body of studies informing this understanding. A major reason for this failure, I think, is the use of a laundry list of ideas approach to human behavior. An alternative organization could have shown data from experimental psychology studies, quantitative cross-cultural comparisons, or ethnographic case materials integrated under a given topic. That would have fleshed out the ideas with data, and breathed life into the theory.

The missing details of human behavior affect the audience likely to find this book interesting or suitable. Active scholars, advanced undergraduate students, and graduate students already conversant with leading studies (e.g., Buss’ foundational 37 culture study, cross-cultural infanticide comparisons, experimental manipulations of facial features to test effects on attractiveness) may not need specifics of these studies in a text like this. Notably, the book jacket contends that this text is “student-friendly” and “ideal for courses in the evolution of human behavior”; this may have been added by the publisher and not accurately reflecting Fuentes’ own goal. Either way, an introductory anthropology, psychology, or related student audience would likely find the book too thick on theory and too thin on actual studies/data/specifics/visuals of human behavior.

The limited data given in this book are also surprising in certain respects. The recurrent reference to comparative primate behavior (e.g., examples of cooperation or conflict) and details of the hominin fossil and archaeological record are welcomed heartily into the explanatory fold. These are types of data sparsely, if at all, incorporated into other texts addressing the evolution of human behavior. However, there is virtually no genetic or neuroendocrine evidence to speak of in the present book. Despite the explosive findings in genetics and genomics, there is no mention of the inferences one might draw, reconstructing the evolution of human behavior. As one illustration, comparisons between human and chimpanzee genomes (see Bradley, 2008) reveal that relatively few genes have been favored by natural selection since we last shared a common ancestor. Yet of those genes implicated, they serve several common functions with behavioral significance: in audition (speech), spermatogenesis (evolving arms race between male and female gametes, changes in mating patterns) and immune function (encountering novel arrays of pathogens, in part due to niche construction).

Moreover, neuroanatomists (see Rilling, 2008), converging with the latest genetic data, show us that the main differences between the brains of humans and other apes appear to reflect tinkering with development (and gene regulation) rather than addition of new molecules or new structures; the result is an explosion in possibilities for cognitive association. Why not incorporate these kinds of highly relevant data into the story of our behavioral evolution?

In summary, Fuentes' book has both major pluses and major drawbacks. It will marvelously serve the reader seeking a sophisticated, yet accessible overview of adaptive frameworks guiding our understanding of human behavior. On the other hand, readers wanting that story along with more details as to the empirical findings on which this story rests will be better served by other books, such as Buss (2005). *Evolution of Human Behavior* gives us the conceptual outline of the evolution of human behavior, but not enough of the grubby details.

## **References**

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