

Sociobiology and Evolutionary Psychology: Darwinism and Dogma

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ABSTRACT

This article converses evolutionary approaches to the study of human minds. Individual are evolved organisms. Thus, studying the evolutionary process helps us to understand human behavior. This assumes that a mechanistic explanation of every aspect of human behavior is possible and human minds are collections of apparatus. These apparatus are supposed to be physically implemented. It is indicated in this article that in the relationship between the mind of current humans and the evolutionary process, evolution has generated only a small set of basic innate mental abilities in humans. According to Wilson much human actions are genetic adaptations and environmental variation affects behavioural adaptations. According to Tooby and Cosmides psychosomatic apparatus produce different behavioural outputs in response to different inputs from experience. Thus even if there are some behavioural differences between populations that have an inherited origin, most of the variation is at the population level.

1. Introduction

A number of scientists argue that biology has much greater scope of application than previously thought, and they are ready to apply evolutionary theory (and other theories of biology) to all aspects of human existence, and to develop a new Darwinian social and human science. They hold that evolutionary biology can yield profound consequences for our understanding of human thought and behavior. This research program used to be called socio-biology but since the 1980s it often has been called evolutionary psychology. It is a disputed question whether socio-biology and evolutionary psychology are basically the same, or two different research programs in biology. What they do have in common is that both attempt to demonstrate the impact of biological evolution on the human mind, behavior, and culture, including the phenomena of dogma. Evolutionary psychology seeks to apply theories of evolutionary biology in order to understand human psychology. The basic strategy is to link evolutionary biology to psychology and psychology to culture. The working hypothesis is that operating beneath the surface of cultural variation is a human mind which contains universal, psychosomatic apparatus or species-typical information-processing programs which evolved in the Pleistocene period to solve adaptive problems regularly faced by our hunter-gatherer ancestors—problems that directly or indirectly affected reproduction, such as finding mates, or problems of protecting offspring, fleeing predators, communicating, and cooperating. The core idea is that if we want to understand culture, including dogma, the best way to do this is to understand first that humans are not born with empty minds, a tabula rasa, or blank slate, which can be inscribed at will by society or individuals, but creatures whose minds are partly hardwired at birth. This hardwiring probably underlies many human universals, that is, forms of behavior and psychosomatic characteristics shared by people in all cultures, such as incest avoidance, feelings of guilt, sex-role differences, and religious mythmaking. There is an inherent human nature driving human events, but it is shaped to cope with Pleistocene conditions rather than modern conditions.

Few scholars would dispute that human beings have evolved out of nature. It is also very probable that the main cause of evolutionary change is natural selection. But how much and how far natural selection has affected and shaped human thinking, behavior, and institutions is the subject of a very heated debate. The defenders of evolutionary psychology say that people have seriously underestimated the extent to which natural selection has shaped human thought and behavior; the critics claim that it is easy to overstate the extent to which evolutionary theory can give us detailed insights into human nature.

It might therefore be helpful to think about a scale of views about the appropriate application of evolutionary theory to humans, or about how much that can successfully be explained in Darwinian terms. We could then at least distinguish between:

Anti-Darwinists, who maintain the evolutionary explanations, are invalid when it comes to the explanation of both nature and culture.

Non-Darwinists who maintain the evolutionary—in contrast to cultural—explanations can tell us very little or perhaps nothing about human thought, behavior, and society.

Moderate Darwinists who maintain the evolutionary explanations can tell us important things about human thought, behavior, and society, and must therefore be treated as a supplement to and a possible correction to cultural explanations.

Ultra-Darwinists who maintain the evolutionary—in contrast to cultural—explanations can tell us very much or perhaps everything we need to know about human thought, behavior, and society.

We here have a continuum, and thus there are no clear lines of demarcation between these four views. Creationists

exemplify the first extreme, and at the other end of the scale are people such as Daniel C. Dennett, who in Darwin's Dangerous Idea (1995) maintains that Darwin's dangerous idea (evolution by natural selection) bears "an unmistakable likeness to universal acid: it eats through just about every traditional concept, and leaves in its wake a revolutionized worldview, with most of the old landmarks still recognizable, but transformed in fundamental ways" (p. 63). Evolutionary psychologists belong more or less to the ultra-Darwinian camp. Anthropologists, sociologists, and scholars of dogma, on the other hand, typically could be classified as non-Darwinians. Evolutionary psychologists have called their view the "standard social science model" and maintained that the understanding of the human mind present in this model—as basically passive, as a basin into which the local culture is gradually poured—has distorted the study of human beings and culture.

The crucial difference is that non-Darwinists (or standard social scientists) believe that we have now evolved to a state of being so much creatures of our culture that our evolutionary origins can tell us little or nothing about what we are now, whereas ultra-Darwinists (or Darwinian social scientists) think that an understanding of the evolutionary process that made us what we are is essential—it provides the key—for understanding who we are and why we behave and think the way we do.

This difference can be illustrated by focusing on, for instance, male polygynous behavior—men wanting to have sex with a lot of women. A non-Darwinian explanation of male philandering understands it as rooted in particular cultural backgrounds, which implies that in a different kind of cultural situation the behavior would not exist. A Darwinian explanation understands this kind of predisposition as hardwired into the male psyche, which implies that male polygynous behavior would likely manifest it no matter what the cultural environment was like: it is genetically hardwired because such behavior increased the reproductive success of males (but not of females) in the environment in which the male psyche evolved. How strong this male polygynous predisposition (or any other human psychosomatic trait) is supposed to be is a point on which evolutionary psychologists disagree. Although they predict that most men would have a predisposition to philander, they might hold different views about whether males could control this desire fairly easily, or whether it is like hunger—something that must be fulfilled.

Moreover, the strength of the psychosomatic apparatus in males for philandering does not have to be the same for all males. Various aspects of our character are deep in our genes, but they can vary between individuals. The extent to which a male philanders depends not only on the strength of this Predisposition in the individual, but also on the social environment he inhabits, the prevailing social conventions, his attachment to his partner, and his religious beliefs.

Evolutionary psychologists, consequently, do not deny that the environment or culture as well as genetic factors play roles in determining human thought and behavior. The weaker the psychosomatic trait is, the more space there is for cultural influence to shape human thought and behavior. But changes

in society and human behavior could be very difficult and take a very long time if Darwinians are right. Given that (1) human genes change very slowly, and (2) the human brain is genetically hardwired to have a certain content, that is, particular species-specific psychosomatic apparatus that cause thought and behavior, it follows that (3) humans are actually adapted for living a life of the late Stone Age, because that is the historical period in which our genes and psychosomatic apparatus were formed, and consequently (4) we cannot with great success change certain things in human society, because in general, biological forces cannot be manipulated as easily as cultural forces. The last implication provides the breeding ground for the politically sensitive debate about any biological explanation of human behavior. Evolutionary psychology can have profound social, political, and religious implications.

2. Evolutionary Psychology of Dogma

Dogma constitutes a great challenge to evolutionary biology, because dogma is one of the major categories of behavior undeniably unique to the human species. Whereas in morality we can find some similarities between animal behavior and moral behavior (for instance, in respect to reciprocal cooperation), this is not true when it comes to religious behavior. There exist no prayers, religious rituals, or beliefs in God or gods among members of other species living on this planet.

The standard Darwinian explanation of the existence of dogma is that dogma emerged and spread because it secured the reproductive success of those of our distant ancestors who embraced it. Tribes who developed religious beliefs, myths, and rituals had a better chance of surviving and reproducing than those tribes who failed to do so. Above all they congeal identity. Religious practice provided these individuals living in a harsh and dangerous environment with unquestioned membership in a group claiming great powers, and by this means gave them a driving purpose in life compatible with their self-interest. The beliefs, myths, rituals, and the institutional structures of different dogmas may differ greatly, but this is not crucial, because the function of all dogmas is ultimately the same—to protect the genes and secure the fitness of the individuals. The standard explanation of why dogma is selectively advantageous is because it justifies and reinforces moral precepts. Dogma indirectly, and morality directly, secured the genetic fitness of our distant ancestors, and for *Homo sapiens*, it continues to do so today. In fact, the most radical ultra-Darwinians hold that everything in culture serves the reproductive success of individuals and, ultimately, the success of their genes. Natural selection regulates everything of any importance in both nature and culture.

Some scientists such as Edward O. Wilson have concluded from the fact that dogma is selectively advantageous that dogma is probably an ineradicable part of human nature whose sources run much deeper than those of ordinary habits. Therefore, if people want to abandon traditional dogmas, they need to find a replacement. Wilson's controversial suggestion is that perhaps science can become our new dogma—a secular dogma he calls "scientific naturalism." Others, such as Scott Atran, deny the existence of

a genetic religious inclination and maintain that humans merely have the capacity to become religious. This difference of opinion arises from the fact that Atran claims that religiosity is not an adaptation and has no evolutionary function as such. Another alternative evolutionary explanation of dogma holds that dogmas are a by-product of natural selection rather than a direct adaptation. Dogma is not directly promoted by natural selection, but merely made possible by other features of the human organism, which gives it a survival advantage. Human intelligence, for instance, is an adaptation, but science is not; science is rather a by-product of a big brain.

This second explanation of dogma (and of other cultural phenomena) is of course something non-Darwinians also accept. The crucial difference, however, is that evolutionary psychologists maintain moreover that natural selection has framed universal human psychosomatic apparatus, stemming from our long-enduring existence as hunter-gatherers, which impose a particular substantive content on culture, or in this case, on religious representation. Consequently, evolutionary psychologists use evolutionary theory not only to explain why and when dogma arises but also to explain recurrent patterns in religious thought and behavior. For instance, Pascal Boyer maintains that ideas about gods, spirits, and ghosts pervade dogmas because humans are endowed with species-typical psychosomatic apparatus which evolved in the Stone Age for reasoning about the behavior of human agents. It is because of these structural developments of the brain that ideas about supernatural agencies became and continue to be culturally widespread. Evolution by natural selection gave us a particular kind of mind so that only particular kinds of religious notions can be acquired.

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3. Criticism of Evolutionary Psychology

Evolutionary psychology is still in its early phase, and any well-grounded verdict about its fruitfulness and adequacy when it comes to understanding dogma will have to wait for its further development.

Nevertheless, a variety of critical responses against evolutionary psychology have emerged from biologists such as Stephen Jay Gould and Richard Lewontin, philosophers such as Holmes Rolston and Mikael Stenmark, and dogmaists such as John Bowker and Keith Ward. Their charges include that evolutionary psychology—in some or all of its versions—contains a naturalist-atheistic bias; that it presupposes scientism (the idea that all genuine knowledge is to be found through science and science alone); that it is self-refuting; that it is un-rigorous (data are skimpy); that it neglects alternative hypotheses; that it does not take seriously the fact that there are many alternative evolutionary forces besides direct adaptation that affect the establishment of characters; and that it fails to explain religious missionary activity, which helps to ensure the replication of genes unlike the missionaries' own.

Although it would be undeniably interesting to reach a general verdict about the prospect of evolutionary psychology, it is important to consider its merits and demerits on a case-by-case basis. Perhaps some elements of religious thought and behavior can best be explained in Darwinian terms, whereas others require instead cultural explanations. We should not accept evolutionary psychology because it is sometimes correct, nor should we reject it because it is sometimes mistaken. The future will tell whether evolutionary psychology will be of great or minor importance for the study of dogma.