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Book Reviews

view and small series of sections. For example, there is a

Moral Origins: The Evolution of Virtue, Altruism, and Shame. By Christopher Boehm. 432 pp. New York, NY: Basic Books (Perseus Books Group). 2012. $28.99 (cloth).

In *Moral Origins: The Evolution of Virtue, Altruism, and Shame*, Christopher Boehm systematically develops the idea that human societies are what they are today thanks to group members enforcing moral behaviors and social rules on each other. Social punishment ultimately shaped the group's survival, he argues, and resulted in advantageous evolutionary strategies that foster conscience and altruism. Acts such as cheating, stealing, or killing were dealt with systematically early in the dawn of *Homo sapiens* through the use of shame, ostracism, and other punitive actions, and our current reluctance, or fear, to engage in immoral acts all stem from adaptive genetic inheritance of "social self controls." Keeping anger and hostility under wraps, avoiding social ostracism because of the great emotional pain involved, avoiding rejection, avoiding exploiting of others, are all parts of beneficial social living.

The biological advantage of imposing rules of behavior, in the first place, is that groups survive better than single individuals. The rules that encourage sharing make groups cohesive. Wars are fought and won better when altruism is in place, for example. Culture develops, knowledge is passed from one generation to the next, and innovations improve life expectancies, and so on. However, the price of all of this is that members subjugate their selfish needs and impulses to the group's rules of conduct. Over many thousands of years, the number mentioned in the book is at least 45,000 years, punitive actions of the group applied to those who deviate has resulted in "social selection," as Boehm calls this evolutionary force. The principle reason the strategy has had lasting effects on society is our inherited genes. Those who possess them get along with other members and a society with large gene pools expressing social compliance flourishes.

How successful has this social selection been compared to sexual selection or natural selection? The answer would have to be no, it has not been as effective. We need but read today's news headlines to know it has not. Countless societies throughout the world are replete with single individuals killing fellow human beings, cheaters ranging in age from the very young to the very old, independently of level of formal education and political affiliation or position. The extent of amoral behavior seems to know no bounds—elected democratic governments, unelected despotic regimes, lower and higher educational systems, and economic institutions. Indeed, the degree of unchecked selfish cunning has been recorded in ancient texts (e.g., the old testament). One wonders which socially related genes have been transmitted through the generations. Why is social selection not as effective as the other adaptive evolutionary strategies? One simple answer is that perhaps it has not been around long enough. Millions of years are needed to select out the deviants, that is, the gene pool still includes those who are not capable of having a conscience, altruism, and good social virtues. Give it time (how much?) and social selection will work, those in favor would say, possibly.

The assumption that Boehm makes is that modern human society began 45,000 years ago when abundant artistic depictions, skillful ornaments, inventive tools and weapons, and elaborate burials all made their appearance in Western Europe. But this date is far from being etched in stone. Archaeologists, anthropologists, and scholars in related fields acknowledge that the antecedents for modern behavior began much earlier and can even be traced to at least 200,000 if not earlier (McBrearty, 2007). Evidence for human group sharing and for sophisticated cognitive modernity, even if not so voluminous, has been around for a very long time, and probably originated in Africa. In evolution, nothing begins one bright day, not even behavior; there are always precursors, always antecedents and this should make us want to consider which brain areas and neural systems are linked to moral behavior (Zaidel and Nadal, 2011).

Analyzing moral behavior from an evolutionary perspective, as Boehm has done, is critical if we are to understand why we have morality, and that is the reason his book is so important. Philosophical, religious, political, and social science discussions alone are not adequate. However, what is not addressed in the book is the fact that the human brain controls much more than morally related functions, namely hormones and neurotransmitters that influence mood and thus socially negative behavior, motivating behaviors controlled by brain pathways linked to various socially destructive addictions, and complex cognition that can go haywire in mental illnesses or even in degrees of "normal" behavior. All these are confounding factors in explaining moral acts as we try to comprehend how those behaviors that we call moral enhance the functioning of society.

I would recommend this book to anyone interested in exploring and discussing the evolutionary take on human morals. Boehm has done so with excellently clear and engaging writing style. A broad range of topics is addressed in depth. The book challenges the reader to consider the deep roots of morality and its purpose in human life, and in so doing takes the reader past the usual forums in which morals are discussed.

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Aggression, Advances in Genetics, Volume 75. Edited by Robert Huber, Danika L. Bannasch, and Patricia Brennan, x + 296 pp. Boston, MA: Academic Press (Elsevier). 2011. $161.00 (cloth).

One of the most longstanding scientific feuds is the "nature vs. nurture" debate, wherein genetic explanations of human behavior have been pitted against environmental

perspectives. Until relatively recently, these two explana- chapter by focusing on the genetic architecture of aggres-