

## Principles-and-Parameters Redux

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*Moral Minds: How Nature Designed Our Universal Sense of Right and Wrong.* Marc D. Hauser. xxii + 489 pp. Ecco, 2006. \$27.95.

Like all careful thinkers who have contemplated the human condition, Marc Hauser does not argue that either nature or nurture acts alone. Indeed, in his new book, *Moral Minds*, he explicitly states that morality results from both influences working together. The variations between societies in how people make moral judgments highlight the role of nurture, whereas the many similarities between cultures reflect the hand of nature. This much is clear from just about any introductory anthropology class, but Hauser wants to bring us farther along the road to understanding what it means to be a moral species.

Hauser repeatedly compares linguistic and moral abilities, using Noam Chomsky's basic approach to the linkage between nature and nurture. Recall Chomsky's famous proposal: The principles of grammar are innate, but the specific parameters are set by the specific language a person learns. Hauser argues that this idea—that nature dictates the principles, whereas nurture controls the parameters—has done useful service in linguistics and applies with equal strength to the psychology of morality.

Hauser's thesis depends to a substantial degree on the observation that when presented with simple moral dilemmas, people make quick, intuitive decisions—ones they sometimes have difficulty justifying when asked to explain them. That automaticity, in Hauser's view, implies the existence of some innate mental machinery. The evidence, however, is weak. Consider an elegant study that compared white American men from Northern states with counterparts from the South, a study that Hauser discusses in some detail. When the subjects were exposed to a mild insult, the Southerners showed a greater willingness to react violently—a difference that is presumably cultural. But the experiment also revealed that testosterone and cortisol levels spiked in the Southerners. Thus their more violent responses, which clearly have a cultural basis, seem every bit as automatic as the snap judgments Hauser uses as evidence of innate moral capacities.

Another problem is that whatever innate moral abilities we possess would have evolved among members of increasingly cooperative groups, a point that Hauser would be unlikely to dispute. Hence one should be skeptical of any explanation of morality that does not involve the intimate interplay between cultural and genetic evolution.

For example, the evolution of innate moral abilities within such groups would, no doubt, result in differences in behavior toward insiders and outsiders. As a result, ethnocentrism is, unfortunately, a good candidate to be considered part of our evolutionary inheritance. Such conclusions are not new. In *Descent of Man*, Darwin included patriotism among the social instincts that would have evolved under conditions of intertribal competition. Some modern versions of Darwin's argument propose that, although differences in culture account for which tribes survive, living in such communities for thousands of generations indirectly selects for individuals with a strong sense of allegiance to the group.

Such loyalty is likely sometimes to conflict with one's self-interest—and self-interest has great sway in most people's behavioral calculus. The resulting dilemmas and debates would seem to spring from more than just different parameters being used by our innate mental machinery for morality. But *Moral Minds* touches on these thorny issues only fleetingly (in chapter 7).

Whereas the genetic influences on morality are subtle, the raw power of culture is apparent. Over the past few thousand years, cultural innovations have allowed huge increases in the size and complexity of human societies—without any known evolution of the innate components of morality or other inborn cognitive abilities. If people continue to live in complex societies for tens or hundreds of thousands of years, certain mental changes will no doubt evolve. This general argument goes back to an idea James Mark Baldwin and others formulated in the late 19th century: Any form of learning can act as a leading factor in organic evolution. Cultural evolution, in particular, operates rapidly and creates highly novel environments that in turn beget selective pressures on genes.

Take the evolution of language. A likely scenario is that cultural evolution created social communities sufficiently complex to favor good communication. Our distant forebears would have made use of whatever rudimentary symbolic capabilities they possessed to develop a crude protolanguage. (From studies teaching chimpanzees to communicate using symbols, we know that such abilities likely existed in our early ancestors.) If the utility of this new form of communication was high—and it apparently was—individuals with an innate gift for mastering language would be favored by natural selection. And as the population gradually became more accomplished in exchanging utterances, further complexities in the language could evolve culturally, ultimately leading to the innate language abilities one sees today—along with a slew of modern languages.

The Chomskyan principles-and-parameters description is, in our judgment, a useful vehicle for conveying to lay audiences some of the nuances of evolutionary psychology found in the scientific literature. But use of this device comes at a high price: It gives a false sense of what investigators really know. Even on its home turf in linguistics, the innatist argument evokes as much controversy as ever.

Today Chomsky himself has retreated from many of his earlier detailed ideas about the nature of innate grammar. Hauser, Chomsky and W. Tecumseh Fitch recently published a rather minimalist interpretation of the innate structure of language and have defended it against those who imagine that there is much more there.

The problem is that the tools available to evaluate whether something is truly innate (such as testing its automaticity) are far too blunt. Apportioning responsibility among genes, culture and individual learning is a daunting task that requires dissecting the complex developmental trajectory of an organ, the brain, whose operations are difficult to observe. The big guns of reductionistic biology are now training powerful new techniques on these problems. Likely enough, functional genomics and developmental neurobiology will one day, perhaps sooner rather than later, put flesh on what now remain some rather theoretical bones. One hopes that advances in psychology will keep pace.

In the meantime, *Moral Minds* makes a grand stab at synthesizing existing work in philosophy, psychology, neurobiology and evolutionary theory in an effort to explain our moral capacities. Although Hauser does a good job of bringing a diverse array of findings and perspectives to bear on the question of the evolution of morality, the book is inconsistent in its portrayal of the division of labor between innate principles and learned parameters. The opening passages suggest that the influence of the former dominates moral decisions, but in much of what follows, Hauser frequently describes the powerful role of the latter.

In our view, Hauser does not fully succeed in his goal of providing a strong framework for further research. In truth, the vexing problem of how genes, culture and individual experience fit together cannot yet be solved. To his credit, Hauser reviews much evidence that culture is important, but his tendency to view the problem in terms of innate principles and learned parameters prevents him from imagining that culture may have shaped the principles and that genes, including ancient selfish and nepotistic ones, may have shaped the parameters.

## **Reviewer Information**

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