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MORAL MINDS: HOW NATURE DESIGNED OUR UNIVERSAL SENSE OF RIGHT AND WRONG. By Marc D. Hauser. New York: HarperCollins. \$27.95. xxi + 489 p.; ill.; index. ISBN: 0-06-078070-3. 2006.

Quite early in the construction of his theory, Darwin realized that he had to explain the distinctive features of the human animal to forestall the return of the Creator. For most British intellectuals, what distinguished man from animals was not reason, an operation in which faint sensory images followed the rules of association, but moral judgment. Thus, shortly after he first formulated the principle of natural selection in the fall of 1838, Darwin began a decades-long struggle to bring human moral judgment under his advancing theory. The fruition of that work came in *Descent of Man*, where two long chapters are devoted to an evolutionary understanding of moral behavior in man and its antecedents in animals. Since that time, numerous efforts have been made by biologists, psychologists, and philosophers to fol-

low Darwin's lead in constructing an acceptable evolutionary theory of moral judgment. Marc Hauser's *Moral Minds* proposes a powerful and largely convincing version of just such a theory.

The author takes for his model Chomsky's conception of a universal, innate grammar. In Chomsky's view, the many specific grammars of different human languages are constrained by an inherited set of principles regarding the production and interpretation of meaningful sentences. Just so, Hauser contends that humans have evolved a set of general moral principles that govern the various specific codes found among different cultural groups. This set of universal rules, he maintains, operates unconsciously to limit the overt maxims according to which individuals make moral judgments. This much is common to many previous efforts at formulating what might be called Darwinian morality. The author's unique contribution is to provide quasi-experiments by which to expose the various principles of this universal grammar.

Hauser and his colleagues in the Primate Cognitive Neuroscience Laboratory at Harvard drew up a series of moral dilemmas to test the intuitions of thousands of people who took an online survey (<http://moral.wjh.harvard.edu>). Responses to

the survey provided a kind of empirical probe by which to expose the underlying moral grammar constraining their subject's intuitions. One typical dilemma presents a scenario in which a runaway trolley car is headed for five people on the track. Subjects are asked if it is morally permissible for a conductor to throw a switch diverting the car onto a side track, thus saving the five, even though a person standing on the siding would be killed. Most agree it would be morally permissible to do so. But then a comparable scenario is proposed. This time it is a single track on which the car is headed for the five, with a bridge over the track and a very large man viewing the scene from the bridge. Now subjects are asked if it is morally permissible to push that man over the side to land just in front of the car, thus preventing the deaths of the five. Although the equation in lives lost and saved is the same, most people think it morally wrong to cast the fat man onto the tracks. From such data, Hauser inductively derives a principle that subjects would not likely be able to formulate themselves but that, as he believes, constitutes part of the innate moral grammar that governs their intuitions. The principle is that of double effect: if an intended good act (e.g., diverting the trolley to save five people) has an unintended secondary effect

(e.g., killing another person who happens to be on the siding), it is permissible, although the intended good consequence must outweigh the unintended bad consequence. What is forbidden is intending a bad consequence for a good end. So with this principle we have a portion of the innate moral grammar—or do we?

The principle of double effect is vintage; it is at least as old as the 13th century, when it was explicitly formulated by Thomas Aquinas. Aquinas used it in a sophisticated analysis of moral quandaries. Has evolution also performed a comparably sophisticated feat? Hauser does not really explore what it means to be an innate principle of judgment or action, or whether spurs to judgment and action are the same. One might consider a comparable case that Darwin investigated in *On the Origin of Species* (Chapter 7). It had been argued that God instilled complex geometrical principles in the honey bee that allowed it to make nearly perfect hexagonal cells that were the most economical in storage capacity. Darwin realized that if natural selection had to perform the same intellectual task as assigned to the Creator, well, his theory would simply not be up to it. But through ingenious demonstration, he showed that the bees actually operated according to quite simple instincts:

stand about equidistance apart, drill a circular pit, stop just before the walls of adjacent cells break into one another. These simple innate behaviors will have the consequence of producing mathematically elegant bee cells. So the question for Hauser is whether he has nailed a principle of the innate grammar or, rather, has abstractly characterized the interaction of, say, two simple instincts— e.g., help another in need and do not gravely assault another. In the case of throwing the switch, the immediate peril of the five would outweigh the perceived harm to the distant individual on the side track. It is the difference between killing someone with your bare hands and pushing a button that launches a rocket.

Hauser fills a good deal of his long and casually organized book with various observations made in the developmental psychology of animals and humans to suggest that a fair amount of behavior has strong genetic determinates—a discussion made more palatable by fudging the notion of free will. The accumulated evidence certainly makes plausible that the rudiments of our moral consciousness have deep, phylogenetic roots. But the author is less good at, or rather, less concerned with making clear the evolutionary causes of these moral instincts or what their elements might be. He

could have taken a cue from Darwin's succinct analyses. Darwin argued that our moral judgments were essentially altruistic, and he proposed three causes of differing strengths for that trait. Praise and blame from our fellows—the guard against cheaters— would have a stabilizing effect on other regarding behavior; and reciprocal altruism (a pre-Trivers insight) would provide another incentive. But Darwin recognized that these two causes failed to capture both the innate, noncalculating quality of moral judgments and their nonselfish core. He then argued that natural selection on small, kin groups (in which, as we suppose, our Pleistocene ancestors to have dwelt) would advance those groups in competition with groups having fewer altruists (Darwin's model was that of the social insects). This later kind of altruism, although initially directed to kin, would spread to others as our ancestors advanced in reasoning capacity to recognize unrelated individuals as essentially the same as themselves. In roundabout and muddled ways, Hauser does seem to argue in roughly this fashion, but it would take a quite discerning eye to put it all together. Darwin forthrightly claimed that his perspective was more ennobling than the selfish theory of the utilitarians; for it made moral character an

intrinsic part of human nature, not something adventitiously acquired.

When Hauser occasionally cites Darwin, he usually leaves a vague impression of the Englishman's accomplishment or fumbles the interpretation. For instance, he assumes that Darwin affirmed that only religious and legal codes could prevent moral decay in society. The agnostic Darwin hardly suggested this in the sentence Hauser (p. 421) plucks from the *Autobiography*. The value of Hauser's book, which is considerable, lies elsewhere. He presents a strong case for an evolutionary construction of moral choice by marshaling a variety of different kinds of evidence and by synthesizing supporting conceptions of several other scholars (e.g., John Rawls, David Sloan Wilson and Elliott Sober, and Peter Richerson and Robert Boyd). The very idea of a moral grammar is quite appealing, if underanalyzed. Hauser's ingenuity sights a path back to Darwin and encourages further refinement of his central proposal.

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