The Emerging Science of Morality₁ Paul R. Lawrence

The issue of human morality has been a difficult one for the human sciences to deal with. Historically it has been left to philosophers and theologians. In fact, some scientists argue that science should have no voice in this matter. Stephen Jay Gould devoted an entire book to making this argument.¹ Nevertheless, this issue is now being studied systematically by evolutionary biologists and the various behavioral sciences. It should come as no surprise to my readers that I will base my analysis of this important but prickly subject on the thoughts of Darwin.

Morality, I will argue, arose from the existence in humans of both a drive to bond (dB) and a superior cognitive ability. It is the emergence of dB in humans that has led to the evolution of a genetically-based starter skill set for morality, an intuitive moral sense. Darwin first articulated this exact formulation of morality, although since his time, his propositions on the subject have been almost entirely ignored. To quote Darwin directly:

The following proposition seems to me in a high degree probable—namely, that any animal whatever, endowed with well-marked social instincts ... would inevitably acquire a moral sense or conscience, as soon as its intellectual powers had become as well, or nearly as well developed, as in man. For, firstly, the social instincts lead an animal to take pleasure in the society of its fellows, to feel a certain amount of sympathy with them, and to perform various services for them... Secondly, as soon as the mental faculties had become highly developed, images of all past actions and motives would be incessantly passing through the brain of each individual; and that feeling of dissatisfaction, or even misery, which invariably results as often as it was perceived that the enduring and always present social instinct had yielded to some other instinct, at the time stronger, but [not] enduring in its nature.₂

This translates exactly into my formulation that human morality is a skill set that arose in humans as a "means" to fulfill an "end," namely the basic human drive to bond in mutual caring with others. Darwin identifies two essential preconditions: namely, in our terms, advanced cognitive powers and a drive to bond. Given these conditions, he argues, the emergence of morality would be *inevitable*; in other words, the content of moral rules can be deduced by logic from the prior state.

¹ Excerpt from *Being Human: A Darwinian Theory of Human Behavior*. Chapter 5, pg. 4-10. Not to be reproduced or copied without the author's permission

It is interesting that Darwin added a footnote to his thoughts about morals that takes unusually strong exception to the position of John Stuart Mill, the dominant economist of the day and one of the founding fathers of modern economics. The footnote follows: "Mr. J. S. Mill speaks, in his celebrated work, 'Utilitarianism,' (1864, pp. 45, 46) of the social feelings as a 'powerful natural sentiment,' [in our terms an innate drive to bond]... He [Mill] also remarks, 'if, as in my own belief, the moral feelings are not innate, but acquired, they are not for that reason less natural.' It is with hesitation that I venture to differ at all from so profound a thinker, but [since] it can hardly be disputed that the social feelings are instinctive or innate, [Mill's belief] that the moral sense is acquired by each individual during his lifetime is at least extremely improbable. The ignoring of all transmitted mental qualities will, as it seems to me, be hereafter judged as a most serious blemish in the works of Mr. Mill."₃ The discipline of economics might have unfolded in a different way if Darwin had convinced Mill of this point.

A number of contemporary scholars from different disciplines have reiterated Darwin's point about the human race's innate moral compass. James Q. Wilson, a political scientist, has expressed this idea in The *Moral Sense*:4

We suggest that these [moral] principles have their source in the parent-child relationship, wherein a concern for fair shares, fair play, and fair judgments arise out of the desire to bond with others. All three principles are rational in a social and evolutionary sense, in that they are useful in minimizing conflict and enhancing cooperation. At some stage in the evolution of mankind—probably a quite early one—cooperative behavior became adaptive. Groups that could readily band together to forage, hunt, and defend against predators were more likely to survive than were solitary individuals.5

This explanation of morality is also offered by Fran deWaal, a leading primatologist. "This common benevolence nourishes and guides all human morality. Aid to others in need would never by internalized as a duty without the fellow-feeling that drives people to take an interest in one another. Moral sentiments came first; moral principles, second."6

E. O. Wilson also makes this point. He states, "Orthodox social theory holds that morality is largely a convention of obligation and duty constructed from mode and custom. The alternative view, favored by Westermarck in his writings on ethics, is that moral concepts are derived from innate emotions... The evidence now leans strongly to Westermarck."7

This entire line of theorizing about morality has recently been pulled together in a comprehensive way by an evolutionary psychologist, Jonathan Haidt. He argues that human morals are based on intuition and emotions and are subsequently elaborated and rationalized by reasoning. "The social intuitionist model ... proposed that morality, like language, is a major evolutionary adaptation for an intensely social species, built into multiple regions of the brain and body, that is

better described as emergent than as learned, yet that requires input and shaping from a particular culture. Moral intuitions are therefore both innate and enculturated."8

The Rules of Innate Morality

The writers quoted above are explicit in their argument that morality in a universal and innate aspect of humans. However, they do not specify any of the discrete rules of such a moral sense. I addressed this question in an earlier article of mine as follows: 9

So far we have discussed morals in a very general sense. Can progress be made by using deductive logic to reason carefully about the content, the specific morals that could have been established as a skill set in human genetic memory? At this point a thought experiment, as philosophers would say, is relevant. If one strongly desires to establish a relationship of mutual caring with another, what kinds of behavior toward the other would help fulfill that desire? It is not a big step from the drive to bond to the practical rule that the key is to treat the other person, most of the time, as one would desire to be treated oneself. This "Golden Rule" has appeared in religious and philosophical teaching with regularity for three thousand years.10 From this start, and presuming that the four drives are in the other person's head, what behavior would help the other person fulfill his or her own drives without violating one's own drives? My preliminary list went as follows:

In support of the other's drive to acquire:

--Help preserve rather than steal or destroy, the other's property.

--Facilitate, not frustrate, the other's pleasurable experiences.

In support of the other's drive to bond:

--Keep, rather than break, one's promises.

--Seek fair, not cheating, exchanges.

--Return a favor with a favor.

In support of the other's drive to comprehend:

--Tell truths, not falsehoods.

--Share, not withhold, useful information.

--Respect, not ridicule, the other's beliefs, even in disagreement.

In support of the other's drive to defend:

--Help protect, not harm nor abandon, the other.11.

Based on this logic and on the existence in humans of many other skill sets that support the other three basic drives, I hypothesize that genetic intuitions such as these have become an innate skill applied whenever a person wishes to bonds with another person or with a collective. And how many important decisions do not involve the drive to bond to some extent?

These rules are not always followed, of course. The other drives are always competing for preference and sometimes win. Therefore, the true confirmation of my hypothesis is not perfect observance of the rules but feelings of guilt, of a "bad conscience," when they are knowingly broken.

The scholar who has gone the farthest in testing for the content of the moral intuitions of all humans is Marc Hauser. His path-breaking 2006 book, *Moral Minds: How Nature Designed Our Universal Sense of Right and Wrong*,12 pulls together his own empirical work on the subject and the widely scattered research of many others, mostly evolutionary psychologists and specialists in child development. He reports from these many studies that there is strong evidence of an innate moral sense in all humans. He goes much further than this by presenting empirical evidence for the existence of some specific moral rules, primarily the following:

- Help others rather than harm them.
- Tell truths, not lies—except for white lies.
- Keep promises.
- Seek fair exchanges that reflect merit differences.
- Detect and punish cheaters.

Hauser also reports the evidence that these moral rules appear in children in their early years: "Children's sense of fairness is in play as early as four years old, probably earlier. Their sense of fairness is intuitive, based on an internal logic that they are only dimly aware of but that computes the payoffs of an exchange and then generates a permissibility judgment."₁₃ This leads him to argue that such rules are genetically-based in humans, but also that they are subject to cultural variation. "For example… though all cultures have some notion of fairness, as revealed by cross-cultural work on bargaining games, cultures differ in terms of where they set the different parameters."₁₄

While Hauser does not explain the evolution of the moral conscience of humans in the way, following Darwin, that I do, his findings clearly reinforce this explanation by serving to confirm the existence of several of the moral rules that I had earlier logically deduced and cited above. This finding is one additional piece of empirical evidence supporting the accuracy of the four drive theoretical formulation of ultimate human motives, and in particular the drive to bond.

Probably the most common punishment for violating moral commitments is (as indicated by Darwin) social ostracism, vocally or by the "silent treatment." Less common—reserved for extreme cases—is the use of solitary confinement or even, as cited by Wrangham in regard to historical tribal behavior, exile or execution. Ostracism as an enforcer of social norms is not only powerful but also low in cost. Infants almost instantly cry out in distress when their welcoming smile to an adult is met with a frozen stare.

This description of human morals moves well beyond the limited type of morals observed in chimpanzees and some other mammals. In *The Moral Animal*, Robert Wright does an excellent job of

pulling together and analyzing observations of this type.15 With the important exception of the strong and lasting bond between mother and infant and the implicit morals of that relationship, chimpanzee alliances seem to be temporary expediencies. This is to be expected when the rules for social relationships are derived from the narrow self-interest (the drive to acquire and the drive to defend) of the parties. Chimpanzee studies also reveal the prevalence of deception and trickery in the social relations of these primates. For example, chimps have been observed going to great trouble to appear to other chimps as if they were hiding food, when they have actually already hidden the food somewhere else. Since humans have a drive to acquire as well as to bond, such opportunistic behavior obviously also occurs among humans, but to a much lesser extent. Wright's analysis of chimpanzee morals makes it clear that, if theirs is the only type of morality that our genetic heritage supports, then any substantial moral code among humans would have to be created almost exclusively by culture and, furthermore, would have to be powerful enough to override genetic-based drives. In fact, our moral codes-built upon human genes-are more enduring and trustworthy. Darwin made this point in very strong terms: "A moral being is one who is capable of reflecting on his past actions and their motives—of approving of some and disapproving of others; and the fact that man is the one being who certainly deserves this designation, is the greatest of all distinctions between him and the lower animals."16

To be sure that people took this point seriously, Darwin repeated it in even stronger terms: "I fully subscribe to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense of conscience is by far the most important."₁₇ When contemporary scholars write off such observations as no more than a reflection of Darwin's Victorian culture, they ignore the substance of his careful observations and the quality of his scientific reasoning. Of course, Darwin was not always right, but his batting average was so good that we cannot afford to brush off any of his conclusions. It is difficult to know when the human moral sense became established in the human gene pool. It clearly must have developed after the emergence of the drive to bond and the extension of that drive to collectives. The moral sense has been found in all human societies, so it must have moved with the tribes as they dispersed around the globe, starting around 50,000 years ago. Hauser argues that human morality probably coevolved gradually, in pace with the evolution of the innate features of language, and this would be consistent with our analysis.

¹ Gould, S. J., *Rock of Ages; Science and Religion in the Fullness of Life*, Ballantine Publishing Group, New York, 1999.

² Darwin, Descent, op. cit. pg. 101.

³ Darwin, Descent, op. cit. p. 101, footnote

⁴ Wilson, J. Q. 1993. *The Moral Sense*. New York: Free Press.

and Its Rational Tail: A Social Intuitionist Approach to Moral Judgment.

⁹ P. Lawrence, "The Biological Basis of Morality?", *Business, Society and Ethics Journal*, Ruffin Series #4, p. 59-79, 2004.

¹⁰ Shermer, M. 2004, *The Science of Good & Evil*, Times Books, New York, pg. 25-26. ¹¹ Ibid. Lawrence, "The Biological Basis of Morality?", p. 63.

¹² Hauser, M. D., 2006, Moral Minds: How Nature Designed Our Universal Sense of

¹³ Hauser, op. cit. p. 262.

¹⁴ Hauser, op. cit. p. 262.

¹⁷ Darwin, Descent, 1998, p. 100.

⁵ Ibid. pg. 70.

⁶ deWaal, F., 1996. *Good Natured: The Origin of Right and Wrong in Humans and Other Animals*. Cambridge, Mass.: Harvard University Press. pg. 87.

⁷ Wilson, E. O., 1998. *Consilience: The Unity of Knowledge*. New York: Knopf. pg. 179. ⁸ Haidt, J., Psychological Review, 2001, Vol. 108, No. 4, 814-834, *The Emotional Dog*

Right and Wrong, HarperCollins, New York, N. Y.

¹⁵ Wright, R. 1994. *The Moral Animal*. New York: Vintage Books, 1994.

¹⁶ Darwin, descent 1998, p. 633.