

The Moral Animal

By Robert Wright

Vintage Books, 1995

Reviewed by Geoff Gilpin

Long before he published *The Origin of Species*, Charles Darwin was well acquainted with objections to the theory of evolution. The idea was hardly new. In *The Moral Animal*, author Robert Wright surveys some pre-Darwinian theories of evolution and their reception by the public.

“...in 1844, a book called *Vestiges of the Natural History of Creation* appeared, outlining a theory of evolution and making a commotion. Its author, a Scottish publisher named Robert Chambers, chose to keep his name secret, perhaps wisely. The book was called, among other things, ‘a foul and filthy thing, whose touch is taint, whose breath is contamination.’”

Darwin’s own uncle Erasmus was an evolutionist long before nephew Charles. Anticipating the public’s response, Erasmus kept his ideas to himself for twenty years. When he finally published his theory in a 1794 book called *Zoonomia*, he got the scorn and abuse he expected.

In 1959, the publication of *The Origin of Species* changed everything. It was still possible to attack evolution on theological grounds, as some do today. However, Darwin’s airtight argument for natural selection silenced most scientific criticism.

The tremendous success of Darwin’s theory hasn’t stopped people from searching for loopholes. Even Darwin’s colleague Alfred Russell Wallace, who independently came up with the idea of natural selection, argued that it couldn’t account for the complexity of the human brain. We know that’s false; evolution has produced a vast array of brains of all degrees of complexity up to and including our own. However, there’s a longstanding and well-established belief that evolution stops with the human body. Mental and social phenomena –

language, art, politics, friendship, reason, love, hate – exist in a black box apart from natural selection. Until recently, most psychologists, sociologists, and other social scientists denied that evolution might have anything to do with their subjects.

Then a revolution occurred. As Wright tells it:

“Between 1963 and 1974, four biologists – William Hamilton, George Williams, Robert Trivers, and John Maynard Smith – laid down a series of ideas that, taken together, refine and extend the theory of natural selection. These ideas have radically deepened the insight of evolutionary biologists into the social behavior of animals, including us.”

The “new synthesis” that combines Darwinian natural selection with genetics and the social sciences goes by many names. Wright prefers “evolutionary psychology” or simply “the new Darwinism.” He makes some pretty striking claims for this new field.

“The questions addressed by the new view range from the mundane to the spiritual and touch on just about everything that matters: romance, love, sex... selfishness, self-sacrifice, guilt... various psychopathologies... the tremendous capacity of parents to inflict psychic damage on their children...” And so on. Furthermore, “The new Darwinian synthesis is, like quantum mechanics or molecular biology, a body of scientific theory and fact; but, unlike them, it is also a way of seeing everyday life. Once truly grasped (and it is much easier to grasp than either of them) it can entirely alter one’s perception of social reality.”

As an example of the explanatory power of the new Darwinism, consider a problem that caused Darwin himself no end of grief. Why do some individuals sacrifice themselves for the good of others?

“We like to think of ourselves as selfless. And on occasion we are. But we are pigs compared to the social insects. Bees die for their fellow bees, disemboweling themselves upon stinging an intruder. Some ants, also in defense

of the colony, detonate themselves. Other ants spend their lives as doors, keeping out insects that lack security clearance, or as food sacks, hanging bloated from the ceiling in case of scarcity.”

It was this last group of insects – the “honeypot” ants of the genus *Myrmecocytus* – that bugged Darwin. From a classical Darwinian standpoint, their altruistic behavior makes no sense. Why would natural selection favor traits that have no benefit to the individual?

Thanks to the science of genetics, we understand the nuts and bolts of evolution better than Darwin did. We know that natural selection isn’t the survival of the fittest *individual* but the survival of the fittest *genes*. According to the new Darwinians, insects, and human beings, sacrifice themselves because they carry a “self-sacrifice gene” (in real life a set of genes).

It’s not difficult to imagine how natural selection might have favored self-sacrifice. In the harsh environment where much of evolution occurred, a group whose members helped each other might have had a greater chance of survival than a group of selfish louts. The survivors got to propagate their genes, including the ones for self-sacrifice.

To some, this explanation has the quality of a “just so” story, a truism that can’t be proven or disproved. The new Darwinism is controversial for a number of reasons, including, perhaps, the tendency of authors like Robert Wright to promote it as an explanation for everything under the sun.

Nevertheless, there are compelling reasons to start thinking about behavior in evolutionary terms. Returning to the question of self-sacrifice, we can see a good example of the new theory’s power in what, at first, appears to be a weakness.

In some cases, self-sacrifice goes to the literal extreme. Wright gives the example of a person who dies while rescuing another from drowning. Among the lower animals, honeypot ants carry their altruism to the point of sterility; they don’t mate or reproduce. If the goal of natural selection is the propagation

of one's genetic material, both of these examples seem like evolutionary dead ends. Why would natural selection favor genes that, apparently, thwart its own purpose?

The answer came from British biologist William Hamilton, one of four scientists Wright credits as founders of the new Darwinism.

"The beauty of Hamilton's theory is that it sees selection as taking place not so much at the level of the individual *or* the family, but, in an important sense, at the level of the gene. Hamilton was the first to clearly sound this central theme of the new Darwinian paradigm: looking at survival from the gene's point of view."

From the gene's viewpoint, self-sacrificial behavior may make perfect sense. Say a man dives into a lake to save his brother from drowning. The hero may die, but the "self-sacrifice gene" is likely to survive, since the brother carries 50% of the hero's genetic material. In the case of a hero saving his family, the chance of the gene's survival becomes even greater.

Hamilton expressed this idea of "kin selection" in very precise mathematical terms. His equations accurately predict the likelihood of self-sacrifice based on the degree of relatedness (shared genetic material) between the victim and the beneficiary.

In *The Moral Animal*, Wright explores the concept of kin selection and related ideas in many areas of human behavior. He's quite aware of critics who make unfavorable comparisons between evolutionary psychology and the discredited ideology known as "social Darwinism." The new theory does seem to uphold the genetic determinism so dear to the hearts of people like Maggie Thatcher. As Wright points out, however, it may be true that the social order is largely determined by our genes, but that's no reason to put up with injustice or other evil behavior. Humans are incredibly flexible. What's more, Wright argues that the new Darwinism has much to encourage and offend both liberals and

conservatives. In any case, he believes that we're better off if we understand the evolutionary nature of our behavior than if we remain ignorant.

The Moral Animal is a long, detailed, and eloquent argument for a new science. Many readers won't agree with parts of the book, and some will reject it altogether. There's no denying its importance, however.

Copyright 2003 Geoff Gilpin