

Book Review

Darwin's Cathedral: Evolution, Religion, and the Nature of Society
by David Sloan Wilson. Chicago: University of Chicago Press, 2002,
268pp., \$25.00.

Reviewed by Fritz Allhoff

Why is religion such a dominant force in human life? Religious belief has been identified as a human universal, which is to say that it has been observed in *every* culture ever studied. The substance of the religious systems diverges dramatically: some systems are monotheistic whereas others are polytheistic; some are inclusive while others are exclusive; some are hierarchical while others have few formal stations; some codify direct access to higher powers whereas others maintain access can only be attained by a privileged few. And so on, there are many distinctions that we could draw among the world's religions.

It is actually so easy to distinguish among various religions that the more significant project might be to determine what they have in *common*. One suggestion might be that all religions propose belief in some supernatural agents (Stark and Bainbridge, 1987). But some systems, such as Buddhism, do not obviously satisfy this criterion, and most of us would be reticent to disqualify it as a religious system. Another suggestion could be that: "A religion is a unified set of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden—beliefs and practices which unite into one single moral community, called a Church, all those who adhere to them" (Durkheim [1912] 1995, 44, quoted. in Wilson 2002, 222). But, while the former proposal seemed too restrictive, Durkheim's proposal seems too broad: patriots might consider their flag to be sacred, but it would seem inappropriate to call the government a religious system (Wilson 2002, 221). Nevertheless, while we might struggle to analyze 'religion', an ostensive project should be reasonably successful. And, once we have recognized the ubiquity of religion, we can ask the important question: "Why?"

The proliferation of religious systems might merely strike the observer as an interesting sociological phenomenon but for one important fact: many religious systems codify rules that appear to diminish reproductive fitness. In other words,

there is at least a *prima facie* tension between our biological nature and our proclivity toward religious practice. For example, many religions advocate sexual restraint, honesty, tithing, civic duty, etc. However, biological pressures to maximize reproductive fitness should, in some cases, run contrary to these ends that religions would seek to secure. Male promiscuity would, for example, tend to produce more offspring than would tendencies toward monogamy and fidelity and, presupposing a genetic basis for these traits, we would expect the former to be selected for at the expense of the latter.

Of course it could be the case that the benefits offered by religion outweigh the biological costs and, if so, the biological calculus might support religion. But what benefits does religion offer? In most religious systems, the rewards are not offered until after (biological) death. Is it possible that a desire for a glorious afterlife might render inoperable a desire for more sex in this world? Sure, but this would do little to allay the tension between religion and biology since our biological heritage would be unimpressed with anything other than our reproductive fitness in *this world*. Alternatively, one might try to argue that religion does provide benefits in this world: healthy living, a support network, community standing, etc. Perhaps these benefits could translate into biological advantages that could outweigh the biological costs? But, if religion did offer such advantages, we are still left without an explanation for the fitness-diminishing aspects of religion. In other words, if we tried to appeal to biological advantage to explain religion, the explanation would only be *partial*: we would only be able to explain *some* elements of religion (i.e., those that augmented reproductive fitness) and would still be unable to explain others (i.e., those that diminish reproductive fitness). So the problem still remains: how has religion, with its fitness-reducing elements, come to proliferate among human societies? Wouldn't it seem that human biology would oppose the ubiquity of religion?

In *Darwin's Cathedral: Evolution, Religion, and the Nature of Society*, David Sloan Wilson seeks to reconcile evolutionary biology with the existence of religion. Wilson's main tool is a reconception of evolutionary theory; Wilson argues against the tradition that has privileged natural selection upon *individuals* (or upon genes) at the exclusion of any other mechanisms or processes. To this end, Wilson argues that *group selection* has played an important role in evolutionary history and that, once we recognize this, much of the tension between religion and biology disappears. Group selection has, of course, had a tough history. In some writings, Charles Darwin seemed to endorse group selection, though it is debatable how comfortable he was with this commitment.

The 1960s was an especially tough decade for group selection: V. C. Wynne-Edwards (1962) argued that group selection could account for various phenotypic traits (such as population restraint) that were inconsistent with individual selection. But, as critics pointed out (Maynard Smith 1964; Williams 1966), there were several problems with this approach. First, any population pre-

sumably under the control of group selection could always be “invaded” by a selfish individual, whose progeny would out-produce the individuals who subserved group welfare. Therefore, group selection could, at best, produce only very unstable homeostases and would be unlikely to account for many persistent phenomena. And, secondly, many of the traits that could putatively be explained by group selection (such as fish collectives) could be more parsimoniously explained by individual selection that would hold that the schooling of fish subserved interests of individual fish. Given the strength of these criticisms, Wilson (1983) remarked that “group selection [at the end of the 1960s] rivaled Lamarckianism as the most thoroughly repudiated idea in evolutionary theory.”

But group selection has recently been resurrected, largely by Elliot Sober and Wilson (1998). In their important book (which is nicely summarized in Chapter One of *Darwin's Cathedral*), they argue that group selection is not an intellectually bankrupt idea and that, furthermore, it is likely to have played an important role in human evolution. Their general idea is that selection can differentially favor groups whose members tend to possess certain traits, such as altruism. While altruism, by definition, diminishes the fitness of the possessor, a group full of altruists could be at a competitive advantage against a group of non-altruists. To take a simple example, imagine that the two populations live in an environment where individuals have a tendency to fall into lakes. The population of altruists would save troubled individuals, whereas the population of non-altruists would dwindle given common drownings. (Sober and) Wilson would certainly grant that selfish individuals could invade the altruistic population and that those selfish individuals would have higher average fitness than their altruistic comrades. And, because of the advantages of being selfish, the incidence of altruism in the population would fall over time. Nevertheless, these features do not militate against the power or reality of group selection; they merely lend credibility to the idea of multi-level (i.e., group *and* individual) selection.

If we introduce group selection, can we make headway on the tension between biology and religion? Wilson thinks that the answer is a resounding yes. Conceptually, the idea is that religion, which may impede certain *individual* reproductive interests, could nevertheless subserve the interests of *groups*. In other words, Wilson thinks that the tension between biology and religion will go away if natural selection is understood as a multi-level process such that group selection plays an important explanatory role. Much of *Darwin's Cathedral* (Chapters Three through Five) consists in Wilson's evidence for religion's promotion of group welfare. To this end, he considers many specific religions and, lest he be accused of bias, also analyzes twenty-five religions chosen at random from the sixteen-volume *Encyclopedia of World Religions* (Eliade 1987).

Let us consider one example, and see why Wilson thinks that this religious system could have evolved from group selection pressures (Wilson 2002, 126-33). On the island of Bali, at the summit of a volcano, farmers worship Dewi Danu,

goddess of the waters, who is represented within their community by a high priest. The rain is critical for Balinese agriculture, so the farmers have created a vast system of aqueducts in order to irrigate their crops with the water that drains down from the mountaintop. But the irrigation system leads to logistical (and moral) difficulties: which *subaks* (association of farmers) should pay for, or aid in the construction of, which branches of the aqueducts? How much water should each *subak* be allowed to take? The upstream *subaks* would, without external intervention, presumably prefer to acquire more than their fair share of water, and they would presumably be uninterested in funding the construction of downstream aqueducts. The Balinese priests preside over these issues and, whenever there is a decision to be made, they convene, debate, and render a decision. In fact, an enormous part of the Balinese religion is constructed around the issues that affect their daily lives and, most importantly, water distribution. Their religion, which provides logistical support, prevents social discord, and plays an important unifying role, therefore benefits the *group* (though not necessarily the upstream *subaks*). As such, it is highly congenial to Wilson's explanation of religion as a group benefit. Throughout the book, Wilson offers numerous examples to support his core thesis.

How successful is Wilson's project? Clearly, he offers a lot of data in support of his view. And Wilson, the consummate scientist, is always fair: he acknowledges the strength and weaknesses of his data, as well as alternative interpretations. This book, however, offers one evolutionary theory of religion, of which there are others. Wilson's project is clearly a positive one—he presents the evidence *for* his own theory without arguing *against* other theories that might enjoy similar empirical success. For example, Wilson posits five evolutionary explanations for religion (Wilson 2002, 45):

1. Religion as Adaptation

1.1 Religion as a group-level adaptation.

1.2 Religion as an individual-level adaptation.

1.3 Religion as a cultural “parasite” that often evolves at the expense of human individuals and groups.

2. Religion as Nonadaptive

2.1 Religion as an adaptation to past environments, such as ancestral kin groups, which is maladaptive in modern environments, such as large groups of unrelated individuals.

2.2 Religion as a byproduct (or “spandrel”) of genetic or cultural evolution.

Wilson is obviously advocating 1.1; and 1.2 is most likely untenable. But some of these other explanations are quite interesting. Pascal Boyer (2001) advocates a form of 2.1, and Wilson fails to consider this view. Richard Dawkins (e.g., 2003)

has argued for something like 1.3, and Wilson similarly ignores this idea. And, of all the ideas, 2.2 might have the most intuitive plausibility (i.e., we evolved rational capacities on which religion “hitched a ride”); this is a view for which Stephen Jay Gould might have been inclined to argue. Perhaps Wilson thinks that, on the strength of his data alone, we should endorse his view over all others. And maybe this is right—I leave it to the reader to decide. Nevertheless, I would be interested to see engagement among the different views, and I would be interested to see how Wilson would respond to the arguments offered by some of these writers. I do, however, think that *Darwin’s Cathedral* is an important book. It offers a new perspective on an important problem, and it is very well written and researched. It will be of interest to many readers, and this book will play a substantial role in future debate.

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