

Book Review

Beyond belief — A review of “The Supernatural and Natural Selection: Religion and Evolutionary Success”

L.B. Steadman and C.T. Palmer. Boulder, CO: Paradigm; 2008. (US\$85.00 (cloth). 253 pages)

The idea that “religion” may have evolved through Darwinian selection has seen an explosion of interest recently, giving rise to numerous journal articles, dedicated conferences and books (for reviews, see Bulbulia et al., 2008; McNamara, 2006; Norenzayan & Shariff, 2008; Wilson, 2008). The field offers a treasure trove for scholars of human evolution because it spans so many topics of interest to us. First of all, there are important theoretical and empirical questions at each of Tinbergen’s four levels of analysis: What is its evolutionary function? What are the proximate mechanisms? What are its developmental features? What is its phylogeny in the human lineage? It also confronts other areas of importance, including the evolution of cooperation, maladaptive behavior in modern life, levels of selection (individual vs. group selection) and multiple possible evolutionary causes (adaptation, by-product or cultural parasite?). These issues are largely unresolved and yet amenable to models, simulations, laboratory experiments, empirical analyses and cross-cultural comparisons.

“Religion” is, of course, a hugely complex phenomenon, which cannot evolve in and of itself. Thus, people have focused on explaining the evolution of particular religious beliefs and behaviors. Beliefs have received perhaps the greatest attention because they pose the most fundamental puzzle: why would people hold false beliefs in supernatural agency, when these beliefs lead to behaviors that incur Darwinian fitness costs in time, resources and lost opportunities? The same focus on beliefs spurred previous generations of anthropologists, sociologists and economists (Pals, 2006).

Steadman and Palmer’s (SP) book is very bold, because it argues that any theory based on religious *belief* is flawed. The fundamental claims of their book are (1) that we cannot study beliefs because we cannot verify them (people may not say what they believe); (2) the only valid way to study religion is by looking at what people communicate to others; (3) religion was selected for because it increased cooperation. SP offer a clear and strong opinion. In the same spirit I take a strong line in my review. I argue that

(1) and (2) are wrong and (3) is not new and better explained by other theories.

1. Beyond belief

According to the publisher’s description, the book offers “[a] fundamentally new approach to religion that differs from all other explanations by defining religion not in terms of unidentifiable beliefs in the supernatural, but by the identifiable behavior of communicating acceptance of supernatural claims” (<http://www.paradigmpublishers.com>). As the authors note, this radically diverges from the definitions of religion that have been used by social and natural scientists in the past — spanning 19th-century anthropologists to modern-day evolutionary psychologists. “According to almost all scholars, it is the supernatural, meaning literally ‘beyond nature’ (and hence, beyond identification by the senses), that distinguishes religion” (p. 4). SP, however, argue that studies of belief are flawed because they are unverifiable — we can ask someone what they believe but why should we believe what they say?

In place of belief, SP base their theory on the following definition instead: “religious behavior is distinguished, and hence, can be defined as, the communicated acceptance of a supernatural claim. That is, the communicated acceptance of another person’s claim as true that cannot be shown to be true by the senses constitutes the necessary and sufficient elements identifying behavior as religious” (p. 16). They are quite serious about rejecting belief from the study of religion, and even beyond: “In order to be scientific, hypotheses proposed to account for religion, indeed anything, must refer to things identifiable by the senses. Only so far as a hypothesis refers to identifiable elements is the hypothesis verifiable, or falsifiable” (p. 35). My review focuses on their definition of religion because it is crucial to all that follows in the book.

Are SP right that the study of beliefs cannot be subjected to scientific inquiry? Let us consider what that means. If beliefs are not to be believed, it fundamentally undermines the work of many philosophers, anthropologists, psychologists, psychiatrists, theologians and mythologists — not to mention evolutionary psychologists. One of the interesting things about recent work on religion by evolutionary psychologists is a very strong and productive interaction

with theologians and scholars of religion who want to engage and understand evolutionary accounts of belief (Bulbulia et al., 2008; Nowak & Coakley, 2009; Schloss & Murray, Forthcoming; Wilson, 2008). SP's book is a large stride away from this endeavor, rejecting the idea that beliefs should be subjected to scientific enquiry at all.

When one considers the big picture, SP's claim that science in general cannot study phenomena that are beyond the human senses is clearly wrong. Otherwise, we would put out of work physicists who study dark matter or engineers who make infrared lights. Evolutionary biologists cannot "see" natural selection either, but it hardly prevents us (or SP) from studying it. As long as there are tools to test difficult concepts, they are open to scientific enquiry. The human senses are obviously limited, but it does not mean that we cannot study phenomena that lie beyond them. We have been successfully doing so for centuries.

The fact is that past and present scholars of religion are all fully aware of the problem that what people say may or may not represent what they believe — surely that is Anthropology 101. Neither do these scholars discount it. Good scientists are vigilant of this potential confound in their detective work and experimental designs.

2. The importance of cognition

Beliefs are often key to explaining behavior precisely because they do differ from what people say. For example, people may not admit to discriminating by race or out-group, but carefully designed psychological experiments nevertheless reveal that they do (Fiske, 2002; Kurzban, Tooby, & Cosmides, 2001). The very difference between beliefs and behavior underlies the entire paradigm of the "cognitive revolution" (Barkow, Cosmides, & Tooby, 1992; Fiske & Taylor, 2007; Gilovich, Griffin, & Kahneman, 2002; Kahneman, Slovic, & Tversky, 1982). We even have good evidence that false beliefs can be adaptive, either because they directly cause behavior that maximizes cost–benefit ratios (Barkow et al., 1992; Gigerenzer, 2002; Trivers, 2000), or because false beliefs steer individuals away from an even worse error (Haselton & Nettle, 2006; Johnson, 2009). An individual's beliefs may be "unverifiable" in a strict sense, but knowledge of the structure and function of the brain mean they are not completely random, unknowable and untestable.

SP's discarding of belief is especially odd at a time when advances in psychology and neuroscience are rapidly increasing our understanding of the brain. The science of the future is one in which the understanding of beliefs is expanding, not ending. Even in the subfield of religion, great strides have been made in exactly this area — the emerging "cognitive science of religion" has documented numerous specific examples of how people's behavior in experiments betrays systematic underlying beliefs about supernatural agency (Atran & Norenzayan, 2004; Barrett,

2004; Bering, 2006; Boyer, 2001; D'Aquili & Newberg, 1999; McNamara, 2006). Moreover, there are many reasons to think that we will not be able to understand the evolution of religion *unless* we tackle underlying cognitive mechanisms — the machinery of beliefs — because cognition and religion are likely to have co-evolved (Johnson & Bering, 2006; Whitehouse, 2008), and because the relevant cognitive mechanisms have significant consequences for how natural selection works and thus which theories are plausible or even possible (Atran, 2004; Barrett, 2000; Bering & Shackelford, 2004).

3. Defining a theory

The rejection of beliefs as a focus of study is not just an academic quibble. It has major consequences for all that follows. The problem is that, given SP's definition of religion ("the communicated acceptance of a supernatural claim", p. 16), their theory is more or less the only one that is possible — the origin of religion necessarily lies in its communication (not in beliefs). Likewise, religion cannot — by definition — be about belief. Thus, any theory of religion that is about belief (which is probably most) is automatically false.

Any theory that depends so heavily on the definition of the phenomenon it is trying to explain starts to sound fishy — especially when it rejects alternative definitions from so many fields and so many scholars all at once. Chapter 2's review of the literature is striking because all classical and modern theories of religion (whether sociological, psychological or evolutionary) are rejected for exactly the same reason — that they assert unverifiable beliefs. Even Richard Dawkins and Daniel Dennett come under fire because, although their cultural parasite model is very different from other evolutionary theories, SP claim that they nevertheless make the same mistake as everybody else — religious beliefs are simply "now called memes" (p. 31).

Whatever problems the various existing theories of religion may have, it seems implausible that such diverse theories would all fall because of exactly the same flaw. As SP say themselves, "the definition proposed in this chapter [1] changes the question that explanations of religion attempt to answer" (p. 17). If so, then whether other theories succeed or fail is entirely due to one's definition of religion — not their substantive claims. For this reason alone, I do not see this book as a challenge to any other theory of religion. Even if it is correct, it may be merely addressing a different phenomenon.

4. The free-rider problem

SP claim that religion was selected because it "promoted cooperation among codescendants of the same ancestor" (p. 52), encouraging family-like cooperation

between kin, kinsmen in different families or even nonkin (p. 41). Various religious phenomena revolve around this basic cooperative function, they argue, so for example, black magic acts a substitute for violence, while divination reduces responsibility in decision making (p. 42). In essence, religion leads to selflessness and self-sacrifice, and “the most significant effect of religion” (p. 44) is that it encourages cooperation.

I agree that religion and cooperation are linked. The problem is that there is no serious treatment in the book of the free-rider problem, which haunts this theory just as it does any other theory of cooperation. SP explicitly accept that cooperation comes at the expense of alternative self-interested behaviors (e.g., “Morality involves both restraint and sacrifice for others at the expense of satisfying one’s own appetite”, p. 51). Thus, in their own terms there would clearly be a natural advantage to individuals who ignored the norms of their religion (or pretended to accept or communicate them but did not bind their own behavior to them all the time).

Such individuals represent the familiar problem of free-riders, who reap the benefits of others’ cooperation without contributing themselves. Without a mechanism to deter or punish free-riders (and barring group selection, which SP explicitly reject), cooperation cannot evolve. Any theory of cooperation thus has to explain why believers will tend to outcompete nonbelievers (Johnson, 2005; Johnson & Bering, 2006; Norenzayan & Shariff, 2008). SP’s theory appears particularly vulnerable, because cooperation is achieved by “nonskeptical acceptance of another person’s influence, the encouragement of respect for ancestors, and the metaphorical extension of kinship” (p. 213). A free-rider in SP’s world simply needs to reject a metaphor they may not even believe in. In other theories, free-riders are still a problem, but they do at least face one important challenge — their own beliefs (Bering & Johnson, 2005; Bering, McLeod, & Shackelford, 2005; Boyer, 2001; Johnson & Kruger, 2004; Shariff & Norenzayan, 2007; Sosis, 2003).

5. Summary

SP have written a book that made me think hard about how and why we study religious beliefs and behaviors rather than other aspects (such as communication), and it contains some excellent ethnographic descriptions of religious phenomena that will benefit any student of religion.

SP have been bold in literally redefining religion and in so doing taking on just about everyone in the field (and many outside it). The mark of a good book is often the consternation it generates among colleagues. If so, then this book may certainly score highly. However, my personal opinion is that beliefs remain the critical and perfectly plausible subject of study, which the rapidly developing cognitive science of religion will slowly help to reveal as long as we look. I also think that cooperation is better explained by

other theories of religion such as costly signaling, supernatural reward and punishment, or perhaps some form of cultural selection, all of which offer an explicit solution to the free-rider problem (Shariff & Norenzayan, 2007; Sosis, 2003; Sosis & Alcorta, 2003; Wilson, 2002). By rejecting centuries of cumulative work on religious beliefs — surely the quintessential element of religion — my worry is that SP have thrown the baby out with the bathwater.

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