Chapter 2

The Problem of Good (and Evil): Arguing about Axiological Originsin Science and Religion

F. LeRon Shults

Why do bad things happen to good people? Answers to this kind of question in religious contexts generally involve some reference to supernatural agents, whose relation to a coalition helps to explain why misfortune befalls its members. In monotheistic religions such as the Abrahamic traditions of Judaism, Christianity, and Islam, this question is complicated by the idea of a single supranatural agent who is believed to be omnipotent, omniscient, and omnibenevolent. This leads to the well-known "problem of evil." If all things are conditioned by a good God, then why are there evils in the world?

For evolutionary scientists, however, it is quite easy to explain happenings that people consider bad for them. The answer is natural selection. Organisms that live long enough to reproduce pass on those variable traits that gave them a competitive advantage for survival in a particular environment. Competition often, indeed usually, means that one organism behaves badly toward another. Why, then, do naturally egoistic people do good things? Altruistic behavior toward other people, especially toward those who are not probable caregivers, appears to lessen one's chances for survival. Evolutionary theories have to address what we might call "the problem of good."

In this chapter, I explore different ways in which these problems are addressed within science and religion. It may appear that these intellectual

efforts have very little in common, but I argue that they share an interest in making sense of the conditions for axiological engagement (i.e., in understanding that which originates, orders, and orients the human experience of valuing and being valued). I will also suggest that what marks most clearly the difference between arguments within science and religion (as defined below) is the role played by supernatural agent conceptions and coalitions.

Although I will examine the general relation between morality and religion, my focus will be on the effect that some recent scientific theories tend to have on the special problem of theodicy in the Abrahamic traditions. The scientific hypotheses I have in mind have emerged as a result of the convergence of insights from a variety of disciplines such as evolutionary biology, cognitive science, moral psychology, cultural anthropology, and archaeology. I refer to the overlapping conceptual fields within which they attempt to explain the origin of morality and religion as the bio-cultural study of religion (BCSR).

"Arguing about axiological origins" refers to the process of constructing, defending, and critiquing hypotheses about the conditions for the emergence of human morality. My primary interest is not in defending a particular scientific or religious hypothesis but in clarifying the different ways in which the relevant sciences and religions formulate their arguments—which is, of course, the development of a certain kind of hypothesis. The problem(s) of good and evil are not only of interest to scholars; understanding the origins of our mutual evaluations of one another, across religious and nonreligious boundaries, is one of the most important tasks facing humanity today.

In order to acknowledge the existential intensity of this task, my chapter is bookended by philosophical challenges raised by Nietzsche, chief among those philosophical masters of suspicion who have pressed us to look more deeply into the conditions that lead to our evaluations of good and evil. The introductory section outlines the modes of inference that are operative within debates on axiological origins, and the concluding section explores the implications of the distinct ways in which they are used in BCSR and the Abrahamic religions. The bulk of the chapter clarifies and illustrates these distinctive modes of argumentation as they bear on the development of hypotheses about the problem of good(s) and evil(s).

GENEALOGY OF MORALS?

Several of Nietzsche's books engage the problem of the origins of good and evil. He acknowledges that making judgments about what is good and *bad* is inevitable—a natural part of life. The translation of this distinction

into judgments about good and *evil,* however, was a result of what Nietzsche calls a "slave revolt" in morality. This "priestly" mode of valuation that defines the threatening other as "evil" arose out of the *ressentiment* of the weak toward the noble and powerful.

He offers an illustrative parable in *On the Genealogy of Morals.* It is no surprise that lambs do not like great birds of prey. But this is not a ground for reproaching the latter for bearing off members of their flock.

> if the lambs say among themselves: "these birds of prey are evil; and whoever is least like a bird of prey, but rather its opposite, a lamb— would he not be good?" there is no reason to find fault with this institution of an ideal, except that the birds of prey might view it a little ironically and say: "we don't dislike them at all, these good little lambs; we even love them: nothing is more tasty than a tender lamb." (1989, 44–45)

Whether one judges the outcome of a particular predation as good or bad (or evil) depends on one's position in relation to the redness of teeth and claws.

Now such an analogy was offensive to those who wished to maintain a strong dichotomy between animals and humans, but Nietzsche, writing in the aftermath of Darwinian theory, adds insult to injury by provocatively referring to "good and evil" as a distinction within "herd" morality. This imagery is particularly suggestive for dialogue with some of the recent theories within BCSR, which argue that the supernaturalizing of social life played a significant role in the alteration and complexification of coalitional organization within early groups of *Homo sapiens.* In other words, religion contributed to forms of human herding (and being herded) that gave a competitive advantage to some of our ancestors.

The main focus of this chapter is to outline the different ways in which some important scientific and religious arguments deal with the problem of the genesis of morality (i.e., with the conditions that generate the possibility of human axiological engagement). Before setting out the senses in which one can argue about and for conditions, let me clarify what I mean by axiological engagement. *Axiology* generally refers to the study of value (*axios*). Especially within the pragmatic tradition, value plays a role not only in ethical judgments (acting) but also in interpretative judgments (thinking) and aesthetic judgments (feeling). The value of the term axiology for my purposes is that it can facilitate the incorporation of the cognitive and affective dimensions of human judgment into discourse about moral engagement.

The term engagement helps to emphasize the dynamic interactive process in which these ongoing experiences of evaluating and being evaluated occur. My main inspiration here is Robert Neville, who shows how the pragmatist metaphor of engagement stands in contrast to, and solves some of the conceptual problems with, the metaphors of mirroring and decoding as utilized, respectively, by some analytic and continental philosophers (1995; 2006). These other metaphors too easily reinforce early modern dichotomies between, for example, humanity and nature, mind and matter, and language and reality, in a way that engagement helps to avoid.

Another value of the term is the way in which it facilitates philosophical dialogue with and within the sciences of evolutionary biology. Human action, interpretation, and affection are not exceptions to but rather particularly complex intensifications of the dynamic processes of engagement that characterize all life. Every organism engages within its natural environment to secure that which is valuable for its survival. The complexity of the engagement of and among human organisms, however, has led to a significant emergent property: "moral" evaluations of events in terms of good and evil.

Like other animals, human beings fight, flee, feed, and copulate (the four "f"s) as they engage other relevant organisms in their environment, often without thinking. But we also sometimes think. We not only think about valuable things but occasionally, and perhaps even often, if we are philosophers, we also think about the conditions that make possible our—more or less—thoughtful evaluations. We even argue about the origin of morality, engaging the problem(s) of good and evil.

In what follows, I offer an oversimplified summary (Table 2.1) of some important distinctions between modes of inference and the roles they play within argumentation, taking the risk of not providing all of the qualifications I know that I should. I take this risk in this context because I believe that this reconstruction can help clarify some of the important differences between scientific and Abrahamic religious ways of making claims about axiological origins. The reader is encouraged to patiently work through the next few paragraphs because the distinctions made here are intended to pay off later in the chapter. On the other hand, the reader may prefer to flip through this section quickly, returning to it later in order to reflect on the differences between arguments about axiological origins in science and religion.

Broadly speaking, arguments provide warrants for making an inference: moving from some grounds to a claim. What we mean by arguing about the conditions for axiological engagement, however, depends on the way in which we utilize the various modes of inference (Table 2.1).

Table 2.1

Modes of Interference

Mode of Inference	Engages	To Determine Conditions For
deductive	propositions	logical necessity
inductive	observations	empirical generalizability
abductive	hypotheses	interpretational plausibility
retroductive	suppositions	existential possibility

A deductive inference engages propositions in order to move from premises that, if true, lead necessarily to a true conclusion. The validity of such inferences is testable by rules of formal logic. The logical necessity determined by a deduction is not of much value unless the premises are true; defending their truth, however, calls for grounds that the deductive mode alone cannot provide. Inductive inferences move from particular observations to general claims meant to apply to other nonobserved particulars. Such inferences do not lead to necessary conclusions but to more or less probable generalizations about empirical phenomena. The validity of probabilistic inductions depends on the quality and quantity of the observations that support the inference and can be tested by various forms of statistical analysis.

C. S. Peirce was apparently the first to use the term abduction to refer to the way in which we develop hypothetical conjectures that are intended to provide plausible interpretations of ambiguous phenomena. Such conjectures occur constantly in everyday life, and are usually immediate and intuitive, often requiring little or no reflection. The word hypothesis is used in different disciplines in a variety of ways, often in relation to the experimental method, but here we are discussing modes of inference.

Abductive inferences can occur naturally as, for example, when we quickly interpret a phenomenon as calling for one of the four f's (see above) and not the others. We may use the hypothesis "tiger" to interpret movement in the jungle. Abductions involving complex theoretical conceptualizations take longer, of course, and may require extensive background knowledge and training. We may use the hypothesis "hypersensitive predator detection module" to interpret human reactions to movements in the jungle. The criteria for accepting the plausibility of these kinds of inference are based not only on logical form or on ongoing observation but also on the extent to which the hypothesis helps to interpret or make sense of the phenomenon.

Judgments about the plausibility of an abductive inference will be shaped by the bio-cultural heritage of the interpreter and the context

within which, and purpose for which, she makes an interpretation. Abductions are shaped by earlier inferences based on empirical observations and on more or less defensible propositions. However, the plausibility of abductions is usually reinforced by the extent to which a newly developed or applied hypothesis also "leads away from" (ab-ducere) old and toward new insightful deductions and inductions. As we will see, this has implications for understanding judgments about the plausibility conditions of scientific and religious conjectures about axiological origins.

Peirce sometimes used the term *retroduction* in a way that was almost synonymous with abduction, but he was not always consistent. For my purposes, I reserve the former term for inferences that are intended to "lead back" (retro-ducere) from more or less stable abductive inferences (hypotheses) to that which conditions the existence of the interpreted phenomenon. In other words, retroductive inferences lead to claims about what makes a phenomenon possible. They are conjectures about those conditions without which the phenomenon could not be as, or become what, it is. I hope to show below how this mode of inference is particularly relevant for dealing with the problem of good and evil in both science and religion.

We can also say that retroduction, like abduction, involves the formation of hypotheses, but in this case the conjecture is about the conditions that make possible the existence of the phenomenon as interpreted by abductive hypotheses. In this sense, abduction and retroduction overlap and work together. Moreover, deductive and inductive inferences are wrapped up within, as well as produced by, retroductive inferences concerning abductions. Abduction attempts to make a perceived phenomenon meaningful by (re)interpreting or (re)conceptualizing it in light of an interpretive hypothesis. Retroduction makes claims about the suppositions of such conjectures, leading back to that which may reasonably be considered the conditions for their existence.

By saying that retroductive inferences operate on "suppositions," I do not mean that they begin with undefended assumptions. A presupposition is a premise that functions in a deductive argument. Retroductions do not presuppose the truth of the hypotheses about whose existential conditions they hypothesize; in fact, retroductive conjectures may very well lead to the weakening or even abandoning of the plausibility of an abductive inference. What I mean to indicate here by retroduction is an inferential operation that moves toward a claim about that which may reasonably be supposed to be the sine qua non of an interpreted phenomenon.

As with all modes of inference, it is the way we handle that little qualifier "reasonably" that makes all the difference; here is where retroductive

arguments get complex—and interesting. The term *suppositum* played a significant role in the debates among medieval scholastic philosophers over the existence of genera and particulars. Even if we have good reasons to reject the metaphysics of causative substance that guided their retroductive inferences about that which makes particulars (including created "evils") possible, we can accept the rational value of their attempts to make sense of the conditions for their existence.

As we will see, these modes of inference are operative in different ways within the arguments of scholars within the evolutionary sciences and the Abrahamic traditions as they make conjectures about the conditions for axiological engagement. One of the most important differences, I will suggest, is the role played by conceptions of supernatural or supranatural agent coalitions in each mode of inference as they are related to the origination, ordering, and orientation of human valuation. In the next three subsections, I introduce some of the empirical findings and theoretical reflections in the bio-cultural sciences that bear on debates about the origin of morality and its relation to religion. I will then spend three subsections demonstrating how these sciences contrast with and shed light on arguments about the problem of evil(s).

THE PROBLEM OF GOOD(S) IN THE BIO-CULTURAL SCIENCES

For scientists working in the fields of BCSR, the problem is how to explain the "good" actions of human organisms. They attempt to develop hypotheses that make sense of altruistic behavior, in which an individual acts in a way that does not seem to contribute to his or her survival. As we will see, the evolution of religion plays an important role in many of these recent scientific conjectures about how human beings came to judge such behavior as good and other behaviors, that appear to enhance individual survival, as evil. First, however, let us notice how this question is connected to the problem of goods.

This is a problem faced by every organism: engaging the natural environment in a way that secures its survival by acquiring the necessary goods such as nutrition and safety. It is bad for the organism if it does not acquire the relevant goods. The competition inherent in the dynamics of natural selection helps to explain why bad things happen to good people (actually, to all organisms). Human individuals live in complex social environments in which the struggle for goods leads to evaluative judgments about others based on the extent to which they facilitate or hinder their acquisition. All too easily we evaluate competitive others as essentially

evil—as they so easily evaluate us. The value we place on others depends, in part, on their role in our survival strategy; an active shepherd is good for the lamb but bad for the bird of prey.

But isn't this a digression? We are, after all, interested in arguments about human morality—about the conditions that shape our capacity and tendency to make judgments about good and evil. In fact, many of the hypotheses developed to make sense of altruistic behavior apply equally well to other primates (De Waal, 2010), a point to which we will return below.

The three most common explanations for good (in the sense of selfless) behavior are kin selection, reciprocal altruism, and indirect reciprocity. First, it makes evolutionary sense that the trait of caring for genetic kin, even at risk to one's self, would be naturally selected; those who are cared for carry on the genes of their caregivers. Second, those with a tendency to care for others (non-kin) because they themselves might need reciprocal care later would also be naturally selected, assuming that group dynamics were such that (over time) such care would in fact likely be reciprocated. Being cared for by others improves one's chances for survival.

But how do we know others will reciprocate—what if they are free-riders or cheaters? Caring for such persons would not contribute to our own survival because they are not likely to care for us. Networks of social scrutiny such as gossiping are ways of scanning for such persons. One way to ensure that one is a trustworthy reciprocator is to engage in costly and sufficiently public displays of altruism. This leads to a third type of hypothesis: people who act altruistically may reap the benefits of a good reputation, which can indirectly, and over time, enhance the chances of their own survival and that of their genetic kin.

All three of these scientific hypotheses are attempts to make sense of the ambiguous phenomena that I have called the "problem of good." They use evolutionary theory to interpret altruistic behaviors as complex ways of contributing to the survival of human organisms. In fact, reflection on all three of these explanations has led many scientists to infer abductively that the best way to interpret the data is by the hypothesis of "group selection" (Sober and Wilson, 1998; Wilson, 2002). The basic claim is that natural selection works not only on individual traits but also, in some sense, on traits that help groups survive. In the case of humans and some other social animals, altruistic behaviors bind and build groups whose solidarity and strength help them outcompete other groups. Individual behaviors that benefit the group as a whole would then be selected over the long term, even if they do not help the individual survive in the short term.

For our purposes, the important point is the way in which these arguments contribute to the plausibility of the claim that the dynamics that characterize human axiological judgments today evolved as a result of the natural selection of survival enhancing modes of affective and collective engagement. The observation that humans share "moral" characteristics with other primates (even reputation building) suggests that our judgments about what is good or evil are not first and foremost the result of neocortical processes but are rooted in biological, physiological, and emotional processes that evolved much earlier.

In other words, human morality emerged through a long process of the natural selection of affect-driven behaviors that contributed to the survival of groups whose collective solidarity improved their competitive advantage with other groups. This affective revolution in the study of morality has involved contributions from a variety of disciplines, including primatology, neuroscience, and economic game theory. Building on these findings, moral psychologists have focused more attention on the role of subcortical processing and emotion in moral behavior (Hauser, 2006). This does not mean that logical reasoning plays no role in morality, but it does mean that the "the emotional dog" wags the "rational tail" (Haidt, 2001).

Jonathan Haidt has argued that human morality is about more than justice/fairness and care/harm, the two dimensions that have received the most attention from traditional moral psychologists. For a long time, the discipline focused on studying individual's moral reasoning in relation to the rights of people to fair (and just) treatment or to the appropriate behaviors toward vulnerable persons who need care (protection from harm). Based on extensive cross-cultural research, Haidt suggests that is too narrow a conception of morality (2007). He argues for three other intuitive foundations for moral judgment, each with a distinct evolutionary function that is related to being part of a group. He calls these in-group/loyalty (coalitional psychology), authority/obedience (hierarchy within groups), and purity/sanctity (which includes disgust-related taboos).

Haidt's research shows that self-described "liberals" tend to endorse only the first two foundations or dimensions of morality. In other words, they are mostly concerned about protecting individuals from each other so they can function as autonomous agents. Self-described "conservatives," on the other hand, make moral judgments based on all five dimensions. They are more likely to evaluate behavior in light of the criteria for in-group loyalty, obedience to authority, and living in a "sanctified" way (as defined by their coalition). As we will see, this raises interesting questions about the relation between religion and morality.

So far we have been exploring scientific hypotheses about altruistic behavior in general. But what is the role of religion in all of this? The general consensus among BCSR scientists seems to be that the origin of morality was not religion but the natural selection of neurobiological, affective, and cognitive traits that enhanced social life in ways that contributed to the survival of particular human groups. This does not mean that religion is irrelevant to morality. On the contrary, it is deeply relevant because of the significant ways in which it has impacted social life. In fact, the problem of good(s) can be clarified in light of conjectures about the evolution of religion and its shaping of moral affect and behavior.

RELIGION AS HYPOTHESIS

As we have seen, a growing number of scientific hypotheses about the origin of human morality include arguments for the survival value of affects and behaviors that strengthen a coalition's competitive advantage. Most of the hypotheses within BCSR for making sense of the role of religion in the evolution of morality have been informed by the observation that every known culture, past and present, has had widespread and shared conceptions of supernatural agents. This idea is itself quite old, but the evidence to support it has grown rapidly in the last decades through extensive archaeological and ethnographic research and psychological experiments across cultures (Atran, 2002; Barrett, 2004; Lewis-Williams and Pearce, 2005; Tremlin, 2006; Whitehouse, 2004). This has led to the increasingly common use of the term "religion" among these scientists as a way of referring to the shared belief in engagement with supernatural agents (such as ghosts, ancestors, jinn, saints, devas, gods, etc.).

For the sake of space and simplicity, I will illustrate this trend by outlining some aspects of Matt Rossano's recent proposal in *Supernatural Selection: How Religion Evolved* (2010). The title might invite suspicion that this is a treatise on intelligent design but, quite to the contrary, his argument is that the evolution of religion can be explained without appeal to the actual existence of supernatural agents. He provides a concise summary of his version of this hypothesis:

> Sometime between the disappearance of *Homo sapiens* from the Levant (about 100,000 ypb) and the Upper Paleolithic in Europe (about 35,000 ybp) some of our ancestors thought up the idea of a supernatural world. The world they envisioned was inhabited by spirits, ancestors, and gods who kept a close eye on them, ready to pounce on the first signs of deviance. The idea was an evolutionary winner.

> Groups who had it fanned out across the globe and quickly over-whelmed those who didn't. (2010, 60)

Why did these groups outcompete? It is because their "supernaturaliza-tion" of social life enhanced their coalitional strength in a variety of ways.

I will return to the issue of evidence for these abductive inferences below, but first let me simply outline some of the conjectures within the story that Rossano tells about the evolution of religion and its impact on morality. Our hominin ancestors were already socially bonding by sing-ing and dancing around campfires by around 500,000 ybp (years before present). Anatomically modern humans (*Homo sapiens sapiens*) moved out of Africa and into the Levant (the southwestern part of what we now call the Middle East) around 100,000 ybp. However, they were confronted by groups of Neanderthals and adverse environmental conditions; by 90,000 ybp they had retreated back to Africa.

During the next 30,000 years or so, which Rossano calls the African In-terregnum, they faced ecological crises and resource shortages and nearly went extinct. Those small bands of humans that survived (our genetic ancestors) learned new strategies for intergroup cooperation. Hunter-gatherers slowly transitioned from smaller and more egalitarian groups to larger and more socially stratified coalitions. Rituals involving more complex social bonding played a key role in holding together these larger coalitions. Human imaginative capacity was enhanced through natural selection as social life became more complex.

Rossano believes that childhood imaginative capacity was the main spring for the conception of supernatural agents. New rituals taxed at-tention and working memory, and as social life became more complex, a fitness advantage went to imaginative children who became socially intelligent adults. These adults further enhanced the affective and col-lective intensity of rituals by incorporating engagement with imagined supernatural agents. With the addition of the supernatural to social life, rituals were expanded from simple singing and dancing to more complex rites that involved initiations, trust building, and shamanistic healing. Being more imaginative also meant being more susceptible to the health-enhancing placebo effects of such rituals.

Adding supernatural agents to social life not only made people health-ier, it also made them "nicer." Rossano argues that the imagined presence of ancestors (ghosts, spirits, etc.) helped to motivate people to give up some of their self-interest and to comply with the social norms of the group and even to punish others who did not follow them. These behaviors stretch the explanatory power of the three hypotheses about the problem of good

explored above. When groups get sufficiently large, it becomes more difficult to watch one another to be sure everyone is cooperating and not in danger of defecting to other groups. The presence of supernatural agents who were always watching, and who were social players who had the power to bring misfortune, went a long way toward solving this difficulty. These advantages "gave 'religious' hominin groups a decisive edge over more 'secular' groups, who eventually went extinct" (2010, 198).

These "religious" groups thrived and around 60,000 ybp moved out of Africa again. This time they outcompeted all other hominin groups and would eventually spread across the globe. Between 50,000–30,000 ybp, their social life was further complexified by the emergence of ancestor worship, which was reinforced by religious narratives in which the living and the dead were part of a larger coalition. Such narratives provided justification for increasingly stratified societies, laying the groundwork for the later "elite versus popular" distinction of classical paganism.

Because of the focus of his project, Rossano only tells the story up to this point; but, of course, religion continued (and continues) to evolve. A fuller story would require a description of the role of religion in the social revolutions that led to sedentism and the domestication of plants and animals in the Neolithic (Hodder, 2010). It would also need to include the formation of complex literate states, which conditioned the emergence of the axial age religions in South Asia (Hinduism, Buddhism), East Asia (Confucianism, Daoism), and West Asia (Judaism, Christianity, Islam). I will return to the latter "Abrahamic" religions in more detail below, exploring how the conception of a single supranatural agent within these complex coalitions impacts their interpretation of good(s) and evil(s) in the world.

The main point here is the way in which Rossano illustrates how scientists can use the hypothesis "religion" to makes sense of the evolution of morality. For example, he argues that supernaturalizing social life played a role in reinforcing the last three moral axes proposed by Haidt (above). In each case, the incentive for following group norms was given supernatural backing. The group/loyalty axis, for example, was reinforced by divine commandments that helped to maintain in-group stability (no coveting the neighbor's wife or property), and to regulate out-group relations (no intermarriage with infidels). The taboos of the purity/sanctity axis, which governed, for example, what could be eaten or said, were reinforced by the presence of supernatural agents. The authority/respect axis was given a divine dimension: "as hunter-gatherer bands coalesced into tribes, shamans became priests who bestowed supernatural authority on chiefs and kings" (176).

In fact, there are many complementary theories that help to explain the recurrence of supernatural agent concepts—"gods" in the broadest sense—across cultures (see suggestions for further reading below). Elsewhere I have described the two basic types of theogonic (god-reproducing) mechanisms as "anthropomorphic promiscuity" and "sociographic prudery" (Shults, 2012). The former refers to the cognitive tendency to over-detect human-like agency in the natural world, the latter to the coalitional tendency to over-protect "our" way of inscribing social life. The survival value of these theogonic mechanisms helps to explain why gods are so easily born in the human mind and so easily borne in human cultures.

At this point, I want to emphasize how *abductive* inference works in these sciences and how conjectures are formed, defended, and criticized. Scientific hypotheses, like Rossano's, are shaped by inductive generalizations based on empirical observations (neurological, psychological, ethnographic, archaeological, etc.). They arise out of and lead to further deductive inferences engaging propositions embedded in theories about empirical data. However, the actual formation of such hypotheses begins with what Peirce called a "guess." Scientific conjectures are educated guesses, inspired hunches that cannot be "proven" like deductions or "validated" like inductions. However, such hypotheses can be rendered more or less *plausible* through the ongoing process of challenge and correction that is abductive argumentation—and this is an important part of what scientific communities (intend to) do.

What about retroduction? I am using the term to refer to inferences that lead back from an abductive hypothesis to make claims about the possibility conditions for the existence of the interpreted phenomenon. Are supernatural agents really that which makes possible human morality? Rossano explicitly refuses to answer this question; he proposes that we simply accept that the question of the existence of supernatural agents (including God) is unsolvable because it is not part of the objective realm (15). This evasion is quite common among BCSR scientists (Kirkpatrick, 2005; Tremlin, 2006). However, there are those who do challenge the plausibility of religious abductive inferences and the supposition that actual supernatural agents are in fact the key to understanding the problem of good (and evil).

HYPOTHESIZING IN RELIGION

This could easily be illustrated by referring to the criticisms of some of the "new atheists," but it makes more sense, in my view, to engage the

arguments of scientists for whom religion is their area of special exper-
tise. Scott Atran, for example, is a cognitive scientist of religion who criti-
cizes belief in supernatural agents as counterfactual and absurd ideas
that make possible logically impossible worlds (2002). David Lewis-
Williams is an archaeologist and anthropologist of religion who argues
that hallucinatory states of consciousness among early shamanistic com-
munities were the source of belief in supernatural agents, which are now
defended by factitious enigmas constructed by complaisant religious
pundits (2010).

The list goes on, as does the colorful rhetoric, but I will use Pascal Boyer
as an exemplar here primarily because of the special attention he pays to
the role of modes of inference in religion. Boyer is no less blunt than the
others: supernatural agent conceptions are parasitic knowledge of "airy
nothing," and their transmission in complex literate states is a result of the
commodification of such ideas by the religious elite (2001). Ouch. But let
us try to stay focused on his argument, which is that the abductive infer-
ence "supernatural agent" as an interpretation of all kinds of ambiguous
phenomena, which is nearly universal among human beings, is the re-
sult of the aggregate relevance of a variety of inferential systems, each of
which evolved for reasons not related to religion.

One thing all supernatural agent concepts have in common is that they
are minimally counterintuitive: not too strange, but just strange enough
to be easily remembered and transmitted across generations. But coun-
terintuitiveness alone does not a divinity make. Mickey Mouse violates
intuitive ontological expectations (an animal that talks), but people do not
usually believe he exists or develop rituals evoking his agency. Boyer ar-
gues that the reason that religious ideas have common features the world
over is that only a small range of counterintuitive concepts activate an
aggregate of multiple inference systems, such as those for detecting pred-
ators, prey, or protectors; those dealing with social exchange and moral
scrutiny; and those for dealing with death (2001, 374). Supernatural agent
ideas activate *all* of these inferential systems.

This is why the hypothesis "supernatural agent" so naturally emerges
as the first "guess" when people are confronted with ambiguous phe-
nomena. Boyer argues that religious inference is basically abductive. As
he puts it, this mode of inference involves "putting forward conjectural
assumptions that, if true, would account for the data observed . . . the main
purpose of abduction is to make surprising data unsurprising by positing
an assumption, of which the data would be a normal consequence" (1994,
147). The conjecture "human-like agent" easily and quickly arises as a way
of trying to make sense of strange experiences. Such abductions have a

great deal of inferential power because human agents do, in fact, account for much of the socially relevant complexity in our worlds.

Often when something bad (or good) happens to us, it is the result of the intentional behavior of others in our group. Social environments are filled with potential bringers of misfortune or providers of protection. When something unusual happens, human cognition automatically produces the inference that "someone" has acted. Once present among a group, conceptions of the disembodied souls of dead ancestors would naturally activate the inference that these are also socially interested parties who have access to strategic information, and that they have a stake in what happens to us (Boyer, 2001, 230).

This inferential richness explains why the knowledge and power (not to mention the relative goodness) of the gods is so important. In his research among the Fang people of Cameroon, Boyer discovered that they are not very interested in powerful gods like the creator Mebeghe, but have elaborate rituals for engaging the annoying ancestor ghosts who are always threatening to cause misfortunes that disturb their daily lives. This is also why most practicing Christians are more concerned about offering petitions to God (or to saints) for protection, healing, or success in a venture, than they are in understanding the doctrines of creation and providence. Engaging in the former activates exceptionally rich and socially relevant inferences, while reflecting on the latter has little impact on one's survival.

This has special relevance for the problem of good (and evil). Boyer points to three different ways in which supernatural agents are connected to morality: the legislator, exemplar, and interested party models. The religious leaders of doctrinal religions typically sponsor the first model, in which the coalition's moral law is determined by God (or the gods): the prohibitions and prescriptions of a divine legislature. On the other hand, supernatural agents are sometimes conceived as moral exemplars (e.g., saints), whose behavior or attitudes should be imitated. However, moral codes can be so general that they are difficult to apply in specific contexts. Exemplars pose the opposite problem: their behavior is too contextually specific, and hard to apply in different circumstances.

Boyer argues that the natural way in which humans connect gods to morality is the "interested party" model. Ethnographic research and psychological experiments suggests that, for the most part, people do not reflect on *why* gods or ancestors would desire to sanction their behavior. They just intuitively assume *that* they do care about how they act because the idea of "human-like agency" automatically activates social strategy inference systems. The idea of a supernatural agent who knows and

cares how we act is interesting; but those that have the power to protect against—or inflict—misfortune are even more likely to activate our inferential systems.

But why would supernatural agency be inferred in the first place? Like most other scientists in these fields, Boyer rejects the idea that recurrent belief in supernatural agents is a result of *inductive* inference, that is, of repeated observations of instances of apparent disembodied agency, which lead over time to generalizations about gods (1994, 77). However, he is also critical of *deductive* models of religious inference, which he calls the "theologistic" approach. Religious leaders and, to Boyer's dismay, many anthropologists assume that "doctrine" is a kind of catalogue of religious assumptions, which agents within the social environment use to make deductive inferences about, for example, what is happening in a ritual.

Boyer's claim is that religious reasoning functions primarily abductively. Naturally evolved and socially sensitive cognitive mechanisms quickly jump to or accept the conjecture "supernatural agent" when interpreting ambiguous phenomena, especially after these abductions are reinforced through participation in rituals that are affect laden and socially intense. Even when the term "abductive" is not used, the prevalence of this mode of inference in religious life has been overwhelmingly confirmed in the literature in BCSR (Atran, 1990; Barrett, 2004; McCauley and Lawson, 2002). Stewart Guthrie (1993) has provided the most extensive demonstration of the prevalence in human life of the perceptual-interpretive strategy that defaults to the guess "human-like" form. The point is not that religious people develop anthropomorphic hypotheses *about* gods; rather, gods *are* failed perceptual interpretations of natural phenomena.

Religious hypothesizing—abductively guessing "supernatural agent"—had powerful survival advantages for early human beings, activating a rich variety of socially relevant inferences. This is why it remains such a prevalent way of hypothesizing today. However, Boyer makes (what I have called) a retroductive inference: we should not suppose that actual supernatural agents are what make the interpreted phenomenon possible. Science has now provided more plausible hypotheses for explaining ambiguous phenomenon, including the phenomenon of religious hypothesizing itself. In fact, argues Boyer, every time that a "monopolistic doctrinal religion" makes the mistake of meddling in empirical facts, the scientific alternative has proved better (2001, 368; cf. 2010). What does all of this mean for our understanding of religious (and "theological") arguments about axiological origins?

THE PROBLEM OF EVIL(S) IN
THE ABRAHAMIC TRADITIONS

As we have seen, hypotheses in the bio-cultural study of religion must account for the problem of good(s). Theologians committed to a religious coalition within one of the Abrahamic traditions, on the other hand, are more likely to find themselves faced with the problem of evil(s). If the Creator is good, then it is no surprise to find goodness in the creation. But how then does one account for the existence of *evil*, which seems to challenge belief in a good God? Here, too, the hypothesis of supernatural agency plays a central role in explaining the conditions for axiological engagement. My focus in what follows will be on the role of the various modes of inference in such arguments, but it is important not to move so quickly that we lose sight of the more concrete problem of *evils.*

Most people are less concerned about abstract debates about *why* their supernatural agents act than they are about *how* their agency is related to any series of (un)fortunate events that impacts their own lives. Arguments about theodicy—theoretical justifications of divine existence or goodness in light of evil—are rarely comforting or compelling during actual axiological engagements with concrete evils. Human cognition does not normally leap to theoretical questions: Does evil have its own existence, or is it merely a privation of the good? Are the existence of evils a necessary condition for human freedom? On the contrary, people's inferential systems struggle to find answers to more immediate questions: Why did this evil thing happen to (our) good people? Why doesn't our supernatural agent protect us? Are we being punished?

The Abrahamic traditions are also faced with the problem of evils *in* religion, that is, with the need to explain why participants in their coalition fail to do good and sometimes do evil. Why do (our) people do bad things? For example, Christian theologians need some hypothesis to interpret the medieval slaughtering of religious out-groups during the Crusades and the torture of alleged in-group defectors during the Inquisition. Almost every day the evening news provides contemporary illustrations of the ambiguous link between religion and violence. We will return to this below in our discussion of the way in which the justification of supernatural agents and the sanctification of supernatural coalitions are mutually reinforcing.

I have been referring to the Abrahamic traditions, but this nomenclature actually obscures a deeper shared presupposition between Judaism, Christianity, and Islam. In each case, arguments about the origin of morality go back not only to the divine call of Abram (with Sarai) to leave

the settlement of Ur, but to the divine expulsion of Adam (and Eve) from the Garden of Eden. The religious traditions that originated in East and South Asia do not trace back the origin of human morality to a primal pair's disobedient decision regarding forbidden fruit. When dealing with the problem of evil, then, it really makes more sense to call these religions the "Adamic" traditions.

It is important to note that religious debates about *origins* are always at least indirectly connected to *morality,* even when they appear to be about physical cosmology or geology. Why, for example, does it matter whether a god created the world in six days? Why not three and one-half days? The reason such details are important is that challenges to their truth threatens the moral authority of the text attributed to the coalition's god. Notice also that in both of the (contradictory) stories in the first three chapters of Genesis, there is no defensive explanation for the existence of evil (or disorder) within—or even before—creation. The watery chaos and formless void in the first story and the crafty serpent in the second story are simply taken for granted. In the Qur'an as well, Satan and the tempting tree are already present in the Garden (e.g., Surah 2).

Of course, I am well aware of the many scholarly interpretations of these and other holy texts that challenge naïve anthropomorphic imagery of the divine. Many theologians within these traditions would also resist sociographically prudish interpretations of such texts. Elsewhere I have pointed to such "iconoclastic" trajectories within the traditions of the axial age (Shults, 2012), but here my concern is with specific arguments within the "sacerdotal" trajectories of the "religions of the Book." I am interested in theodicies driven by the need to make sense of evils in light of belief in a supernatural agent who is described in a particular religious in-group's holy texts, but who is *also* construed as an all-determining and morally perfect agent.

One of the main points here is that "the" problem of evil within the Abrahamic (Adamic) traditions is not so much a result of claims within their holy texts but of the way in which their monotheistic conceptions of the divine were forged after their encounter with the ancient Greek conflation of the Good and the One. Up to now I have been referring to supernatural agents, which is the generic term used in BCSR to refer to disembodied or ambiguously bodied intentional entities. As Wesley Wildman puts it, *super*-naturalism involves the inclusion of discarnate wielders of power in one's ontological item inventory (Wildman 2009, 20–25; 2010, 23–24). Adopting and adapting his terminology, I take *supra*-naturalism to indicate belief in *an* ultimate disembodied intentional entity that exists "above" or "beyond" and conditions all other (natural and supernatural) ontological inventory items.

It is belief in a *supranatural agent* that makes the existence of evil so problematic for the Abrahamic religions. In what follows, I will use GOD (in small capitals) as shorthand for a supranatural agent who is omnipotent, omniscient, and omnibenevolent as generally understood within the classic theological traditions of the Abrahamic religions. If GOD exists, whence evil (*unde malum*)? There is a vast literature on theodicy (see suggestions for further readings), but my task here is not to adjudicate among or contribute to the debates over the validity of such arguments. Rather, I want to draw attention to the way in which they tend to use the various modes of inference introduced above.

Philosophers of religion and theologians operating within these traditions, especially within Christianity, typically focus on the logical or evidential problems of evil. As we will see below, these arguments primarily utilize the deductive and inductive modes of inference. Does the existence of evil entail that the nonexistence of GOD is logically *necessary?* Do our repeated observations of evils provide evidence that the nonexistence of GOD is highly *probable*? Theodicies attempt to defend against deductive and inductive inferences that would challenge the possibility or probability of GOD's existence. This may be in part because so many philosophical opponents of monotheistic religion use these inferential strategies in their attacks against it.

My point here is not to demean the sophistication or downplay the rational value of such argumentation, but to suggest that greater attention to the role of abduction (as well as retroduction) could shed new light on the debate. The sciences of BCSR suggest that the abductive guess "supernatural agent," which was an overextension of the naturally evolved hypersensitive cognitive detection of agency, enhanced the solidarity of early hominin coalitions and increased their competitive advantage against other groups. Our phylogenetic inheritance helps to explain why such abductions occur so naturally in small children and are so easily rendered plausible among adults in the same coalition.

Once particular supernatural agent hypotheses are present within a coalition, they are susceptible to the same cognitive biases that operate within all abductive interpretations. Psychological studies have shown how people adjust their impressions of a scene to fit how others describe it, wrongly assume that others judge impressions the way they do, believe things they would like to be true, and continue to detect instances that confirm their initial hypotheses while missing instances that do not. In other words, supernatural agent abductions are easily born(e) within human cognition and culture.

What about the hypothesis GOD? This abstract concept of a transcendent deity did not help our ancestors survive, and doctrines like transcendence

and omniscience are not easily transmitted because of their relative irrelevance. Nevertheless, the hypothesis GOD can still be understood as a result of theogonic mechanisms. When the abductive guess "supernatural agent" is applied to the ambiguous phenomenon "all things," it is transmuted into a "supranatural agent" hypothesis. There is no evolved cognitive module for processing "all things" (what would our ancestors have needed it for?). At the limits of knowledge, ambiguity collides and colludes with infinity, and the promiscuity of anthropomorphic abduction can run wild. GOD is born—and borne among the Abrahamic religions. So is "the problem of evil."

JUSTIFYING SUPERNATURAL AGENTS

Once supernatural agents are detected and widely postulated within a coalition or wider culture, their actions must be justified. And this is in two senses. On the one hand, *that* such agents are strategic social players in the coalition requires justification when attempted axiological engagement with them does not seem to have the expected or desired outcome. On the other hand, if such agents are presupposed to be good and all-determining, then occurrences of misfortune also require justification. The justification (*dikaioma*) of god (*theos*) takes on a unique form in theodicy—defenses of a supranatural agent like GOD.

First, however, it is important to notice how easily *super*natural agents are justified in the first sense. When a shaman's healing ritual or a witch doctor's summoning fails, this rarely challenges belief in the ancestor ghosts or spirits. Perhaps the ritual participants are unworthy, perhaps the supernatural agents are angry. When a cult leader's prophecy about the end of the world does not occur on the predicted date, the survival of the coalition depends on the provision of a good reason. Perhaps our faith is being tested; perhaps GOD is graciously giving the world more time. Even within monotheisms, there are always other supernatural agents whose existence and strategic interest in the coalition helps explain misfortune or even the temporal delay of righteous divine judgment (evil spirits, demons, jinn, Satan).

McCauley and Lawson observe that the most emotionally powerful and cognitively stimulating religious rituals are not those in which culturally postulated superhuman (CPS) agents are patients (e.g., recipients of gifts), but those in which they are engaged as actors (e.g., healers). In such cases, the ritual must be characterized as mediating a fundamental transformation for which the CPS agent gets credit. In order to survive, religious coalitions have to develop some conceptual control over apparent ritual

failure in particular cases. This is easiest if the CPS is construed as active in the ritual, but "*without necessitating any empirically detectable changes in the world that the religious system cannot control*" (2002, 206, emphasis in original). In fact, this kind of ritual is found the world over.

The justifications involved in theodicy are of a different kind. If GOD conditions (creates, determines) all things, then why is there *any* evil? Here the supranatural agent must be defended—in general—in relation to the existence of all evil or to the existence of a particular quantity or quality of evils. As indicated above, these arguments tend to fall into two categories. The first is the logical problem of evil, which primarily focuses on deductive inferences that seem to follow from the following propositions. An omniscient being would know all about evils. An omnipotent being would have the capacity to eliminate evil. An omnibenevolent being would eliminate evil if it could. Yet, evils exist. Therefore, it seems logically necessary that GOD does not exist.

The second type is the evidential problem of evil. Here it is inductive inference that plays the primary role. Does our observation of so many evils (quantitative), or such horrible evils (qualitative) render it improbable that GOD exists? Given the limits of human knowledge in the face of an indeterminate number of compossible worlds, it is very difficult indeed to prove the necessary *impossibility* of any premise, much less one involving an abstract concept like GOD, which helps to explain why most opponents of the concept seem to focus more energy on rendering it highly *improbable.*

Defenders of the concept of GOD, whether as a premise or a possibility, most often develop strategies that tweak the concept of evil and/or tweak the attributes of GOD. One classical Christian example of an approach that focuses on the first strategy is Augustine's argument that evil is only the privation of good—its existence is parasitic. On this model, claims that the world only appears evil to us or that we are not in a position to weigh the evidence are often reinforced by reminders that divine *knowledge* is higher than ours and/or that divine *power* will prevail in the end.

Models that emphasize the second strategy do not deny the real existence of evil(s) but argue that divine power or knowledge (rarely divine goodness, which is presupposed) is limited in some sense. In Christianity, Irenaeus is often credited as the originator of this approach. In his case, the divine power in relation to creation was "limited" by the divine knowledge that the goodness of a world with free creatures would require the existence of evils (in order to prepare creatures for responsible fellowship with GOD and one another in an eschatological coalitional consummation). After the early modern period, versions of this model for defending GOD in the face of evil have often called been called "free-will" theodicies.

Some scholars within the Abrahamic traditions find the very idea of defending an abstract theological concept through logical and evidential arguments in the face of evil somewhat offensive. They develop a different strategy by focusing on what has been called the *existential* problem of evil. For those who have faith in GOD, they insist, the encounter with evil should lead not primarily to defending divinity but to helping humanity. The main "problem" is not theoretical but practical. Arguing whether the nature of evil is privative or preparative is insensitive and unhelpful; the existence of concrete evils should provoke us to participate in redemptive action toward those who are suffering. In most cases, however, one still finds within such arguments appeals either to the limits of human knowledge in relation to the divine plan or promises of eschatological consummation that will be of infinitely higher value than even the most horrendous evils.

All three of these strategies work (more or less) well *within* religious coalitions, but are rarely convincing to those outside them. Our review of the empirical findings and hypotheses about the evolution of religion within the disciplines of BCSR helps to explain why. They all function to reinforce the abductive inferences already dominant in the mental and social space of those committed to the tradition. Even if (or precisely because) most people do not understand why the idea of GOD is important to theologians, they do not find the challenges to theodicy very worrisome. They simply default to a "supernatural agent" hypothesis, which hardly needs any justification for them because it *feels* right.

For many of those within the Abrahamic traditions, the biblical texts are not problematic until a theologian tells them they are. Imagine Adam and Eve. The original coalitional pair hears ambiguous "sounds" at dusk, "at the time of the evening breeze." They are afraid that the god who made them will discover their deceit. That god punishes them by instituting the unpleasant conditions that regulate childbirth and agriculture, banning them from the garden, and withholding immortal life (Genesis 3). This is just the sort of narrative that we would expect to emerge as a result of the kind of hypotheses about ambiguous natural phenomena that helped our ancestors survive (together).

Within the complex literate states in which the Abrahamic traditions took hold, philosophical, psychological, and political factors eventually led to the idea of a supranatural agent, which became the official orthodox hypothesis within those coalitions for any and all phenomena whatsoever. The emotional and social inferential systems of most religious practitioners, however, are not strongly activated by the abstract idea GOD. Instead, their naturally evolved cognitive functions lead them to detect not quite

so maximally counterintuitive supernatural agency, i.e., to make the automatic kind of abduction that contributed to the affective and collective security of early hominins. Whether religious leader or layperson, however, the same cognitive and cultural theogonic mechanisms are at work.

I am not suggesting that bringing BCSR into the dialogue will prove that GOD does not exist (is not logically possible) or even render it statistically unlikely that GOD will ever be observed (is not empirically probable). These ways of framing the issues have always ended in impasse, and there are no signs that such arguments will be resolved or rescinded. Moreover, BCSR hypotheses about the role of religion in the origin of morality will not have much immediate bearing on the existential problem of evil either. Like the other two models, the latter can always end with an appeal to mystery or paradox, which will almost always suffice as "justification" within the coalition because its participants are held together (psychologically and politically) by naturally and abductively inferring the presence and purposiveness of GOD who is already and always watching them.

And this is the point at which attention to abduction and retroduction alters the way in which we argue about the origins of axiological engagement. Theologians within the Abrahamic religions attempt to justify GOD in the face of evil(s) by defending the possibility, probability, or existential potentiality of their supranatural agent. Their opponents find their arguments unjustifiable. Generally speaking, the insights of BCSR into the cognitive and cultural processes that shape all "supernatural agent" guesses raise doubts about the *plausibility* of any such religious abduction. This also applies to the more specific question: can one make sense of evil in light of the hypothesis GOD?

But another question lies behind, or close beside, this one: what may one reasonably suppose to be the condition(s) of the *existence* of theodicy-hypothesizing itself? What makes possible the ambiguous phenomena *of* religious abductions that interpret evil in relation to the hypothesis GOD? Our evaluations of retroductive inferences of this type will be shaped, of course, by a whole host of factors, not least of which is the way we are bound together with others through the axiological inscriptions that constitute and regulate our social lives.

SANCTIFYING SUPERNATURAL COALITIONS

As we have seen, research in the fields of BCSR suggests that the reason supernatural agent hypotheses are relatively easily justified is not only because our evolved cognitive equipment is hyper-sensitive to the detection

of agency but also because this equipment evolved in a way that made us hyper-protective of our coalitions. Supernatural coalitions are sanctified (*sanctificare,* to set apart, make holy) just as "naturally" as supernatural agents are justified. In one way or another, religious arguments about the origin, order and orientation of axiological engagement appeal to the possibility (or actuality) of being in coalition with supernatural agents.

The beliefs and behaviors of religious coalitions often seem bizarre to out-groups. From the perspective of BCSR, however, it is their very oddness that helps us to make sense of them. Initially, it does not appear that ideas about ghosts or gods would give any competitive advantage for survival to believers. Moreover, the painful initiation rites, elaborate ritual offerings of scarce resources and even self-sacrifice that anthropologists find religious coalitions across the world seem to weaken (or destroy) an individual's chances of survival. Here too, however, scientists within BCSR have developed hypotheses that help to makes sense of these phenomena in light of evolutionary theory.

Richard Sosis, for example, has argued that costly public expressions of religious belief and behavior strengthen a coalition by providing clear signals about commitment to the in-group (2006). As we saw above, when competition for resources between small groups is fierce, as during what Rossano called the African Interregnum, those groups with the most cohesion and fewest defectors are most likely to survive. Sosis points out that it is precisely those who have actually internalized the beliefs of the community that are most likely to be willing and able to make the most convincing signals of commitment. The more bizarre and costly the better, because the point is to root out those who are not really committed and may defect to out-groups.

What does this have to do with the problem of evil? First, professing belief in the doctrinal explanation of evil vis-à-vis the supernatural agent(s) of one's coalition signals one's commitment to the in-group. This is easier if one believes (or really believes that one believes) that GOD can be understood simultaneously as perfectly good and as the ultimate condition of all evils. Understanding how this makes sense is less important than believing that it could (or will eventually) make sense. Threats to such beliefs from out-group members (e.g., atheists) are often met with bemusement rather than with anger by the faithful. Challenges (or even questions) raised by members within the coalition, however, are more likely to elicit powerful emotional and political pressure to conform. Failure to do so can lead to various forms of censure, punishment, and exclusion.

Susceptibility to these coalitional forces remains powerful today because the sociographic prudery of our ancestors was naturally selected

and passed onto us. Those coalitions composed of members for whom supernatural abduction came easily and who strongly signaled their commitment to the beliefs of the in-group survived. Today most people already interpret ambiguous phenomena in light of supernatural agent hypotheses, and these do not really need to be defended logically or evidentially—or even existentially—because such abductions are so easily generated and powerfully reproduced by theogonic mechanisms.

It seems that most religious people within the Abrahamic traditions do not need to use *modus ponens* to deduce GOD's knowledge of their situation from the premise of divine omniscience. Divine power *in situ* is not inductively inferred from the analysis of previous empirical observations of GOD. Even if they signal their belief in a "supranatural agent" theodicy, they are more likely to infer "supernatural agency" automatically (and abductively) in ambiguous and existentially intense situations. BCSR helps us understand why and how they can do both. The survival value of being a committed member of a coalition, which can require costly expressions of beliefs in deductive and inductive arguments that appear odd to out-groups, reinforces the naturally occurring abductions that *some* kind of supernatural agency is at work in the regulation of good and evil.

The other side of in-group cohesion is out-group violence. And this brings us to a second way in which these coalitional dynamics are relevant for understanding the origin of the problem of evil (and good). In the Abrahamic traditions, the setting apart (making "holy") of the coalition is often understood as eternally secured by the eschatological promise of reward from a supranatural agent, which in turn entails the eschatological punishment of those from other coalitions. As John Teehan observes in his analysis of the Abrahamic religions in light of costly signaling theory and other insights from BCSR, it is the same "moral logic" that "sanctions" both the death penalty for in-group members and violence against out-groupers (2010, 158).

As we have seen, morality was already present in hominin groups prior to the emergence of belief in supernatural agents, and "moral intuitions" are present in children prior to their being scripted into the norms of the socius. However, religion has the power to *amplify* these cognitive and emotional dispositions. This is why one finds extreme examples of both altruism and terrorism supported by appeals to religion. Teehan points to two of the ways in which this amplification operates in monotheism. First, it sets a moral boundary around the in-group in such a way that a lower moral consideration for out-groupers appears to be authorized by a divine judge and enforcer. Second, it raises the stakes. The question is no longer merely competition between self-interested groups attempting to survive,

but a cosmic struggle between the forces of good and evil in which total victory or annihilation are the only options.

Teehan also helpfully demonstrates how the moral codes of the Abrahamic religions are not exempt from evolutionary analysis. They reinforce the same dynamics of coalitional bonding with supernatural agents that helped some early hominin groups prevail over others. Most of the rules have to do with behavior that holds groups together and helps them survive (no lying, be nice) while those that have no apparent rationale (keep the Sabbath, as opposed to some other day, holy) provide opportunities for costly signaling of commitment. He shows, for example, how even the biblical command in Christianity to "love your enemy" ultimately appeals to direct reciprocity (reward in heaven) for in-groupers who remain committed and the threat of punishment (torture in hell) for out-groupers and defectors (2010, 135–143).

Similar observations could be made about other religions, including Buddhism, which is often thought by Westerners to be an exception to the rule. Here, too, it is coalitional engagement with supernatural agents that orients moral behavior. Even in *The Way of the Bodhisattva,* monks are urged toward enlightenment and loving-kindness by promises of communion with the Buddhas and other Bodhisattvas, and by threats of the unrelenting pain of being crushed and lacerated by hellish beings (Shantideva, 2008).

The justification of gods—or GOD—and the sanctification of coalitions are mutually reinforcing. My point here is not to make judgments about the value of particular moral codes but to indicate the way in which religious axiological coding is mediated by appeals to supernatural coalitions, which tends to amplify good and bad. Philosophical reflection on the findings of BCSR suggests that it is precisely *religious hypothesizing*—supernatural agent abduction—that is the origin of the problem of evil. And this brings us back to Nietzsche.

BEYOND GOOD AND EVIL?

Arguing about axiological origins and arguing about axiological destinations naturally belong together. Where "ought" we to go from here? How is it even possible to evaluate answers to this question? Nevertheless, here we are, evaluating and being evaluated in and across our various coalitions, seeking goods and trying to avoid evils. It *feels* frightening, perhaps even nauseating, to consider the possibility of moving "beyond good and evil." Such a move would seem, well, immoral. We cannot ignore the fact that bad things happen to us all; indeed, we ourselves are

often the agents of happenings that others (and we ourselves) judge as bad. To evaluate things as good or bad is part of the human condition.

But does axiological engagement require an ontological distinction between good and evil? Such evaluations can obscure the fact that those who are competing with us are alive, just as we are. Nietzsche pointed out that any living thing "will want to grow, spread, grab, win dominance—not out of any morality or immorality, but because it is *alive*." Refraining from injuring others and placing one's will on par with others is "in a crude sense" the basis for good manners. This often works well enough, he concedes, if certain economic and other conditions are in place. As a "fundamental principle of society," however, it is the negation of life itself.

> life itself is *essentially* a process of appropriating, injuring, overpowering the alien and the weaker, oppressing, being harsh, imposing your own form.... "Exploitation" does not belong to a corrupted or imperfect, primitive society: it belongs to the *essence* of being alive as a fundamental organic function...although this is an innovation at the level of theory—at the level of reality, it is the *primal fact* of all history. Let us be honest with ourselves to this extent at least! (2002, 153)

Can we be honest with ourselves about this? At *least*!

We have already seen how sanctifying supernatural coalitions can lead to the crushing of out-groups. But evaluations of others who make us feel threatened as "evil" also crush the life out of in-groups as well. It makes us slaves of the "priestly" axiological inscriptions of the socius authorized by justifying supernatural agents.

It is important to keep in mind that the term "religion" throughout this chapter has been used in the limited way commonly adopted in the BCSR literature, to refer to shared beliefs and behaviors that appeal to supernatural agency. To be critical of the theoretical, pragmatic, or even aesthetic value of such abductive hypotheses is not to deny that there are other aspects of what is more broadly called "religion" that can enhance life. Maintaining a connection to the wisdom of the religious traditions, which have indeed helped hold us together and constrain selfishness adequately to survive, makes good sense. But "religious hypothesizing" (abductively guessing "supernatural agent") also amplified in-group and out-group violence. Could we really live *without* religion in this sense? Can we *really live* with it?

The main point I have been trying to make in this chapter is that philosophical reflection on the insights of BCSR can open up new modes of

dialogue about axiological origins that not only explore the *plausibility* of scientific and religious abductions in general, which is already a step in the right direction, but also attempt to lead back through retroductive inference to new hypotheses about that which may be reasonably supposed to be the condition(s) for the existence of any and all supernatural agency hypothesizing whatsoever.

Which retroductive inference is most reasonable regarding the conditions for the existence of religious hypothesizing (including theodicy hypothesizing)? That the supranatural agent detected by (some of) those within (one of) the Abrahamic religious coalitions intentionally created the conditions for this and all other supernatural agent detections, including those that are faulty among other coalitions? Or that the detection of a supranatural agent among the Abrahamic traditions is made possible by the same natural bio-cultural conditions that underlie all supernatural agency hypotheses in every religious coalition?

Which makes most sense? That the proscriptions and prescriptions by which one of the coalitions in the Abrahamic tradition have inscribed the socius are authorized by a supranatural agent who will also judge all other coalitions according to these eternally grounded axiological standards? Or that these religious traditions are held together by the same temporally developed hypersensitivity to protecting coalitions by detecting socially interested supernatural agents that conditions all such sociographically prudish coalescing?

There are no logical rules or statistical methods by which to decide between these retroductive claims. Arguing in this way sounds hard—and even dangerous. Today, however, humanity faces a new and complex adaptive task: surviving the intensity of worldly "evil" that we ourselves have created. Learning to challenge our supernatural agent abductions will not solve all our problems, but refusing to do so will only make things worse. We must find the courage to argue about axiological origins in new critical and creative ways. Nothing less is at stake than the *future* of good and evil.

FURTHER READING

I have indicated suggestions for further reading in relation to the sciences of BCSR within the text. For examples of the various approaches to theodicy described above, see the anthologies edited by Adams and Adams (1991), Peterson (1992) and Larrimore (2000). For more background on Peirce's reflections on argumentation and the modes of inference, a good place to start is Peirce (1998).

REFERENCES

Adams, Marilyn M. and Robert M. Adams. 1991. *The problem of evil.* Oxford: Oxford University Press.

Atran, Scott. 1990. *Cognitive foundations of natural history: Toward an anthropology of science.* Cambridge: Cambridge University Press.

Atran, Scott. 2002. *In Gods we trust: The evolutionary landscape of religion.* Oxford: Oxford University Press.

Barrett, Justin. 2004. *Why would anyone believe in God?* New York: AltaMira Press.

Boyer, Pascal. 1994. *The naturalness of religious ideas: A cognitive theory of religions.* Berkeley: University of California Press.

Boyer, Pascal. 2001. *Explaining religion: The human instincts that fashion gods, spirits and ancestors.* London: Random House.

Boyer, Pascal. 2010. *The fracture of an illusion: Science and the dissolution of religion.* Göttingen, Germany: Vandenhoeck & Ruprecht.

De Waal, Frans. 2010. *The age of empathy: Nature's lessons for a kinder society.* New York: Three Rivers Press.

Haidt. Jonathan. 2001. "The emotional dog and its rational tail: A social intuitionist approach to moral judgment." *Psychological Review,* 108: 814–34.

Haidt, Jonathan. 2007. "The new synthesis in moral psychology." *Science,* 316 (May): 998–1002.

Hauser, Marc. 2006. *Moral minds: The nature of right and wrong.* New York: HarperCollins.

Hodder, Ian, ed. 2010. *Religion in the emergence of civilization: Catalhoyuk as a case study.* Cambridge: Cambridge University Press.

Kirkpatrick, Lee A. 2005. *Attachment, evolution and the psychology of religion.* New York: The Guilford Press.

Larrimore, Mark. 2000. *The problem of evil: A reader.* Oxford: Wiley-Blackwell.

Lewis-Williams, David. 2010. *Conceiving God: The cognitive origin and evolution of religion.* New York: Thames & Hudson.

Lewis-Williams, David and David Peirce. 2005. *Inside the Neolithic mind.* New York: Thames & Hudson.

McCauley, Robert N. and E. Thomas Lawson. 2002. *Bringing ritual to mind: Psychological foundations of cultural forms.* Cambridge: Cambridge University Press.

Neville, Robert. 1995. *The truth of broken symbols.* Albany: State University of New York Press.

Neville, Robert. 2006. *On the scope and truth of theology.* New York: T&T Clark.

Nietzsche, Friedrich. 1979. *On the genealogy of morals.* Ed. and trans. by Walter Kaufmann. New York: Random House.

Nietzsche, Friedrich. 2002. *Beyond good and evil.* Trans. Judith Norman. Cambridge: Cambridge University Press.

Peirce, C. S. 1998. *The essential Peirce: Selected philosophical writings,* Vol. 2. The Peirce Edition Project. Bloomington: Indiana University Press.

Peterson, Michael L. 1992. *The problem of evil: Selected readings.* Notre Dame, IN: Notre Dame University Press.

Rossano, Matt J. 2010. *Supernatural selection: How religion evolved.* Oxford: Oxford University Press.

Shantideva. 2008. *The way of the Bodhisattva.* Trans. by The Padmakara Translation Group. Boston: Shambhala.

Shults, F. LeRon. 2012. "Science and religious supremacy: Toward a naturalist theology of religions." In Wildman and McNamara, eds., *Science and the world's religions,* vol. 3. Santa Barbara, CA: ABC-CLIO.

Sober, Elliott and David S. Wilson. 1998. *Unto others: The evolution and psychology of unselfish behavior.* Cambridge, MA: Harvard University Press.

Sosis, Richard. 2006. "Religious behaviors, badges and bands: Signaling theory and the evolution of religion." In Patrick McNamara, ed., *Where God and Science Meet,* vol. 1. London: Praeger.

Teehan, John. 2010. *In the name of God: The evolutionary origins of religious ethics and violence.* New York: Wiley-Blackwell.

Tremlin, Todd. 2006. *Minds and gods: The cognitive foundations of religion.* Oxford: Oxford University Press.

Wildman, Wesley. 2009. *Science and religious anthropology.* Farnham, UK: Ashgate.

Wildman, Wesley. 2010. *Religious philosophy as multidisciplinary comparative inquiry.* Albany: State University of New York Press.

Wilson, David Sloan. 2002. *Darwin's cathedral: Evolution, religion and the nature of society.* Chicago: University of Chicago Press.