

Religion, Morality, Evolution

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Abstract

How did religion evolve? What effect does religion have on our moral beliefs and moral actions? These questions are related, as some scholars propose that religion has evolved to enhance altruistic behavior toward members of one's group. I review here data from survey studies (both within and across countries), priming experiments, and correlational studies of the effects of religion on racial prejudice. I conclude that religion has powerfully good moral effects and powerfully bad moral effects, but these are due to aspects of religion that are shared by other human practices. There is surprisingly little evidence for a moral effect of specifically religious beliefs.

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INTRODUCTION

Psychologists typically ignore religion. It is barely mentioned in introductory textbooks, and the best journals rarely publish papers on the topic. Religion is seen as an exotic specialty area, like sexual fetishes or the detection of random number sequences.

This neglect isn't limited to psychology proper. McCauley & Whitehouse (2005, p. 3) note: "... as with so many contemporary intellectuals, cognitive scientists, until quite recently, have mostly found topics like religion to be an embarrassment." They add: "No topic—not even sex, death, taxes, or terrorism—can elicit any more quirky, unpredictable responses from intellectuals than religion." Religion is like sex to a Victorian or dreams to a behaviorist—an awkward and embarrassing phenomenon best

not talked about. Many would go further and insist that religion isn't a fit topic for science at all. To study it as a psychologist is to commit the sins of "scientism" and "reductionism" (see Wieseltier 2006 for such an attack).

Since this article explores religious belief and practice, it's worth addressing this concern at the outset. One way to do so is to insist on a distinction made by David Hume. In 1757, Hume began *The Natural History of Religion* with this: "As every enquiry which regards religion is of the utmost importance, there are two questions in particular which challenge our attention, to wit, that concerning its foundation in reason, and that concerning its origin in human nature" (p. 21).

There is a lot to be said about Hume's first question and whether it is the proper focus of empirical inquiry. Some scholars believe that religion's "foundation in reason" falls within the realm of science, while others disagree. But the second question—religion's "origin in human nature"—is bread-and-butter psychology. How could psychology *not* address such an important domain of belief, motivation, and action? Critically, the psychology of religion can be studied independently of one's belief about the truth of religious claims. Regardless of whether God exists, for instance, the question remains as to why so many people believe he does (see Bloom 2009).

Why should psychologists be interested in the topic? One consideration is the universality of religious belief. Most people characterize themselves as belonging to a religion—typically Christianity and Islam; about half of the 6.9 billion people on Earth see themselves as falling into one of these two faiths. Most people engage in various religious practices, such as circumcision and church going and obeying dietary restrictions, and most people hold religious beliefs, such as believing in God or in life after death.

Religion is ubiquitous in the United States, where well over 90% of the population claims to believe in God, and about 40% believe that Jesus Christ will return to Earth in the next half

century (Appiah 2006). America is admittedly unusual compared to the countries of Western Europe, where the citizens are less likely to affiliate themselves with a religion and where they often claim not to believe in God. But looking at the world as a whole, it is Western Europe that is the exception. American religiosity sits well with the countries of Asia and Africa and the rest of the Americas—that is, most of the rest of the planet.

Within the United States, there are political and social divides, and these correspond to religiosity in the expected ways, with conservatives being more religious than liberals. But religion is not limited to a conservative subgroup. Most people who identify themselves as Democrats pray daily or more often, and the vast majority believe in life after death (Waldman 2004). Even most American academics, who are among the more secular and liberal members of our species, are religious. A recent study of 40,000 faculty members at 421 colleges (Lindholm et al. 2006) found that almost two thirds said that they considered themselves religious either “to some extent” (29%) or “to a great extent” (35%).

In 1916, a large selection of scientists were asked whether they believe in God, and the question was framed in a fairly strict manner, referring to a God who one could pray to and actually get an answer from. Even with this high bar, about 40% of scientists said yes—the same percentage found in a similar poll in 1996 (Larson & Witham 1997). Only when we look at the most elite scientists—members of the National Academy of Sciences—do we find a strong majority of atheists and agnostics (Larson & Witham 1998).

Finally, religion is highly relevant to many people’s lives (Shermer 2003). Religious activities are a major source of everyday pleasure (Bloom 2010). And many important contemporary social and political debates—over gay marriage, abortion, capital punishment, stem cell research, the teaching of evolution in schools, and so on—are affected by people’s religious views. It is impossible to make sense of most of human existence, including law, morality, war,

and culture, without some appreciation of religion and how it works.

TWO PUZZLES

Religion and Morality

The main focus of this review is the effect of religious belief and religious affiliation on our moral lives. To put it crudely, does religion make people good, does it make them bad, or does it have no effect at all?

Many people think they know the answer. In a 2007 Gallup poll, most Americans said that they would not vote for an otherwise qualified atheist to be president—they were more willing to vote for a Mormon, a Jew, or a homosexual. Another study found that people ranked atheists lower than Muslims, recent immigrants, and homosexuals in “sharing their vision of American society” and were least willing to allow their children to marry them (Edgell et al. 2006). When asked why there were so set against atheists, the answers had to do with morality:

Some people view atheists as problematic because they associate them with illegality, such as drug use and prostitution—that is, with immoral people who threaten respectable community from the lower end of the status hierarchy. Others saw atheists as rampant materialists and cultural elitists that threaten common values from above—the ostentatiously wealthy who make a lifestyle out of consumption or the cultural elites who think they know better than everyone else. Both of these themes rest on a view of atheists as self-interested individualists who are not concerned with the common good (pp. 225, 227).

This distrust of atheists is shared by many scholars, including those who are otherwise seen as champions of the Enlightenment. John Locke, for instance, did not believe that atheists should be allowed to hold office. He wrote (1689, p. 51): “Promises, covenants, and oaths, which are the bonds of human society, can have

no hold upon an atheist” (quoted by Haidt & Kesebir 2010).

There are other scholars who hold the opposite view, arguing that religion makes people worse. Most would agree, after all, that religious fanaticism and extremism can sometimes drive people to do terrible things, and many would agree as well that certain everyday religious practices and beliefs can have a dark side. Examples might include the persecution of homosexuals, the murdering of heretics, and incitements to holy war. As Blaise Pascal pointed out, “Men never do evil so completely and cheerfully as when they do it from a religious conviction.” Even Pope Benedict XVI conceded this, noting: “There exist pathologies in religion that are extremely dangerous” (cited by Myers 2008).

Some would take this further, arguing that religion in general has a corrosive effect of our moral lives. Hitchens (2007, p. 56), for instance, argues that religion is “violent, irrational, intolerant, allied to racism and tribalism and bigotry, invested in ignorance and hostile to free inquiry, contemptuous of women and coercive toward children” (see Myers 2008 for discussion). Batson (1976, p. 30) argued that religion is “a double agent”: “Espousing the highest good, seeking to make all men brothers, religion has produced the Crusades, the Inquisition and an unending series of witch hunts. Virtually every organized religion has been the excuse, if not the cause, for violent, inhumane, and antisocial acts.”

To some extent, the question of the effects of religion falls outside the domain of psychology. Debates about the moral effects of religion are often framed with reference to data from history and sociology and anthropology: Participants in these debates tally up all of the good and all of the bad done by the religious and the non-religious, and argue about who comes off better in the end. (As I put it in an earlier article, “I see your Crusades and raise you Stalin!”) From this standpoint, this question of the moral effects of religion is similar to arguments over the merits of parliamentary democracy, free trade, or the legalization of drugs. These are empirical questions, at least in part, but they are best

addressed through the study of societies, not through psychological research into the minds of individuals.

Still, as we have seen, many believe that religion does have an effect on individuals within a society, and they argue, plausibly enough, that policy implications follow from this. Brooks (2006), for instance, argues that religion makes individuals both happier and kinder, and concludes that organizations such as the American Civil Liberties Union, which seek to staunch displays of religiosity, are harming society. On the other side, the so-called New Atheists, a group that includes Christopher Hitchens, Daniel Dennett, Sam Harris, and Richard Dawkins, argue that religious belief is not just factually mistaken, but makes us worse people. If so, then rational and moral individuals should work toward its demise.

To put the importance of the issue in perspective, consider that psychologists spend great energy exploring whether violent video games have a negative effect on children. Could anyone doubt that the question of the moral effects of Islam and Christianity—practices far more widespread than *Grand Theft Auto*—is at least as interesting?

Evolution of Religion

A second question about religion that I address here is why it exists in the first place. Religion poses certain difficult and intriguing puzzles for anyone interested in the evolution of the human mind.

Consider first the problem of religious beliefs. Nonreligious beliefs that people hold include:

- Unsupported things fall to the ground.
- The sun rises in the morning.
- One plus one equals two.

Such beliefs make Darwinian sense because they are true of the world in which we live. This makes it plausible that they could either arise directly through natural selection (because it is usually adaptive for animals to know true

things), or they could arise indirectly through natural selection (because we have evolved fairly accurate mechanisms of perception and learning and can use these mechanisms to learn true things).

Consider now religious beliefs such as:

- God created the universe.
- When people die, they go to heaven or to hell.
- Christ was born from a virgin.

These beliefs illustrate, as H.L. Mencken put it, humanity's "stupendous capacity for believing the incredible." Mencken was an atheist, but even a theist would agree that these beliefs really are incredible in the sense that they don't arise in any clear way from our usual systems for apprehending the world. We can see dogs and trees; we cannot (in any literal sense) see God. The propensity to form such beliefs could be innate, but this raises the question of how such a propensity could have evolved.

Religious activities pose an even more difficult puzzle. Just as with beliefs, many of the nonreligious activities that people choose to do are related in some sense to the dictates of natural selection—eating, drinking, fornicating, caring for children, establishing social relationships, and so on. The psychological mechanisms underlying these behaviors can be seen as adaptations. There are also many activities that don't have obvious selectionist explanations, such as music and art; these can often be understood as by-products of adaptations (see Bloom 2010).

But religious activities fall into a third rather mysterious category. It is not merely that they don't have obvious survival value; it is that they seem maladaptive from a Darwinian standpoint. Religious practices include mutilating one's body, sacrificing valuable goods, choosing celibacy, and so on. One might have expected any desire to engage in such activities to be weeded out by the unforgiving sieve of natural selection. Why this hasn't happened is another of the mysteries that any theory of the evolution of religion has to address.

The study of the origin of religion connects in interesting ways to issues of morality. One increasingly popular theory sees religion as an evolved solution to the problem of bringing together communities of people; religious belief and practice exist to instill cooperation and group feelings, to motivate kindness and compassion to other members of one's tribe. This review critically evaluates this proposal.

In the course of this exploration, I discuss a range of research programs. As noted above, there isn't as much research on the topic as one would hope. Furthermore, the research that does exist is carried out by intellectual communities that don't tend to read one another's work. There is a tradition in social psychology, for instance, that focuses on the relationship between religion and prejudice, and there is another tradition that explores the effect of religious primes on generosity and altruism—and they don't tend to cite one another. The parable of the blind men and the elephant is overused, but here it seems apt. One goal of this article, then, is simply to review and synthesize research. More ambitious goals are to show that these findings can be integrated in a satisfying way and to make some substantive claims about religion, morality, and evolution.

SENSES OF RELIGION

What do we mean when we talk about religion? We can consider three main senses.

One sense of "religion" corresponds to a certain type of transcendent or mystical experience. This was the topic of William James's (1902) classic *The Varieties of Religious Experience*. James was interested in "the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine" (p. 31). The contemporary scholars who continue this tradition include those who explore the emotion of awe (e.g., Keltner 2009) and those who study the neuropsychology of religious visions (e.g., Persinger 2001).

A second sense has to do with supernatural beliefs. In 1871, the anthropologist Edward Tylor argued that the “minimum definition of religion” is a belief in spiritual beings, in the supernatural. Much of the work in the psychology and cognitive science of religion concerns the question of why we have such beliefs—why we believe in Gods, spirits, and so on (e.g., Bloom 2004).

A third conception of religion is as a certain sort of social activity, what one does with other people. As we will see, this is the conception that most connects with claims about the evolution of religion and its relationship to morality.

One can be “religious” in these three distinct ways, then, and each of the three senses of religion can exist in the absence of the others. One can experience transcendent experience without any specific beliefs and affiliation; this is what is often meant when people describe themselves as “spiritual.” Even some ardent atheists discuss and seek out such transcendent experiences, as in meditative practice. Or one might hold supernatural beliefs without affiliating with a religion or having any transcendent experiences—these individuals are what David Hume called “superstitious atheists.” Indeed, most who insist that they have no religious affiliation still believe that they will survive the death of their bodies (Putnam & Campbell 2010). Finally, one can belong to a community that is a religion in every sense except that its adherents don’t engage in transcendent experience or believe in supernatural beings. Zuckerman (2008) notes that this is the case for many Christians in Scandinavian countries.

As an exercise, one could continue to mix and match, describing all eight permutations of the above three features. I won’t do this here. Note that although these notions of religion are separable, they do tend to fall together. That is, most of those who characterize themselves as adhering to Christianity, Islam, Judaism, Hinduism, and other religions are religious in the sense that they have certain experiences and that they hold certain beliefs and that they engage in certain practices.

RELIGION AND MORALITY: POSSIBLE CONNECTIONS

How might religion, characterized in any of the above ways, affect morality? How can it influence one’s views about right and wrong, the extent of one’s altruism or selfishness, and so on?

One possibility emphasizes the fact that religions make explicit moral claims that their followers accept. Through holy texts and the proclamations of authority figures, religions make moral claims about abortion, homosexuality, duties to the poor, charity, masturbation, just war, and so on. People believe these claims because, implicitly or explicitly, they trust the sources. They accept them on faith.

This sort of deference is common; many of our moral and political and scientific beliefs have this sort of deferential nature, where we hold a belief because it is associated with our community or with people that we trust. Upon hearing about a welfare plan proposed by a political party, for instance, people are more likely to agree with the plan if it has been proposed by their own political party—although, interestingly, they are not conscious that this is occurring; they mistakenly believe that their judgment is based on the objective merit of the program (Cohen 2003). Most people who claim to believe in natural selection do so not because they are persuaded by the data—indeed, most have no real understanding of what natural selection is—but rather because they trust the scientists (see Bloom & Weisberg 2007).

A second way in which religion can have an effect is by emphasizing certain aspects of morality. As one case of this, Cohen & Rozin (2001) note that Christianity codifies the principle that thoughts are to some extent equivalent to actions. This is expressed in Christ’s dictum: “You have heard that it was said ‘you shall not commit adultery’; but I say to you, that everyone who looks at a woman with lust for her has already committed adultery with her in his heart.” Judaism, in contrast, focuses less on intentions and more on actions. Cohen and Rozin find that this difference has an effect

on the intuitions that individual Christians and Jews have about specific situations. For instance, Christians and Jews have different moral evaluations of a person who doesn't like his parents but chooses to take good care of them nonetheless. For the Christians, the person's attitude matters more than it does for the Jews—the Christians judge him more negatively because of his mental states.

More generally, religions tend to emphasize certain aspects of morality that are less important to an atheist. These include what Shweder et al. (1997, p. 138) describe as an “ethics of divinity”: a cluster of ethical notions that rely on concepts such as “sacred order, natural order, tradition, sanctity, sin, and pollution. . . [an ethics that] aims to protect the soul, the spirit, the spiritual aspects of the human agent and ‘nature’ from degradation.” There is an especially tight connection between religion and the moralization of purity, particularly in the domains of food and sex (see Graham & Haidt 2010).

Finally, it might be that religion has a more general effect. Religion might turn the dials of compassion. Religious belief and practice might increase one's empathy and caring and love. It might also increase one's prejudice and intolerance, particularly toward those who are seen as outside of the community. Such effects might be triggered by the messages that religions convey or might somehow emerge from the very nature of religious practice and activity. Much of the discussion that follows focuses on this proposal.

MORALITY AND THE EVOLUTIONARY ORIGIN OF RELIGION

One popular view among psychologists who write about the evolution of religion is that religion is an accident. Under this view, religion is a by-product of other evolved systems or traits, what is sometimes described as a “spandrel” (see Gould & Lewontin 1979). It is not the case, under this view, that humans are religious because our more religious ancestors

outlived and outproduced our less religious ancestors. Rather, religion emerges out of capacities, traits, and inclinations that have evolved for other purposes. It is an evolutionary accident.

More specifically, the notion is that certain universal religious beliefs—such as belief in supernatural beings, creationism, miracles, and body-soul dualism—emerge as by-products of certain cognitive systems that have evolved for understanding the physical and social world (for different versions of this proposal, see Atran 2004; Barrett 2004; Bloom 2004, 2007, 2009; Boyer 2001; Evans 2000, 2001; Guthrie 1993; Kelemen 2004; Pinker 1997; Pyysiäinen 2003; see Bloom 2009 for review).

One of the best-known examples of this approach is the theory that humans are highly sensitive to cues to animacy and intention; we are constantly on the lookout for other humans and nonhuman animals, for clear adaptive reasons. This leads us to sometimes assume the existence of entities that don't really exist and hence provides the foundation for animism and deism (Guthrie 1993; see also Barrett's 2004 proposal of a Hyperactive Agency Detection Device). As another example, I have argued that the cognitive systems that underlie “theory of body” and “theory of mind” are functionally and neurologically distinct. As a consequence of this, we think about bodies and minds as distinct sorts of things, which may explain why we are natural-born dualists, why we so naturally believe in immaterial souls, in spirits, and in ghosts and reincarnation (Bloom 2004).

When it comes to explaining religious beliefs, such theories have the virtue of simplicity because they posit no special cognitive capacities beyond what we already have. They also have some empirical support. For instance, if belief in God and other deities is caused by an overextension of social cognition, then adults who fall on the autism spectrum disorder, who have diminished social cognition, should be less prone to believe in a feeling God, and there is some evidence that this is the case (Bering 2002). Women are arguably more sensitive to the mental states of others (see Baron-Cohen

2003), which is nicely consistent with the well-known finding that women tend to be more religious than men. Further, the development of religious and supernatural beliefs in children seems to track the emergence of more general theory-of-mind capacities (e.g., Bloom 2004, Lane et al. 2010).

One problem with this accident view, however, is its narrowness. At best, it explains religious belief. But it says nothing about transcendent experience, religious rituals, or the social nature of religion.

Over the past decade or so, an alternative perspective on religion has emerged that might fill some of these gaps. Religion, under this view, is a constellation of behaviors and thoughts that have evolved to benefit groups, and, in particular, to help solve the problem of free-riders. A community works best if everyone cooperates on certain tasks, such as group hunting, care of children, and warfare. But individual members of the community might benefit from defecting, from accepting the benefits of this cooperative behavior without paying the cost. Religion is arguably a solution to the problem of defection. As Haidt (2007) nicely put it, “Religions, generally speaking, work to suppress our inner chimp and bring out our inner bee” (see also Haidt 2012 for an extended discussion).

This might be one function of rituals (see Alcorta & Sosis 2005, Atran & Norenzayan 2004, Bulbulia 2004, Irons 2004; see Finkel et al. 2010 for review). Consider again the sorts of activities that people do when they are members of a religion: cutting away part of one’s genitals (or one’s child’s genitals), spending a potentially productive day doing nothing, refusing to eat tasty and nutritious foods, enduring agonizing initiation rites, and so on. The painful, difficult, and time-consuming aspects of these rituals seem entirely mysterious until you consider that these negative aspects may be the very point behind their existence. From a costly signaling perspective, these serve as hurdles that weed out the uncommitted: “If fulfilling these obligations is more costly for nonbelievers than believers, then cooperation

can emerge and stabilize” (Finkel et al. 2010, p. 290).¹

Other religious activities create bonds between members of a group. This might also help with the free-rider problems—to the extent that you feel emotionally close to another, you are less likely to betray him or her. Some ritual activities generate what Durkheim (1912) called “collective effervescence.” Dancing and chanting are the best cases of this. Most of us are familiar with the emotional rush of linking arms and dancing at a Jewish wedding, or being at a rave, or dancing in a pub with drunken friends. Laboratory studies find this synchrony has prosocial effects, leading people to sacrifice more money to others in economic games (Wiltermuth & Heath 2009). Indeed, even simple mimicry can increase empathy (Chartrand & Bargh 1999). The reason why this works is unclear; one possibility is that it is due to a glitch in the system. If I dance with others, and they move with me, their bodies moving as I intend my own body to move, it confuses me into expanding the boundaries of my self to include them (Bloom 2010). Regardless of its cause, religions might exploit this fact about our minds in order to increase ingroup solidarity.

To show that this evolutionary theory is correct, however, it’s not enough to demonstrate that such activities bring people together as a cohesive and cooperative group. One also has to present evidence that this is why these activities have evolved in the first place; it’s what they are *for*. Such evidence is hard to find, but not impossible. One prediction that the evolutionary account does make, for instance, is that the extent to which religious rituals are practiced by a

¹One different interpretation of these rituals builds on the classic cognitive dissonance finding that if you sacrifice to belong to a group, you’ll be more committed to that group (e.g., Festinger 1957). Someone who gives up time to work for a political party, say, will be more committed to the party than someone who gets a salary; a patient who pays for therapy will value it more than someone who gets it for free. This is why fraternities and other communities have painful and humiliating hazing rituals. From this perspective, participation in unpleasant religious rituals can be seen as a form of hazing, evolved to increase fidelity to a group.

group should relate to the success of that group. Consistent with this, religious groups that have many costly rituals tend to outlast those that have fewer (Sosis & Bressler 2003).

I have been framing this proposal so far in terms of what's good for the group, as this is the approach that many of its proponents take. A propensity for religious ritual is in our genes, then, not because of the advantages it gives to individuals, but because of the advantages that it gives to the groups that the individuals belong to (e.g., Wilson 2002, 2007). Such an appeal to group selection is controversial, to say the least (Williams 1966; see Sober & Wilson 2011 for discussion). And many would argue that it's unnecessary here and that one can explain the evolution of social traits that suppress free-riders using a more standard Darwinian approach (e.g., Cosmides 1989). This is an interesting debate, though unfortunately one that falls outside the scope of this review.

A quite different approach is sometimes known as "cultural group selection," (Boyd & Richerson 2002, Norenzayan & Shariff 2008). Religion, including religious rituals, might emerge through cultural evolution: Societies that have religion would outlast those that do not. This process can occur without genetic change, and hence, unlike the biological approach, this cultural theory does not predict that our psychologies would be naturally oriented to the creation and practice of religion. Note, however, that biological evolution and cultural evolution are compatible. It might be, for instance, that some aspects of religion initially evolved through natural selection and then cultural evolution kicked in to enhance and transform them (see Norenzayan & Gervais 2012 for discussion).

In both its biological and cultural forms, this free-rider theory focuses on rituals and on community. What about supernatural beliefs? It's possible that these too can be seen as existing for a social function. One specific proposal is that a belief in an omniscient supernatural entity might make people nicer to those with whom they are in constant contact (Bering 2006, 2011; Norenzayan & Shariff 2008). After all, we cheat

less and give more when we think someone else is watching. And so belief in an omniscient God might be a clever mechanism—emerging in biological evolution or cultural evolution—that exploits this fact about human nature. Similarly, it is not hard to see how belief in heaven and hell can play a similar role (Johnson 2005, Johnson & Bering 2006). Just like rituals then, religious beliefs might evolve to serve a prosocial function.

MORALITY WITHOUT RELIGION?

How can we tell if religion has an effect on morality?

It is difficult. The standard way to look at the effect of *X* on human behavior (where *X* might be exposure to violent video games, testosterone, spanking, psychoanalysis... or religion) is to compare people who have been exposed to *X* to those who haven't. This can be done through correlational studies (do children who have been spanked turn out differently from those who haven't?) or, better, through controlled experiments (what happens if you give a randomly selected subset of patients a certain form of therapy?).

But what if *X* is everywhere? What if everyone is exposed to *X*? The dilemma we face is that religion seems to be inescapable. As de Waal (2010) puts it, "It is impossible to know what morality would look like without religion. It would require a visit to a human culture that is not now and never was religious." There are of course relatively atheistic communities and individuals, but many of the customs and morals that they adhere to have emerged long before they became atheistic. One might argue then that the kindness (or cruelty) of such individuals and societies exists only because they ride the coattails of religion.

Still, we do have some access to populations without religion. Indeed, de Waal himself, in the same article, goes on at length about altruism, empathy, and even rudimentary notions of fairness and justice in chimpanzees, bonobos, and monkeys (see also de Waal 1996, 2010).

Consider also the demonstrations of moral, or at least proto-moral, behavior in babies and toddlers, including empathetic responses to the pain of others (e.g., Hoffman 2000), spontaneous altruistic behavior (e.g., Warneken & Tomasello 2006), and some capacity to judge individuals on the basis of their behavior to others (e.g., Hamlin et al. 2007).

We can be confident, then, that at least some good behavior exists prior to religion. This refutes the strong claim that morality requires religion. Then again, an advocate of the importance of religion to morality will respond by pointing out that there are all sorts of moral capacities that chimps and babies don't have, and it is at least possible that the reason they aren't fully moral beings is that they don't have religion.

What about studies with adult humans? Since researchers who study this population aren't able to contrast *X* from non-*X*, they do the next best thing and compare more *X* with less *X*. And so the studies that explore the effect of religion on our moral lives do so by comparing individuals within cultures that used to be religious but now are not entirely so (such as Danes) versus cultures that are more heartily religious (such as Americans). Within a culture they compare religious people with less religious people; in priming studies they explore the effects of getting people to think about religious notions more than they would normally do. This is the research that is described below.

RELIGION AND GOODNESS, WITHIN AND ACROSS COUNTRIES

One specific question concerns the effect of religion on a person's kindness to strangers. Are the religious more generous and more likely to volunteer to help others?

In his influential book *Who Really Cares?*, Brooks (2006) draws upon existing datasets and concludes that, controlling for education, age, gender, income, and politics, religious people care more. They donate more money to charities, including nonreligious charities; they are

more likely to volunteer, to donate blood, and to give to the homeless. And they are happier. In a 2004 study, the secular are twice as likely to say that they feel like failures, whereas the religious are twice as likely to say that they are very happy with their lives.

These conclusions were recently supplemented by a large set of analyses reported by Putnam & Campbell (2010). They find that giving to religious charities is correlated with giving to nonreligious charities and that frequent churchgoers are particularly likely to give to the needy, the elderly, and the young. And again, this holds even when one rules out other factors, such that the American religious are more likely than average to be older, female, Southern, and African American. These data suggest that there is a moral boost to being religious and that it's not restricted to one's ingroup, but rather it applies more generally.²

In a critical discussion of Brooks (2006), Norenzayan & Shariff (2008) note that these data are based on self-report. This raises the concern that religion might not lead to an actual increase in altruism, but rather to an increase in how much people believe they are altruistic or how prone they are to say that they are altruistic. This point applies to Putnam & Campbell (2010) as well. In support of their concern, Norenzayan & Shariff (2008) note that the research of Batson and his colleagues (e.g., Batson et al. 1989, 1993) finds that although religious people report being more altruistic, they are no nicer in laboratory conditions.

This is a serious concern. On the other hand, there are some objective data for the connection

²As an aside, the major conclusion of Brooks (2006) wasn't about religion; it was about political orientation. His answer to the question "Who really cares?" was: political conservatives (at the top of the cover of the paperback version is, *The Surprising Truth About Compassionate Conservatism*). But Putnam & Campbell (2010) point out that in their own datasets, and in the datasets that Brooks himself used, the moral advantage of political conservatives exists only because of the correlation with religiosity: "Holding religiosity constant, ideology has little significant effect on total giving or total volunteering but liberals assuredly give and volunteer more for *nonreligious* causes than conservatives do" (p. 458; emphasis added).

between religion and altruism: Data from the Internal Revenue Service (IRS) indicate that the more religious states give more to charity than do the less religious states (Brooks 2006). Since the IRS requires receipts for charitable giving, their data suggest that there is a real difference.

Also, there is real-world evidence that religion is a force for charitable giving. It is not unusual for hospitals and other charitable organizations to be religiously based, with the Salvation Army being a prominent example. And some degree of charity is proscribed in all the major religious faiths, as in the parables of Christ, the Jewish notion of *tzedaka*, and the Islamic pillar of *Zakat*.

Other analyses provide a different perspective, however. Paul (2005) presents an analysis of 18 democracies and finds that the more atheist societies are better off with regard to several objective measures of societal health, such as murder and suicide rates, extent of sexually transmitted diseases, abortion, and teen pregnancy. This conclusion has been criticized; among other concerns, it is based on a highly selective sample of countries (Jensen 2006). Still, it does show that religion isn't essential for a moral community. Along the same lines, Zuckerman (2008) provides an extensive case study of the Danes and the Swedes. These are among the least religious of contemporary humans. They tend not to go to church or pray in the privacy of their own homes; they tend not to believe in God or heaven or hell. But, by any reasonable standard, they are nice to one another. Even without belief in a God looming over them, they murder and rape one another significantly less frequently than the much more religious Americans do.

Although it is possible that these correlations exist because religion has a negative effect on a society, it is more plausible, as Paul (2005) suggests, that some drop in religious belief is caused by the prosperity and social health of a community—perhaps rich and stable Western democracies are likely to abandon or reject religious ideals. Paul (2010, p. 642) takes this further: “Prosperous modernity is proving to be the nemesis of religion.”

RELIGION AND GOODNESS, LABORATORY MANIPULATIONS

We can now move from the rather messy correlational data and turn to laboratory research. There is a long tradition of experimental studies that explore the role of religion on good actions. Many of these studies work by eliciting religious thoughts and exploring their effects.

The best-known study is famous for its cleverness—and for its null effect. Darley & Batson (1973) tested male seminary students, telling them that they had to make a short presentation, either about the jobs available for seminary students or about the parable of the Good Samaritan, in which Jesus tells about a traveler lying unconscious on the road, attacked by thieves, and the good man who stops to help him. The students were then told to go to another location, and some were told to hurry, that they were already late. On the way, all groups of students passed someone slumped in a doorway, a confederate playing a part of the victim.

The main finding was that students who were told to hurry were more likely to pass the victim by—that aspect of the situation influenced their behavior. But whether or not they were told the story of the Good Samaritan (which, of course, was directly relevant to the situation they were in) had no effect. The authors note that, “on several occasions, a seminary student going to give his talk on the parable of the Good Samaritan literally stepped over the victim as he hurried on his way!” (p. 107).

In a reanalysis, however, Greenwald (1975) noted that the sample size was small, and he reanalyzed the data using different methods. Although being told to hurry clearly did have an effect, Greenwald concluded that it was premature to dismiss the possibility that reading the parable actually did increase the odds of helping. Darley and Batson might well have been the first psychologists to successfully use religion to prime moral behavior.

Several have done so since then. Mazar et al. (2008) asked subjects to either write down ten books they read in high school or

write down the Ten Commandments. When later put in a situation where they could cheat, those in the Ten Commandments condition were less likely to do so. Bering et al. (2005) confronted children and adults with supposed supernatural beings. When adults are told that there is a ghost in the laboratory, they are less likely to cheat on a computer task. And when children, ages 5–6 and 8–9, are told that they are in the presence of an invisible agent (“Princess Alice”), they are slower to cheat than are those not given this information. Indeed, when the skeptical children—who did not believe in Princess Alice—were removed from the analysis, the effect of the presence of this invisible figure was the same as the presence of an actual adult (Piazza et al. 2011).

Using a scrambled sentence task, Shariff & Norenzayan (2007) found that getting subjects to unscramble sentences that included religious words—spirit, divine, God, sacred, and prophet—made them more generous in a “dictator game” in which they were free to give an anonymous stranger as much money as they wanted. Randolph-Seng & Nielsen (2007) found that subliminal priming of religious words—flashing them on a screen for 80 milliseconds—made subjects less likely to cheat on a subsequent task. Pichon et al. (2007) found that when primed with religious words, people were later more interested in helping to distribute charity-related information.

Why do these primes cause these effects? One possibility is that they make people think about an invisible and omnipresent God. Subjects believe, perhaps unconsciously, that they are being watched, which leads to better behavior. This meshes well with findings that even subtle cues to the presence of others—such as photographs of eyes or even dot patterns that resemble eyes—affect moral behavior. People are more generous, for instance, in a computer task when they are exposed to eye spots on the screen (Haley & Fessler 2005). And they are less likely to take coffee without paying (Bateson et al. 2006) or to litter (Ernest-Jones et al. 2010) when in the presence of posters with eyes on them.

There is reason to doubt, however, that the felt presence of a supernatural watcher is solely responsible for the priming effects. Other studies find that one can get the same effect with secular moral primes. Shariff & Norenzayan (2007) replicated their finding in a second study when subjects scrambled sentences with the primes: civic, jury, court, police, and contract. Mazar et al. (2008) found that getting subjects to sign a brief statement acknowledging their commitment to the local university honor code (even if their university didn’t in fact have an honor code) caused a similar drop in cheating.

RELIGION, INGROUPS, AND OUTGROUPS

The work so far suggests that religion causes a general boost in moral behaviors, such as altruism and reluctance to cheat. But the evolutionary theories described above make a prediction about the limits of religiously triggered niceness. If religion is an adaptation that binds groups together, it shouldn’t lead to indiscriminate kindness. Rather, it should drive one to favor the ingroup.

One doesn’t have to be steeped in evolutionary theory to make this prediction. Critics of religion have long emphasized its power to divide people, to motivate hatred toward heretics and apostates, and to fuel violence and genocide and war. After all, religious moral teachings are often explicitly parochial. As Graham & Haidt (2010) summarize:

Many of the religious commandments to treat others compassionately and fairly are limited to the treatment of other individuals within the religious community; for instance, the Hebrew Bible’s “love your neighbor as yourself” (Leviticus 19:18) was intended to apply only to other Israelites. . . . The Qur’an commands, “Do not take the Jews and Christians as allies: they are allies only to each other. Anyone who takes them as an ally becomes one of them—God does not guide such wrongdoers” (5:51; see also 29:68–69).

One might ask how religiosity affects one's attitudes toward others who don't belong to the same faith. Does being very Catholic make one more prone to despise Jews, or vice versa? But the focus of most research in social psychology concerns the effects of religiosity on racial prejudice (see also Batson & Stocks 2005 for review), and it is this line of work that I review here.

This topic was first explored in detail in Gordon Allport's classic book, *The Nature of Prejudice* (Allport 1954). In his original studies in the 1940s and 1950s, people's responses to the question "To what degree has religion been an influence in your upbringing?" correlated with prejudicial attitudes toward other groups (see also Allport & Kramer 1946). Subsequent research found that this was true as well in the 1970s: Relative to those whites who claimed to have no religious affiliation, white Protestants were more likely to disapprove of interracial marriage, and white Protestants and Catholics were more likely to agree that "most blacks have less in-born ability to learn" (Putnam & Campbell 2010). And a recent meta-analysis (Hall et al. 2010) looked at 55 studies between 1964 and 2008 and found that a small but statistically significant relationship exists between certain forms of religiosity and racial prejudice.

Some caveats are needed, however. In the Hall et al. meta-analysis, not all form of religiosity had this effect on prejudice: It was found for "extrinsic religiosity," defined as "an instrumental approach to religion that is motivated by external factors such as desires for social status, security, and acceptance from others" (Allport & Ross 1967, p. 127) and for "religious fundamentalism," defined as "an unquestioning, unwavering certainty in basic religious truths" (Altemeyer & Hunsberger 1992, p. 127). But greater "intrinsic religiosity"—being "committed to religion as an end in itself" (p. 128)—was negatively associated with prejudice, as was "Quest," a notion introduced by Batson (1976, p. 128), which corresponds to a "readiness to face existential questions, acknowledge religious doubts, and accept change" (see Sedikides & Gebauer 2010 for review and discussion).

Moreover, in most analyses, the relationship between religion and prejudice has declined since 1964.

One wonders also about the extent that these studies are finding negative effects of religion per se as opposed to other factors that are correlated with religiosity. Unlike the recent studies reported by Brooks (2006) and Putnam & Campbell (2010) discussed above, there is rarely any attempt in these earlier studies to factor out considerations such as age, race, political orientation, and so on. It might well be, for instance, that those with no religious affiliation have more cosmopolitan attitudes and experiences than those who are religious, and it is this that leads them to be less prejudiced, not their lack of religiosity per se. More generally, there is a clear correlation between religiosity (and particularly religious fundamentalism) and political conservatism and authoritarian attitudes, both of which correlate with negative attitudes toward racial minorities (see Jost et al. 2008, Napier & Jost 2008).

Still, there is priming data suggesting that religion in itself can evoke prejudice. In what is, to my knowledge, the only study of this sort, Johnson et al. (2010) found that flashing religious words (such as church, gospel, prayer) on a screen for 35 milliseconds increases prejudice by whites toward African Americans on a range of overt and implicit measures.

Also, a provocative series of studies by Ginges et al. (2009) found strong correlations between religiosity and support for suicide bombings. Interestingly, though, only certain measures of religiosity had an effect. Ginges et al. found that for Palestinian Muslim adults, frequency of mosque attendance predicted support for suicide attacks but frequency of prayer did not. (They also found that students who attended mosque more than once a day were over three times more likely than those who didn't to believe that Islam requires suicide attacks.) Ginges et al. also tested Israeli Jews living in the West Bank and Gaza, asking about their support for the 1994 suicide attack by Baruch Goldstein, who killed 29 Muslims in the Cave of the Patriarchs in the West Bank.

When primed with thoughts about synagogue attendance, they were more likely to describe the act as “heroic” than when primed with thoughts about prayer.

Finally, Ginges et al. (2009) used survey data from Indonesian Muslims, Mexican Catholics, British Protestants, Russian Orthodox in Russia, Israeli Jews, and Indian Hindus to explore the relationship between prayer frequency and frequency of religious attendance on negative feelings toward other groups, as measured by their responses to the questions “I would be willing to die for my God/beliefs” and “I blame people of other religions for much of the trouble in this world.” Once again, religious attendance was a positive predictor while regular prayer was not.

EXPLAINING THE COMPLEX EFFECTS OF RELIGION

The available research tells us two things about the moral effects of religion.

First, religion makes people nicer. There is evidence from studies of charitable giving that religious people within the United States devote more time and resources to helping others than the nonreligious. Such studies rely on self-report, but they are backed by laboratory demonstrations that religious primes increase moral behaviors such as generosity to strangers and reduce immoral behaviors such as cheating. All of this makes sense in light of the universalist and enlightened moral notions encoded in all of the major religions (Waldron 2010, Wright 2009).

Second, religion doesn’t make people nicer. In laboratory studies, secular primes work just as well to improve behavior as religious primes. Countries filled with the devout, such as the United States, are in many objective regards morally worse than more atheistic countries, such as Sweden. There is evidence that certain sorts of religiosity are associated with increased prejudice toward others. And attendance in religious ceremonies is correlated with an endorsement of suicide bombings. All of this makes sense in light of the parochial

nature of religious beliefs and practices and the explicit religious ideologies that privilege themselves over others (Hall et al. 2010, Harris 2004).

How can we explain these seemingly contradictory effects?

A close look at the data suggests a reasonably coherent account, largely along the lines proposed by Graham & Haidt (2010). Religion exerts many of its effects, good and bad, through its force as a social glue: To belong to a religion is to belong to a social group whose members are close to one another, who share rituals and meet regularly, and hence are more likely to be generous toward each other and less likely to cheat one another—and, under some circumstances, are more likely to be nasty toward others.

From this perspective, it is the community associated with religion that mainly drives its effects, not the belief system. As support for this, Putnam & Campbell (2010) collected extensive data on theological views and practices, asking people about their beliefs in life after death, heaven, and hell; in the importance of religion, evolution, and special creation; and in the importance of God to morality. It turns out that none of these beliefs correlate with behaviors having to do with volunteering and charitable giving. Community is everything: “Once we know how observant a person is in terms of church attendance, nothing that we can discover about the content of her religious faith adds anything to our understanding or prediction of her good neighborliness” (Putnam & Campbell 2010, p. 467). They later add, “In fact, the statistics suggest that even an atheist who happened to become involved in the social life of the congregation (perhaps through a spouse) is much more likely to volunteer in a soup kitchen than the most fervent believer who prays alone. It is religious belongingness that matters for neighborliness, not religious believing” (p. 473).

The same point holds for the data reviewed by Brooks (2006) that find that the religious are happier and more generous than the secular. These surveys do not define “religious” and

“secular” in terms of belief. They define it in terms of religious attendance.

This emphasis of community can provide a different perspective on why American atheists are less generous. It’s not that they have no sense of right and wrong or are cold-blooded self-maximizers. It is that they have been left out of the dominant modes of American togetherness. And, as P.Z. Myers (2007) puts it, “[S]cattered individuals who are excluded from communities do not receive the benefits of community, nor do they feel willing to contribute to the communities that exclude them.”

If this view is correct, then the specifically religious aspects of religion—supernatural beliefs and sacred texts and transcendent experiences—might play little role in its moral force. Indeed, Putnam and his colleagues (Putnam 2000, Putnam & Campbell 2010) use data from survey studies to argue that any form of voluntary association with other people is integral to a fulfilled and productive existence. This makes us “smarter, healthier, safer, richer, and better able to govern a just and stable democracy” (Putnam 2000, p. 290). Putnam argues, for instance, that membership in a bowling league—secular, but social—is just as much of a boost to charitable giving as is affiliation with a religious community.

The importance of sociality—and the relative unimportance of religious belief—is also reflected in the data from the Scandinavian countries. These data were framed above as showing that religion isn’t needed for a society to be civil, nonviolent, and, by most standards, morally good. But we can now think about it in a more nuanced way as having to do with the type of religion that is relevant. Zuckerman (2008) points out that most Danes and Swedes have their babies baptized, give some of their income to the church, and feel attached to their religious community—they are Christian, they just don’t believe in God. (He suggests that Scandinavian Christians are a lot like American Jews, who are also relatively secularized in belief and practice, have strong communal feelings, and tend to be well behaved.) The Scandinavians might be atheists, then, but they

are also religious—in precisely the sense that matters for morality.

Community can also explain the uglier side of religion. Recall the Ginges et al. (2009) findings discussed above. Religious devotion, as measured by frequency of prayer, had no effect on support for suicide bombing, but religious participation did. Contrary to the claims of Dawkins (2006), Harris (2004), and others, Ginges et al. (2009) conclude, “the relationship between religion and support for suicide attacks is real, but is orthogonal to devotion to particular religious belief” (p. 230). It is commitment to the social group that matters, as reflected by participation in group activities and religious rituals. This commitment might also motivate milder forms of denigration of outgroups, as reflected in the attitudes toward American atheists.

This last point raises a question: If religion is such an insular force, why isn’t there a greater effect of religion on prejudice in the studies of Americans? As noted above, such an effect exists, but it is small, restricted to certain sorts of religious orientations, and perhaps a by-product of the fact that religiosity is correlated with other traits, such as certain political attitudes.

One explanation has to do with the sort of prejudice that these studies explore. The research reviewed above was done with white Christians, exploring their attributes and behaviors toward blacks. Even if religion naturally reduces one’s compassion toward other groups, then it might not have a negative effect in this case because these blacks are seen as in fact belonging to their group—they are also, for the most part, Christian.³ Religion can establish boundaries then, but it can also dissolve them. As Allport (1954, p. 444) famously put it, “The role of religion is paradoxical. It makes prejudice and it unmakes prejudice.”

³This predicts that one would find more antiblack prejudice in the United States by Jews and Hindus, because these individuals don’t tend to share the same religion as American blacks.

Much of this is consistent with the evolutionary theory reviewed above, where religion is a solution to the problem of free-riders, a mechanism to bring people together. To put it differently, if it turned out that religion has no positive ingroup moral effects—or no negative outgroup effects—this evolutionary account would be effectively refuted. The finding that social aspects of religion are so linked to their moral effects supports the hypothesis that this is their evolved function, though of course it does not prove it.

What about the claim that supernatural beliefs—belief in gods, afterlife, spirits, miracles, and so on—have also evolved to motivate moral behavior? This hypothesis fares less well. The increased generosity that one finds when people are exposed to religious primes is sometimes attributed to the notion of a supernatural watcher—the primes make one think of the presence of God, one's behavior is no longer anonymous, and so people act nicer. But the problem with this account is that secular moral primes—relating to the legal system, say, or to honor codes—have the same effect as religious primes. It doesn't seem, then, that a belief in a supernatural being plays any distinctive role here.

Note also that the idea of omniscient moral God is a relatively recent invention—the gods of hunter-gatherers were far less impressive (Wright 2009). Moreover, many current humans do not believe in an omnipotent God; they instead hold animistic or polytheistic beliefs. For these reasons, a propensity to believe in a moralizing God is unlikely to be the product of natural selection.

DEBATING THE MORAL RELEVANCE OF BELIEFS

The most controversial claim made above is that religious beliefs play little substantive role in religion's moral effects. I want to conclude by considering, and responding to, counter-arguments.

The importance of religious beliefs might seem obvious to some. It seems perverse to

deny, after all, that some religious beliefs motivate how people think and act. Consider suicide attacks. Ginges et al. (2009) found that levels of devotion to religious belief are unrelated to support for suicide attacks, but as Liddle et al. (2010) point out in response, this doesn't entail that religious belief itself is irrelevant. It is likely, after all, that someone who believes that God wants them to kill infidels is going to be a lot more sympathetic toward killing infidels than someone who doesn't believe in God. Dawkins (2006, p. 348) might be right then when he concludes: "Suicide bombers do what they do because they really believe what they were taught in their religious schools: that duty to God exceeds all other priorities, and that martyrdom in his service will be rewarded in the gardens of Paradise."

Consider as an analogy that one might engage in a demonstration or counter-demonstration at an abortion clinic for all sorts of reasons. But surely one relevant consideration is what one thinks about abortion. It might well be that the intensity of one's abortion-related beliefs doesn't correlate well with the likelihood that a demonstrator will show up or turn violent, in the same way that the intensity of religious devotion doesn't correlate with support for suicide bombings. But it would be a mistake to conclude from this that the belief itself is irrelevant.

Some would take this further and argue that the moral effects of religious beliefs are particularly potent, and pernicious, because they are unmoored from the everyday world. Religion, after all, traffics in notions such as life after death, the desires of invisible deities, and the demands of thousand-year-old texts. The argument of Timothy Dwight, the President of Yale from 1795 to 1817, against the morality of the smallpox vaccine ("If God had decreed from all eternity that a certain person should die of smallpox, it would be a frightful sin to avoid and annul that decree by the trick of vaccination") seems like a specifically religious argument (see Hitchens 2007). As the physicist Steven Weinberg (1999) put it, "With or without religion, you

would have good people doing good things and evil people doing evil things. But for good people to do evil things, that takes religion.”

The defense of the relevance of religious belief has so far been framed in terms of its negative effects. But it is also defended by scholars who think that religious belief has had a uniquely positive effect on our lives. Legal scholar Jeremy Waldron (2010, p. 10) provides an articulate defense of this view:

Challenging the limited altruism of comfortable community has been one of the great achievements of the Western religions. I know the Jewish and Christian traditions best, and what I have in mind are the prescriptions of the Torah, the uncompromising preaching of the Prophets and the poetry of the Psalmist aimed specifically to discomfit those whose prosperity is founded on grinding the faces of the poor, on neglecting the stranger, and on driving away the outcast. I have in mind too the teaching and example of Jesus Christ in associating with those who were marginal and despised, and in making one's willingness to feed the hungry, clothe the naked, take in the stranger, and visit those who are in prison a condition of one's recognition of Him. And it's not just scripture: it is the whole edifice of (say) Catholic natural law reasoning about need, and church doctrine on the perils of complacent and exclusive community.

Waldron concedes that religious conviction is no guarantee of a universalist mentality and can fuel hatred and division. But he suggests that, for most people, religion is the only route available for the sort of broad-spectrum morality that many would aspire to, one that rejects traditional and seemingly natural social and economic boundaries. The notion that religion can ground a cosmopolitan worldview is defended by Appiah (2006) as well, who notes that Christianity in particular has had a universalist ethos. He quotes Saint Paul: “There is neither Jew nor Greek, there is neither bond nor free, there is neither male nor female, for ye all one in Christ Jesus.” One might sympathize

with physicist Freeman Dyson's (2006) addition to the Weinberg quote above, “And for bad people to do good things—that takes religion.”

It turns out then that scholars who disagree radically about the valence of the moral effects of religion would nonetheless agree that religion has its effects, at least in part, through the substantive claims that it makes about what is right and what is wrong. If the relevance of religious belief doesn't show up in the studies and surveys of empirical researchers, it is because the researchers are asking the wrong questions—for instance, by confusing intensity of belief with the presence of belief.

Alternatively, though, we might be overestimating the power of belief. Nobody could doubt that some actions—good and bad—are motivated by specific religious beliefs. But our intuitions about specific cases cannot be trusted here. Indeed, one of psychology's contributions to the theory of human nature, starting with Freud and continuing through contemporary social psychology, is that we are often wrong about the reasons for our own actions—and we tend to err in the direction of assuming that we do things because of rational justifications (see Haidt 2001). To return to an example given previously, people might believe that they prefer a welfare plan based on its objective merits and be unaware of how much they are influenced by their knowledge that it is proposed by the political party that they belong to (Cohen 2003). Similarly, people might sincerely believe that their disapproval toward homosexuals is rooted in the teachings of Biblical texts. But they might just be mistaken—they might have some animus toward homosexuals for other reasons and then justify this animus by reference to religious faith.

More generally, Wright (2009) argues that although people frequently try to explain their actions through appeals to the Bible or the Koran or other religious texts, the actual causal force is more situational. If individuals are in a zero-sum relationship, they find scriptural motivation for hatred and war; when their fates are intertwined in a positive way, they find tolerance and love. For Wright, it is not that

people get their moral views from religious texts and authorities; rather, their moral views are determined by the “the facts on the ground”; people shop around for justifications after the fact.

This is consistent with the data reviewed in this article. In the lab and in the world,

moral actions such as suicide bombings, racial prejudice, honest behavior, and generosity to strangers are related to religion—but not to religious belief. Although it is often claimed that the moral ideas encoded in the world’s religions have an important effect on our moral lives, there is little evidence for this popular view.

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LITERATURE CITED

- Alcorta C, Sosis R. 2005. Ritual, emotion, and sacred symbols: the evolution of religion as an adaptive complex. *Hum. Nat.* 16:323–59
- Allport GW. 1954. *The Nature of Prejudice*. Reading, MA: Addison-Wesley
- Allport GW, Kramer BM. 1946. Some roots of prejudice. *J. Psychol.* 22:9–39
- Allport GW, Ross JM. 1967. Personal religious orientation and prejudice. *J. Personal. Soc. Psychol.* 5:432–43
- Altemeyer B, Hunsberger B. 1992. Authoritarianism, religious fundamentalism, quest, and prejudice. *Int. J. Psychol. Religion* 2:113–33
- Appiah K. 2006. *Cosmopolitanism: Ethics in a World of Strangers*. New York: Norton
- Atran S. 2004. In *Gods We Trust: The Evolutionary Landscape of Religion*. New York: Oxford Univ. Press
- Atran S, Norenzayan A. 2004. Religion’s evolutionary landscape: counterintuition, commitment, compassion, communion. *Behav. Brain Sci.* 27:713–30
- Baron-Cohen S. 2003. *The Essential Difference: The Truth About the Male and Female Brain*. New York: Basic Books
- Barrett JL. 2004. *Why Would Anyone Believe in God?* Walnut Creek, CA: AltaMira
- Bateson M, Nettle D, Roberts G. 2006. Cues of being watched enhance cooperation in a real-world setting. *Biol. Lett.* 3:412–14
- Batson CD. 1976. Religion as prosocial: agent or double agent? *J. Sci. Study Religion* 15:29–45
- Batson CD, Oleson KC, Weeks JL, Healy SP, Reeves PJ, et al. 1989. Religious prosocial motivation: Is it altruistic or egoistic? *J. Personal. Soc. Psychol.* 57:873–84
- Batson CD, Stocks EL. 2005. Religion and prejudice. In *On the Nature of Prejudice: Fifty Years After Allport*, ed. JF Dovidio, PS Glick, L Rudman, pp. 413–27. Oxford, UK: Blackwell
- Batson CD, Schoenrade P, Ventis WL. 1993. *Religion and the Individual: A Social-Psychological Perspective*. New York: Oxford Univ. Press
- Bering JM. 2002. The existential theory of mind. *Rev. Gen. Psychol.* 6:3–24
- Bering JM. 2006. The folk psychology of souls. *Behav. Brain Sci.* 29:453–98
- Bering JM. 2011. *The Belief Instinct: The Psychology of Souls, Destiny, and the Meaning of Life*. New York: Norton
- Bering JM, McLeod K, Shackelford TK. 2005. Reasoning about dead agents reveals possible adaptive trends. *Hum. Nat.* 16:360–81
- Bloom P. 2007. Religion is natural. *Dev. Sci.* 10:147–51
- Bloom P. 2004. *Descartes’ Baby: How the Science of Child Development Explains What Makes Us Human*. New York: Basic Books

- Bloom P. 2009. Religion belief as an evolutionary accident. In *The Believing Primate*, ed. MJ Murray, J Schloss, pp. 118–27. New York: Oxford Univ. Press
- Bloom P. 2010. *How Pleasure Works: The New Science of Why We Like What We Like*. New York: Norton
- Bloom P, Weisberg DS. 2007. Childhood origins of adult resistance to science. *Science* 316:996–97
- Boyd R, Richerson PJ. 2002. Group beneficial norms spread rapidly in a structured population. *J. Theor. Biol.* 215:287–96
- Boyer P. 2001. *Religion Explained*. New York: Basic Books
- Brooks AC. 2006. *Who Really Cares: The Surprising Truth About Compassionate Conservatism*. New York: Basic Books
- Bulbulia J. 2004. The cognitive and evolutionary psychology of religion. *Biol. Philos.* 19:655–86
- Chartrand TL, Bargh JA. 1999. The chameleon effect: the perception-behavior link and social interaction. *J. Personal. Soc. Psychol.* 76:893–910
- Cohen AB, Rozin P. 2001. Religion and the morality of mentality. *J. Personal. Soc. Psychol.* 81:697–710
- Cohen GL. 2003. Party over policy: the dominating impact of group influence on political beliefs. *J. Personal. Soc. Psychol.* 85:808–22
- Cosmides L. 1989. The logic of social exchange: Has natural selection shaped how humans reason? Studies with the Wason selection task. *Cognition* 31:187–276
- Darley J, Batson CD. 1973. From Jerusalem to Jericho: a study of situational and dispositional variables in helping behaviour. *J. Personal. Soc. Psychol.* 27:100–8
- Dawkins R. 2006. *The God Delusion*. New York: Bantam
- de Waal F. 1996. *Good Natured: The Origins of Right and Wrong in Humans and Other Animals*. Cambridge, MA: Harvard Univ. Press
- de Waal F. 2010. Morals without God? *N.Y. Times*, Oct. 17
- Durkheim E. 1912/1995. *The Elementary Forms of Religious Life*. New York: Free Press
- Dyson F. 2006. Religion from the outside. *N.Y. Rev. Books*, June 22
- Edgell P, Gerteis J, Hartmann D. 2006. Atheists as “other:” moral boundaries and cultural membership in American society. *Am. Sociol. Rev.* 71:211–34
- Ernest-Jones M, Nettle D, Bateson M. 2011. Effects of eye images on everyday cooperative behavior: a field experiment. *Evol. Hum. Behav.* 32:172–78
- Evans EM. 2000. Beyond Scopes: why creationism is here to stay. In *Imagining the Impossible: Magical, Scientific and Religious Thinking in Children*, ed. K Rosengren, C Johnson, P Harris, pp. 305–31. Cambridge, UK: Cambridge Univ. Press
- Evans EM. 2001. Cognitive and contextual factors in the emergence of diverse belief systems: creation versus evolution. *Cogn. Psychol.* 42:217–66
- Festinger L. 1957. *A Theory of Cognitive Dissonance*. Evanston, IL: Row, Peterson
- Finkel D, Swartwout P, Sosis R. 2010. The socio-religious brain: a developmental model. In *Proceedings of the British Academy*, ed. R Dunbar, C Gamble, J Gowlett, 158:287–312
- Ginges J, Hansen I, Norenzayan A. 2009. Religion and support for suicide attacks. *Psychol. Sci.* 20:224–30
- Gould SJ, Lewontin RC. 1979. The spandrels of San Marco and the Panglossian paradigm: a critique of the adaptationist programme. *Proc. R. Soc. Lond. B Biol. Sci.* 205(1161):581–98
- Graham J, Haidt J. 2010. Beyond beliefs: religion binds individuals into moral communities. *Personal. Soc. Psychol. Rev.* 14:140–50
- Greenwald A. 1975. Does the Good Samaritan parable increase helping? A comment on Darley and Batson’s no-effect conclusion. *J. Personal. Soc. Psychol.* 32:578–83
- Guthrie S. 1993. *Faces in the Clouds: A New Theory of Religion*. New York: Oxford Univ. Press
- Haidt J. 2001. The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychol. Rev.* 108:814–34
- Haidt J. 2007. Moral psychology and the misunderstanding of religion. http://www.edge.org/3rd_culture/haidt07/haidt07_index.html
- Haidt J. 2012. *The Righteous Mind: Why Good People Are Divided by Politics and Religion*. New York: Pantheon
- Haidt J, Kesebir S. 2010. Morality. In *Handbook of Social Psychology*, ed. S Fiske, D Gilbert, pp. 797–832. New York: McGraw Hill. 5th ed.

- Haley KJ, Fessler DMT. 2005. Nobody's watching? Subtle cues affect generosity in an anonymous economic game. *Evol. Hum. Behav.* 26:245–56
- Hall DL, Matz DC, Wood W. 2010. Why don't we practice what we preach? A meta-analytic review of religious racism. *Personal. Soc. Psychol. Rev.* 14:126–39
- Hamlin JK, Wynn K, Bloom P. 2007. Social evaluation by preverbal infants. *Nature* 450:557–59
- Harris S. 2004. *The End of Faith: Religion, Terror, and the Future of Reason*. New York: Norton
- Hitchens C. 2007. *God Is Not Great: How Religion Poisons Everything*. New York: Twelve Books
- Hoffman M. 2000. *Empathy and Moral Development*. Cambridge, UK: Cambridge Univ. Press
- Hume D. 1956 [1757]. *The Natural History of Religion*. London: Black
- Irons W. 2004. An evolutionary critique of the created co-creator concept. *Zygon: J. Religion Sci.* 39:773–90
- James W. 1960 [1902]. *The Varieties of Religious Experience*. London: Fontana
- Jensen GF. 2006. Religious cosmologies and homicide rates among nations: a closer look. *J. Religion Soc.* 8:1–14
- Johnson DDP. 2005. God's punishment and public goods: a test of the supernatural punishment hypothesis in 186 world cultures. *Hum. Nat.* 16:410–46
- Johnson DDP, Bering JM. 2006. Hand of God, mind of man: punishment and cognition in the evolution of cooperation. *Evol. Psychol.* 4:219–33
- Johnson MK, Rowatt WC, LaBouff JP. 2010. Priming Christian religious concepts increases racial prejudice. *Soc. Psychol. Personal. Sci.* 1:119–26
- Jost JT, Nosek BA, Gosling SD. 2008. Ideology: its resurgence in social, personality, and political psychology. *Perspect. Psychol. Sci.* 3:126–36
- Kellemen D. 2004. Are children “intuitive theists”? *Psychol. Sci.* 15:295–301
- Keltner D. 2009. *Born to Be Good: The Science of a Meaningful Life*. New York: Norton
- Lane JD, Wellman HM, Evans ME. 2010. Children's understanding of ordinary and extraordinary minds. *Child Dev.* 81:1475–89
- Larson EJ, Witham L. 1997. Scientists are still keeping the faith. *Nature* 389:435–36
- Larson EJ, Witham L. 1998. Leading scientists still reject God. *Nature* 394:313
- Liddle JR, Machluf K, Shackelford TK. 2010. Understanding suicide terrorism: premature dismissal of the religious-belief hypothesis. *Evol. Psychol.* 10:343–45
- Lindholm JA, Astin HS, Astin AW. 2006. *Spirituality and the Professoriate*. Los Angeles, CA: UCLA Higher Educ. Res. Inst.
- Locke J. 1983/1689. *A Letter Concerning Toleration*. Indianapolis, IN: Hackett
- Mazar N, Amir O, Arieli D. 2008. The dishonesty of honest people: a theory of self-concept maintenance. *J. Mark. Res.* 45:633–44
- McCauley RN, Whitehouse H. 2005. Introduction: new frontiers in the cognitive science of religion. *J. Cogn. Cult.* 5:1–13
- Myers DG. 2008. *A Friendly Letter to Skeptics and Atheists: Musings on Why God Is Good and Faith Isn't Evil*. San Francisco, CA: Jossey-Bass/Wiley
- Myers PZ. 2007. Commentary on “Moral psychology and the misunderstanding of religion,” by Jonathan Haidt. http://www.edge.org/discourse/moral_religion.html#myers
- Napier JL, Jost JT. 2008. The “antidemocratic personality” revisited: a cross-national investigation of working-class authoritarianism. *J. Soc. Issues* 64:595–617
- Norenzayan A, Gervais W. 2012. The cultural evolution of religion. In *Creating Consilience: Integrating Science and the Humanities*, ed. E Slingerland, M Collard. Oxford, UK: Oxford Univ. Press. In press
- Norenzayan A, Shariff AF. 2008. The origin and evolution of religious prosociality. *Science* 322(5898):58–62
- Paul GS. 2005. Cross-national correlations of quantifiable societal health with popular religiosity and secularism in the prosperous democracies. *J. Religion Soc.* 7:1–17
- Paul GS. 2010. Religiosity tied to socioeconomic status. *Science* 327(5966):642
- Persinger MA. 2001. The neuropsychiatry of paranormal experiences. *J. Neuropsychiatry Clin. Neurosci.* 13:515–24
- Piazza J, Bering JM, Ingram G. 2011. “Princess Alice is watching you”: children's belief in an invisible person inhibits cheating. *J. Exp. Child Psychol.* 109:311–20

- Pichon I, Boccato G, Saroglou V. 2007. Nonconscious influences of religion on prosociality: a priming study. *Eur. J. Soc. Psychol.* 37:1032–45
- Pinker S. 1997. *How the Mind Works*. New York: Norton
- Putnam R. 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster
- Putnam R, Campbell D. 2010. *American Grace: How Religion Divides and Unites Us*. New York: Simon & Schuster
- Pyysiäinen I. 2003. *How Religion Works: Towards a New Cognitive Science of Religion*. Leiden: Brill
- Randolph-Seng B, Nielsen ME. 2007. Honesty: one effect of primed religious representations. *Int. J. Psychol. Religion* 17:303–15
- Sedikides C, Gebauer JE. 2010. Religiosity as self-enhancement: a meta-analysis of the relation between socially desirable responding and religiosity. *Personal. Soc. Psychol. Rev.* 14:17–36
- Shariff AF, Norenzayan A. 2007. God is watching you: Priming God concepts increases prosocial behavior in an anonymous economic game. *Psychol. Sci.* 18:803–9
- Shermer M. 2003. *How We Believe: The Search for God in an Age of Science*. New York: Freeman
- Shweder RA, Much NC, Mahapatra M, Park L. 1997. The “big three” of morality (autonomy, community, divinity), and the “big three” explanations of suffering. In *Morality and Health*, ed. P Rozin, A Brandt, pp. 119–69. New York: Routledge
- Sober E, Wilson DS. 2011. Adaptation and natural selection revisited. *J. Evol. Biol.* 24:462–68
- Sosis R, Bressler ER. 2003. Cooperation and commune longevity: a test of the costly signaling theory of religion. *Cross-Cult. Res.* 37:211–39
- Tylor EB. 1871. *Primitive Culture, Volume 2*. London: John Murray
- Waldman S. 2004. Pilgrim’s progress. June 29. <http://www.slate.com/id/2103017/>
- Waldron J. 2010. Secularism and the limits of community. *NYU School Law, Public Law Res. Pap. No.* 10-88. <http://ssrn.com/abstract=1722780>
- Warneken F, Tomasello M. 2006. Altruistic helping in human infants and young chimpanzees. *Science* 311:1301–3
- Weinberg S. 1999. A designer universe? (Did the universe have a cosmic designer?). *N.Y. Rev. Books* 46:46–48
- Wieselstier L. 2006. The God genome. *N.Y. Times*, Feb. 19, Sec. 7, p. 11
- Williams GC. 1966. *Adaptation and Natural Selection*. Princeton, NJ: Princeton Univ. Press
- Wilson DS. 2002. *Darwin’s Cathedral: Evolution, Religion and the Nature of Society*. Chicago: Univ. Chicago Press
- Wilson DS. 2007. *Evolution for Everyone: How Darwin’s Theory Can Change the Way We Think About Our Lives*. New York: Delacorte
- Wiltermuth SS, Heath C. 2009. Synchrony and cooperation. *Psychol. Sci.* 20:1–5
- Wright R. 2009. *Evolution of God*. New York: Little Brown
- Zuckerman P. 2008. *Society Without God: What the Least Religious Nations Can Tell Us About Contentment*. New York: NYU Press



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