Responding to the
New Atheism: Scientific and
Religious Perspectives

Richard N. Williams and Edwin E. Gantt, Editors
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It may be lamentable, but is nonetheless true, that many people speak and write English without ever consulting a dictionary of the English language or a grammar text. Many, if not most Americans will defend our constitutional democracy and the rights it guarantees without ever reading or understanding in detail the Constitution and without much concern for the difficult questions about what constitutes a right and how rights are to be guaranteed. Most Christians manage to live fulfilling lives of faith without sophisticated training or immersion in the formal theology of their church or denomination. In one sense, this is probably how it should be. Christianity is robust enough to survive basically intact through most private interpretations. Not every valid, useful, sufficient, or true understanding needs to be a detailed analytical one. However, we should never lose sight of the fact that “ideas matter,” that knowledge and understandings come from somewhere in the past and point to somewhere in the future. They are what they are, and teach what they teach, largely because of the presumptions built into them and the implications toward which they direct us—most often without our explicit awareness, much less our deliberate assent (see, e.g., Slife & Williams, 1995).

More to the point for this volume of essays, many people—even well-educated people who, perhaps, should be more careful—will respect science, invoke science, and believe science without careful discussion and understanding about just what science is or what qualifies as scientific knowledge. Some well educated people, on the other hand, will reject science in the same way. This also seems to be true regarding various scientific theories, models, explanations, and findings. Some are believed simply because they are “scientific,” without clear or critical understanding of the knotty metaphysical, epistemological, methodological, and ethical issues, commitments, and assumptions bundled into such explanations and findings. It is unrealistic to believe that the majority of the consumers of science and other intellectual products of our universities, laboratories, and think tanks will easily develop for themselves the skills and background necessary to ask the right questions and examine the metaphysical, epistemological, and ethical assumptions and implications running through scientific “knowledge” and other offerings. It is, therefore, the obligation of scholars and students who produce these products to do the careful analysis necessary to convey what is true, trustworthy, and just plain worthy in the intellectual life of our culture, as well as what is incoherent, erroneous, and unworthy.

This is most often not an easy thing to do. It is almost always an unpopular thing to do. Our own academic careers provide numerous examples. These examples come from a social science—psychology—but we believe they apply across most disciplines. One of us has been described as an intellectual “hair shirt.” We are not certain whether the emphasis in the image was the penance associated with a hair shirt, or just the fact that it is irritating. The other has been somewhat playfully described as an “annoying jerk.” Over the years, we have developed a repertoire of academic conversation stoppers. For example, within the disciplinary discourse, it is frequently thought necessary to affirm that psychology is a real science. In the context of such discussion we are often moved to ask questions like:

- What do you mean by science?
- Do you insist that science is necessarily and only naturalistic explanation?
- Why does only naturalistic explanation count?
- Do the observational data of science require that only naturalistic explanations can be tendered to account for them?
- What labs would have to shut down if we kept the methods of science, but just rejected strict naturalism?
- What labs would have to close just in case there is a God?
- Do you mean science as a set of truth claims derived from a particular method?
- Do you mean science as a method of systematic investigation?
- Do we have to grant the same epistemological priority to scientists’ explanations and theories as we do to their observations?
- Do you mean a purely empirical Baconian science, or something more like a Newtonian science?
- What about conceptual problems associated with verification and falsification in any empirical science?

As one can imagine, about this time the conversation is over and our reputation as disciplinary hair shirts remains intact. Maybe we really are annoying jerks.
The point here is not that we are particularly clever, but, rather, to illustrate the importance of being careful “educated consumers” of scientific and intellectual work, particularly as it is filtered through various information outlets, including print and electronic media. We have used this example because, we believe, it is relevant to the subject and the purpose of this volume. The topic of the volume is responding to a “new” (in the sense of recent) body of work—or, perhaps, a new genre—that is often referred to as the “New Atheism.” As we have become acquainted with the genre, it seems to us that it looks a lot like the “old atheism,” but there is something new about it that bears noting and requires response. The heart of atheism—in any age—has always been skepticism; skepticism about the supernatural, about how supernatural things can be known, and about how supernatural things can “cause” natural ones. It has always relied on reason and rational argument, often in the guise of one or another model of science as the alternative to religion and religious knowledge. The rational scientific alternative has served, for atheists, as the basis of a profound skepticism about religion, claims of religious knowledge, and the supernatural in general. But the role of a skeptic has always been that of a “spoiler,” always challenging religion with the same question, “Yes, but how do you know?” Such a question, if it’s your lead-in as well as your summation is a bit unsatisfying. Skepticism is not a very good offensive position because if religion really has no basis for truth claims, neither does a purely skeptical atheism. So nobody knows, and nobody wins.

The energy and boldness behind “New Atheism” comes, it seems to us, from a perceived opportunity to move beyond traditional skepticism and seize the offensive in making affirmative declarations about the objective non-existence of God and the actual harm religion has supposedly done. The opportunity for this bold move comes from recent advances across several of the sciences—both the technical and technological advance of the science and the results achieved—and from the confluence of many lines of work that have sophisticated and solidified evolution, in particular, as a mega-explanation that enjoys unprecedented popularity, and near hegemony as a universally applicable explanation of all things human and natural.

The New Atheism is both nurtured by and fosters the increasing secularization of our culture. Whatever other things are in play, the New Atheists perceive an opportunity to show believers not only that they do not really know what they claim to believe—because only science really knows—but that religion is finally irrelevant because the explanation of life in all its aspects is evolution via natural selection. As Richard Dawkins (1996) has expressed the matter:

An atheist before Darwin could have said, following Hume: “I have no explanation for complex biological design. All I know is that God isn’t a good explanation, so we must wait and hope that somebody comes up with a better one.” I can’t help feeling that such a position, though logically sound, would have left one feeling pretty unsatisfied, and that although atheism might have been logically tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist. (p. 6)

To sow doubt is one thing, to demonstrate your opponent’s obsolescence and irrelevance is quite another—the former human, the latter irresistible. Thus, proponents of the New Atheism have tried to appropriate for their purposes both science and reason in general, and evolution in particular, greatly reinforcing the classical skepticism that has always been at the heart of most atheist arguments. Indeed, in many ways, the New Atheists have sought to co-opt science and scientific discourse for their own naturalistic ideological ends, maintaining in various ways that science is really only science insofar as it conforms to (and, in the end, confirms) a neo-Darwinian account of the world (Goldsmith, 1990; Poppe, 2006). That is, one’s arguments or findings only count as scientifically credible if they are the product of purely observational data that is explained solely in naturalistic terms. Findings not couched in such fashion are routinely derided as either simply nonsensical or reflections of yet another attempt to sneak traditional biblical creationism back into the halls of science from whence it was rightly ejected well over a century ago.

The chief problem with such a strategy, however, is that it ultimately makes neo-Darwinism not only impervious to serious critique but also impervious to refutation even by science itself. After all, science is, on such an account, all but synonymous with neo-Darwinism and, therefore, cannot be marshaled against itself in any critical or potentially falsifying fashion. In games of chance this approach is known as “playing with loaded dice” and is a form of cheating that is universally held to be in very bad form. In science it is equally inexcusable. Science co-opted by a particular ideological seeks to validate itself by ignoring or refuting reason itself—in favor of observation and orthodox explanation. This is difficult to justify given that all science, including the rules of observation, faith in observation, and the process of explanation is, at foundation, grounded in rational argument. Science, thus co-opted, becomes more dogma than inquiry, as only one set of scientific questions is allowed to be asked and only one form of answer to those questions, or interpretation of evidence, is permitted—a sort of Kuhnian dystopia. The intellectual result of this is that in the end the only evidence one ever finds is evidence that supports the initial premises that ground and guide one’s science in the first place. The potentially more dangerous psychological result, however, is that one becomes ever more confident that one’s scientific account of the world has been objectively demonstrated, that any real debate has been settled, and that any objections reflect either serious misunderstandings or some sort of nefarious intent on the part of one’s critics.
Indeed, a number of commentators have noted that the ardor and fervency with which many of the New Atheists hold to their neo-Darwinist convictions often exceeds that to be found in even the most devoted religious believers (Haught, 2008; McGrath & McGrath, 2007; Novak, 2008). After all, unlike the religious believer whose position on the existence of God is a matter of faith, for many of the New Atheists, the nonexistence of God is a matter of objective knowledge, a truth that has been duly demonstrated by means of careful, empirical scientific observation. Of course, when science is defined solely in terms of the concepts and presuppositions of neo-Darwinian materialism, and, thus, that science points to only one viable conclusion based on the single type of inference that one is allowed to draw from the only sort of evidence one is permitted to consider as evidence, it comes as no surprise that one finds precisely what one was looking for all along. And, if one repeats this investigative cycle often enough, the “evidence” that mounts soon comes to be seen as overwhelming. Thus, for example, particle physicist Victor Stenger (2007) can entitle his recent book, *God: The Failed Hypothesis: How Science Shows That God Does Not Exist* and not be worried in the least how one can make a genuinely empirical scientific discovery of the nonexistence of anything, much less “show” that nonexistence in any genuinely empirical (i.e., observational) way.1

In the end, the New Atheist thinker remains absolutely convinced of the truth of the neo-Darwinist paradigm and its account of the world, and remains so in a fashion that not only resists any serious criticism but which also allows the New Atheist to live on unburdened by any doubts as to the undeniable truth of the belief system that he or she has adopted. Fortunately, many rational, thoughtful people—some believers and some not—do not find the deep naturalistic faith reflected in the New Atheism persuasive, nor are they convinced that the New Atheists’ conception of science and reason are adequate. In short, they do not convert to the new faith. And so, they feel a need to respond. The authors in this volume have so responded.

It is, perhaps, important to note that it is not evolution, per se, that is being called into question in these responses. Most sophisticated critics of the New Atheism and its neo-Darwinian orthodoxy do not deny that things in the world change, evolving to meet challenges that arise. Thus, for example, it is not in serious dispute that the finches of the Galápagos Islands that Darwin observed had beaks of varying lengths and were themselves of varying sizes, dependent on which particular island in the volcanic chain they happened to inhabit and the particular types of food that were available to them there. Nor is it in dispute that genetic mutations and environmental contingencies can substantially alter the morphology of fruit flies and peppered moths. What is in dispute is whether neo-Darwinism as a fundamentally materialist philosophical worldview is necessarily the only or even the best account of the observed data of biological development and adaptation. There are sound reasons to suggest that, far from being the essential grounding for science, neo-Darwinism is, in fact, hostile to science itself.

More importantly, perhaps, as we move to the understanding and explanation of phenomena more complex and sophisticated than the relatively straightforward facts of biological adaptation, can the blind random processes that are the foundation of neo-Darwinism offer a viable account of the origin of life, human intelligence, consciousness, and meaningful phenomena such as religion and culture? In one sense, proponents have an easy explanatory task. Regardless of the phenomenon in question the explanation is always the same, namely, random processes of some unspecified ontological character operating upon or within brute matter. This position, in one sense, invokes the very explanatory tack its proponents find so unsatisfactory within religion—*creatio ex nihilo*. The neo-Darwinists insist that they get something (meaning, morality, culture, and “everything”) out of nothing but the substances of matter itself. Ironically, however, a moment’s reflection reveals this to be a species of *nihilo ex creatio*, that is, the neo-Darwinist investigates the meaningful world of human beings and finds no meaning at its core. It is, thus, the materialist and mechanist philosophical presumptions of neo-Darwinism that are in question in responses to the New Atheism, and not evolution as manifest in the reality of change or adaptation in the biological or social worlds.

Any serious response to the New Atheism must sooner or later deal with the issue of Intelligent Design (ID). Intelligent design, in the plain sense meaning of the words, is a very old and venerable position—at least as old as the Western tradition—and depending on what we mean by the term, perhaps much older (for example, the Old Testament tradition, and other ancient creation accounts). In the most general and encompassing sense, the term *intelligent design* simply refers to the notion that the world and the things of which it is composed, in their form, function, structure, activity, make up, and so forth, manifest or reflect purpose or design, or, put slightly differently, show “evidence” of purpose or design. This leads to the thesis (or hypothesis) that some guiding intelligence was *in some way* responsible for the being or the coming to be of the world and the things in it. The most famous modern example of ID thinking is William Paley’s (2006) argument in terms of the “watchmaker.” His argument is, essentially, that if one were to find a watch on the beach, one would reasonably conclude that the watch did not come into being—or come to be on the beach—by happenstance, but that the watch’s being on the beach, and, indeed, its very existence, implies a watchmaker who was, at some point, responsible for there being a watch at all.

Over the centuries, very bright people have reached similar conclusions about the existence of the universe, the world, and the beings that inhabit it. For very many
believers who want to accept and embrace contemporary science (as most of us do) some type of position congenial to the notion of a Creator-God seems crucial in reconciling and maintaining a harmony among faith, intellect, and science. For this reason, sophisticated discussions responding to the New Atheism must include at least a discussion of intelligent design in the broadest sense. While some may recoil at the use of the term intelligent design, there is still an issue here that bears on any believer’s personal responses to the tenets of the New Atheism.

This having been said, this volume is not a referendum on intelligent design as it is seen to be an alternative—if not a threat to—orthodox evolutionary explanatory systems. More to the point, this volume is not a referendum on the quality of the research underlying any particular intelligent design approach. And, most emphatically, it is not a referendum on what should be taught in public schools about creation or evolution. Rather, we are interested—as believers or as educated consumers of the intellectual offerings of contemporary culture—in learning how to respond sensibly, sophisticatedly, or faithfully to the New Atheism when we might have occasion to do so. At the same time this volume is not a referendum on evolution itself. Many (or most) of the New Atheists view evolution (and seek to use it) as the stake that can finally be driven through the heart of religion to dispatch it once and for all. Many very thoughtful believers see the hand of God, or, perhaps they see the whole of God, in evolution—in the wonder of a universe just right for life to flourish and to glorify God. Our purpose is to present sophisticated responses to the issues raised by the New Atheism and learn from them—so our own responses can be as helpful and as sophisticated as possible.

To date, most people have not been personally affected by the arguments of the New Atheism. But exposure to this new species of atheist argument will likely spread—especially as our world becomes both smaller and more secularized. Our goal is to provide a brief, but thoughtful and well-reasoned introduction to various ways of responding to the challenge of the New Atheism. In doing so, we desire to join with other people of faith intelligence and good will in responding to those who denigrate what we hold sacred and essential to the purpose of life and creation, and to help defend those whose lives may be diminished or whose faith and belief may be dimmed by an encounter with the New Atheism. We summarize our purpose of this volume with a quotation from a sermon by C. S. Lewis (1980) entitled, “Learning in War-Time,” as an introduction for this volume:

*If all the world were Christian, it might not matter if all the world were uneducated. But, as it is, a cultural life will exist outside the Church whether it exists inside or not. To be ignorant and simple now—not to be able to meet the enemies on their own ground—would be to throw down our weapons, and to betray our uneducated brethren who have, under God, no defense but us against the intellectual attacks of the heathen. Good philosophy must exist, if for no other reason, because bad philosophy needs to be answered.* (p. 58)

**RESPONSES TO THE NEW ATHEISM**

The essays in this volume are adapted from presentations given at a symposium on “Responding to the New Atheism” convened by the Wheatley Institution at Brigham Young University. They provide important clarifications of history, intellectual traditions, and science, as well as perspectives on theology, and the interface of science and faith. They also suggest lines of analysis that defend science from being preempted by the particular philosophical position underlying new atheist arguments and help disambiguate real science and sound philosophy from the radical faith of the New Atheism. The analyses contained in the essays may provide what one of the authors, Dinesh D’Souza, refers to as a “bulletproof vest” for those who wish to defend faith, including their own, against what can only be understood as attacks from the New Atheists. In his essay in this volume, D’Souza refers to his experience in debating the New Atheists on various college campuses. He summarizes the particular elements that make the New Atheism new, recounting some of their most frequently employed criticisms of religion. He then recounts his own experience in becoming prepared to answer these criticisms, and stresses the importance that all believers be so prepared. Finally, he provides a helpful analysis of the New Atheist positions and his own penetrating response.

Philosopher James Faulconer provides a historical perspective on the question of faith and intellect, and provides an intellectual space within which the New Atheism can be conceptually understood. His critical review of the issues furnishes the reader with the grounds for responding to the question of atheism in general. This approach suggests that the “new” atheism is new in that it draws upon current cultural understandings and issues salient in our “modern” world, including current conceptions of the nature and character of God, the current emphasis on radical conceptualizations of human freedom, and, within this context, the nature and role of religion, and the supernatural. In short, adequately responding to the New Atheism requires nothing short of opting for one worldview over the discernibly different worldview the New Atheists have invoked.

Next, physicist Karl Giberson offers a thoughtful examination of some of the ways in which the scientific fundamentalism of the New Atheists is impacting the broader cultural landscape. In so doing, he traces how some of the most influential and well-known figures of the New Atheist movement employ many of the same rhetorical strategies as those one finds in traditional religious sermonizing. Giberson shows that many of the New Atheists, or scientific fundamentalists as he calls them, are in fact engaged in constructing theologies, despite their frequent claim to be
speaking solely on behalf of science and in purely scientific terms. Thus, quite ironically, these scientific fundamentalists end up operating in exactly the same ways as do the very theologians whom they claim to despise, and whose approach they claim is the antithesis to genuine scientific thinking and discourse.

In his essay, Physics and Faith, physicist Stephen Barr addresses the frequent New Atheist contention that there is, and always has been, a fundamental conflict between science and religion. By means of historical review, Barr shows that far from being enemies to one another science and religion have enjoyed a long and mutually productive relationship over the centuries. Indeed, he argues that in many instances and in profound ways science has relied on, and continues to rely on, religion and religious understandings even as religion has drawn considerable support from scientific advances. In support of this analysis, Barr discusses a number of scientific developments, particularly in contemporary physics, that reveal the very sort of orderly and coherent universe that theologians have long claimed we would find given the universe’s ultimate origins in the creative act of a Divine Intelligence.

Similarly, drawing attention to the irreducible complexity of even the most basic cellular entities, biochemist Michael Behe seeks to counter the New Atheist claim that neo-Darwinian theory can adequately explain the origins of life and the variety of species by means of undirected, mechanical processes involving random mutation and natural selection. Summarizing arguments he has made in two best-selling books (Darwin’s Black Box and The Edge of Evolution), Behe argues that design in nature can be objectively deduced from the physical structure of a given system, and is, thus, not some mystical conclusion based on questionable or speculative inference. Further, he demonstrates, because this is so and because everyone in the biological sciences agrees that many biological structures appear to be designed, that there are serious obstacles to the traditional evolutionary account. Ultimately, Behe claims, the Darwinian evolutionary account of complex biological structures, despite its tremendous popularity and seeming unassailability in the intellectual arena, is untenable because it reflects undisciplined imagination rather than careful empirical observation and reasoning.

In the concluding essay of this volume, theoretical psychologists Edwin Gantt and Richard Williams offer the outlines of a response to the New Atheism informed by a consideration of doctrines and understandings from a Latter-day Saint tradition. This response provides a perspective less concerned with the mechanical particulars of God’s creation of the universe and more with the ways in which the world reveals God’s moral purposes. Moral purpose in human life requires a creator with moral purpose. Intelligent design within an LDS context, then, includes the idea that the world is created as just the right place where God’s children can have the opportunity for an adequate moral test. Because of some differences between more traditional theologies and an LDS understanding of the nature of God, some of the criticisms leveled at Christianity do not apply to LDS doctrines in exactly the same way. Some of the New Atheist arguments, however, owing to their reliance on Darwinian evolution, which Daniel Dennett described as a “universal acid” that eats through everything, apply equally to believers in the LDS tradition. The essay by Gantt and Williams contributes a response to the New Atheism intended to speak to the issues and questions from an LDS perspective.

NOTES
1. It should also be understood that no serious religious person has ever claimed that the existence of God is a scientific hypothesis in the first place.

REFERENCES
DEFENDING AGAINST THE THREAT OF THE NEW ATHEISM

Dinesh D’Souza, King’s College

The purpose of this symposium is to talk about the New Atheism. I would like to explore the idea of what is new about it. Does it pose a particularly formidable threat of a kind that we have not had before (because we’ve had atheists before)? I do not want to merely get to how to answer the New Atheism, but I want to get to what's motivating it, what's driving it. And that, I think, will help us understand not only how we should think about it, but perhaps at a practical level, what we should do about it.

Now, in a sense I think what makes our moment in history special, or different, is that we’re living today in America in a secular culture. It is very different than has been the case before. If we lived in America fifty years ago, or a hundred years ago, we would be living in a country in which, you might say, Christian assumptions, call them Judeo-Christian, if you like, were taken for granted. They formed the agreed-upon fabric of the society. Even for someone who was not a Christian, who was Jewish, or who was not even a believer, one could easily appeal to, for example, the Ten Commandments as a generally accepted code for people to live by. What is different today is that our society, certainly in the West—and to some degree in the world—has become more secular, and this requires a new language in which to talk about issues.

The New Atheism is not new in being atheism. We’ve had atheists before. I came to the United States from India in 1978 as an exchange student. In the 70s or 80s, if you were to hear the term atheist, you would think of someone like the activist Madalyn Murray O’Hair, or you might think of some rumpled ACLU lawyer. Which is to say, this was not an atheism with much mass appeal. It was, moreover, an atheism that had a confined and narrow agenda. The atheism of the past was fairly content to police the boundaries of church and state. “Let’s take down the Ten Commandments from the Texas state capitol”; something like that. But on the other hand, the old atheism said if you want to be religious, you can be that at home, in private, in the church. As long as you keep the public domain secular, we’re happy.

Now, the New Atheism is different in both these respects. First of all, it is not content with policing the bounds of church and state. It wants to attack belief in God and it wants to attack religion in the private sphere also. It wants to make the believer feel like a total idiot for believing in God. So it’s more ambitious, it’s more aggressive in its agenda. Second, the new atheists are a more suave bunch than the atheists of the past. If you think of someone like Richard Dawkins, with his Oxford pedigree, or Christopher Hitchens, with his Richard Burton accent, his artfully disheveled hair, his Vanity Fair kind of pose; it’s all aimed at striking a rebel stance that is particularly appealing to young people.

The New Atheists are better positioned in the media and in the universities, and this gives them confidence in saying that they know they are the minority in society, and that is okay. They are saying, in effect, “We’re going to let the religious parents breed them, but at some point, parents are going to have to send their children out into the world, and that’s when we’re going to get them. We’re going to use the techniques of knowledge and skepticism and questioning and science to interrogate religious belief, to reveal its hollow foundations, and ultimately, to win people over to our, the atheist, side.”

Now, this New Atheism comes at a time when those of us who are, you might say, in the camp of the believers, have not been really prepared for it. I think this is the case for two reasons. The first reason I will exemplify by my own case. I was raised a Catholic in India. I come from a small minority of Indian Christians, and so I learned my Catholicism at my parents’ knees when I was five-, six- or seven-years-old. But when I look back on that, I say to myself, “Was that Christianity?” Well, no. It was a kind of crayon Christianity, by which I mean it was a Christianity adapted, simplified, and presented to my young mind. But many people never outgrow that crayon Christianity. In fact, looking back on it, that is pretty much the Christianity I brought to America as a high school exchange student, and it is the same Christianity I took to Dartmouth College as an undergraduate a year later.

Now, Dartmouth, like a lot of the Ivy League colleges, was started as a Christian institution. It was actually founded by a Yale Congregationalist minister who decided that some Indians up in the woods of New Hampshire needed to be educated and converted. When I think back, I am not really sure how I got to Dartmouth. I think I might have misread the catalogue, you know, the part about the Indians. But Dartmouth, of course, is no longer a Christian campus; it is very secular. And so when you go there, you find your religious beliefs immediately under skeptical attack. “What, Dinesh, you’re telling us that somebody was born of a virgin? Walked on the water? Brings dead people back to life? Are you nuts? We’re living in the twentieth century
(now the twenty-first century); don't you agree that the world operates according to fixed, irrevocable laws? You think these laws can be suspended at somebody's whim or discretion?"

So I realized then at the age of seventeen or eighteen that I did not really have the tools to try to answer these kinds of objections. And I found myself becoming a little embarrassed about my Christianity. It is not that I did not want to believe, but you might say my brain was getting in the way. And this is the strategy of the New Atheism: to drive a wedge between the brain, or the mind, on the one side, and, you might say, the heart, the will to believe, on the other.

A second reason, and this may be more true of Protestants than perhaps of Catholics or Latter-day Saints, I don't know, but a lot of Christians are educated and trained, particularly in the regimen of the churches, to answer questions. "What's your problem with gay marriage?" "Well, the book of Leviticus says this, or the Gospel of Luke says that." In other words, it is almost habitual to turn to the Bible, the source of wisdom, and say, "That's why I believe what I believe."

The problem with that defense is that it is a pretty good way of making your case if you are talking to somebody who shares your religious beliefs, who agrees that the Bible is the fount of wisdom. But, if you are talking to someone from a different religion, or if you are talking to a secular person, or to an atheist, they are going to say, "Who cares what the book of Leviticus says? We don't accept the authority of the Bible to adjudicate the matter." And then as a believer you are a bit tongue-tied because that was your argument. So, for these reasons, the New Atheism has made headway because, in a sense, it has come upon an unprepared community of believers.

What I propose to do here is to try to look at some of the strongest arguments of the New Atheism. I will focus on three of them. It has been an interesting experience as I have been sort of crossing swords, debating some of the leading atheists around the country. I tend to debate these guys not in churches but on campuses. And I like to debate them on their own campuses. Why? Because many of them are "big men" on campus and they are treated like godlike figures on their own campuses, and sometimes their students feel a little intimidated. So, I like the idea of challenging the atheists on their own ground. It can be a rather interesting spectacle.

Not long ago I was at Tufts University debating Daniel Dennett, who sort of looks like Santa Claus; he is a big, burly guy. When I came into the room to debate him, somewhat to my surprise, strewn through the audience were several little Santa Clauses who were apparent disciples of Dennett and had been planted to ask tough questions. So, this is the atmosphere of these debates. As you know, in debates you look for the weak point of the other side. You try to find a historical error or a logical fallacy, but I'm not going to do that here. I actually want to remove the historical errors and state the New Atheism arguments at their best. Why? Because if you can counter New Atheism at its strong point, not its weak point, then you actually do have a sturdy foundation for affirming faith or religious belief.

My first debate with Christopher Hitchens was at Kings College in New York. He began by making an argument in which he said, "Why do we need God in order to be good?" I start here with this argument to make contact with the claim others have made in this symposium that the moral argument is central in LDS theology. Hitchens said, essentially, "Look, you Christians really sicken me. You run around pretending like you're better, kinder, more virtuous, and gentler than everybody else. You're followers of Jesus; you display your silly bumper stickers, 'What would Jesus do?'" He said, "Wait a minute. You can't name a single virtue that could be done by a believer that can't also be done by a non-believer."

He continued, "If there is a big famine tomorrow in Rwanda, the religious believer could shed a tear, volunteer his or her time, and write a generous contribution or check." Hitchens said, "Well I can do that too!" You don't need God, he argues, to be good.

Now in thinking about this for a minute, one has to concede that there seems to be a level of truth to it. I think no religious believer would say that believers have a monopoly on virtue, or that atheists are incapable of it. But the point I want to make is a little different one, and that is this: Let us set aside the religious virtues and only look at the virtues that atheists care about. If you read the books of the New Atheism, what do those guys care about? Well, they care about science as an autonomous or independent enterprise. They care about the individual; they care about the right to dissent and to criticize. They affirm the equal dignity of women; they celebrate the abolition of slavery. They care about compassion as a social virtue. Well, if you make a list of these virtues and take a good hard look at them, you suddenly realize that all these virtues came into the West, and arguably into the world, because of Christianity. How do we know that? Well, we look to other cultures to see if these virtues are in fact affirmed and emphasized there, or we look to ancient Greece and Rome before Christianity to see if we can locate these virtues prior to the Christian era.

For example, let us take something as simple as the idea that "Human life has value, that the dignity of human life is worth protecting," an important value, even though there may be some debate about euthanasia or abortion. No one denies the preciousness or value of human life in our culture. But the truth of the matter is, if you go to ancient Greece or Rome and you look at the ancient Spartans, you see that they were perfectly happy to take a sick or defective child, deposit it on the mountainside in the winter and find it dead in the morning. This is not even the real scandal. The real scandal is that the great thinkers of ancient Greece knew about this. But they viewed it with relative equanimity, which is to say it was for them "no big deal."
Why? Because the value, the sacredness of life, as we might call it now, was simply not a high priority for the culture of ancient Sparta and other cultures in the ancient world.

Or, consider something as simple as compassion. Compassion is a virtue; it has become a political virtue in our culture. We have a mainstream political party that builds its platform around the idea of moist eyes and compassion. And yet Aristotle, when he makes a list of the virtues, doesn’t mention compassion. In fact, when he writes about it he tends to write about it more like a vice. Aristotle does talk about magnanimity. But magnanimity has nothing to do with compassion. Magnanimity is the superior man demonstrating his superiority by extending liberality to the inferior man. So, compassion, as we understand it today, is not emphasized in ancient Greece or Rome.

Sam Harris (2004), in his book The End of Faith, says that Christians bear a heavy responsibility for the institution of slavery. Now, there is something in what he says, but let us remember that, historically, slavery was a universal institution. It has existed in every known society. The ancient Indians had it; it was common in China. There was slavery in Africa; and American Indians had slaves long before Columbus arrived. Now, historically, slavery needed no defenders for the simple reason that it had no critics. It was kind of like the family—taken for granted. Only in one civilization, namely western civilization, known as Christendom, did slavery become controversial. It became controversial only among one group of people, namely Christians. I want to briefly qualify that statement. One group of people were always opposed to slavery, and that group is called “slaves,” and so you had runaways and slave revolts in every culture. But the slaves were not opposed to slavery in principle. Slaves were typically taken in war as captives. So someone might not want to be a captive himself, but he was perfectly happy if his tribe could capture others and reduce them to slavery.

What I am really saying is that Abraham Lincoln’s sentiment “As I would not be a slave, so I would not be a master” (cited in Lang, 1941, p. 60) is quite understandable. Lincoln does not want to be a slave. But he does not want to be a master either. That idea of principled opposition to slavery is a Christian idea. In fact, it comes out of the theological idea that we are all created equal in the eyes of God. For some centuries some people thought that was a spiritual truth that applied only to the next life. But then groups of Christians, the Quakers, the Evangelical Christians, started saying, “Wait a minute. If we are all created equal in the eyes of God, it follows that no man has the right to rule another man without his consent.” This idea became not only the root of antislavery or abolition, but, if you think about it, it also became the moral root of democracy. Why? Because the core idea of representative democracy is that no man has the right to rule over another without consent.

So, my first point is that I want to emphasize that even the secular values of our culture, values undisputed by the new atheists, are historically rooted in the soil of Christianity. It is a way of saying that the atheist is ungratefully standing on a mountain that he or she refuses to acknowledge. The atheist is dependent on these virtues but is grudgingly unwilling to concede the foundation that precedes atheism and is in fact rooted in the idea of the transcendent.

Having said a little about history, I now want to say a little about science. Normally I would not say a lot about science. I am not a scientist. However, I feel like science needs to be addressed across the divide of the two cultures because the New Atheism marches behind the banner of science. This is not always true, by the way. Atheism in different eras takes different shapes, as does apologetics, which is the effort to counter atheism and defend religious beliefs. Apologetics has different challenges in different times. The most famous apologist in the twentieth century was C. S. Lewis, but Lewis was writing in the period around World War II, in which many of the questions that were being raised were things like, “Why would a just God allow the Holocaust?” C. S. Lewis’ (1944) book, The Problem of Pain can be seen as a sort of response to that.

But today, in the twenty-first century, we are facing new questions, and the atheists are apostles of science. Many of them argue that not only is science a better way of knowing, but that science is based on reason while religious belief is based on faith, what the Bible calls the evidence of things not seen. In the atheist narrative, science is advancing and religion is retreating. Why? Because, as the story goes, when man was primitive and ignorant, and experienced things that could not be explained, he would then credit it to God. You could think of the caveman looking out his cave window and seeing a bolt of lightning and saying, “Hey, who caused that? I have no idea; that was probably the Lightning God.” Then you hear a bolt of thunder. “Where did that come from? I have no idea; that was probably the Thunder God.” So the idea here is that God is invoked to explain the mysterious, but now we have a better way of doing that. As science explains these natural phenomena one after the other, there is less and less for God to do. God’s domain retreats. We know that lightning, for example, is an electrical discharge; you don’t have to invoke the supernatural to account for it. So, as this narrative goes along—and it’s a narrative so powerful many believers buy into it, and it begins to creep into the text books—you get the idea that time after time religion asserts a claim, and science slaps the claim down and religion has to back off. So that now religious explanation is reduced to invoking a pathetic “God of the gaps.”

Now, the idea used to be that the ancient Christians, the medieval Christians, for a thousand years, believed the earth was flat. Then the brilliant scientists showed up with instruments and were able to reveal that, in fact, the earth is round, embarrassing a millennium of Christian theorizing. And then the Christians used to assert that the earth was the center of the universe. The sun goes around the earth. But
first Copernicus and then Galileo came around and said, “No that's not it at all.” Actually, the earth goes around the sun, the earth is not the center of the universe. Strike two! And then in the nineteenth century, the Christians asserted that God made every creature, every species, each unto its kind, but Darwin emerged to show that, in fact, chance and natural selection can fully account for the diversity of life on the planet. So this, in essence, is the narrative of science marching forward and religion backing off.

I want to examine that narrative for a moment. First of all, note that the narrative hangs on about three specific historical examples; it stands on a tripod. Remove the examples and the whole case collapses. And when you actually begin to scrutinize the examples, you begin to realize that all the legs of the tripod are really quite fragile. If you look, for example, at the issue of the flat earth for a moment, if you do a modicum of historical research, you soon discover that educated people throughout the Middle Ages knew perfectly well that the earth was round. Round was the “God of the gaps” is a valid critique. But here’s the point I want to make: People who level criticisms against the God of the gaps are, in a way that they have not rec

radically new view of reality. Instead of assuming that the earth is the center and all the planets are going around the earth, if we change the assumption and put the sun at the center, then we can explain the data better.” The point here is that the gap is a mother lode of scientific discovery. It opens the door to a

Consider a second brief example: Isaac Newton. Newton’s predictions about the motions of the planets were given with almost Euclidian precision—except one. The orbital motion of the planet Mercury deviated very slightly—only by a fraction of a degree every century. Of course, a lot of people at that time said, “Well, that’s a gap. No big deal! Pretty soon we’re going to find a missing planet or some other piece of matter we haven’t found; the gap will soon be closed and it will go away.” It took the genius of Einstein to see that no, in fact, these Newtonian gaps are not small lacuna in the fabric of a known reality. Rather, they are clues that the whole picture needs to be redrawn! And, in fact, when Einstein came up with relativity theory, he went back—he knew about the orbital precession of Mercury—and tested his new theory against it, and he was thrilled to see that it could explain that little deviation that Newton’s theory could not. That convinced Einstein that he was right.

So, the point I’m trying to make here is that the atheist who pretends to be the champion and the friend of science is a bit of a scientific ignoramus. He asserts, “Oh, consciousness? Well, that’s just a little gap. Oh, and the original cell which evolution presupposes? Just another gap.” These are treated as irritating little holes that will soon be filled. But no, to the true scientific mind, they are huge opportunities to recast our understanding of reality as a whole.

Now, Steve Barr mentioned in his discussion of physics (this volume) the idea of the “Big Bang.” However, I do not want to talk about that. What I do want to do is notice that in this notion of science advancing and religion retreating the beautiful story goes marching along smoothly but abruptly stops in 1859, 150 years ago. Why? Have there been no new discoveries in the last 150 years? No! The truth of it is that scientific discoveries in the last century and a half are almost never mentioned in the New Atheist
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literature because they tend to cut the other way. Far from undermining the assumptions of belief, they tend to give startling corroboration to ideas that previously seemed to be, in some senses implausible, and at best, believable only on the basis of faith.

I want to give one example of this, and that is the example of the way our universe is tuned. Recently, some physicists have been asking a rather simple and interesting question. Our universe is based on a whole bunch of very precise numerical values. “The electromagnetic force is so strong,” or “Gravity is so strong,” or “The strong nuclear force; the weak interaction force,“ and so on. One physicist, Lee Smolin (1997), from Princeton, says you can sort of imagine God at a big desk, and he’s got in front of him a hundred different dials. Every dial is set to a specific number. It is all very precise. But then he asks, in effect, “What if you were to sneak into the room and (when God isn’t looking) fool a bit with the dials? Move them around a little bit. What would happen?” It is a way of asking: What if the numerical constants of nature were a little different than what they are? This question, by the way, is discussed by Stephen Hawking, in his book A Brief History of Time. Hawking (1988) says that if you touch one of the dials (he’s talking about the rate of expansion of the universe) and you move it, not ten percent, not one percent, but one part in a hundred thousandth millionth millionth, you would have no universe, there would be no life. In other words, the entire universe has to be as big as it is and as old as it is, and have precisely the numeric values that it does, because if it didn’t then we would not be here.

The universe appears to be a kind of giant conspiracy to produce us. This argument, the so-called “fine-tuned universe,” or “anthropic principle,” (Barrow, Tipler, & Wheeler, 1988) has put modern atheism completely on the defensive. I want to note that it is an argument utterly immune from undermining the assumptions of belief, they tend to give startling corroboration to ideas that previously seemed to be, in some senses implausible, and at best, believable only on the basis of faith.

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I have been a little bit about science, but I want to shift gears a little bit and talk about an argument that has given the New Atheism a lot of its current persuasive force. The argument that I want to talk about is the one that alleges that religion and religious belief is not merely wrong or unscientific, it is pernicious and dangerous, that religion lies at the root of the conflicts and division and war in the world. In this argument, religion has inspired modern terrorism and, therefore, to get rid of it is not only to make our world more rational, but it is to make our world more decent and more peaceful.

Reading the New Atheists these days you will learn that the war on terror is really just a war of competing fundamentalisms. The thrust of the argument is: “Over there you have Islamic extremism. Over here you have Christian extremism. What do these two groups have in common? Well, they’re fueling their fanaticism at the same holy gas station!” In other words, God is the problem. Accordingly, some say about 9/11, drawing on President Bush’s famous words, that it was “a faith-based initiative.” They also go on to ask that if you look around the world, why are people fighting? They’re fighting over religion! Why are the Israelis and Palestinians at each other’s throats? They’re fighting over religion. What about the Hindus and Muslims? They’re fighting over religion. What about in Northern Ireland? They’re fighting over religion. We are told to just look at history: the Crusades, the Inquisition, the religious wars of the Protestant Reformation, the Salem Witch Trials. The conclusion of any rational person, we are told, must be that belief in God is a menace to civilization. We would be better off with a secular society.

Now, this argument is actually worth noting because it shows the way in which the New Atheists are sophisticated in surfing on the wave of current events. The New Atheists are very crafty at taking advantage of what’s going on in the world and saying, “Look! This shows you why their view is bad and ours is a better way to go.” So it is actually worth challenging this argument head-on, and that is what I want to do here. I do want to note that like arguments that prove to be, in the end, dubious, this one too contains a molecule of truth. I often tell students that if they hear a bogus argument, they should always ask, “What’s the grain of truth in it?” Because if it didn’t have a grain of truth in it, no one would ever believe it. So, what’s the grain of truth here? Well, the grain of truth is that the Islamic radicals do some really bad things in the name of God. That is true. But, there is really nothing equivalent in any other religion. Where are the Buddhist suicide bombers? Where is the Mormon Bin Laden? Where is the Christian al-Qaeda or Hamas or Hezbollah? Where is the Christian country run today along the lines of post-Khomeini’s Iran? It really doesn’t exist.

Now, there are efforts to create this equivalency between religions. I was recently watching Christiane Amanpour of CNN who has a special called “God’s Warriors.” They keep re-airing it, so I happened to catch it. The idea is that the Abrahamic religions in particular all have a tendency to violent extremism. One day she does Islamic extremism, one day she does Jewish extremism, one day she does Christian extremism. Okay, Islamic extremism. Well, there’s a wealth of material. September 11th, the Bali bombing, the London bombing, the Madrid bombing. She could have added the Mumbai bombing, but it came too late. Anyway, the program goes on to cover Christian extremism. So, here is Christiane Amanpour in the hills of Montana, standing outside a trailer in which a ninety-year-old man sits in a rocking chair. He wants to blow up the world! Of course, he is broke and has no idea how to do it, but he is the Christian Bin Laden! We must be very afraid of this man!

Well, you see where I’m going here. There is a bogus equation being made between Islamic radicalism and
everybody else. But let's push the argument further. Let's ask, why are the Israelis fighting the Palestinians? Are they really fighting about God? I mean, are the Israeli's saying, “Well, you know, we think that Moses was the greater prophet.” Are the Palestinians responding with: “No way, it was definitely Muhammad!” Is this what is bringing them all to blows? Is this what they are really fighting about? No! They are actually fighting about land. And the Hindus and the Muslims are fighting about Cashmere. And even if you go to Northern Ireland, they have not been fighting about the Eucharist or transubstantiation. They are fighting over which group gets to rule that country! The question of self-determination, not religion, is the main source of that conflict.

There is a humorous and instructive story about a fellow walking down the street in Belfast when a man jumps out behind him and puts a gun to his head. The man with the gun asks, “Catholic or Protestant?” The poor fellow with the gun to his head is in a deep fix and so he looks over his shoulder and he says, “Well, actually I’m an atheist.” The voice behind him pauses for a moment and then asks, “Catholic atheist or Protestant atheist?”

Now, I thought that I had received a relatively good education at Dartmouth. But if you were to ask me when I graduated, “Dinesh, how many people were killed in the Inquisition?” I would have said, “Wow. The Inquisition was huge. It lasted for centuries, particularly in Spain. I don’t know. Hundreds of thousands, maybe millions?” Then if you asked me how many people were killed in the Salem Witch Trials, I would probably have answered: “Well, I don’t know exactly, but we all read Arthur Miller’s play in college, which was based on McCarthyism, loosely based on the Salem Witch Trials. I don’t know, hundreds, maybe thousands?” Well interestingly, today there is a good deal of scholarship on all of this and it’s quite illuminating. If you look at studies, for example, of the Inquisition, you can discover (from primarily secular scholars) the number of people killed in the Inquisition—this is the Spanish Inquisition, which was undeniably the worst. Over some 375 years, the death toll was about 2,000 people; 2,000 people in 375 years. Now, I was not a math major in college, but that works out to about five people a year. In other words, this is not the sort of thing that would normally be considered a world historical crime.

My wife and I visited Salem, Massachusetts, a couple of years ago. I do want to report to you that the witches are doing really well. A lot of them today are tourist guides; they take you around. If you take one of their brochures, it tells you the number of people killed in the Salem Witch Trials: 19. Now, is that 19 too many? Yes! Is 2,019 too many? Of course it is. But here is the point I want to make: We need to keep a bit of perspective. The atheists are crying inconsolable crocodile tears over the crimes of Christianity often committed 200 or 500 or, in the case of the Crusades, 1,000 years ago. By the way, these are crimes that are relatively unrepeatable today. What is the realistic chance, for example, of the Inquisition returning to, say, Fresno? These crimes have gone into the mist of the past.

Meanwhile, the vastly greater crimes of atheist regimes are routinely ignored or downplayed, and not only are those crimes incomparably greater in magnitude, they are much more recent and they are still going on. People often say to me, “Well, Dinesh, are we talking here about Mao in China, or Stalin in Russia, or the Nazi regime in Germany?” And I say, “Well, yes, but that is just the tip of the iceberg.” I mean, it is true that those three regimes—the “Big 3” of modern atheism—in a relatively short space of time (about seven decades), managed to kill close to a 100 million people. But that does not even count murderous tyrants like Nicolae Ceausescu, Enver Hoxha, Kim Jong Il, and Fidel Castro. Indeed, it ignores a whole procession of atheist dictators that went through Andropov and Brezhnev and Chernenko, all the way back to Lenin.

In other words, atheism has amassed a massive body count; a mountain of bodies and an ocean of blood. But who should parachute into our discussion at this critical moment but Richard Dawkins! The estimable Oxford professor cries out, “Wait a minute! We have to make a critical distinction. The Christians killed in the name of Christianity. You might have had some tyrants who happened to be atheists, but they didn't kill in the name of atheism.” Now, Dawkins is actually a respected biologist. Here I think you begin to see the problem when a biologist is allowed to leave the laboratory. Why? Because evidently the poor man knows no history. I mean, all you need to do is crack open the collective works of Karl Marx to learn that religion “is the opium of the people” (Marx, 1970, p. 131). Religion is a kind of drug that is supposed to numb you to social injustice. And the whole idea of Marxism is to get rid of it. As a Marxist you want to create a new man, a new utopia liberated from the shackles of traditional religion and traditional morality. The atheism here is not incidental. It is absolutely central to the whole scheme. And so my conclusion, I think, a rather straightforward description of the facts, is that atheism, and not religion, is responsible for the mass murders of history.

And now to my final point. I want to briefly explore the motives of the New Atheism. This is, by the way, not an unfair inquiry. Atheists often speculate on the motives of believers. Atheists are often saying since belief in God is irrational, why would normally rational people do it? Sam Harris (2004), in The End of Faith, for example, essentially argues something like this: “The Christian is 50% rational. If you tell him his wife is cheating on him, he's going to demand evidence. Where are the photographs, where’s the proof? Show me the private detective.” But he says, "Ask the Christian, ‘Is there another life waiting for you beyond this one?’ and the Christian, without one shred of evidence, will happily affirm that there is another life." So, there is a lot of atheist speculation about how rational people easily suc-
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moral judgment. What I want to suggest is that today's athe-

The early church Father St. Augustine (1960), in his Confessions said, and I am paraphrasing here, “I kept postponing my conversion to Christianity. I kept praying to God, ‘Make me chaste, O Lord, but not yet’” (see p. 135). Even Augustine is chafing under this idea of unremitting moral judgment. What I want to suggest is that today's athe-

So where does this leave us? It seems to me that in the past there have been, I think, some regrettable and bitter skirmishes among religions and between believers. “You're wrong about this, you're wrong about that.” In the midst of the Protestant/Catholic conflict, the Anglican divine Richard Hooker, in an important essay, wrote, warning both sides, “Be a little careful,” and again I’m paraphrasing, “because there's a third man waiting to dance on both your graves.” In other words, while you fight about these issues of the fine points of theology, there is a secular enemy of you both that wants to occupy the field.

We are living in a time somewhat late in the day when that secular opponent has actually moved right in, and in fact dominates the public debate, leaving religious believers in a little bit of a besieged position. But see, to me, the New Atheism should not be seen entirely as just a threat. It is also in a way, a great opportunity. Number one, the New Atheists have completely abandoned postmodernity. They are not into the “Well this is true for you, but something else is true for me” approach anymore. No! They assert their beliefs to be absolutely true! There is no God. There is no life after death. In that sense, they are straight out of the Enlightenment era. They share with the believer a belief in the final sense, justice. In other words, there is a kind of ultimate accounting in which what goes around does come around.

Consider, for example, the case of Hinduism. You are a lousy jerk in this life? Well, then, we'll be seeing you in justice, courts. We say stuff like, “What goes around comes around.” Well, unfortunately, that just is not true. Why? Because many times, the bad guy ends up on top. Many times the good guy comes to grief. What goes around does not always come around. Now, it is the shared premise of all the major religions of the world that even though that is true, that there is no ultimate terrestrial justice, there is, in a final sense, justice. In other words, there is a kind of ultimate accounting in which what goes around does come around.

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The philosopher Bertrand Russell (1957) many years ago wrote a notorious book titled Why I Am Not a Christian. Apparently, someone once asked him, “So, if you die and suddenly find yourself in front of God, what would you say to Him?” Russell is purported to have replied, “I would say to him, ‘Sir, you have failed to provide me with adequate evidence.’” This is the pompous pose of the modern atheist. The modern atheist says, “I am a disciple of the data. I am following the pathways of reason wherever they may lead, and if I don't believe, it's just because I just don't see the evidence out there.”

I want to give you my own view of why this is to me an unbelievable or dubious explanation of the New Atheism. Normally if you do not see evidence for something, if you do not believe in something because there is no proof of it, what do you do? You ignore it! You go about your life as if the thing that you do not believe in, for which there is no evidence, does not exist. Case in point: I do not believe in unicorns. But you will notice that I have not written any books on unicorns: The Unicorn Delusion or The End of Unicorns or Unicorns Are Not Great. I do not go around debating unicorn advocates. I just go about life as if there aren't any unicorns and leave it at that. The belligerence of the New Atheism is an important clue that something deeper is going on here, and I want to leave you with my thought about what that is.

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The philosopher Bertrand Russell (1957) many years ago wrote a notorious book titled Why I Am Not a Christian. Apparently, someone once asked him, “So, if you die and suddenly find yourself in front of God, what would you say to Him?” Russell is purported to have replied, “I would say to him, ‘Sir, you have failed to provide me with adequate evidence.’” This is the pompous pose of the modern atheist. The modern atheist says, “I am a disciple of the data. I am following the pathways of reason wherever they may lead, and if I don't believe, it's just because I just don't see the evidence out there.”

I want to give you my own view of why this is to me an unbelievable or dubious explanation of the New Atheism. Normally if you do not see evidence for something, if you do not believe in something because there is no proof of it, what do you do? You ignore it! You go about your life as if the thing that you do not believe in, for which there is no evidence, does not exist. Case in point: I do not believe in unicorns. But you will notice that I have not written any books on unicorns: The Unicorn Delusion or The End of Unicorns or Unicorns Are Not Great. I do not go around debating unicorn advocates. I just go about life as if there aren't any unicorns and leave it at that. The belligerence of the New Atheism is an important clue that something deeper is going on here, and I want to leave you with my thought about what that is.

If you think about life, it is easy to see that it's a little unfair. We do not want it to be unfair—after all, we believe in justice, courts. We say stuff like, “What goes around comes around.” Well, unfortunately, that just is not true. Why? Because many times, the bad guy ends up on top. Many times the good guy comes to grief. What goes around does not always come around. Now, it is the shared premise of all the major religions of the world that even though that is true, that there is no ultimate terrestrial justice, there is, in a final sense, justice. In other words, there is a kind of ultimate accounting in which what goes around does come around.

Consider, for example, the case of Hinduism. You are a lousy jerk in this life? Well, then, we'll be seeing you in justice, courts. We say stuff like, “What goes around comes around.” Well, unfortunately, that just is not true. Why? Because many times, the bad guy ends up on top. Many times the good guy comes to grief. What goes around does not always come around. Now, it is the shared premise of all the major religions of the world that even though that is true, that there is no ultimate terrestrial justice, there is, in a final sense, justice. In other words, there is a kind of ultimate accounting in which what goes around does come around.
ply say, “Let me show you the Pope's latest Encyclical.” In other words, it’s almost as if, as religious believers, we have to learn to be bilingual. By which I mean, we need to speak perhaps a religious language at church and at home, but then a different, more secular language in the public square. And I think there are opportunities for religious believers, without discounting differences of theology, to make common ground against the New Atheism, which would ultimately like to demolish all of us and eradicate religion as a kind of smallpox from the public square. It is not going to happen, but in some sense we need some tools to counter it.

Sometimes when I speak on campus, and certainly in church, people come up to me and say, “Dinesh, what you’ve said is profoundly depressing! Because what are you asking us to do? Are we supposed to become biologists and physicists and philosophers and theologians to go and take these guys on?” And I say, “No, you don’t have to do that. They [New Atheists] don’t do it either!” What do they do? Well, the New Atheist basically comes into the public square with a kind of big holster and a couple of six guns, with a couple of easy magic bullets to fire at you. “Religion is the source of all the evil in the world. BAM!” Or, “How do you know that your religion is true and everybody else’s is false; have you conducted a comparative investigation of all the religions of the world? No, you belong to the LDS church because your parents did; you were born in Salt Lake City. BAM!” Or, “You’re a Protestant because you were born in Kelso, Oklahoma. If you had been born in Afghanistan, you’d be a Muslim. You have no basis for thinking your beliefs are true. BAM!”

So, then, very often as believers, we find ourselves a little defenseless. And, in a sense, what we need is a way to defend our beliefs. Some Christians say, “I don’t want a holster; I’m non-violent.” My response is, then, “Okay, how about a bulletproof vest? How about a few arrows for your quiver? Or at least maybe a couple of pellets for your blow-pipe!” That way, when the atheist comes into the public square and starts in with: “Hello guys, I’ve got something for you…BAM!” You can say, “Missed me! And I’ve got something for you, Christopher Hitchens! Bing!” And that really is the great opportunity of apologetics.

REFERENCES
THE POSSIBILITY OF ATHEISM; THE PLACE OF FAITH

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It is odd to talk about a new atheism. Atheism is hardly new (though it is distinctly modern—meaning after 1500). Equally, the kind of atheism we see in the work of people like Richard Dawkins, Daniel Dennett, Sam Harris, and Christopher Hitchens (and a fortiori in their pale, cocktail party imitators) is hardly new. It is just the atheism of Spinoza, Hume, and Voltaire dumbed down and gussied up with rhetorical flourish. And as several, from Terry Eagleton (2009) to David B. Hart (2009), have pointed out, neither is this rehash of the old atheism particularly sophisticated. Nevertheless, its resurgence is remarkable, attributable perhaps to the new attention that faith and religion are getting in academic and other circles, not only among those supposedly benighted by the foolish religious heritage of their traditions, but also among educated and cultured people such as Charles Taylor, Alasdair MacIntyre, Paul Ricoeur, Jean-Luc Marion, and more than one president of the United States.

Perhaps the recent onslaught of books and articles by these atheists is a sign of some significant change in our society, something that religious people ought to worry about. Perhaps, however, it is merely a sign of fear, their fear of religion’s reemergence into public life. Perhaps this is a defensive move disguised as an offensive one.

The general thrust of the offensive move is to argue that religion is inherently divisive and anti-democratic, so it should be banished from civil society, though it may continue to exist as a merely private matter. The fact that individual conscience ought not to be trampled on means that a person may believe privately whatever she wishes. Nevertheless, her beliefs ought to have no import outside the sphere of her personal life. This is because, as those called New Atheists understand religion, reason and faith are mutually exclusive. Simon Blackburn (2008) makes that assumption when he tells us that religious faith amounts to nothing but “arbitrary stabs of confidence in things for which there is no evidence.” For Blackburn—and, ironically, also for many who are religious but make the same assumption—there is little or no difference between faith and superstition. Each believes without external evidence.

How did we get from a premodern world in which, as Charles Taylor (2004) argues, it was as impossible not to believe in God as it is not to believe in electricity in a world in which the case for God and for faith is on the defensive, often to the point that those who believe give up making the argument, believing that no argument can be made even if they do not give up faith and religion? The answer is the coming of modernism and the change in the understanding of the world that modernism brought.

It is not uncommon to explain the premodern Western world by reversing Emile Durkheim’s term, as Taylor (2004) does, and describing the premodern world as enchanted (see, e.g., pp. 2–4). An enchanted world is one in which God appears in the very things before us and around us, as forces, in spirits, and even in ordinary objects, and where those things form a unitary whole, a world. It is a world in which God is not other than nature, not because He is the same as nature (though for some He may be), but because He is present in all of nature. As His creation, nature is His image (see Dupre, 1993).

As long as a society’s best minds were occupied by theological questions, it was possible to speak of a given religion as the way of thinking of the whole social organism. All the matters which most actively concerned the people were referred to it and discussed in its terms. But that belongs to a dying era. We have come by easy stages to a lack of a common system of thought that could unite the peasant cutting his hay, the student poring over formal logic, and the mechanic working in an automobile factory. (p. 7)

Milosz confusion the theoretical concern for theological questions with the existential phenomenon of enchantment, arguing that the modern emphasis on theory, present from the beginning of Greek philosophy, but even from the beginning headed in the direction of modernism, was the downfall of religion.
All three of these thinkers agree that the enchantment of the premodern world gave that world a stable unity that has disappeared with modernism. In contrast, according to the atheists, with the rise of modernism that which enchanted the world, namely religion, has become, at best, an old-fashioned superstition that some people attend to in their private lives and that may give us the form of various social functions and customs but that has no further relevance. So, enchantment gave the world stability, but enchantment has become irrelevant.

I want to question that assumption about the enchantment of the premodern world, not because it is merely wrong, but because it is inadequate. Milosz makes an important point: the seeds of modernism have been present from the Greek beginnings of the West. But it is not just the Greek notion of theory that lays the ground for the coming of modernism, though the notion of theory is important. As has often been noted, secularism, the separation of the public and the religious that characterizes modernism, has its roots in an ancient religious idea: Israel had both a king and a prophet, separating the church and the state within a single community. Jesus recognizes the different demands of the state and of God and requires His followers to render obedience to both. The political/practical seeds of modernism were Jewish and Christian; its theoretical seeds were Greek.

Though it is probably true that most medieval European people lived in an enchanted world, they practiced a religion that already contained at least the possibility of the dissolution of that enchantment. Modernism drastically reinterprets the meaning of the Judeo-Christian difference between king and priest, and it mistakenly thinks that its reinterpretation is the only possible alternative to enchantment. Nevertheless, it takes the material for its self-understanding of the secular from the religion that it supposedly overcomes.

MacIntyre (1969) agrees that the premodern world was an enchanted one, but he reminds us: “Theism is not only to be distinguished from its post-Christian transformations [in modernism]; it is equally to be distinguished from all those pretheistic beliefs in which sacredness inheres in features of nature and society [namely, paganism]” (pp. 18–19). This premodern separation of Christianity from nature and society gave religion a means of coping when it came into conflict with the new ideas of the modern world, for by separating religion and the world, Christianity could “withdraw from claims that it cannot uphold convincingly in the secular sphere” (MacIntyre, 1969, p. 19). The problem is that now “the point has been reached at which physics and politics—using both terms in their broadest sense—define a world in which theism has no place at all” (p. 19). Even in the enchanted premodern world theism already opened a space between itself and the secular. For a variety of reasons, beginning in the thirteenth century and culminating in the fifteenth, what we call modernism filled in that open space and forced theism to the margins. But when we think about the rise of modernism we must remember that at least for Abrahamic religions “it is the essence of theism to resist confusion between God and any feature of the world” (p. 18). The division that eventually became the division between the religious and the secular is implicit in Judeo-Christian and Islamic theism.

**FROM THE PREMODERN TO THE MODERN**

The story of the shift from the premodern to the modern is complicated and long, best told by careful historians of ideas with pages and pages to expend rather than by philosophers limited to an essay. But let me outline four interlinking threads within the web of that change, threads that will suggest how modernism undoes the enchanted premodern world and threads that make possible modern atheism, which thinks that it has undone not only the premodern world, but also belief in God.

1. The first thread: **modernism replaces love with will**. Prior to approximately the fourteenth century, the assumption was that love (and its correlates) was more important to God than will. Augustine (1998), for example, writes:

   *What art Thou then, my God? . . . Most highest, most good, most potent, most omnipotent; most merciful yet most just; most hidden yet most present; most beautiful yet most strong; stable yet incomprehensible; unchangeable yet all-changing; never new, never old; . . . ever working, ever at rest; still gathering yet nothing lacking; supporting, filling, and sheltering; creating, nourishing, and maturing.* (Bk 1, Ch. 4; translation modified)

Notice that Augustine praises God for His transcendence and immanence, His goodness, His mercy and justice, His beauty and strength, His unchangeability, His self-sufficiency, and for His care for the created world: support, shelter, creation, nourishment, maturation. More important to our discussion, notice that Augustine does not mention God’s will.

Will is naturally understood in terms of power, meaning that this shift in understanding of God’s being was a major shift, the shift from God as love to God as power. Of course, prior the fourteenth and fifteenth centuries, God was assumed to have “absolute power,” but that power was understood to have moral and rational limits. God could not do something evil and He could not do something that was ultimately irrational, as He is challenged to do in the well-worn question of whether He can create a stone so large that He does not have the power to lift it. After about 1300, however—so still well before modernism begins—thinkers like William of Ockham understood absolute power as the power to do anything, as long as it implies no contradiction. The rational limits of God’s power remain, but the moral limits are gone. The consequences of this new idea, voluntarism, are vast, but consider here only four.
a. The first is the understanding of what it means to be in the image of God. Rather than imaging God in virtue of the possibility of being virtuous, late medieval philosophy understood us to image Him by the fact that we have a will. It might appear at first glance that our will, unlike God’s, is limited, but philosophers argued that our will too is unconstrained. Descartes (1989), for example, tells us that the will cannot be constrained, for the soul can always choose (see, e.g., p. 41). The things it can choose may be limited, but the will itself cannot be constrained from willing, from choosing. A version of Descartes’ understanding of will continues with us. As Hart (2009) says, will “for many of us, is the highest good imaginable. . . . For us, it is choice itself, and not what we choose, that is the first good” (p. 22).

b. A second, perhaps surprising, consequence of voluntarism is that within a voluntarist understanding God moves in the direction of being utterly incomprehensible. If He has unrestricted power, then we cannot hope to understand the rational order of the cosmos by understanding God’s nature: it is possible that He made the natural order in a way that is completely unrelated to the order of His being. In that case, understanding nature tells us nothing about God. But if we cannot understand Him by understanding the natural order, then we cannot understand Him at all, for we have no other access to Him than through the natural order, through His creation. And if we cannot understand Him, then we do not understand His grace. Grace may be given out in a completely inscrutable way, as in the common understanding of Calvinism (Dupre, 1993). With voluntarism, it is difficult to see how reason can help us come closer to God; fideism is a natural, even if not logically necessary, result. If God’s power is absolutely without limit, then in principle we cannot understand Him and we cannot understand His grace toward us.

c. A perhaps surprising consequence of the previous surprising consequence of voluntarism is that the incomprehensibility of God is among the influences that lead to the separation of God from nature, with the resulting modern insistence that the study of one is unrelated to the study of the other. In fact, after Nicolaus Cusanus theologians either accepted the view that nature and grace are independent entities or they stressed one of those entities at the expense of the other. This may be the single most important philosophical idea in the historical process that made modern political thought as well as modern science possible: since the realm of nature and that of grace are independent of one another, one can study human nature or physical nature independent of any study of the Divine.

Understanding God in terms of will rather than love leads toward understanding choice itself rather than the Good to be a fundamental good, toward the notion that God is utterly incomprehensible to human thought, and toward the separation between the sciences of nature (social as well as physical) and revelation.

d. With the new understanding of knowledge as power comes also a new understanding of religious faith. On a voluntarist view, the view that God’s will rather than His love is central to His being, religious beliefs are representations to ourselves of aspects of the ideal world. As such, religious beliefs make it possible for us to act in religious ways. For the voluntarist, beliefs are fundamental to religion, so they are what the religious person knows. However, given the incomprehensibility of God, the reasons for those beliefs are, at best, unclear.

With modernism, rather than understanding faith in terms of trust and fidelity, religious belief is redefined as weak knowledge, even belief without reasons (as we saw Blackburn understanding it). The effete modern view of religion, that it is fundamentally a matter of belief and that faith is belief with weak or no reasons, has its origin in voluntarism.

2. The second thread of modernism to consider is that, contra ancient and early medieval thought, it defines freedom as liberation from constraint, rather than as liberation from sin. In Romans 7:15–19, Paul shows us a hypothetical person wrestling with sin, and wrestling with it precisely because of his will. For Paul, and presumably therefore for other Christians as well, will is not what gives this person freedom. It is an impediment to his freedom, perhaps the impediment. Deliverance—liberation—comes not from the freedom to choose that marks Paul’s will, but as a gift of God, namely the gift of the Spirit (see, Romans 8:1–2). According to Paul, true freedom is the freedom to become what one most fully is, the freedom to become one of the children of God, to become like His Son.

Liberation from constraint will not necessarily help a person obtain that divine freedom, will not help him become what he most truly is. In fact, liberation from constraint may well entangle him further in that which he wants desperately to escape. For Augustine, freedom as liberation from constraint is so little valued that he understands God to be incapable of sin, constrained—but contrary to our modern intuitions, constrained because, being incapable of sin, God is infinitely free. His freedom is made possible by a limitation on His will, namely the limitation created by His infinite goodness. Those who inherit salvation in His kingdom imitate Him by having the same incapacity for sin—the same moral goodness—so the goal of Christian life is the limitation of free will by virtue rather than the complete absence of constraint.

Such a view is incomprehensible for moderns. The nineteenth-century Russian social philosopher, Alexander Herzen, tellingly says of modern freedom: “Why is liberty valuable? Because it is an end in itself, because it is what it is. ‘To bring it as a sacrifice to something else is simply to perform an act of human sacrifice’” (cited in Berlin, 1978, p. 197). For Herzen, the sacrifice of the will, even presumably to the Good, is tantamount to murder. Less dramatically, but no less insistent on the preeminence of free will, Immanuel
Kant defines enlightenment as freedom from dependence on others, in other words freedom from authority in matters of understanding. For him, that freedom from authority and dependence is fundamental to genuine knowledge: “If only freedom is granted, enlightenment is sure to follow” (Kant, 1988, p. 463). True knowledge requires absolute independence of the will.

The Lithuanian-French, Jewish philosopher, Emmanuel Levinas (1989), can be read as arguing that making will fundamental to human being was the origin of modern tyranny and the Holocaust. As Hart (2009) points out, the irony is that if we believe that the ultimate freedom is freedom of will over nature, we believe that we have the power to make ourselves what we wish to be, and it is only an unfortunately short distance from that to the belief that we have freedom to make the nature of others into what it ought to be, or to annihilate that nature as undesirable (see p. 107). The freedom to shape human being—modern tyranny—is a product of the modern elevation of freedom.

To understand freedom in a modern context is to understand it as freedom from constraint rather than freedom to fully act. But it is important to note that the change in our understanding of freedom that came with modernism is not an unalloyed bad thing. To understand that change is to understand a great deal about not only the libertinism of contemporary society but also about things we value highly, such as the movements for human liberation that have characterized modernism, whether the American and French revolutions, or the Abolitionist, Suffragette, Feminist, or Civil Rights movements. As I said, history is more complicated than any simple story can tell.

3. The third thread of this change from the premodern to the modern is that modernism separates the natural from the supernatural. In earlier Christian thought, the natural and the supernatural were two ways of understanding the same reality: the world and God's presence in the world. The term supernatural does not mean for those thinkers “what is beyond human understanding and explanation,” but “what is above Creation but manifest in it,” namely God. With modernism, the terms begin to refer to two different realities.

We have already seen how voluntarism contributed to this separation of the Divine and the natural realms. The Christian notion of the Fall also contributed: to understand nature as fallen and in need of redemption is to understand it as in some sense independent of God. In the end, for modern thought it is simply independent from Him, other than Him. That independence of nature from God eventually made it possible to take up the study of nature without considering the study of the Divine at all. And when the study of the Divine was taken up, it was taken up alongside the study of nature rather than as a necessary propaedeutic for that study.

If we separate the natural and the supernatural, then we need not take up the question of our relation to the supernatural when we undertake to understand the natural. That makes modern natural science possible. But this division also changes the nature of theology. Previously queen of the sciences because it was the umbrella beneath which all other science made sense, theology with modernism becomes "a science among others, with a method and object exclusively its own" (Dupre, 1993, p. 189). It is something one could do or leave alone, but it is not essential to human understanding as a whole.

4. The final thread to consider is that modernism seeks knowledge rather than virtue. This thread is twisted together with the first and the third of the previous three. If the essence of God is will rather than love, then His will is most manifest in His knowledge. Love seeks excellence, but will seeks knowledge. Indeed, God's will and His knowledge are coextensive for most who consider the question during the late medieval and early modern periods, and His knowledge is at least a representation of the world—rather than an intimate acquaintance with it.

Since human beings are in the image of God, human knowledge is in the image of divine knowledge. In other words, it too is a representation of the ideal. Knowledge is no longer fundamentally a matter of love or virtue, a desire to be one with the Good. Instead, it is an investigation of mental representations, as we see so clearly in Descartes' Meditations on First Philosophy. The change from the Platonic definition of knowledge as virtue to the Baconian definition of it as power over representations and the things they represent is emblematic of the direction this thread takes us.

This focus on knowledge created two crises for religion; the first in the seventeenth century and the second in the nineteenth (see MacIntyre, 1969, pp. 9–10). The first crisis occurred when it became clear that the non-revisability of religious belief meant that people who claimed religious knowledge had to explain the relation of that knowledge to the new, revisable experimental knowledge of natural science. Theists had two options: (1) They could understand theism as making factual claims on a par with other scientific (i.e., knowledge) claims—that made religious belief a hypothesis to be tested like any other hypothesis—or, (2) they could understand theism as something not to be understood in a scientific way at all, something wholly spiritual or something existential, to use an anachronistic but appropriate term. In that case, however, the latter understanding could not count as knowledge.

With the arrival of these two options for understanding religion, atheism entered Western thought for the first time as a genuine possibility. Of course atheists have existed since Lucretius, but it is not inconsequential that almost all of those whom we think of as important atheists lived after 1600: Spinoza, Hume, Voltaire, Nietzsche. And the kind of atheism we find in Lucretius is quite different than the atheism that comes later: Lucretius doesn't disbelieve in the gods; he argues that they are irrelevant to us. Atheism as we
know it is a modern, in other words post-sixteenth-century, phenomenon. As MacIntyre (1969) notes, “the God in whom the nineteenth and early twentieth centuries came to disbelieve had been invented only in the seventeenth entury” (p. 14).

MacIntyre (1969) argues that the second crisis of theism came in the nineteenth century when the criterion of falsifiability was applied not only to the physical sciences but to the rest of human knowledge as well: “Theism . . . was subjected to the critical standards of modern culture, which treats refutability as a necessary character of warrantable belief at every point in the study of history, in science, and in ordinary life” (p. 14). Disbelief in God becomes a possibility for which one could give reasons, and for which many did.

More important, however, is the fact that, as Nietzsche so splendidly points out, a more passive atheism had also become possible. This atheism did not require the rejection of the God of theism but the ignorance of Him, forgetting Him as well as the questions to which He was an answer. (That is what Nietzsche’s famous “death of God” is about, our ignorance and forgetting.) Historically, the atheism Nietzsche describes, not that of Dennett, Dawkins, and Hitchens, is the new atheism. The real New Atheism is one that has never thought about the question of God. It didn’t reject God because it had never affirmed Him, except perhaps in passing.

This genuinely New Atheism is often found even among believers, those who might respond to polls on religion by affirming belief in God—or “some Higher Power”—but to whom faith and religion make very little day-to-day difference. My suspicion is that though most Americans today profess belief in God and, so, are not atheists in the strong sense, a majority of them are atheists in Nietzsche’s weaker, more pernicious sense. They are atheists in the same way that many premodern people were theists: it is ingrained in the structure of their cosmos, something they neither see nor question because it is everywhere. But being atheists in that new way, they are consequently more susceptible to the old atheism of Dennett and company. They at least are more likely to find the arguments of such old-style, but so-called New Atheists plausible.

As I have already suggested, to recognize these four threads and their difficulties—that love replaces will in modernism, that freedom means freedom from constraint, that the natural and the supernatural are separated, and that knowledge not virtue is the end of intellectual inquiry—is not to completely disapprove of modernism. Latter-day Saints, in particular, cannot simply reject modernism, for without it and its developments, such as democracy and printing, the Restoration would have been impossible. To recognize that modernism did not come to us as the pure good portrayed by many is certainly not to wish nostalgically to return to a premodern world. Instead it is to understand, from within modernism, the differences that have come with modernism. That means neither insisting—as do the Enlightenment and the so-called New Atheists insist—on the pure goodness of the change nor, as it may be tempting for Christians to do, that it was a purely bad thing. Human history is not that simple.

We may recognize the serious problems that some of the changes wrought, and we may hope for a world in which virtue rather than knowledge is the human end. But it is important to notice, as Charles Taylor (1999) points out, that the coming of modernism was by and large a good thing. He tells us that sometime “in the last centuries, the Christian faith was attacked from within Christendom and dethroned,” but, ironically, “it was this process that made possible what we now recognize as a great advance in the practical penetration of the gospel into human life” (p. 18). Freedom of conscience, for example, a freedom conceived in the modern way, as freedom from constraint, means that my response to God is coerced only by the Holy Spirit and, so, is more authentically a response to Him. This realization is humbling: we must agree with the atheists that had this not happened, we would still be “run by the Inquisition” (even if they get wrong what the Inquisition was).³

RESPONDING TO MODERNIST DISENCHANTMENT

How then are we to understand the transition from the premodern to the modern and what might that understanding suggest about the situation of theism in contemporary society? The so-called New Atheists, like the old, have taken modernism as the disenchantment of the old enchanted world, and they have aligned that enchantment with magic and superstition. Modernism, they say, has undone the enchanted, superstitious world and, so, it has also undone Christianity.

Christians have sometimes, perhaps often, implicitly believed this modernist claim, and they have responded in several ways (see MacIntyre, 1969, pp. 15–16). For example, some have isolated themselves and avoided contact with modernity as far as possible, though it takes little observation to notice the degree to which even the most extreme of those who have done so have been unable to escape modernity. Even when they have, like the Amish, found ways to retain older forms of life, they have been unable to escape fully the conceptual changes wrought by modernism.

Other Christians have responded to modernism’s hegemony by blurring the lines between religions and focusing on what all religions share,⁴ but in doing so they run the risk of reducing religious belief and practice to little more than a system of ethics. Yet another way of dealing with this crisis has been to turn to the past and to see in religion the source of culture, something to be preserved as that source,⁵ and the person who takes this route runs the danger that her religion becomes no more than a cultural heritage, a museum piece, on the one hand, or a historical/sociological structure, on the other (Boeve, 2003).

The problem with these responses is that, as MacIntyre (1969) says, “contemporary theism, while retaining older
forms, has very often changed the content which it invites us to believe or disbelieve” (p. 22). Not only has modernism brought with it the rise of secular knowledge, with its methods and criteria and the subsequent challenge to theism, but theism itself has changed, in both its content and its self-understanding. “Theists are offering atheists less and less in which to disbelieve” (MacIntyre, 1969, p. 24).

The mistake is to identify too closely the enchanted premodern world with the Christianity that was its most important feature. It may very well be that many or most of those who lived in premodern Christendom lived in an enchanted world. But as we have known for a long time, probably since the New Testament, Christendom and Christianity are related but not the same. Modernism undid a pagan world that appeared in the guise of Christianity (and that often reappears that way) alongside an often unnoticed but nonetheless genuine Christianity. Modernism has mostly undone Christendom—including many of the ills and even horrors about which people like Dawkins, Hitchens, and Dennett complain—but modernism has not undone Christianity.

The undoing of the premodern was possible because the possibility of the secular is implicit in Judeo-Christian theism. Judaism and Christianity gave us the tools we needed for the destruction of Christendom. The result, as Taylor points out, is that, if anything, modernism’s undoing of premodern Christendom has made Christianity more rather than less possible (1999, pp. 23–24).

CONCLUSION

In summary, my argument is that atheists believe we must choose between the world of the enchanted god and the world without him. Given modernism’s destruction of the enchanted world and its god, it follows for them that the only alternative is a world without God. But Christians and others know that the choice is a false one. They too wish to live in a world absent of idols, including—perhaps especially—that of the enchanted world. The true God is not the god of the enchanted world, and Christianity yearns for the true God.

Modernism has had critics since its beginning: Gianbattista Vico, Thomas Reid, the Romantics, Søren Kierkegaard, Friedrich Nietzsche, and late twentieth-century philosophers like Levinas, Derrida, Taylor, MacIntyre, Ricoeur, Michel Henry, John Milbank, Jean-Yves Lacoste, and Jean-Luc Marion. A good deal of hype surrounded these later thinkers in the 1980s and 1990s. Nevertheless, in spite of the strange interpretations that some of their work was given in Anglo-American literary criticism circles, it is clear that there is a religious thrust to much of their work, even of those who are not themselves believers. Dominique Janicaud (1991) saw this when he published The Theological Turn of French Phenomenology, attacking Levinas, Marion, and Henry for supposedly having ceased to do phenomenology—for all intents and purposes, as far as Janicaud was concerned, identical with philosophy—by having introduced theological concepts.

The thinkers I have named, and those like them, are not part of a movement or school. Like all philosophers, they disagree vehemently amongst themselves. But they have found that as they express their skepticism about elements of modernism, they are unable to avoid bringing in religion or at least quasi-religious concepts. Even thinkers like Ricoeur or Levinas, who spent most of their careers scrupulously keeping their philosophical and more theological or religious work separate, cannot be understood well without understanding the religious thinking that served as background for their philosophical work. At the very moment when the “new” atheists clamor loudly about the end of religion, we find it reemerging in intellectual life. That reemergence gives me great hope for faith and religion. They are taking their place in both the public sphere and the academy.

Like any great hope, however, this one comes with a danger, the danger that in examining modern culture “we will not be sufficiently bewildered, that we think we have it all figured out from the start and know what to affirm and what to deny” (Taylor, 1999, p. 36; italics added). We can be insufficiently bewildered because we are too confident that we know what is wrong with modernism; equally we can be insufficiently bewildered because we are too confident that we know what is wrong with religion. Or we can be insufficiently bewildered because we are too confident in our understanding of one or the other. To paraphrase a Book of Mormon prophet, “I cannot tell you all the things whereby you may fail to be bewildered, for there are divers ways and means, even so many that I cannot number them” (see Mosiah 4:29).

In spite of that danger, may we be bewildered, amazed, made to wonder so that our wonder will make a new understanding of the modern possible; a resurrection of it that opens more widely the place for faith. May we offer not only atheists of every type more in which to disbelieve but ourselves more to believe.

NOTES

1. This confusion is itself a phenomenon of modernism, for in it we see Milosz assuming that reflective thought—theory—is what holds a society together.

2. See, e.g., Mark 12:17; Matthew 22:21; Luke 20:25. This view of secularism’s origin in Christianity and Judaism will do for this analysis, but John Milbank (2006) has cogently argued that it is insufficiently nuanced: “It belongs to the received wisdom of sociology to interpret Christianity as itself an agent of secularization, yet this thesis is totally bound up with the one-sided negativity of the notion of desacralizing; a metaphor of the removal of the superfluous and additional to leave a residue of the human, the natural and the self-sufficient” (p. 9).
3. It is important to notice that the Inquisition is a bogeyman whose reality was bad enough but seldom as bad as its modern reputation (Hart, 2009, pp. 77–85; see also D’Souza, this volume).

4. This question of the relation between Christianity, culture, and morals, says MacIntyre (1969, p. 18), was what defined the Victorian age.


REFERENCES
The foot soldiers of scientific fundamentalism are on the march. Led by Richard Dawkins’s ubiquitous polemic *The God Delusion*, the media, bookstores, and even public television are filling up with assaults on religion and discussions of assaults on religion. Sam Harris’s *The End of Faith* and *Letter to a Christian Nation* warn that religion will do us in. Daniel Dennett’s provocative *Breaking the Spell* "explains" religion by explaining it away. This self-proclaimed ungodly trio, profiled in the cover story in the November 2006 *Wired*, join a roster of distinguished and articulate public intellectuals coming out against religion: Nobel Laureates Stephen Weinberg and Francis Crick; Harvard’s Pulitzer-winning E. O. Wilson. They join the late Stephen Jay Gould, Carl Sagan, and Isaac Asimov, who were preceded by Jacques Monod and Bertrand Russell.

The scientific fundamentalists are being called New Atheists although there is nothing new about them. They preach a common and familiar sermon from the shared scripture of science: the world religions are collections of false superstitions, not merely wrong, but foolish and dangerous. They lead us to shoot abortion doctors, fly planes into buildings, persecute homosexuals, and squander natural resources. They make us racist, homophobic, and sexually uptight.

A safer road to truth, goes the sermon, can be found within science and we had better get on that road and off our current byways of error, superstition, and ignorance. The world is a big, complex place and we are small complex creatures gradually doing ourselves in; if we are serious about the salvation of our race we had better turn to science.

This, at least, is the sermon, which can only be described as the gospel of scientific fundamentalism. This movement is remarkably analogous to its arch enemy, biblical fundamentalism, which attempts to locate all reliable, absolute truth in the Bible and subordinate other sources of truth—science and history in particular—to the scriptures. Continuing the analogy, we can say that the scientific fundamentalists locate all truth in the book of nature, and insist that there are no other sources of truth.

The argument from the scientific fundamentalists is simple and easy to understand. Its proponents are articulate and persuasive public intellectuals, strong writers, and effective polemists. Many of them have made important contributions to science and other fields. Some have led noble causes like protecting rain forests. They are charismatic, effective communicators with bully pulpits announcing that science is true and religion is not. As a result, many people, including the majority of American Christians, are uneasy about a science they don’t understand but are told by its leaders that it refutes their faith. Many of them even reject contemporary science as incompatible with their faith, and develop faith-friendly “alternatives.”

There is a problem however, with the sermon of the scientific fundamentalists. Compare the enthusiasm that companies studying, say, astronomy, with that found in a large church on Sunday morning. In America’s leading churches, thousands of people voluntarily assemble every week to sing choruses of praise, swaying back and forth, their hands in the air. Or they stand together and read ancient liturgy in unison. Then they sit quietly while a preacher reads from the Bible and encourages them to seek God’s will for their lives. And then, when the offering plate is passed, they pay for the privilege.

Imagine trying to persuade that audience to put aside the usual Sunday morning programming and listen to an astronomy lecture, or any scientific lecture for that matter. As eloquent as he was, Carl Sagan could never have filled the stadiums that came to hear Billy Graham preach. The defrocked Ted Haggard had well over 10,000 people coming every week to listen to his Sunday sermons.

It’s hard to look at a stadium full of enthusiastic Christians—think Joel Osteen—and believe that religion in America is dying, or even feeling poorly. Enthusiastic predictions by earlier generations of scientific fundamentalists that religion would gradually disappear have not come true, which is why Richard Dawkins grows ever more desperate and shrill. Daniel Dennett’s clever image of the “universal acid” of evolution dissolving traditional religion is also proving to be a bit too clever. Whatever religion is made of, Darwinism apparently cannot dissolve it.

There is growing awareness that religion offers something important to people. And it seems unlikely that science is going to meet that need, at least for ordinary people. Religion fills a need in people’s lives—something even the scientific fundamentalists are coming to understand.

In subtle and implicit ways, the secular arch-critics of religion are realizing that humans need more from science than factual accounts of how we got here and accurate descriptions of the world we inhabit. As valuable and grand
as such hard-won scientific accounts may be—and they are certainly valuable and grand—they provide no maps for finding our way in the world. They provide no larger context for our lives, no guidance for how we should live, no insights into right and wrong, no recipes for the building of community. They do not, on their own, have anything to say about purpose. So, while they may be exciting and give us iPods and pacemakers, they fall short of serving as replacement religions.

THE SERMONS OF SCIENTIFIC FUNDAMENTALISM

I want to make the case, though, that the scientific fundamentalists are not merely arguing for the omnipotent supremacy of science but also making a case that science has a quasi-religious character. The agenda is thus not merely to refute mainstream religion but to replace it.

The following paragraphs from several leading scientific fundamentalists illustrate what I am talking about. They are taken from the concluding paragraphs of significant works of popular science. As the authors get to the “here-is-what-it-all-means” reflection, the tone suddenly starts to sound very religious.

Richard Dawkins (2004) in The Ancestor’s Tale:

I have not had occasion here to mention my impatience with traditional piety, and my disdain for reverence where the object is anything supernatural. But I make no secret of them. It is not because I wish to limit or circumscribe reverence; not because I want to reduce or downgrade the true reverence with which we are moved to celebrate the universe, once we understand it properly. “On the contrary” would be an understatement. My objection to supernatural beliefs is precisely that they miserably fail to do justice to the sublime grandeur of the real world. They represent a narrowing-down from reality, an impoverishment of what the real world has to offer.

I suspect that many who call themselves religious would find themselves agreeing with me. To them I would only quote a favorite remark that I overheard at a scientific conference. A distinguished elder statesman of my subject was having a long argument with a colleague. As the altercation came to an end, he twinkled and said, “You know, we really do agree. It’s just that you say it wrong!”

I feel I have returned from a true pilgrimage. (pp. 613–614)

Carl Sagan (1985) in Cosmos:

We are the local embodiment of a Cosmos grown to self-awareness. We have begun to contemplate our origins: star-stuff pondering the stars; organized assemblages of ten billion billion billion atoms considering the evolution of atoms; tracing the long journey by which, here at least, consciousness arose. Our loyalties are to the species and the planet. We speak for Earth. Our obligation to survive is owed not just to ourselves but also to that Cosmos, ancient and vast, from which we spring. (p. 345)

Stephen Jay Gould (1990) in Wonderful Life:

And so, if you wish to ask the question of the ages—why do humans exist?—a major part of the answer, touching those aspects of the issue that science can treat at all, must be: because Pikaia survived the Burgess decimation. This response does not cite a single law of nature; it embodies no statement about predictable evolutionary pathways, no calculation of probabilities based on general rules of anatomy or ecology. The survival of Pikaia was a contingency of “just history.” I do not think that any “higher” answer can be given, and I cannot imagine that any resolution could be more fascinating. We are the offspring of history, and must establish our own paths in this most diverse and interesting of conceivable universes—one indifferent to our suffering, and therefore offering us maximal freedom to thrive, or to fail, in our own chosen way. (p. 323)

Edward O. Wilson (1978) in On Human Nature:

If religion, including the dogmatic secular ideologies, can be systematically analyzed and explained as a product of the brain’s evolution, its power as an external source of morality will be gone forever and the solution of the second dilemma will have become a practical necessity. . . . What I am suggesting, in the end, is that the evolutionary epic is probably the best myth we will ever have. It can be adjusted until it comes as close to truth as the human mind is constructed to judge the truth. And if that is the case, the mythopoeic requirements of the mind must somehow be met by scientific materialism so as to reinvest our superb energies. (p. 201)

Stephen Hawking (1998) in A Brief History of Time:

If we do discover a complete theory, it should in time be understandable in broad principle by everyone, not just a few scientists. Then we shall all, philosophers, scientists, and just ordinary people, be able to take part in the discussion of the question of why it is that we and the universe exist. If we find the answer to that, it would be the ultimate triumph of human reason—for then we would know the mind of God. (p. 191)

Steven Weinberg (1993) in The First Three Minutes:

It is very hard to realize that this all is just a tiny part of an overwhelmingly hostile universe. It is even harder to realize that this present universe has evolved from an unaccountably and unfamiliar early condition, and faces a future extinction of endless cold or intolerable heat. The more the universe seems comprehensible, the more it also seems pointless.

But if there is no solace in the fruits of our research, there is at least some consolation in the research itself. Men and women are not content to comfort themselves with tales of gods and giants, or to confine their thoughts to the daily affairs of life; they also build telescopes and satellites and accelerators, and sit at their desks for endless hours working out the meaning of the data they gather. The effort to understand the universe is one of the very few things that lifts human life a
little above the level of farce, and gives it some of the grace of tragedy. (pp. 154–155)

That these pronouncements above go beyond science is obvious. But, this is not in and of itself a problem. After all, virtually all the sources that have informed the human quest for meaning have been located outside science. There is nothing wrong with anyone building a case informed by science for this or that particular source for meaning, or for this or that orientation toward the mystery of human existence.

However, the process by which one constructs systems that address meaning is more generally known as theology. Theology, for most of its history has described itself as something like “reflection on the life of the religious community” and has generally been tied to a specific religious tradition. Catholic theology has dealt with the ongoing consideration of the content of Catholic beliefs in the light of developments in science, biblical studies, philosophy, and so on. Likewise, Baptist or Lutheran theology has had a similar parochial focus. Analogous reflective activities take place in the other world religions.

In the past several decades however, some liberal scholars, with minimal allegiance to traditional views, have called for the task of theology to be reinvented. Differences between branches of Christianity, the ambiguous role of Jewish and Greek sources in Christian thought, critical examination of the biblical texts, the plurality of world religions, and, of course, scientific developments have led some to call for theology to punch “reset.”

This reinvented theology tries to start with a blank slate, uncluttered by the confusion of the past. It also tends to work outside existing religious traditions, which keeps it rather disengaged and thus irrelevant for many Christians. But it engages with science in interesting ways, which is what I want to look at more closely.

THEOLOGY FROM SCRATCH

We can get a quick overview of what I am talking about by considering Harvard theologian Gordon Kaufman’s (2004) In Face of Mystery: A Constructive Theology as an example. If we look at Kaufman’s project we can see, remarkably, that the scientific fundamentalists are essentially constructing theologies and, in so doing, functioning as the very theologians they so despise.

Kaufman starts by calling our attention to “the mystery within which human existence falls” (p. 28), his name for the rich and ambiguous circumstances of our situation. In addressing this mystery we start by acknowledging our limitations. “We really know very little of what we are or who we are, with what realities we have to do in life, what meaning human existence has or can have” (p. 29). Existing religious traditions are familiar responses to the mystery of our existence, but they are simply options that have been developed historically and we are under no obligation to privilege those responses, at least as starting points. If we are to start, says Kaufman, we must start over. And we must start, for we cannot exist in a world without meaning. “Although the human spirit has no way of overcoming the mystery of life, it is also true that we are not able simply to live with the blank, empty Void. So humans create pictures, pictures of what they think the world is like.” (p. 29). The world disclosed by the science of any generation is simply these pictures, writ large. Once upon a time we lived at the troubled center of an Aristotelian cosmos. Now we float on a tiny sphere in an ordinary galaxy. “We tell ourselves stories which depict the human situation in this world, and in our lives we attempt to act out our own parts in these stories” (p. 29).

In the creation of these pictures, in the development of our stories of how things came to be, and in the search for our place in the grand mystery of existence, we find ourselves drawn to that which offers the greatest clarity and meaning. Kaufman, remarkably unfettered by tradition, calls this “God.” “The word ‘God’ is ordinarily used to indicate or invoke that which will supposedly provide us with the proper orientation in life and adequate motivation in face of the most severe crises of life. That is, the idea of God is the idea of that—whatever it might be—which is absolutely trustworthy and unfailing, that to which we can turn in an hour of great confusion or dire need, that to which we can give ourselves without reservation” (p. 237).

Note that this concept of “God”; as Kaufman is careful to remind us, is a symbol. It points beyond itself to whatever provides us with the “proper orientation in life” but it does not have to point to anything resembling the traditional deities of the world religions. “God” as used here, could refer, in principle, to anything. This redefinition, of course, fails to connect well with traditional Christianity, but I am making the point that it does connect with the rhetoric of the New Atheists.

With this definition of God in mind, Kaufman outlines the task of those who would do theology as the “attempt to construct conceptions of God, humanity, and the world appropriate for the orientation of contemporary life” (p. 31). These notions, he notes, are “human creations, human imaginative constructions; they are our ideas, not God’s” (p. 31).

With Kaufman’s directions on constructing a theology in mind, it is interesting to note how the writers of the passages quoted above all morph into theologians, as they construct “conceptions of God, humanity, and the world appropriate for the orientation of contemporary life” (p. 31). Let’s see how this works.

THE SCIENTIFIC CREATION STORY

For starters, there is no denying that modern science has a creation story, and a good one. In an earlier book I offered the following description:
From the origin of the universe to the origin of our preference for unrelated mates, the modern creation story provides a coherent and, in the main, empirically verifiable evolutionary explanation. Most of the story is quite well understood and is supported by a wealth of scientific data. Even the more speculative parts are not without empirical support. Adherents anticipate that the speculative character of some portions of the modern creation story will diminish as they slowly yield up their secrets to careful and painstaking research. The scientific creation story crackles with drama and surprise, evoking wonder, and captivating many of those who take the time to learn it. (Giberson & Yerxa, 2002, p. 35)

This story offers a conception of humanity and the world. The “world” rests on a secure foundation of reliable and remarkable natural laws, trustworthy in their regularity. These laws possess a seemingly miraculous power to bring forth matter, galaxies, stars, planets, and maybe even life, all within a framework of natural processes we can understand. And as we come to understand these processes, their marvelous character seems only to enlarge until these processes, no matter how well we understand them, continue to evoke awe and surprise.

The scientific creation story, qua creation story, offers an interesting alternative to the story of the Abrahamic faiths in which God creates everything in six days and then rests. And, although many contemporary religion scholars are quick to point out that this story should not be read scientifically,1 the story in Genesis is considered a historical accounting of how things came to be by many, although not all, Christians, both present and past. The views of “humanity and the world” that informed thinkers from Augustine and Luther, to Dante and Shakespeare, to Galileo, Newton, and even the young Charles Darwin were drawn from the opening passages of the Bible, although they did not all read the text in the same way.

The superiority of the scientific creation story in providing a physical description of how humanity and the world originated is apparent. Of course, I would argue this is because details of this sort are not even present in the biblical creation story. The Genesis creation account states that, for example, “God created the earth,” but no physical details of any sort are provided so that statement is not really at odds with the generally accepted findings of the planetary sciences.

But theology is called to do more than “construct conceptions of humanity and the world.” The task demands that these constructions be “appropriate for the orientation of contemporary life.” This important orientation must provide not only a description of the world but an adequate location of human beings within that world—we must feel “at home.” And we must have ethical systems so we will know how to live.

The modern creation story does both of these. In terms of being “at home in the universe” the story offers a coherent picture of how human beings relate to the entire history of the universe. The atoms in our bodies were forged in the nuclear furnaces of ancient stars that exploded and seeded our galaxy with rich chemistry. Our planet and its life-sustaining sun formed from this same recycled stellar debris. As the popular song by Joni Mitchell goes: “We are stardust, we are golden, we are billion-year-old carbon.”² This connection to the physical history of the cosmos is a provocative and intriguing insight into our origins.

Human history is also intimately interwoven with the history of life on this planet. We owe our existence to our planet’s 3.8 billion year adventure of life, from its origins as a simple cell to its eventual production of large-brained creatures capable of reflecting on the process. Ongoing research in primatology connects us to our nearest evolutionary relatives in new and exciting ways (de Waal, 2005), and we are, in general, coming to understand ourselves as one special component in a vast ecosystem shared with countless life-forms. Physically and biologically, the modern creation story locates us clearly within both the physical universe and the web of life.

Furthermore the scientific creation story belongs to everyone. It is not a parochial religious account, at odds with its counterparts in other religions. It is the story of the origin of the Hindus, the Buddhists, the Jews, the Christians, the Confucians. It is the story of the devotees of all religions and the devotees of no religions. We even share it with the animal kingdom and the stars overhead. The atheist theologian Loyal Rue sees in the universality of the scientific creation story grounds for hope that a fragmented and suspicious humanity might find common ground on which to build a global village of trust and cooperation. Rue (2000) concludes his account of evolution with these words: “We are, at the moment, in many different places, with many histories and hopes. But we are now called together to one place, to a shared history and to a common vision of enduring promise. If there are saints enough among us, we shall survive” (p. 138).³

In terms of an ethical orientation to the world, the scientific creation story also provides a place to stand, although the structure seems a bit rickety. Recent work on evolutionary ethics suggests that many of our moral sensibilities are deeply rooted in our genes. These lights built moral codes into our genes because moral codes have survival value. Those of our ancestors that refrained from killing each other, avoided mating with their siblings, shared with their friends, and kept their agreements were more successful at producing healthy offspring in functioning communities. Genetic predispositions emerged to understand these sorts of behaviors as “the right thing to do.” But because so much of evolution works at the subconscious, intuitive level, our predispositions to behave in these ways took up residence in our species as moral codes, rather than rationally motivated practical behaviors.
I hasten to point out that designating such behaviors as “moral” is something of an over-reach for science. The best we can really say is that we may have biologically based drives and inhibitions that relate in interesting ways to the moral codes of our religions. Incest, for example, is both universally proscribed from a moral standpoint and biologically disadvantageous. But—and this is no small point—the evolutionary basis for avoiding intimacy with our siblings is no different in principle than the basis for avoiding contact with rotting meat. Neither is good for the species, but we would hardly put the latter in the category of morality. Something more than a purely scientific perspective is required to make the move from an aversion to incest to the claim that incest is morally wrong.4

The scientific creation story also illuminates the role human beings play vis-à-vis the environment, and other species. We understand that we are consuming limited resources, destroying the atmosphere, and polluting the oceans. From these insights come a host of ethical directives, from recycling newspapers to giving tax breaks to buyers of fuel-efficient cars. Many of our “good” behaviors—actions that make us feel good about ourselves and responsible as citizens—derive from these insights.

In terms of other species, we are coming to understand that perhaps these species have “rights” of some sort. A moral stance that killing animals is wrong leads many to become vegetarians; the value we place on preventing extinctions leads us to set aside habitats for many animals. We pass wetland protection laws to prevent civilization from destroying the ecosystems that are home to many species. We undermine the market for ivory to protect elephants; we disallow hunting for most of the year; we even brake for squirrels. Behaviors like these are rooted in the scientific creation story and provide for many people, especially in the better-educated and more affluent parts of the world, an ethical framework in which they can locate themselves and feel good about their actions.5

Finally I turn to the question of God and the degree to which our scientific “theologians” provide content for the central theological symbol of “God.” In sophisticated Christian theologies there is an explicit recognition that our concept of “God” is partially a human construct and we have to be cautious about how we handle that symbol. As feminist theology points out, for example, masculine metaphors for God can be alienating. Other problems arise if God is understood as too transcendent, or not transcendent enough. God must be loving God, but not at the expense of being a just God. God must be omniscient, unless it compromises our free will and so on. These are the nuances that balance the Christian concept of God and create the disagreements that lead to schisms and splintering. Another set of concerns, partially overlapping but often different, come into play for non-Christian religious traditions.

The search for this “Goldilocks God” has resulted in a plethora of complementary and even contradictory perspectives, which is why some theologians call for a new beginning as we attempt to build/recover a concept of God appropriate for this stage in our history. In abandoning the often intensely personal metaphors for God that have dominated Judeo-Christian reflection, we open space for consideration of God in new ways. In particular—and of interest in this context as we consider the “theology” of the New Atheists—we create the possibility for a package of ideas from science to assume the role that the symbol “God” is supposed to play in a theological system.

This “replacement” theology is embodied in the life and philosophy of E. O. Wilson.

THE CURIOUS CASE OF E. O. WILSON

Wilson is an interesting case. He grew up in a Southern Baptist home. He had a conversion experience, “giving his heart to Jesus”; he read the Bible cover to cover more than once and worshipped with his family in a local Alabama congregation throughout his childhood. He believed in, and worshipped, a traditional biblical God. Now as one of the world’s most articulate evolutionists, he calls for us to worship “the evolutionary epic” (see Wright, 1988).

Note what has happened here. Largely—perhaps entirely—because of his scientific studies, Wilson rejected the faith of his childhood. But he did not simply shrug his shoulders and bid his faith farewell, as he done some years earlier with his belief in Santa Claus. Instead he reconstituted his faith. He replaced the biblical creation story with the scientific creation story; he replaced Christian ethical directives, with ones derived from evolution and ecology; and he replaced the worship of God with the worship—perhaps celebration might be a better word—of the grand story of evolution.

“Religion,” Wilson (1978) wrote in On Human Nature, “constitutes the greatest challenge to human sociobiology and its most exciting opportunity to progress as a truly original theoretical discipline” (p. 175). This progress will come when a fully materialistic worldview has replaced that of religion: “Make no mistake about the power of scientific materialism. It presents the human mind with an alternative mythology that until now has always, point for point in zones of conflict, defeated traditional religion” (p. 192). And then he asks a most powerful question: “Does a way exist to divert the power of religion into the great new enterprises that lay bare the source of that power” (p. 193)?

Perhaps because of his background Wilson understands the importance of religion. But, more importantly, the science that he did so much to create—evolutionary psychology, which looks at the way human evolution has shaped, not just our bodies but our behavior—points to a natural predisposition that we have toward religion. While the science is speculative, many evolutionary psychologists are convinced that we have a genetically based intuition to seek out or create religions (see, e.g., Boyer, 2001; Newberg, 2001; Wilson, 2002). For these and other reasons Wilson knows
that religion is not simply going to “go away,” just because, in his mind, science has triumphed over it. But Wilson does not even want religion to go away. He just wants to swap out its traditional contents and replace them with new scientific ones. This, however, is a theological task.

Wilson is the most overtly theological of the scientific fundamentalists. Perhaps his childhood faith still calls to him and he seeks comfort in a surrogate, although that seems like a rather patronizing viewpoint. More likely is that he simply understands the necessity and power of religion in the lives of ordinary people and knows that science should alter only the content of religion; it must not destroy it. Whatever the reason Wilson has clearly embraced a theological project.

SCIENCE AS RELIGION?
The scientific fundamentalists, in their own way, offer something surprisingly religious. Carl Sagan’s Cosmos series, for example, was a sort of “religious theatre” (see Van Till, Young, & Menninga, 1988). The series often showed Sagan standing in front of a podium that resembled nothing so much as a pulpit, speaking in reverential tones while the universe sped by out a “window” behind him. Give him a sermon to read and he would be a subdued version of a TV preacher. “Our obligation to survive,” says Sagan (1985), “is owed not just to ourselves but also to that Cosmos, ancient and vast, from which we spring” (p. 345). For Sagan, the “Cosmos from which we spring” is the equivalent of the “God that created us” and he enjoins us to be faithful to our creator.

Weinberg, as we saw in his mini-sermon above, interprets the universe as hostile and without purpose. There is no grand evolutionary epic to worship, and the “cosmos” that created us is not something to which we owe any loyalty, for it is hostile and radiates despair, not hope. Human existence, for Weinberg, is a farce, a mockery, a tale told by an idiot. And we are actors in this grand farce. Our only hope—the closest we can come to salvation—is science, which “lifts human life a little above the level of farce and gives it some of the grace of tragedy.” (Weinberg, 1993, pp. 154–155).

THEOLOGICAL INCOHERENCE?
Not surprisingly, the “theological” claims of the scientific fundamentalists, taken as a whole, constitute a piecemeal, incoherent, and contradictory set of blueprints for finding meaning in the world. Wilson, Sagan, and Dawkins stand in reverential awe of the history to which humans owe their existence. Gould insists that this history was just a crapshoot, and owed no more loyalty than a state lottery that made some happy citizen into a millionaire. And Weinberg, if his cryptic remarks about the hostility of the universe are taken at face value, views our origins as some kind of cruel joke played by an uncaring cosmos, hardly to be celebrated and certainly not to be worshipped.

Wilson and Sagan find in the evolutionary epic some grounds for morality: in our genes, in our obligation to survive, in our care for our planetary home, in the continuation of the grand story. Wilson (1978) claims, for example, as the three primary principles of interhuman ethics that one ought to protect “the cardinal value of the survival of the human genes in the form of a common pool over generations,” one ought to “favor diversity in the gene pool as a cardinal value,” and one ought to regard “universal human rights . . . as a third primary value” (pp. 196–199). And, while we—and most people, for that matter—would agree with Wilson that these are worthy ethical directives, it is hard to see exactly how they are derived. If anything, they seem completely at odds with the “selfish gene” paradigm for understanding human behavior. Dawkins, however, thinks it is a fallacy to derive ethics from science and that ethics must come from outside science, although exactly where that might be located is not clear. What is also not clear is why Dawkins thinks this is possible. If, as he has argued so eloquently and for so many years, we are controlled by our selfish genes, how can we possibly construct an ethics that is anything other than codified selfishness? One looks in vain in his many books for exactly how one would go about doing this.

Gould opposes the whole “Get religion from science” enterprise. His well-intentioned, if naïve, “non-overlapping magisteria” (NOMA) proposal recommends that science and religion should be kept completely separate from each other. The episode of The Simpsons on which Gould appeared involved a controversy over an “angel” and a sub-theme of science versus religion developed as the characters debated the nature of this angel. The conflict ended up in court with a judge issuing a very “NOMA” sounding restraining order that “science should stay 500 yards from religion at all times.”

The scientific fundamentalists are ambassadors from the scientific community to the public at large. But perhaps missionaries would be a more appropriate term, accounting for the enthusiasm with which they bring their surprisingly religious message.

The missionary metaphor is suggestive but raises a most troubling question about the cultural significance of the scientific fundamentalists. Why are the scientific community’s spokespersons drawn from the small subset of scientists who reject traditional religion? There are tens of thousands of scientists who might have been the public figures on the bestseller lists, and who would have had no interest in undermining religion. Some of them would even have been interested in placing their expositions within the framework of a traditional religion either directly, as John Polkinghorne (1998), Ken Miller (2000), and Francis Collins (2007) do, or indirectly, like John Barrow (1988, 1990, 1992) or Simon Conway Morris (2003). How is it that the public faces of science tend to be missionaries for materialism? Why is it that concerned Christians like Phillip
Johnson can find so much evidence for their view that there is something profoundly hostile to their faith coming from science? There is some interesting and important work to be done on this state of affairs. What, exactly, is the origin of the connection between the public stature of the scientific fundamentalists and their materialistic agnosticism? Is it possible that a priori commitments to materialism motivate these missionaries to spread “their” gospel? Perhaps, without any traditional religion of their own, frustrated by what they believe is going on in the name of religion, they feel compelled to share their alternative worldviews. Dawkins, for example, believes that religion should be blamed for the September 11 terrorist attacks. Weinberg (2003) believes that religion has caused most of the wars throughout history and that religion is the only thing that can make a “good person to do evil” (p. 242). These are strong, powerful beliefs. Is it possible that these beliefs are a part of the motivation—maybe a large part—for the scientific fundamentalists to step forward, as missionaries, to spread their message?

Whatever the reasons, the cultural impact of scientific fundamentalism has been disastrous. Because so many of the leading public faces of science come from the tiny subset of the scientific community that are hostile to traditional religion, a near universal perception is steadily reinforced that science and religion are implacably hostile to each other. Even those who claim to reject this conclusion betray themselves when they refer to the “science-and-religion debate” as if debate would be the only possible exchange when science and religion sit down to talk.

The fear that science is hostile to faith creates a market for pseudoscientific alternatives, like the young earth creationism on display in Ken Ham’s museum in Kentucky. Every week thousands of visitors, most of them evangelical Christians, parade past a display of a dinosaur wearing a saddle, surely the most scientifically preposterous exhibit in America. When Gallop and Pew take polls, almost half of all Americans, and most Christians, reveal their preference for Ken Ham’s science, rather than that of Francis Collins.

We are members of a species catalogued Homo sapiens, which means, literally, thinking man. Certainly science is a wonderful example of the designation sapien and many of our deepest thinkers are scientists. The philosopher Jurgen Habermas, however, has called attention to the fact that our species does not merely create knowledge (Latin: sapientia) but also creates religions. He suggests that our species might be better labeled Homo religious. We should hope the scientific fundamentalists do not succeed in collapsing these two parts of our nature into one.

NOTES
3. Whether or not the scientific creation story offers an adequate location for humans within the grand scheme is not the point here. The point is simply that it does, and that this is one of the tasks of theology.
4. I raised this concern with Frans de Waal at the 2009 Venice Summer School in Science and Religion. De Waal, one of the world’s leading primatologists, has thought more about the evolutionary origins of morality than just about anyone. He agreed that the best we get from evolution is a deeply rooted and often powerful sense that there are certain things we are drawn to either doing or avoiding. But evolution provides no insights into whether we can attach moral labels to those inclinations. That move requires something from outside science.
5. Again, whether or not the scientific creation story offers an adequate ethical orientation for humans is not the point here. The point, as stated above, is simply that it does, and that this is one of the tasks of theology.
7. Collins is a very interesting case as he is currently emerging as an important public intellectual in America. He stands alone as a traditional religious believer who has both a public “testimony” and scientific credentials. Ken Miller has comparable stature and is a practicing Roman Catholic. The Nobel Laureate physicist William Philips, who has not written much for popular audiences and is less well known than Collins or Miller, is another important scientific figure with traditional evangelical faith. But the leading public faces of science still tend to be dominated by people without religious beliefs.

REFERENCES

Most of what the New Atheists say is not new at all, but a reprise of old ideas, in particular of the very old idea that a conflict exists between religion and science. There is a conflict, to be sure; but it is not between religion and science. It is between religion and a certain philosophy called “scientific materialism.” Scientific materialism is the belief that the ultimate reality is matter, and that everything that exists and everything that happens can be explained by the laws of physics and blind chance. For some people this is just a philosophical view, but for others it is a passionately held ideology. That ideology has a mission, which is to save mankind from superstition in all its forms but especially in the form of religion. Religion thus plays the role, for some scientific materialists, of a needed enemy, the struggle against which contributes to the larger meaning and purpose of their lives. A conflict between science and religion, therefore, is necessary to their worldview. And it is largely through their propaganda over the last two centuries that the belief that science and religion are indeed at war has become widespread.

There are three parts of this “warfare” thesis: a historical claim, a philosophical claim, and a scientific claim. The historical claim is that religion—especially Christianity and most especially Catholicism—has been hostile to science and has tried to suppress it. The philosophical claim is that—whatever the attitudes of religious people and institutions may have been toward science, hostile or not—an inherent incompatibility exists between the religious and scientific outlooks. Science is based on natural explanations and natural laws, whereas religion is based on the supernatural and miraculous; science is based on reason and evidence, religion is based on faith and dogmatism. The scientific claim is that the actual discoveries of science since the time of Copernicus have debunked many particular false beliefs taught by religion (see, e.g., Hitchens, 2007; Stenger, 2007, 2009).

Let us consider the historical claim first. One might think that Latter-day Saints are unaffected by the historical claims, since the Church of Jesus Christ of Latter-day Saints played little role in the history of science, either positive or negative. Modern science was almost entirely a European phenomenon for its first 300 years, and the LDS Church was simply not on the scene. However all religions are affected by these historical claims. The historical claim supports the philosophical claim. People are more ready to believe that religion and science are by nature enemies, if they think that religion has consistently opposed and tried to suppress science throughout history.

I will not attempt a comprehensive case against the historical myth but will merely point out a few facts. G. K. Chesterton (1959) once observed that some facts are too big to be seen. There is a historical fact about science that is so obvious that it often passes without comment and is therefore often ignored or forgotten, and that is that modern science had its start in Christian Europe and nowhere else. Many scholars have argued that this was not an accident, and that various aspects of the Christian worldview were conducive to the development of science (see, e.g., Ferngren, 2002; Numbers, 2009; Stark, 2003). But one way in which medieval Christian culture undoubtedly did contribute to the birth of modern science, was by inventing the university. By the end of the Middle Ages about one hundred universities existed in Europe. These were founded, for the most part, under church auspices, received much church patronage and protection, and were staffed largely by members of the clergy. According to the distinguished historian of science, Edward Grant (1996), what occurred in those medieval universities for the first time in human history was the “institutionalizing” of science. For the first time scholars could study scientific questions within a stable institutional setting, from year to year and generation to generation. These universities produced a scientific community and a scientific public from whose ranks scientific talent could emerge. Without this, argues Professor Grant, the Scientific Revolution of the seventeenth century would not have occurred.

That revolution, when it came, was not the work of atheists or enemies of religion; far from it. Most of the great founders of modern science were themselves religious believers, including Copernicus, Kepler, Galileo, Descartes, Newton, and Boyle. Kepler announced his third law of planetary motion with the prayer, “I thank thee, Lord God our Creator, that thou hast allowed me to see the beauty in thy work of creation.” Robert Boyle, a leading figure in the Scientific Revolution, left a large sum of money to endow a lectureship, one of whose purposes was to refute “notorious infidels” (i.e., atheists). It continued to be the case well into the nineteenth century that most leading scientists were religious believers. The two greatest physicists of the nineteenth century, for example, Michael Faraday and

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James Clerk Maxwell, were both deeply devout Protestants. Not only were most scientists religious, but quite a few of them were clergymen. Indeed, the very founders of several branches of science were Catholic priests, such as Niels Stensen in geology, Benedetto Castelli in hydraulics, Marin Mersenne in acoustics, Rene Just Hairy in crystallography, Gregor Mendel in genetics, and Georges Lemaitre in Big Bang cosmology. It was Catholic priests also who first discovered the phenomenon of the diffraction of light, built the first reflecting telescope, drew the first maps of the moon’s surface, discovered the first binary star, discovered the first asteroid, and first classified stars by the spectra of their light.

Nor was it just religious individuals who contributed to science. Religious institutions did. The noted historian of science, Professor Lawrence Principe of Johns Hopkins University, says, “[I]t is clear from the historical record that the Catholic Church has been probably the largest single and longest-term patron of science in history” (2009, p. 102). I have particularly emphasized the Catholic contribution, not just because I am Catholic, but because the Catholic Church is often cited as the most dogmatic and anti-scientific of the major religions, and because the actions of the Catholic Church in the case of Galileo are usually Exhibit A in the case against religion (e.g., Draper, 1896; White, 1901; see Numbers, 2009 for a more sophisticated analysis of the “Galileo affair”). So here the contrast between the atheist myth and the historical reality is especially stark.

We come now to the philosophical claim that an inherent incompatibility exists between religion and science. Let us distinguish two parts to this claim. The first is that science is based on reason and evidence, whereas religion is based on dogma, faith, and mystery and is therefore irrational. The second is that science is based on natural explanations and laws of nature, whereas religion is based on the supernatural and miracles and is therefore superstition.

As to the supposed irrationalism of religion, I will limit myself to a few comments. The dominant view in Christian tradition, typified by St. Augustine and St. Thomas Aquinas, is that faith and reason are not contrary to each other but are complementary ways of attaining truth. In the words of Pope John Paul II (1998), “Faith and reason are like two wings on which the human spirit rises to the contemplation of truth” (p. 3). Divinely revealed truth is not only to be known and accepted, but also to be contemplated, reflected upon, and understood insofar as we are able. It is given to guide our steps, of course, but also to illuminate our minds. It is the role of theology to penetrate more deeply into that which has been revealed; it is what St. Augustine called “fides quaerens intellectum,” faith seeking understanding. This deeper understanding allows us to see more clearly the beautiful internal coherence of revealed truth as well as its consistency with the knowledge that we acquire by natural means (i.e., by the empirical investigation of the world about us).

I have been told that in the LDS Church, theological reflection and analysis plays a less prominent role than it does in Catholicism and Protestantism. The way it was explained to me is that it is not necessary for the LDS Church to work out theologically the answers to new doctrinal or moral questions, since God will provide new revelations to deal with such questions as the need arises. I can see a great deal of logic in that. However, it is precisely in the challenges posed by various forms of skepticism, including the New Atheism, that one sees the enormous importance of theology. The human mind naturally and rightly seeks consistency and coherence, for they are marks of truth. We can only live with so much of what psychologists call “cognitive dissonance” (i.e., the failure of everything we believe to fit together in some plausible way). In the case of science and religious doctrine, many people today—Catholic, Protestant, Jewish, and I assume Mormon—experience some level of dissonance. I think that this is due to the fact that they have not been provided with the intellectual tools—the concepts, distinctions, insights, and analyses—that would allow them to resolve the questions that occur to them or that are thrown at them. This is a failure on the part of the churches and their theologians. Fortunately, a lot has been written in recent years that can be of help to the layman, both by theologians and by theologically knowledgeable scientists.

I turn now to the idea that science is based on natural explanations and natural laws, while religion is based on the supernatural and miracles. There is some truth in this, but this dichotomy reveals a deep misconception that afflicts not only atheists but many religious believers as well. Christianity and Judaism are not based on supernaturalism, if one means by that a rejection of the idea of a “natural order.” Indeed, scholars tell us that the book of Genesis was itself a polemic against pagan supernaturalism and superstition. When Genesis said that the sun and moon were lamps placed by God in the heavens to light the day and night, it was attacking the pagan religions that worshipped the sun and moon. When it said that man, and only man, was made in the image of God and was to exercise dominion over the animals, it was, among other things, attacking the paganism in which men worshipped and bowed down to animals or to gods made in the image of animals. Whereas in paganism the world was imbued with supernatural and occult forces, and populated by numerous deities, gods of war, gods of the ocean and of the earth, goddesses of sex and fertility, and so forth, Jews and Christians taught that there was only one God, who was to be sought not within nature, not within its phenomena and forces, but outside of nature, a God who was indeed the very Author of nature. By sharply distinguishing between God and the world, between the Creator and the created universe, biblical religion helped to depersonalize and desacralize the world. It made the world, indeed, into a “natural world.”
this way, it helped clear the ground and prepare the soil for
the later emergence of modern science.

The biblical religions, then, have taught that there is a
natural order, which comes from God. For them it is this
very orderliness of the universe that points to its Creator.
One can show this from many early Christian writings.
The Latin Christian author Minucius Felix (1998), writing
around the year 200 AD, had this to say:

If upon entering some home you saw that everything there
was well-tended, neat and decorative, you would believe that
some master was in charge of it, and that he was himself
much superior to those good things. So too, in the home
of this world, when you see providence, order, and law in
the heavens and on earth, believe that there is a Lord and Author
of the universe, more beautiful than the stars themselves and
the various parts of the whole world. (p. 109)

Note that he does not point to the miraculous but to the
providence, order, and law in the universe as evidence of
God. The classic Jewish and Christian argument was that
if there is a law, there must be a lawgiver. Of course, God
was the lawgiver to Israel—the first books of the Bible are
called the Torah meaning “Law”—but He is the lawgiver
also to the cosmos itself. The Lord says through the prophet
Jeremiah, “When I have no covenant with day and night
and have given no laws to heaven and earth, then will I
reject the descendants of Jacob and of my servant David”
(Jer. 33:25–26). Psalm 148:6 tells of the sun, moon, stars,
and the heavens obeying a divinely given “law that will not
pass away.” Around 97 AD, Clement of Rome, the fourth
Pope, in a famous letter written to the Church in Corinth,
speaks of God as the great Architect and Lord of the uni-
verse and speaks of the laws by which God governs the uni-
verse. For example, he refers to the “laws…that sustain the
fathomless deeps” and of the “ordinances of the Lord” that
rule the ocean and the worlds that lie beyond it (see Louth,
1987, p. 31).

Even atheists have admitted that the concept of God as
lawgiver to the cosmos underlay the search for universal
laws that has characterized modern science. The biologist
Edward O. Wilson (1998), for example, explaining why the
Scientific Revolution occurred in Christian Europe rather
than China, and why China never produced a Newton or a
Descartes, despite some impressive Chinese achievements
in science that the Chinese made, used these words:

Of probably even greater importance, Chinese scholars aban-
doned the idea of a Supreme Being with personal and creative
properties. No rational Author of Nature existed in their uni-
verse; consequently, the objects they so meticulously described
did not follow universal principles…. In the absence of a
compelling need for the notion of general laws—thoughts in
the mind of God, so to speak—little or no search was made
for them. (p. 33)

The cosmologist Andrei Linde (1990), an atheist, has said
that this modern scientific notion of a single universe gov-
erned by “one law in all its parts” ultimately has its roots in
monotheism.

One mistake that defenders of religion often make is to
look for evidence of God in phenomena that they believe
to have no natural explanation. The more traditional idea,
however, is that nature itself points to God. It is not in vi-
olations of, or departures from, or gaps in, the orderliness
and lawfulness of nature that evidence of God's existence
is primarily to be seen, but in that very orderliness and
lawful of nature, as we have seen from those early Jewish
and Christian texts. Of course, Christians and Jews do
believe in miracles, but miracles in the Bible and through-
out Christian history were not given as signs by which the
unbeliever, the skeptic, or the atheist might be convinced.
The miracles of Christ were performed in the sight of Jews,
who had no doubt at all about the existence of the one true
God. Rather, miracles were signs of God's mercy and favor
to His people, and signs that those through whom the mir-
acles were performed spoke and acted by divine authority.
The belief in miracles does not contradict the belief in a
lawful natural order but presupposes it. If there were not
a lawful natural order, there could be no such thing as a
miracle.

If one temptation is to find evidence for God primarily in
departures from the order of nature, another is to argue too
simplistically from the orderly structure of visible, tangible
things, or their orderly arrangement, to the conclusion that
God directly “fashioned” them, in the manner that an arti-
san shapes his material. For example, one might look at
the beautiful shapes of gemstones or snowflakes, or the intri-
cate dance of the planets of the solar system, or the shapes
of seashells, and say, “These, surely, were fashioned by the
hand of God.” The problem with this way of arguing is that
modern science can explain the orderly shapes, structures,
and arrangements of things in a way that appeals to the
laws of nature rather than to an intelligent agent. When
water freezes, for example, to form the lovely patterns of
frost on a windowpane, it is not because God intervenes in
an extraordinary way to move this water molecule here or
that one there. Rather, the water molecules that had been
moving around randomly and aimlessly are organized by
impersonal natural forces that operate by natural laws. The
same is true of the orderly motions of the planets; the laws
of physics are quite adequate to account for them. When
Napoleon asked the great physicist Laplace why he did not
mention God in his monumental treatise explaining the
motions of the planets, Laplace famously (and with some
justification) retorted, “I had no need of that hypothesis.”
In the same way, if you point out to a modern atheist an
device example of visible structure in the universe, he will say,
again with some justification, “The laws of physics can
explain it.”
That is why the argument from the order of the cosmos to a designing intelligence has to be made in a more sophisticated way if it is to have any teeth. To make the argument well, the crucial point to grasp is that while science does explain the order seen in phenomena, it always does so by appealing to even greater order at a deeper level. For example, the beautiful “order in the heavens” discovered by Kepler and formulated by him in his three laws of planetary motion was later explained by Newton’s laws of gravity and mechanics. But Newton’s laws were themselves statements of a more beautiful and comprehensive order in nature than that which had been discovered by Kepler. Eventually, Newton’s law of gravity was itself explained by Einstein’s theory of gravity, the so-called theory of general relativity. But general relativity describes an even more profound and more beautiful order than Newton’s laws. There are strong reasons to believe that general relativity, in turn, is explained by a yet deeper and more mathematically sophisticated theory—very likely superstring theory.

So science does not explain order away; rather, it always shows order at one level to be the consequence or manifestation of a deeper and greater underlying order. To the modern theoretical physicist the universe seems much more orderly, and its order much more profound and mathematically beautiful, than ancient peoples could ever have imagined. When Minucius Felix extolled the “providence, order, and law in the heavens and on earth,” he was writing at a time when only fragmentary glimpses of that order and lawfulness could be seen peeking out from amidst a great deal of apparent irregularity and haphazardness. But now science can penetrate into the inner workings of the physical world and to the deepest roots of its structure, and what it sees there is unblemished order of pristine mathematical purity.

When it reaches the deepest level of nature, namely the ultimate laws of physics—and virtually all theoretical physicists are convinced that such ultimate laws exist—science will have gone as far as it can go. Since science always explains laws in terms of deeper and more fundamental laws (as Kepler’s laws were explained by Newton’s, and Newton’s by Einstein’s), it cannot explain the ultimate laws; there are no deeper laws to explain them by. Any explanation of the ultimate laws must go beyond science. We do not yet know what the ultimate laws are, but we are getting near to them. And the closer we get, the more magnificent, the more sublime the mathematical structure that has been uncovered. The leading physicist Edward Witten (who I think was an atheist himself) was frustrated by his inability to explain to a science reporter how truly remarkable in its mathematical beauty superstring theory is. He said, “I don’t think I’ve succeeded in conveying to you its wonder, incredible consistency, remarkable elegance, and beauty” (quoted in Horgan, 1996, p. 54).

An explanation of the ultimate laws, which, as I have said, must necessarily go beyond science, would have to account for the great subtlety, intricacy, and mathematical beauty of those laws. The only explanation anyone has ever been able to come up with is that they are the product of a mind—a mind of incomparable depth. The famous mathematician and mathematical physicist Hermann Weyl (1932) gave a lecture at Yale in 1931, in which he said:

Many people think that modern science is far removed from God. I find, on the contrary, that it is much more difficult today for the knowing person to approach God from history, from the spiritual side of the world, and from morals; for there we encounter the suffering and evil in the world, which it is difficult to bring into harmony with an all-merciful and almighty God. In this domain we have evidently not yet succeeded in raising the veil with which our human nature covers the essence of things. But in our knowledge of physical nature we have penetrated so far that we can obtain a vision of the flawless harmony which is in conformity with sublime reason. (pp. 28–29)

There are two things, well at least two things that science cannot explain and cannot hope to explain. One is the orderliness and lawfulness of the universe. Yes, it can explain certain orderly patterns as arising from laws, and even explain certain laws as arising from other deeper laws. But its explanations are based on the lawfulness of nature, the cosmos; they don’t explain why it is lawful in the first place. The other thing science cannot explain is why there is a universe at all. The question is often stated this way, “Why is there something rather than nothing?” In other words, why does anything exist at all, rather than there being just blank nonexistence? And when I say “anything”, I mean, why is there even space and time? The traditional Jewish and Christian conception of God as the Author of the universe gives an explanation. No one else has ever given any other explanation of these two facts. All the atheist—old atheist or new atheist—can say is that he has no explanation to offer.

As I understand it—I may be wrong; it’d be interesting to discuss this in the question session—LDS teaching has a different conception of creation, according to which God is not the Creator of the universe and of space, time, and matter, which have always existed but is rather the fashioner of things within the universe. It may be that scientific materialism poses more of a challenge to this latter conception of creation than to the mainstream Jewish and Christian conception of creation ex nihilo, or at least, I should say, it may pose different challenges. If the question is how certain things got assembled or arranged from preexisting matter, such as the earth, moon, stars, galaxies, mountains, rivers, and so forth, then the scientific materialist, the scientific atheist can say, “I don’t need your God to explain that, since I have the laws of gravity and chemistry, nuclear physics, and so on, and they do a perfectly good job of explaining these things.” Now when it comes to living things, there is still room to argue, as Michael Behe (1997) has, for example,
that these conventional scientific explanations fall short. But, as I am sure he would tell you, convincing the scientists of that is an uphill fight. For the world of inanimate things, however, conventional scientific explanations do a remarkably good job across the board. On the other hand, if the questions are the more basic ones of why there’s a universe at all, and why that universe is orderly and governed by laws, then the scientific materialist has nothing to say, and the traditional Jew or Christian does have something to say. He says that God is the ultimate source of all being and the source of all law. What does the Latter-day Saint say? I’m not sure, that would be an interesting discussion.

One potential problem I see is that if space, time, and matter all existed from eternity and are not the creations of God, then God also is not the ultimate source of order and lawfulness in the cosmos. Modern physics shows us that space, time, and matter are in their inmost being, so to speak, deeply ordered. Behe (1997) has pointed out how a hundred years ago many people thought of living cells as little more than simple globs of protoplasm and had no inkling of how deeply and fantastically structured they are. In the same way, many people think of matter as made up of particles that are just blobs or bits of stuff, and space as just a formless void. But space and time themselves have a great deal of structure—one has to learn all the intricate mathematics of Einstein’s theory of general relativity to understand that structure. And the simplest particles have a rich mathematical structure as well. In other words, space, time, and matter cannot be separated from the deep structure given them by the fundamental laws of physics. You cannot imagine stripping that structure away from them—if you did you would have nothing left. As long as space, time, and matter have existed, there have been laws of nature. And so, if one says that God did not create space, time, or matter, then, as I said, one may be forced to conclude that He is not the ultimate source of law and order in the cosmos. That would take off the table one of the strongest and most robust arguments for the existence of God.

This brings me to the enormously important question of the nature of time. By reflecting on the traditional Christian teaching about God and creation, St. Augustine, in the fifth century, was led to very profound insights about the nature of time that anticipated by 1,600 years some of the insights of modern physics. He was stimulated to these reflections by the need to respond to the taunts of pagans.

According to the ancient pagans—including their philosophers, such as Aristotle and Plato—the world had always existed. Many pagans, therefore, would mock the Jews and Christians, by asking, “If your God only created the universe a finite time ago, or only created the world a finite time ago, as you believe, then what was he doing for all that infinite stretch of time before he did so?” In response, St. Augustine made the profound observation that time is a feature of the created universe. Time is a relationship among things and events of that created universe. Therefore, if God had not created a universe, there would be no things and events to have temporal or spatial relations between them. There would therefore be no such thing as time or space. As St. Augustine (1960) put it, “There can be no time without creation” (Bk. 11, Ch. 30). Indeed, time itself, as a feature of the created universe, must itself be something created by God. Augustine wrote, “What times could there be that are not created by you, [O Lord]” (Bk. 11, Ch. 13)? But that means that if there is time passing there is already something in existence that is created by God, namely that time which is passing. That is, if time is passing, then creation has already happened. Therefore, there cannot have been any times existing “before” creation. In other words, when the world of created things came into being, time and space must have come into being with them. It makes no sense, therefore, to ask what God was doing “before” He created the universe. There is no such time as “before the universe was created.” This is how St. Augustine (1960) put it: “You [O Lord] created time itself, and no time could pass by before you created time. But if there was no time before heaven and earth, why do they ask what you did ’then’? There was no ’then’, where there was no time” (Bk. 11, Ch. 13).

In modern cosmology, it is also understood that time and space are features of the physical universe. Space-time, to the physicist, is every bit as physical as rocks or trees. As a result of this insight, modern physics too has reached the same conclusion St. Augustine did sixteen centuries ago; namely, if the universe had a beginning, then so did time itself. There is no such thing as times “before” the beginning of the universe. But physicists did not understand this point until Einstein’s theory of space-time and gravity were developed in 1916. St. Augustine beat physics to these understandings by 1,600 years.

Many of St. Augustine’s statements about time have a strangely modern sound and seem pregnant with meaning to scientists who think about relativity. Indeed, the physicist Steven Weinberg noted in a paper that it has become a custom for papers in the field of quantum cosmology to quote St. Augustine on the nature of time. And the philosopher Bertrand Russell (1946) praised St. Augustine for what he called his “admirable relativistic theory of time” (p. 373).

Modern cosmology also supports the idea that the universe, and therefore time, did indeed have a beginning. In most theories, that beginning was the Big Bang. There are also theories, perfectly reasonable theories, in which the Big Bang was not the beginning of the universe. But no one, at present, knows how to construct a self-consistent and sensible physics theory where the universe has no beginning. So, from the point of view of present scientific theory, it is highly probable that the universe and time itself had a beginning, whether that beginning was Big Bang at some earlier point—though, admittedly, this may never be something that we can prove definitively.

If scientists end up concluding that the universe and time had a beginning, it would obviously raise some questions
for LDS thinkers to consider. But even if scientists conclude that the universe as a whole had no beginning, and that the Big Bang was simply an episode within a universe that had always existed, the Big Bang would raise significant questions, I think, for LDS thinkers. The reason for this is that in the cosmological theories that physicists discuss at present, any physical being who is now exerting any kind of influence on the earth and its environs, or who was exerting such influence when life appeared on earth, or when the earth itself formed, had to have passed through the conflation of the Big Bang. Could such a being have survived that experience? Perhaps, but the idea is highly problematic. This is certainly a difficult question to be pondered. Such questions do not arise if God is an atemporal, non-spatial, non-material, purely spiritual being completely distinct from the physical universe to which He gives being and of which He is Lord and Author, as He is according to the traditional teaching of Catholic, Eastern Orthodox, and Protestant Christians.

The larger point is that to the extent God is conceived of as a being existing within space-time, questions arise as to whether and to what extent He is subject to the laws of nature and the limitations of matter, space, and time. Many questions of that sort would naturally occur to any scientist or person whose thinking is deeply influenced by science.

I will conclude by saying that the supposed conflict between religion and science is, for the most part, a discredited myth. That does not mean, however, that all religious ideas are equally compatible with what scientists believe they know about the world. Some Christians believe that the earth and terrestrial life came into existence only within the last 6,000 or 10,000 years. That belief is in definite conflict with science. So every religion has to think through its own tenets and try to determine whether there are areas of apparent conflict or tension with current scientific thought. If there are, then how those tensions can be resolved while doing justice both to scientific knowledge and revealed truth is for the thinkers within each tradition to work out. As a scientist I can only tell you about the science and suggest some questions that may be worth your consideration.

NOTES

1. When told of this by Napoleon, another great physicist, Joseph-Louis Lagrange is reported to have said, "Ah! But it is such a beautiful hypothesis. It explains many things" (Newman, 1957, p. 51). According to the New Catholic Encyclopedia, Laplace died a Catholic.

2. It is relativistic, I should explain, only in a certain sense, but not in the full technical sense of the theory of relativity.

3. As a technical aside, I should note that attempts to formulate such a theory tend to run afoot either of the Borde-Guth-Vilenkin Theorem or of the second law of thermodynamics, or both.

REFERENCES


The title of my presentation is “The Argument for Intelligent Design in Biology.” When I give this presentation, I announce my name and my institution, Lehigh University. But then, I provide a disclaimer, which says, “The opinions presented here are solely my own, and do not necessarily represent the opinions of Lehigh University or any of its departments or employees.” So, in case anybody was thinking otherwise, I am not speaking for my university, I do not speak for my colleagues, my mother disagrees with me. These are just my ideas that you have here.

It turns out that intelligent design, although it is very controversial, has actually been talked about for a long time. It is really not all that controversial if you talk about it in a certain way. For example, Richard Dawkins (1995), about whom much mention is made in this volume, has said the following: “The universe that we observe has precisely the properties we should expect, if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference” (p. 133). This is a bleak view, perhaps, but a popular one in certain circles in the scientific community. So let us notice here that he seems quite happy to talk about the idea of design; of intelligent design in the universe. Moreover, he decides that there is no such design, and he does it based on what he thinks is physical evidence, the universe we observe has the properties we expect. So he does not think he is making a philosophical argument, he thinks he is making a scientific one.

In case it’s thought that we are all picking on Richard Dawkins, let me show you that this view is widespread. As a matter of fact, it is essentially the default scientific view. For example, about four years ago, there was a dust-up in Kansas over the teaching of Darwinian evolution in schools and that was the occasion for a group of 38 Nobel Laureates, writing under the auspices of the Elie Wiesel Foundation for Humanity, to send a letter to the Department of Education in Kansas. They said, “We, Nobel Laureates, are writing a defense of science. We reject efforts by the proponents of so-called ‘Intelligent Design.’” And then they went on to say something interesting. They defined their terms. They said, “‘Darwinian evolution’ is understood to be the result of an unguided, unplanned process of random variation and natural selection.” It is signed by Richard Axle, who won the Nobel Prize in Medicine in 2004, Linda Buck (Medicine, 2004), Gunter Blobel (Medicine, 1999), Robert Curl (Chemistry, 1996), John Fenn (Chemistry, 2002), David Gross (Physics, 2004), Avram Hershko (Chemistry, 2004), and about 30 others. So if the stars of science consider Darwinian evolution to mean, “an unguided, unplanned process,” then that is what that term means, and that is what we have to deal with.

And so my talk today is essentially to give the other side from Richard Dawkins and these fellows here. I am going to argue that from physical evidence the universe looks like it was designed, that there is purpose. My presentation will follow the outline of an Op-Ed piece that I published in the New York Times a little over four years ago (Behe, 2005). So you can know going in that it is not really a difficult argument because if you can sum it up in an Op-Ed piece, it cannot be all that hard.

And so my argument consists of four different points. The first point is that design is not some mystical conclusion. It is not something that you have to close your eyes and hold up your hands to see. Rather, we deduce design from the physical structure of a system. The second point is that everyone agrees aspects of biology appear designed. The third point of the argument is that there are structural obstacles to Darwinian evolution. There are physical reasons to think that it cannot do what its proponents claim for it. But, as you may have noticed, every time we turn on the TV to a science show or read a science article in a newspaper, we are told that science already knows that Darwinian processes can explain life. So, my last point is to argue that those grand Darwinian claims—not the little Darwinian claims but the grand Darwinian claims—rest on undisciplined imagination. They are urban legends.
Before I start with these points, it is important to ask, “What do we mean by intelligent design?” If you look in the dictionary, you will find a lot of different definitions of design, but the pertinent ones run something like this: “Design is the purposeful or inventive arrangement of parts or details.” More simply, we can just say that design is the purposeful arrangement of parts. That means that we infer design, we conclude design has occurred, whenever parts appear arranged to accomplish a function.

What does it mean to infer design? Often it is easier to understand with the help of an image than it is with words alone. Figure 2 contains two photographs of piles of the children’s toys, Legos. Both are piles of Legos, but there is a difference between the two piles. Clearly the second one appears to have been arranged to perform a function. And actually if you look at it closely, it turns out that this is a Lego catapult—if you do it right, it can launch a projectile. So the point is that design is not some mystical conclusion. We understand that design has occurred by looking at the physical attributes of a system.

Nonetheless, suppose you and your friend walked by the mountain shown in Figure 4, and he asked the same question, “Where did this come from?” You’d say, “Hmm. This looks weird. This kind of looks like a chin, this kind of looks like a nose here, and a forehead.” As a matter of fact, this is called “The Old Man of the Mountain” or “The Great Stone Face,” and it was located in New Hampshire until it collapsed a few years ago. But the thing is that you would look at it, and wonder, “This looks like a face. Do you think maybe some prehistoric folks got together and . . . Well, nah, it’s an interesting rock formation, but maybe somebody did, but there’s really no compelling reason—it’s interesting, but it’s probably just an accident.”

Then suppose you and your friend were walking by the mountains shown in Figure 5, and he asked you the same question again. “Where did these come from?” And now there is no hesitation whatsoever. You do not think that maybe this is the result of a lucky rock formation or that it was erosion or plate tectonics and so on. In fact, at least the faces here, you quickly realize are the result of purposeful design. And it is not because of some religious conclusion,
The Argument for Intelligent Design in Biology

Purposeful arrangement of parts, such that flying, swimming or seeing are possible, Dawkins (1986) maintains that "Any engineer can recognize an object that has been designed, just by looking at the structure of the object" (p. 21). So, according to Dawkins, we infer design when we see a purposeful arrangement of parts.

So let us now ask the question, in biology, is this appearance of design kind of like what you see in The Old Man of the Mountain in New Hampshire? Is it kind of like seeing faces in clouds, intriguing resemblances but really nothing all that profound? Well, again, not according to Dawkins. He is, of course, a Darwinian and does not think that the appearance of design reflects real design. Nonetheless, he says the following: "Natural selection is the blind watchmaker. Blind because it does not see ahead, does not plan consequences, has no purpose in view. Yet the living results of natural selection overwhelmingly impress us with the appearance of design, as if by a master watchmaker, impressing us with the illusion of design and planning" (Dawkins, 1986, p. 21).

So, according to Dawkins, we are not talking about The Old Man of the Mountain here. We are talking about something way beyond even Mount Rushmore; "overwhelming appearance of design." Dawkins talks about things that are flying, swimming and seeing and so on. In other words, he talks about biology mostly at the organismal level. But in the past century, and especially in the past 50 years, science has advanced tremendously beyond what Darwin knew and the kind of examples that Dawkins talks about. And we have learned about the molecular foundation of life. Many scientists thought that once we knew the molecular foundation of life that the appearance of design would dissolve, but instead it has gotten much, much stronger.

For example, the table of contents for a special issue of the journal, Cell, from the year 1998 contained articles such as, "The Cell as a Collection of Protein Machines" (Alberts, 1998), "Polymerases and the Replisome: Machines within Machines" (Baker & Bell, 1998), "Mechanical Devices of the Spliceosome: Motors, Clocks, Springs and Things" (Staley & Guthrie, 1998), "The Hsp70 and Hsp60 Chaperone Machines" (Bukau & Horwich, 1998), and so on. And so, unexpectedly, science has discovered that the very foundation of life, rather than being amorphous protoplasm, as was thought in Darwin’s day, is actually based on sophisticated molecular machinery.

In this volume we cannot go into each of these examples, but I do want to discuss one example of a molecular machine (see Figure 6). This is called a cilium, and without relating the details of how it works, each one of the little dots are themselves very sophisticated proteins, which make up the cilium. Notice the very apparent purposeful arrangement of parts. This is a computer-generated image of a cilium, and interestingly, this was published in a journal called Nanotechnology. It is not just intelligent design proponents who liken these things to molecular machines. All biologists do. We have recognized that the foundation
of life is enormously, enormously sophisticated. The point is that everyone agrees that aspects of biology appear to be designed, even those who most strongly disagree that the design we see is real. And those folks who disagree, for the most part, think that Darwinian theory has offered a good substitute for any explanation that invokes actual design.

My next point is that there are, in fact, structural obstacles to Darwinian evolution. There are physical reasons, structural reasons, to think that it cannot do what its proponents claim that it can do. There are a number of such obstacles, but just one will be briefly dealt with here. This one was recognized by Charles Darwin (1979) himself in a section of The Origin of Species entitled, “Organs of Extreme Perfection and Complication.” In that section, he wrote about the eye and other very complex biological organs. At the end of that section, after having successfully answered the objections to gradualism in the evolution of complex organs—or so he thought—Darwin (1979) nonetheless wrote: “If it could be demonstrated that any complex organ existed which could not have possibly been formed by numerous slight modifications, my theory would absolutely break down,” adding, “but I can find out no such case” (p. 219). So, here Darwin was emphasizing that his idea was that random mutation and natural selection had to act in tiny steps, over long periods of time, improving things inch by inch (i.e., gradualism). He knew that if organisms or organs improved in great leaps rapidly, then it would look very strongly as if something other than random processes were involved. So he always insisted that evolution be gradual.

If we take Darwin at his word, then we must ask, “What sort of a system does not look like it can be put together by numerous, successive, slight modifications, and, thereby, strongly resists gradualistic explanations?” I have argued elsewhere that such a system is one which is irreducibly complex, or has the property of “irreducible complexity” (Behe, 1996, 2007). Now this is a fancy phrase, but it actually stands for a pretty simple idea. It just means that you have some system that does something; it has a function. The system has a number of parts, and the parts act on each other, and they are all necessary for the system to function. You take away one of the parts and the particular function is no longer possible.

A good example of this from our everyday world is the humble mousetrap; a mousetrap that you can buy in any hardware store. A mousetrap has several components. It has a wooden platform, to which everything is attached and it has a tightly wound spring with an extended end to press against the platform and another extended end to overlap with a metal piece called “the hammer,” which is what actually squashes the mouse. You have got to push the hammer over and stabilize it in position until the mouse comes along. That is the job of the holding bar. The end of the holding bar itself has to be stabilized and inserted into something called the “catch.” Now, the trap needs all of these parts in order to work. Take away the spring, take away the holding bar, and you do not have a trap that works half as well as it used to or a quarter as well as it used to. You have a broken mousetrap that does not work at all—it does not squash mice.

So, this is what I mean by irreducibly complex. What does this have to do with Darwinian evolution? Well, suppose you wanted to evolve something like a mousetrap by something like a Darwinian process? That is, by numerous, successive, slight modifications, randomly changing things, and every time you hit upon an improvement, saving that one. What would you start with? Would you start with, say, just the platform and hope to catch mice inefficiently, you know maybe trip them or something like that? Maybe you could add the holding bar to the platform and maybe then when they tripped they would impale themselves when they fell on the holding bar. Well, no, that is a silly idea, of course. You simply cannot do it like that, it just would not
work because an irreducibly complex system pretty much only works when all of the parts are put together.

So, imagining how this could be put together by numerous, successive, random changes is extremely difficult. Well, for us the question is not mousetraps, but biological machines. The question is “Are any of them irreducibly complex?” And the answer is “Yes, they are all pretty much irreducibly complex!” Any moderately complex machine, like a mousetrap, is going to be that way. All of those complexes that were spoken about in the journal, Cell, that were mentioned above have multiple parts that are necessary for them to work at all.

But I think the best visual example of the idea of irreducible complexity in a biological machine is shown in Figure 8. This is a drawing of something called the bacterial flagellum. It literally is an outboard motor that bacteria use to swim. It has a rotary motor, which spins the filament around and acts as the propeller. As it is spinning, it is attached to the drive shaft, which actually turns, and it is attached by something called the hook region, which acts as a universal joint, transmitting the rotary motion of the drive shaft to the rotary motion of the propeller. The drive shaft is attached to the motor, which uses a flow of acid from the outside of the cell to the inside of the cell to power the turning of the drive shaft. The whole thing has to be kept stationary in the plane of the membrane of the bacterial cell, just like an outboard motor on a boat has to be clamped onto the boat in order for it to work, and that is the job of some parts that act as stators, and there are many, many other parts of this machine.

Now, without going into detail, I think it is easy to see that without the drive shaft, without the hook or without the stator or the motor, you would not have a flagellum that spun half as fast as it used to, or a quarter as fast as it used to spin. Rather, it just would not work, it would be broken. So, like a mouse trap without one of its necessary parts, this, too, would be broken and non-functional. So, that was the point that there are structural obstacles to Darwinian evolution, which was recognized even by Darwin himself.

But haven’t we heard that science, in fact, has already shown that Darwinian evolution can produce life? So clearly, it must have an answer for these things. So my next point is that now, in fact, we know that this is not true. It is a gross exaggeration to say that science has shown that Darwinian evolution can produce life. When you read that in magazines or see it on TV, it is really just wishful thinking masquerading as a scientific conclusion. So, the last point that I will make is that grand Darwinian claims rest on undisciplined imagination. In the interest of space, I will just support this with one quotation. In 1996, I published a book called Darwin’s Black Box, which goes into detail on these points that I am discussing only briefly here. The book was reviewed pretty widely, including by evolutionary biologists, molecular biologists, and many scientists. A typical response was written in a book called, The Way of the Cell: Molecules, Organisms, and the Order of Life, by a man named Franklin Harold (2001), who is an emeritus professor of microbiology at Colorado State University. The Way of the Cell was published by Oxford University Press, a very prestigious academic publishing house. Harold briefly touched on the idea of intelligent design in his book. He had the following to say: “We should reject, as a matter of principle, the substitution of intelligent design for the dialogue of chance and necessity” (p. 205), and he cites my book. “But,” he continues, “we must concede that there are presently no detailed Darwinian accounts of the evolution of any biochemical system, only a variety of wishful speculations” (p. 205).

Well, now, here is a very well-known academic writing in an academic book for an academic audience, saying that we have wishful speculations, but that is all. And that is my point. These grand Darwinian claims actually rest on undisciplined imagination. Furthermore, in fact, real, strong, tight Darwinian arguments simply do not exist.

And so, to sum up this part, I just want to say that my conclusion is this: the conclusion of intelligent design is rationally justified. We conclude that something was designed from a purposeful arrangement of parts. We have clearly discovered that, at the very foundation of life, there are no other explanations for that appearance of design, Darwinian claims notwithstanding. It is rationally justified to think that those things were designed.

Recently, I published a second book called The Edge of Evolution (2007), which I think bears on these questions. Remember those pictures of the mountains (Figures 3, 4, and 5)? We concluded that the naturally occurring mountains were certainly not designed, if you take the laws of nature as background at least. Mount Rushmore as it is today, however, definitely was designed. So where, along a continuum of things that start to look harder and harder to explain by chance and necessity, should we draw the edge of evolution, the limit of random processes to explain life,
and where do we say design had to come in? There had to be intelligence behind the production of some features of natural systems.

Now, in order to find that edge of evolution, we have to be pretty careful in what we are looking at. We have to craft our definitions very carefully, we have to make some subtle and important distinctions. It turns out that Darwinism is a multi-part theory. Some parts of it may be right, and certainly are, but other parts may be quite wrong. For example, a big part of Darwinism is the notion of common descent. This is the notion that all organisms living today are descended from common ancestor organisms living in the past. Now, this is an interesting idea, but it is actually fairly trivial because it does not tell us where those past organisms came from. It does not tell us how they changed into the descendants that we see today.

Another aspect of Darwin’s theory is the idea of natural selection. This is the idea that organisms that have an advantage in the struggle to survive will tend to survive and leave more offspring than others. In my view, this is also interesting, but ultimately trivial. After all, who would argue with the idea that organisms that are better fit will do better in the struggle for life? It seems pretty straightforward, not controversial at all. I argue, however, that most of the scientific work and almost all of the philosophical work done by Darwin’s theory is packed into a third feature: random mutation. The critical claim of Darwinism is the sufficiency of random mutation to supply the advantageous mutations when they are needed, in the proper order, and so on.

In the past ten years, as I write in my book, a lot of data has become available that was not available to us before. Data that shows us not what we have theorized that natural selection and random mutation can do, but what it actually does do in a natural setting. My prime example is malaria. Malaria is a terrible disease that kills a million people a year (though not in the United States anymore). It is still a big problem throughout the world. And as we have discovered, there have been mutations, changes in the human genome, which allow people in malarial areas of the world to have a better chance of survival.

One of the best known of these beneficial mutations is the sickle cell gene. The gene confers a bit of resistance to malaria. Scientists have noted areas in Africa and Asia where malaria occurs, and where the sickle cell genes occur, and where they overlap. Essentially, the overlap is very strong, and this is very strong evidence that, in fact, in these areas, the gene is selected by a classic Darwinian process. This is a wonderful example of Darwinian evolution in action. But we also know that if a person has not one copy of the sickle gene, but two copies of the sickle gene, then they have something called sickle-cell anemia. Their red blood cells assume bizarre shapes compared to the nice oval shapes of normal red blood cells, and this leads to very severe circulation problems and death by the age of ten in countries that do not have modern medicine. So, this particular mutation helps a bit, but it is really very inelegant, a crude way to try to deal with malaria.

Well, again in the last decades, other mutations which help in the fight against malaria have been discovered, and they are listed in the table in Figure 9. So the first one is a mutation in a protein called hemoglobin, but that leads to sickle-cell disease. Another mutation takes the gene for one part of hemoglobin and breaks it. That leads to something called thalassemia, where a person is anemic, has other problems, but they do have some resistance to malaria, and that can help them in malarial regions. Another separate mutation is to take a gene for another part of hemoglobin and break it. And again, that helps a little bit, but it leads to anemia and other things. Another way to help modulate these responses is something called hereditary persistence of fetal hemoglobin, where the hemoglobin that is expressed in a human baby in utero continues to be expressed later in life. The way you get that is to break the genetic controls that turn off the expression of this gene when the baby is born. One way to help in resistance to malaria involves something called G6PD (glucose-6-phosphate dehydrogenase) deficiency, where the gene for an enzyme which works in the red blood cell is broken, or the genetic controls which turn it on are broken. In another type of protection, Band 3 protein is deleted, and in yet another way, the Duffy antigen is lost.

The point here is that from our study of the best example of Darwinian evolution of which we know, we learn that random mutation and natural selection break genes. They easily break genes. It is kind of like this: Suppose you wanted to make your car more aerodynamic. You want your old, present-day car to be more aerodynamic, to have less wind resistance. What could you do? One easy thing you could do would be to break off the side view mirrors, because then you would have less drag. You would not be able to see on the side, but it would be more aerodynamic. That
is in essence what Darwinian evolution does in the best examples we have. The mechanism is “broken genes.” I saw a photograph online once, on a BBC outlet, that, I believe, conveys what is wrong with the idea that the primary mechanism behind Darwinian evolution—breaking genes and capitalizing on resultant unintended consequences—can be the mechanism by which things that reflect design (or the appearance of design) are created or brought into being in the natural world of which you and I are a part. The photograph showed a group of soldiers in Columbia, South America. And it turns out an army convoy was on its way up a road and across a bridge to a plantation because it got wind that some guys were growing drugs on the plantation. The drug dealers got wind of the intended army raid, and what they did was blow up the bridge that led from the road to their plantation.

Now from the point of view of the drug dealers, that was a positive mutation of the bridge. It saved them from the government soldiers and, so, was helpful. Nonetheless, blowing up a bridge does not tell you how bridges are made. Blowing up a bridge is not the reverse of building a bridge. And Darwinian evolution, which is seen to break genes and blow up genes and so on does not tell us anything about how the elegant systems that we have discovered came to be in the cell in the first place.

My final point, then, is that the discovery of design in biology is not some isolated, surprising example. It increases a trend that has been seen in other scientific disciplines, including physics and astronomy. Up until about 80 or so years ago, most physicists thought that the universe was eternal and unchanging. And then data were observed, leading to the hypothesis of the Big Bang, that our universe had a beginning. And since then much has been discovered about that universe and, in fact, people have begun to call it the “Goldilocks universe” (Davies, 2006) after the fairy tale. Our universe is not too hot, it is not too cold. It is just right for life. That has led a lot of people to think about design of the universe at large. This was talked about a few years ago in an article in the journal Nature, the most prominent science journal in the world. This article was entitled “Our Universe: Outrageous Fortune” (Brumfiel, 2006), meaning that we are extremely lucky to live in the kind of universe that we do. If the number controlling the growth in the universe since the big bang is just slightly too high, the universe expands so rapidly that protons and neutrons never come close enough to bond into atoms. If it is ever so slightly too small, it never expands enough; everything remains too hot for even a single nucleus to form. Similar problems affect the observed masses of elementary particles and the strengths of fundamental forces and many, many other things. So other branches of science too have started to point to design, as a matter of fact, before biology did.

I look at the whole picture in this way: Here is just a list of things in nature, starting with very basic, very broad things.
stage, the players are free to do as they wish on the stage. So that design extends into nature to a certain depth, but that takes away nothing of human freedom.

REFERENCES
OUTLINES OF AN LDS RESPONSE TO THE NEW ATHEISM

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Recent years have seen an eruption of books and essays about a movement in our culture and our intellectual life that has come to be referred to as the “New Atheism.” This new movement has received much media attention. In many important respects the conceptual foundations of this movement are not new at all but merely resuscitate the usual arguments, many of which are now centuries old, that have always characterized atheistic discourse in any culture and have attempted to drive a wedge between faith and reason. What is new, however, is that proponents of the New Atheism (e.g., Richard Dawkins, Daniel Dennett, Sam Harris, Christopher Hitchins, Steven Pinker) have been energized and emboldened by recent developments in the sciences, particularly the life sciences, and with renewed confidence and vigor have attempted to bring the weight of science to bear on their side of the issues. Critics of the New Atheism, have countered this new approach by employing a strategy of pointing out how, in important ways, science is either neutral on the questions posed by the atheists or how science and religion can be reconciled to the intellectual satisfaction faithful scientists.

As members of The Church of Jesus Christ of Latter-day Saints, we find ourselves in a rather unique position regarding this new debate. As we will show in this essay, some of the most important arguments leveled at religion by the New Atheists can be seen as not really applying to us, or, at least, not applying to us in exactly the same way they apply to other faiths. We will argue that this is the case because of the doctrines and knowledge available to us through modern revelation, as part of the Restoration of the gospel. At the same time, and for the same reasons, some of the species of reconciliation between science and religion that have been proposed are also not available to us—or do not appear to be relevant to us. Complex and fascinating questions surround this issue, and we will not be able to handle all of them. However, we understand that the arguments of the New Atheists are problematic for many people, and that they have the potential to weaken faith and conviction—even for Latter-day Saints. Our purpose here is to articulate one preliminary response to the New Atheism from an LDS perspective, one which emphasizes the intellectual aspects of this new confrontation of faith and a particular style of reason.

For us, the fundamental response to the New Atheism from an LDS perspective must begin with a scriptural passage that is one of the best known and most frequently quoted by members of our church. It is found in the Pearl of Great Price. The relevant verse is taken from an account of a revelatory vision received first in ancient times by Moses and subsequently restored to us in this modern day by the Prophet Joseph Smith. In this passage, God Himself proclaims:

For behold, this is my work and my glory—to bring to pass the immortality and eternal life of man. (Moses 1:39)

Now, before drawing any implications from this short passage and bringing them to bear on the topic of the New Atheism, it is important to note that we will neither be engaging in nor drawing from any sort of official “Mormon theology.” Indeed, we believe it important to note that there is no “Mormon theology” in the sense that a theology is a “philosophical treatment of Christian doctrine,”1 a system of dogma “authoritatively held and taught by the church,” or a set of propositions about the nature of God based on “reasoning about natural facts apart from revelation” (Oxford English Dictionary Online). Some have argued, consistent with this position, that Mormonism exhibits a fundamentally “atheological character” (e.g., Faulconer, 2010). Of course, this is not to say that there are no philosophical treatments of Christian doctrine as it is found and practiced in the Mormon faith (see, e.g., McLachlan & Ericson, 2007; MacMurrin, 1959; Madsen, 1966; Ostler, 2001, 2006, 2008). Indeed, from very early in its history, philosophical investigation and theological study have attracted the interest and efforts of thoughtful members of the Church such as Parley P. Pratt (1891), B. H. Roberts (1903, 1994), James E. Talmage (1909), and John A. Widtsoe (1915). It is to say, rather, that such theological projects are not carried out nor sponsored by the Church itself. The Church has neither produced nor encouraged a systematic theology. Our presiding leaders are not theologians, schoolmen, or philosophers; they are “merely” prophets.

The reason Latter-day Saints are not, and need not be, overly concerned with producing an official systematic theology is illuminated in the short passage of scripture quoted above and further clarified by the very existence of such scripture that has been revealed in modern times. In Moses 1:39, God reveals his purpose, intention, or “design” for the world, and it is a distinctly moral purpose or design. His...
purpose has to do with the moral perfecting of the human soul through the atoning sacrifice of Jesus Christ—which sacrifice is the core of all Christian faith. For the moral purposes of God to be achieved in our lives it is clear that we require knowledge of moral truth, expressed in true doctrines, commandments, practices, and ordinances. It is not as clear, however, that we need a formalized theology—the fruits of philosophical treatments of doctrine. While such treatments might enlighten, inspire, motivate, and generally reveal comforting or captivating insights, they might also—if our reasoning and analysis go wrong, or are improperly influenced by our own egos and imperfections—lead us astray from revealed truth and make it more difficult to understand God’s moral purposes and our moral obligations. In the place of theology and its role of interpreting what was given in the past, yielding new insights, and suggesting applications of God’s revelations of Himself and His purposes, we believe that God has simply continued to reveal Himself and His will to modern prophets and apostles and through scriptures given or brought to light in our own day. He has also promised to reveal truth and guidance to every one of His children who seeks knowledge, guidance, or direction. This principle and promise of ongoing and personal revelation is at the heart of the LDS Christian faith. The emphasis on personal revelation, and the understanding of its form, source, and function, in some ways, sets Latter-day Saint doctrine and practice apart from that of other Christian sects.

This discussion of the LDS belief in an open canon of scripture and continuing modern revelation which illuminates the centrality of God’s moral purposes in regards to us, and the centrality of the moral purpose of our lives, bears on our response to the New Atheism in two central ways—one general and one specific. The general point is that if there is no God, then there is no moral purpose to life and the world. As Dostoevsky famously wrote, and no one has yet adequately rebutted, “If there is no God, then everything is permitted.” Such reveals the unvarnished nihilism that is at the heart of new (and old) atheist arguments. While such an unmasking of the nihilism that inhere in atheism is not new, and while it does not deliver a crushing refutation of their position such that it can be immediately shown to be wrong, it does place a burden on aggressive and assertive atheists (of which the New Atheists are certainly exemplars) to show just what foundations for meaning and moral purpose can be put in place to supplant those that have grown from and are maintained by the Judeo-Christian tradition (e.g., D’Souza, 2007). The second specific way in which the issue of the reality of the moral purposes of God is relevant to the present discussion has to do with the question of “intelligent design” in such discussions and the scientific debates about the nature and meaning of Darwinian evolutionary theory. Although we believe that there is within accepted and distinctive Mormon doctrine something that might be called a design or purpose in creation—something that might be called “intelligent design,” we readily admit that after having said this, it may well be necessary to no longer use the term, lest we be misunderstood by both sides in a controversy in which we as a faith community have no fundamentally compelling interest. The “intelligent design” we care about is a moral design, a purpose or plan at the core of creation that allows us as human beings and offspring of Deity to fulfill our purpose in this life, which is to be perfected, to become as much like God as we can, in order to live with Him as immortal beings when we depart this life. We believe God created (i.e., organized) this world in such a way that it could accomplish His purposes for His children. Exactly how He did that, however, we leave to the scientists to work out, while we also await God’s own revelation on the matter, having no particular stake in the particulars. We do not see that any case is to be made that would require LDS Christians to endorse or reject any particular views on the nature or mechanics of evolution as LDS Christians—although we may have some as LDS scientists or LDS citizens. The only species of evolution that LDS Christians would necessarily find unacceptable is any that ruled out the existence of God, denied Him any role in creation or any ongoing participation in the world and our lives in it, or which required us, as human beings to be merely natural organisms subject only to natural (reflex-like) motivating principles.

**IMPLICATIONS OF THE MORAL PLAN, DESIGN, AND PURPOSE OF GOD**

Modern scripture makes salient the moral purposes of God and the moral purposes of our life on earth. This is partly due, no doubt, to the many occurrences of the word _plan_, which is a relatively modern word, and thus not found in English translations of ancient scripture. The Book of Mormon, for example, refers to and teaches about “the merciful plan of the great Creator” (2 Nephi 9:6), “the plan of our God” (2 Nephi 9:13), the “eternal plan of deliverance from death” (2 Nephi 11:5), “the great plan of redemption” (Jacob 6:8), “the plan of salvation” (Jarom 1:2; Alma 24:14: 42:5), “the plan of redemption” (Alma 12:25, 26, 30, 32, 33; Alma 17:16; 18:39; 22:13; 29:2; 34:16; 39:18; 42:11, 13), “the great plan of the Eternal God” (Alma 34:9), “the great plan of happiness” (Alma 42:8), and “the plan of mercy” (Alma 42:15, 31). Likewise, in the account of the creation contained in the Book of Abraham in the Pearl of Great Price, given through the Prophet Joseph Smith, we are told that

> the Gods prepared the waters that they might bring forth… every living creature that moveth, which the waters were to bring forth abundantly after their kind… And the Gods saw that they would be obeyed, and that their plan was good. (Abraham 4:21; emphasis added)
Joseph Smith also taught that

> Happiness is the object and design of our existence; and will be the end thereof, if we pursue the path that leads to it; and this path is virtue, uprightness, faithfulness, holiness, and keeping all the commandments of God. ... [A] God has designed our happiness—and the happiness of all His creatures, he never has—He never will institute an ordinance or give a commandment to His people that is not calculated in its nature to promote that happiness which he has designed, and which will not end in the greatest amount of good and glory to those who become the recipients of his law and ordinances. (Teachings of the Prophet Joseph Smith, pp. 255–256)

The Book of Mormon prophet Lehi taught that “Adam fell that men might be; and men are, that they might have joy” (2 Nephi 2:25), while a later prophet taught his son that “wickedness never was happiness” (Alma 41:10).

We want to reinforce our earlier explanation of how and why Mormon approaches the issues we are discussing here are not strictly theological in nature and origin—because we have no systematic theology, per se. This point about God’s having and unfolding a moral plan (of happiness) for this world and for all the creatures on it also sheds some light on why we Mormons tend to put so much emphasis on living a moral life, obeying commandments, and improving the moral state of the soul—and less time on working out theological questions. However, this emphasis on God’s plan for us which gives meaning and purpose to the world and its creation and to our individual lives also reveals to us how and why Latter-day Saints might be vulnerable to the arguments of the New Atheists, and where we might concentrate our efforts in response. We believe our vulnerabilities, and the way we might craft a response, will overlap in significant ways with those of most Christians—though that they might well differ in some other respects.

THE NEW ATHEIST ARGUMENTS AND OUR VULNERABILITIES

If, indeed, God has a moral plan and purpose for this world, it follows reasonably that He would have created the world (through whatever mechanisms, vehicles, or acts of creation might have been necessary) in such a way that those great purposes could be recognized and realized; that is, that the moral perfection of the soul would be possible and even abundantly likely. Therefore, it follows that the only perspective on creation that is genuinely problematic is one in which God does not exist and, thus, plays no role in creation. The arguments typically arrayed to support the view that God plays no role—though they enjoy a lengthy history—are not really very strong ones. Arguments that oppose this view are, we believe, far stronger and ultimately more intellectually compelling.

Our contention here, however, is not just that the New Atheists are guilty of employing old, weak arguments, but that they have tried to “hijack” science in the process of doing so, and that within the field of science, they have tried to hijack evolutionary theory to establish that God is unnecessary and, therefore, does not exist. Now, even though we might all rather live in a world in which the things we happen to deem unnecessary—such as earwigs and broccoli—do not exist, most of us do not end up writing books about them. And, even first-semester logic students are not likely to be persuaded that just because one happens to think something is unnecessary for some event, then that thing does not in fact exist. We suspect, rather, that the real reason for this hijacking of science and evolutionary theory is—as Richard Dawkins (1996) has written:

> An atheist before Darwin could have said, following Hume: “I have no explanation for complex biological design. All I know is that God isn’t a good explanation, so we must wait and hope that somebody comes up with a better one.” I can’t help feeling that such a position, though logically sound, would have left one feeling pretty unsatisfied, and that although atheism might have been logically tenable before Darwin, Darwin made it possible to be an intellectually fulfilled atheist. (p. 6)

In other words, atheists such as Dawkins believe that they have found in neo-Darwinian evolutionary theory an approach to the study of the world that provides not just another or a newer argument against the existence of God but actual (i.e., objective) evidence of his absence.

We submit, however, that neither the existence of God nor the non-existence of God will be, or ever can be, established by the methods of science as presently constituted and understood. Indeed, after having argued for so many centuries that God’s existence cannot be scientifically established due to the epistemological limitations and narrow scope of science, it would seem terribly inconsistent (if not just downright “bad form”) to turn around and now argue that His non-existence can be scientifically demonstrated despite those self-same epistemological limitations (see Stenger, 2007, as an example of just this sort of inconsistency). Any claim of scientific “proof” that God does not exist violates one of the fundamental tenets of empirical science—that it is impossible to prove a negative. For example, it cannot be established whether Smith shut the door upon leaving the room even if it can be established that the wind could have shut it. Nothing in principle or in observation excludes the possibility that Smith did it. Under such circumstances, the only real way to settle the matter would be to ask Smith directly whether he had in fact shut the door—although the more we know about Smith and the more we have seen him operate in the past, the more confident we might be in surmising that he had in fact shut the door.
By the same token, experience with and knowledge of God, having seen Him operate in our lives and in the world, is viable evidence of His role in creation (Davis, 1999). It seems to come down to a question of knowledge and experience. Ironically, science itself, as practiced in the empirical sciences, also comes down to knowledge and experience. Science cannot be invoked as evidence that God plays no role in the world—there is no empirical observation of His absence. When the New Atheists claim science as evidence of God’s absence they are merely reasserting their own original premises—rational theories and principles—rather than validating what science makes evident from the world itself (Hunter, 2007).

**NEW ATHEIST ARGUMENTS AND LDS PERSPECTIVES**

Many of the New Atheist arguments are crafted in such a way that they challenge traditional Christian theology, or at least some caricature of Christian theology or Christian practice that seems most vulnerable—especially when presented in an attenuated or caricatured form. This New Atheist attack on Christianity has been well addressed by many bright and capable scholars (e.g., Barr, 2003; Berlinski, 2008; D’Souza, 2007; Day, 2008; Giberson & Artigas, 2006; Hart, 2009; Hunter, 2001, 2007; McGrath, 2004; McGrath & McGrath, 2007), often with great success. There are, however, other New Atheist arguments and contentions that are not so specifically targeted at Christian theology and that have not been as carefully addressed. These arguments are either more general in nature (i.e., epistemological and moral skepticism) or more subtle and nuanced than some of the direct attacks that are typically made. While they might not challenge a particular theology or specific doctrine, such attacks can weaken the faith of any believer who is not prepared for them. Thus, we believe it is vital that we address the issue of whether the world was created (and now exists) so that God’s moral designs and purposes for us can be fulfilled.

It is in the consideration of this issue that we encounter the arguments of the New Atheists in their most virulent form, and it is here that we are most motivated to articulate a response from an LDS perspective. We will point to certain elements of the New Atheist case against God and religion that we feel have significant implications for faith and that must be responded to in a way that shows them to be fundamentally unpersuasive. The issues we will address have to do with how the world can be understood so as to make the moral designs and purposes of God possible. Addressing moral purpose and design takes us to questions of what it means to be human, what we are capable of, and whether the world is constituted so that we can genuinely act as moral agents in a world of meaning. These are intellectual questions common to religion and our own discipline of psychology. Psychology as a scientific discipline has grappled with these issues—albeit not explicitly in relation to atheism or religion. However, the questions posed by atheism will take us to a discussion of the nature of science itself, the scientific enterprise as portrayed by the New Atheists, and how such science might relate to the study of human beings in their psychological, moral, biological, historical, and social context.

**HIJACKING SCIENCE**

Contrary to what is often presented as the authoritative view, there is no necessary incompatibility between science and religion. Though we often hear the unfounded contentions of late nineteenth-century historians of science such as John William Draper and Andrew Dickson White repeated with great fervor by many of the New Atheists (see, e.g., Dawkins, 2006; Dennett, 2006; Hitchens, 2007; Stenger, 2009), there is surprisingly little evidence that the relationship between religion and science has been one of incompatibility, conflict, or warfare (see, e.g., Brooke, 1991; Numbers, 2009; Russell, 2002). Indeed, for most believers, science enriches faith by revealing useful and fascinating things about God’s creation and how it works. Certainly, Latter-day Saints embrace all truth as revealed by God and as discovered by science. President Brigham Young, for example, declared:

> Our religion is simply the truth. It is all said in this one expression—it embraces all truth wherever found, in all the works of God and man that are visible or invisible to mortal eye…. (Journal of Discourses, Vol. 10, p. 251)

Likewise, early apostle Orson Pratt remarked:

> The study of science is the study of something eternal. If we study chemistry, we study the works of God. If we study chemistry, geology, optics, or any other branch of science, every new truth we come to the understanding of is eternal; it is a part of the great system of universal truth. It is truth that exists throughout universal nature; and God is the dispenser of all truth—scientific, religious, and political. Therefore let all classes of citizens and people endeavor to improve their time more than heretofore—to train their minds to that which is best calculated for their good and the good of the society which surrounds them. (Journal of Discourses, Vol. 7, p. 157)

We must observe here, however, that President Young and Elder Pratt are referring specifically to truth but not necessarily to anything that any scholar might discover or formulate and consider to be truth, even if done in the name of science. Not everything that is produced in the name of science qualifies as truth even when it is accepted as such by the scientific community—as evidenced by the history of science itself. Thus, we are committed to accepting and incorporating all truth, but not necessarily all that passes for science. Latter-day Saints believe that scientifically derived truth and true religion will be compatible. And...
they have confidence that when all things are revealed and truth is known, the truth as revealed by God and taught in true religion and the truth that may be revealed by other means (scientific, philosophic, aesthetic, etc.) will concur—though surely not everything that was ever considered to be scientific “truth” will concur with revealed religion.

It is important, therefore, that we be very sensitive to the question of the nature of science, for not everyone understands the nature of science the same way, and not all such understandings of science are valid. Science is a human creation and, as such, it is not self-existent or self-regulating, and neither is it univocal nor infallible. Through the ages, atheists have aimed their attacks on the epistemological enterprise, and have proposed that one or another form of human reason is the only source of real knowledge or truth (McGrath, 2004; Thower, 2000). Sometimes the conflict has been cast in terms of reason versus faith, or reason versus revelation (Shorto, 2008). Most recently, as in the challenges of the New Atheism, it has been cast in terms of science versus religion—which is typically equated with primitive superstition (Atran, 2002) or even madness (Dawkins, 2006). It should be clear, however, that the foundation of science (in all its historical forms) is and always has been reason (DeWitt, 2004; Leon, 1999). Any conflict between reason (or science) and religion has always reflected the interests and agendas of persons, rather than something fundamental in reason or science or religion, per se (Barbour, 1997; Fergren, 2002; Numbers, 2009).

Science, in its most basic form, as systematic rule-governed reason, is, as noted by various philosophers of science (see, e.g., Boyd, Gasper, & Trout, 1991; Cover & Curd, 1998; DeWitt, 2004; Slife & Williams, 1995), good at studying certain types of things, answering certain very specific sorts of questions, and revealing to us certain things about the workings of the world. Clearly, science excels at formulating and addressing “what” and “how” questions. Science is less effective, however, when it comes to addressing the “why” questions that have animated, and continue to animate, so much of cultural and intellectual discourse, and which are at the core of religion. In the empirical sciences, theories themselves are really attempts at articulating answers to the “why” questions that seem to always remain after empirical investigation has completed its work on the “what” and the “how” of the world. Thus support for particular theories is much more the product of human interpretation and imagination than it is a necessary product of the data that is usually derived from scientific methods of measurement or observation (Trigg, 1993).

The New Atheists, however, have attempted to hijack science as applied systematic reason and turn it into an exercise in radical naturalism whereby science becomes little more than a synonym for materialistic and mechanistic explanation. Despite the fervency of such attempts to equate science with materialism, nothing in the nature of scientific inquiry itself requires science to presume that only natural objects and processes exist, or that the only form of adequate explanation is one that is restricted to material entities and efficient causes. Even though science is about the natural world, there is certainly no incontestable scientific reason that all scientific explanations must be confined to naturalistic, that is, purely material and mechanistic concepts and constructs. Indeed, the physical and biological sciences routinely invoke explanatory constructs that are neither purely material nor clearly mechanical (see, e.g., Bohm, 1980; Roederer, 2005; Scott, 2007; Stapp, 2007). Radical naturalism is neither a historically accurate nor a logically necessary rendering of science qua science. Indeed, so many scholars have made such clear and compelling cases in this regard (see, e.g., Berlinski, 2008; De Caro & Macarthur, 2008; Goetz & Taliaferro, 2008; Griffin, 2000; Hart, 2009; Haught, 2006; Hunter, 2007; Johnson, 1998; McGuire & Tuchanska, 2000; Olafson, 2001) one cannot help but wonder why these issues need still be debated.

RADICAL NATURALISM AND HUMAN NATURE

One notable effect of this attempt to hijack science by forcing it to serve the philosophical ends of radical naturalism is that all religious understandings (and all religious language) are preemptively put out of play in science—and even in the thinking of individual scientists. In addition to being both unnecessary and problematic, such a move is at its conceptual root the very antithesis of genuine scientific inquiry. Science and reason, as many have argued (see, e.g., Bernstein, 1983; Gadamer, 1975, 1981; Gergen, 2009; Kuhn, 2000; Persson, 2005; Ratsch, 2000; Trigg, 1993), simply cannot bear the burden of establishing all truth. Science and reason are human inventions—useful ones—but inventions nonetheless, and will necessarily reflect back to us only what is possible in our own framing of the problems within the limits of our own rational discourse. In short, science cannot carry the epistemological load that the New Atheists seek to place upon it. Hijacking science and turning it into nothing but an expression of radical naturalism is an attempt to dictate the grounds upon which intellectual discourse and scientific inquiry can proceed, and therefore, such efforts must not only be resisted but also exposed for exactly what they are.

By way of example, when radical naturalism is taken to be the foundation of social science, as is often the case in contemporary psychology, the results are immediately visible, clear, and nothing short of disastrous. If science is taken to be an exercise in radical naturalism, then all scientific (i.e., legitimate and endorsable) accounts of human behavior and all understandings of human beings can be rendered only in terms of natural substances and mechanical processes. Human beings are, from such a perspective, necessarily and ineluctably seen as nothing but natural objects subject to the mechanical processes of natural forces. The language of necessity inherent in radical naturalism obviates the language of virtue, meaning, and
possibility. This sort of reductive naturalistic understanding of human beings and human action ultimately renders genuinely moral accounts or genuinely moral acts by genuinely moral agents incomprehensible (MacMurray, 1999). At best such moral acts and understandings are metaphorical in nature, and at worst they are tyrannical impositions from a culture that ought to be more value neutral (Joyce, 2006). The most sophisticated ethical system that might emerge from a regime of radical reductive naturalism is a negotiated utilitarian system based solely on calculations of self-interest, the future and moral trajectory of which are by no means secure (Hart, 2009). Natural objects, however, are not capable of making genuinely moral judgments or genuine choices (Gantt, 2002; McCann, 1998; Williams, 1990). Nor are such entities capable of making real covenants with one another because such relational arrangements fundamentally require volition and intentionality (Williams, 2005). Likewise, natural objects—or “meat machines” to use Marvin Minsky’s famous term—are in no need of salvation because they cannot be held responsible, in any genuine way, for their actions. Their actions are determined for them by natural forces over which they not only have no control, and in whose operation they do not participate, but also of which they are mostly unaware. More profoundly, though—at least for Christians and other religious believers—such beings can never be genuinely transformed by others and the relationships they might share with them because (unless alchemy proves to be successful) as natural objects, their natures are fixed.

Thus, for Latter-day Saints, radical naturalism is both untenable for understanding our nature as moral agents and the offspring of Deity, and incompatible with our understanding of the purposes of this life. Our scriptures teach that “the spirit and the body are the soul of man” (Doctrine and Covenants 88:15). LDS doctrine, rooted in modern scripture, also teaches of the premortal existence of the spirits of all human beings. In fact, we hold that the Lord has revealed that “Man was also in the beginning with God. Intelligence, or the light of truth, was not created or made, neither indeed can be” (D&C 93:29). As the Lord taught Abraham, our existence as individual intelligences, with individual attributes, predates our life on earth:

Now the Lord had shown unto me, Abraham, the intelligences that were organized before the world was; and among all these were many of the noble and great ones. (Abraham 3:22)

And we are assured that individual intelligence will continue after our life on earth as well. A prophet of the Book of Mormon taught:

Now, concerning the state of the soul between death and the resurrection—Behold it has been made known unto me by an angel, that the spirits of all men, as soon as they are departed from this mortal body, yea, the spirits of all men whether they be good or evil are taken home to that God who gave them life. (Alma 40:11)

The radical reductive materialism of the New Atheist argument not only distorts science as science, but it makes nonsense of the moral purpose of this life and of all creation. That is to say that, if radical naturalism is true, then what William Provine (1988), a historian of science, has summarized must also be true:

...that nature has no detectable purposive forces of any kind. ...
...that the world is organized strictly in accordance with deterministic principles or chance.... There are no purposive principles whatsoever in nature. There are no gods and no designing forces that are rationally detectable.... that there are no inherent moral or ethical laws....[that] human beings are marvelously complex machines. The individual human becomes an ethical person by means of only two mechanisms: deterministic heredity interacting with deterministic environmental influences. That is all there is.....when we die, we die and that is the end of us.... There is no hope of life everlasting....[F]ree will, as traditionally conceived, the freedom to make uncoerced and unpredictable choices among alternative possible course[s] of action, simply does not exist.... The universe cares nothing for us.... Humans are as nothing even in the evolutionary process on earth.... There is no ultimate meaning for humans. (pp. 64–66, 70)

THE ONTOLOGICAL GAP

Another consequence of the radical reductive naturalism of the New Atheists can be clearly shown to be problematic—not to mention untrue—when applied to the understanding of human beings. We have termed this the “ontological gap” (see, e.g., Williams, 2001).11 The radically reductive naturalism that is the hallmark of New Atheist science requires that all phenomena of the world have their origins in material substances and mechanical processes.12 What this means for human beings is that those phenomena that seem to be at the heart of our identity as moral agents—things like love, honor, shame, knowledge, and virtues of all sorts—seem to have some manner of non-material existence. That is, such things seem, at best, to rely on materiality only as a sort of necessary but not sufficient condition for their existence and expression in human life. They give every appearance—logically, empirically, and phenomenologically—of being of a very different ontological category than mere matter. There is, thus, an ontological gap between feelings, virtues, and intentions, and the matter from which they supposedly derive. Radical materialism, and its incumbent materialistic explanations of our thoughts, feelings, and behaviors, attempts to circumvent the conceptual problem of how matter can produce phenomena of a different ontological order; that is, how natural kinds can produce psychological kinds despite...
the fact that they are fundamentally different in kind. In essence they attempt to plug the ontological gap by stuffing more meat into it. The explanation is something on the order of, “Well, that’s just what the brain does,” but this is not in fact an answer, rather merely an insistence—often delivered in testy and impatient tones—that such transformational magic is just what the brain “does.”

Unfortunately, though magnificent in its complexity and its importance to our daily functioning, generating moral perception, reflective thought, emotional vicissitude, or social behavior is not something a brain can do. In truth there is no account of how the material can produce the immaterial, and thus, no account of how the material of body can produce the experiential phenomena of life; there is not even the hint of a theory of how it actually happens or might happen (see, e.g., Beauregard & O’Leary, 2007; Bennett & Hacker, 2003; Hacker, 2007; Murphy & Brown, 2007; Schwarz & Begley, 2003). Furthermore, insofar as we are aware, there is no documented evidence that any physical matter or state ever produced a particular meaningful, purposeful human act, or mental state such as an intention, a preference, or caring (see, Bennett & Hacker, 2003; Penfield, 1973). In fact, all the behavioral evidence would suggest that insofar as there might be a causal connection between the body and the mind, the causality goes the other way—as anyone who has blushed at an embarrassing thought can readily attest.

The point here is that, for Latter-day Saints (and, perhaps, even for most Christians), the most important reality about creation and God’s part in it, is the moral design of the world and, thus, its purpose—that all human beings should have an opportunity to learn that they need salvation, to experience the gift of that salvation, to experience the joy that is the purpose of their existence, and to grow and develop morally to become more like God. These activities all involve an ontological realm other than the strictly material. Radical naturalism, in its current guise of New Atheist scientism, denies the reality of that ontological realm and, thus, the very purpose of our existence, and seeks to do so on the basis of the flimsiest of evidence—when not merely by proclamation (Berlinski, 2008). The defenders of this new materialist orthodoxy certainly do not bother to build the case for the adequacy of radical naturalism as a sufficient ontology in which all of reality can be anchored. As C. S. Lewis (1949) famously wrote:

The strength of such a [materialistic] critic lies in the words “merely” or “nothing but.” He sees all the facts but not the meaning. Quite truly, therefore, he claims to have seen all the facts. There is nothing else there; except the meaning. He is therefore, as regards the matter in hand, in the position of an animal. You have noticed that most dogs cannot understand pointing. You point to a bit of food on the floor: the dog instead of looking at the floor, sniffs at your finger. A finger is a finger to him, and that is all. His world is all fact and no meaning. And in a period when factual realism is dominant we shall find people deliberately inducing upon themselves this doglike mind. A man who has experienced love from within will deliberately go about to inspect it analytically from outside and regard the results of this analysis as truer than his experience. (pp. 113–114)

Making much the same point about the inadequacies of radical materialist reductionism, though somewhat more trenchantly, Lewis has the following short dialogue take place between two of his characters in one of his famous Narnia books:

“In our world,” said Eustace, “a star is a huge ball of flaming gas.”

“Even in your world, my son,” replied the old man, “that is not what a star is but only what it is made of.” (Lewis, 1952, p. 180)

Material realities and mechanical processes simply cannot bridge the ontological gap to the world of meaning and moral depth where we actually live our lives, no matter how vigorous or presumably scientifically grounded one’s assertions might be. Having made a serious category mistake, the New Atheism should be rejected on these grounds alone.

EPISTEMOLOGICAL MYOPIA

Atheism has always relied on reason to make its arguments against religion and religious beliefs and experiences. It has enshrined reason as the only acceptable source of knowledge. All epistemological claims and all moral claims must pass the test of reason and reasonableness. Such confidence in reason as an epistemological touchstone was perhaps more secure in the past than it is today—following what now seems to us to be the unhappy partition of knowledge into reason and faith. Recent decades have seen much penetrating and important work on knowing and on the limits of rationality, coming not only from the analytical tradition (e.g., Wittgenstein, 1953) but also from the phenomenological, hermeneutic, and deconstructionist traditions in continental philosophy (e.g., Derrida, 1976; Gadamer, 1975, 1981; Husserl, 1970). Work in these traditions have made us less confident that all knowledge that counts as knowledge is propositional, that it must always reflect the rules of logic, that it will correspond to empirically verifiable states of affairs in the material world, that it consists of the possession of information which corresponds to reality, or that knowledge is an entirely rational function. As early as the time of Aristotle the significant and subtle differences among types of knowledge—episteme, techne, phronesis, sophia, theoria, poiesis, and praxis—were being carefully articulated. More recently, Martin Heidegger’s (1962) explication of modes of engagement as ways of knowing, as well as many post-modern analyses of the limits of reason
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And now, behold, because ye have tried the experiment [of hearing and accepting the Word of Christ], and planted the seed, and it swelleth and sprouteth, and beginneth to grow, ye must needs know that the seed is good. And now, behold, is your knowledge perfect? Yea, your knowledge is perfect in that thing, and your faith is dormant; and this because you know, for ye know that the word hath swelled your souls, and ye also know that it hath sprouted up, that your understanding doth begin to be enlightened, and your mind doth begin to expand. O then, is not this real? I say unto you, Yea, because it is light; and whatsoever is light, is good, because it is discernible, therefore ye must know that it is good. (Alma 32:33–35; emphasis added)

NEW ATHEIST EPISTEMOLOGY AND THE REJECTION OF REASON

In light of the foregoing analysis, one cannot help wondering whether the New Atheism is not just an enemy of theistic religion, but also (ironically) of science and reason as well. A basic assumption of the New Atheism—and one with which we have taken repeated issue in this brief essay—is radical naturalism, or the notion that the root of all our thoughts and actions is really just the happenstance occurrence of specifiable material conditions (e.g., brain states, genetics, environmental contingencies, etc.). This truly startling claim has become so commonplace in our modern world that it's deeply disturbing implications for not only how we understand ourselves but also how we understand science typically go entirely unnoticed (Berlinski, 2008; Wiker, 2002). We have tried to explore a few of those implications throughout this piece. There is, however, one last implication of this line of thinking that we would like to mention before moving to a brief treatment of the implications for the New Atheism of the LDS perspective on the nature of God.

Because of its fundamental commitment to materialist explanation, the New Atheism holds that all our thoughts, feelings, and behaviors are fundamentally rooted in unthinking, non-rational, non-caring processes and mechanical causes aimed solely at ensuring successful reproduction via evolutionary selection processes. Because the driving purpose behind evolution is reproduction, and not rationality; however, there are no grounds for supposing that the fruits of evolution, including human thought and culture, will consist of anything inherently rational. Natural selection's fundamental aim, after all, is not to shape a human mind capable of producing true beliefs about the world, but rather to produce a mind whose beliefs are capable of motivating us toward reproductively advantageous behavior whether those beliefs are true or not. As Patricia Churchland (1987), a prominent advocate of this brand of materialism, has stated:

Looked at from an evolutionary point of view, the principle function of nervous systems is to enable the organism to move...
appropriately. Boiled down to essentials, a nervous system enables the organism to succeed in . . . : feeding, fleeing, fighting, and reproducing. The principle chore of nervous systems is to get the body parts where they should be in order that the organism may survive . . . Truth, whatever that is, definitely takes the hindmost. (pp. 548–549)

There is more than a little irony in such a confident pronouncement, especially when the one making it does so in the name of scientific progress and truth. After all, if our thoughts are simply the results of our biochemistry moving us toward reproduction, then the thought, “radical naturalism is the best way to understand the world of things and people,” is itself not a rationally defensible or inherently true thought. Rather, it is simply something our brains make us think, believe, and say to other reproductively viable members of our species in the hopes that we might impress them sufficiently to get them to mate with us. That this strategy will be effective must certainly stretch the credulity of even the most ardent scientists.

The irony doesn’t end here, however. For, whether you accept the notion that the radically reductive theories of human behavior being espoused by the New Atheists are true or reject them as pseudoscientific fables depends entirely on which genes are influencing your current neurological interactions with the environment and not on whether you have been or could ever be persuaded by reasoned argument and the convincing power of truth. To put it another way, if the materialist science advocated by the New Atheists is true, then the only reason anyone would advocate it is because they must do so given their evolutionary history, the particular mental mechanisms that their genes have provided for them, and the current arrangement of reproductive possibilities in their environment. Likewise, critics of the theory are really only critics because we don’t happen to possess the appropriate “materialism is true” thought-generating brain functions or genes. So much for reason, so much for science, so much for truth!

THE NATURE OF GOD FOR LATTER-DAY SAINTS

A good deal of the effort of the New Atheists has been to focus on how the natural world functions (i.e., evolution), and how it might have come to be (i.e., Big Bang cosmology). This is likely due to recent advances in the natural sciences, which these atheists have appropriated for their materialist cause. That so much attention is focused on what are essentially “creation issues” is likely also testimony of the salience of “arguments from design,” which have been in play for centuries as arguments for (or evidence of) God’s existence. We will conclude our essay with some remarks on the nature of the Creator God that is reflected in LDS doctrine.

We take it to be significant that much more has been revealed about the “why” of creation than about the “how” of creation. This might reflect the relative importance of those two questions—from God’s own perspective. Perhaps the “why” question is of greater importance. This is expressed in modern revelation: “Remember the worth of souls is great in the sight of God” (D&C 18:10). Modern revelation also influences how we think about God, and thus also how we think about creation. Mormonism traces its origins in our time to the first vision of Joseph Smith. On a spring morning in 1820, in answer to prayer, God the Father and the Son, Jesus Christ, appeared to Joseph Smith in a grove of trees near his father’s farm in New York. This incident is usually referred to as a vision, but it can also be understood as a visitation. Thus, in a crucially important and commonsense way, God literally was in a grove of trees in upstate New York that day. LDS believers take it as revealed doctrine that “The Father has a body of flesh and bones as tangible as man’s; the Son also…” (D&C 130:22).

That God is a tangible embodied being, albeit, in a refined and perfected material state, must affect how we think about creation as well as about God’s ongoing relationship with that creation. However God may have effected creation, He did it as a real embodied being, and as this same sort of being He will see that his purposes are achieved. That God resembles humankind will be seen by some as simply primitive anthropomorphic thinking. For Latter-day Saints, however, it is a “theomorphic” understanding of our own nature and destiny, and, as such, it gives us insight into the moral purpose of creation itself.

The other doctrine that influences an LDS understanding of creation has to do with the pre-existent state of not only human beings but other beings found on our earth. In a creation account originally revealed to Moses, and then to us through Joseph Smith, we learn of the spiritual existence of living things before their physical (i.e., temporal) creation:

I, the Lord God, created all things of which I have spoken spiritually before they were naturally upon the face of the earth . . . . And I, the Lord God, had created all the children of men; and not yet a man to till the ground; for in heaven created I them; and there was not yet flesh upon the earth, neither in the water, neither in the air . . . . (Moses 3:5)

We noted in a previous section of this essay the scriptural basis for our notion of the premortal existence of the human spirit.

We do not profess to know much about the “how” of creation, involving as it apparently did, the bringing forth physically on the earth of things with pre-existent spiritual being. However, the premortal existence of spirits does influence our understanding of creation. For example, as Latter-day Saints, we do not believe in the doctrine of creatio ex nihilo, and, thus, there seems to be no need to defend the reality or rationality of a single act of creation that brought into existence everything, including the souls.
of human beings, from nothing. In a sense, it might be said that LDS doctrine regarding this aspect of creation has some affinity with a Parmenidean notion of Being: everything that is, in some real sense, always was, and always will be. As we understand our doctrine, things don’t just come into and go out of existence. Thus, to the extent that New Atheist attacks are aimed at creation accounts relying on an extraordinary single act of an immaterial but intelligent creator, LDS believers generally do not feel the need to become personally involved in the debate—except to help, as best we can, all believers to preserve their faith in God against unfounded critiques or attacks on their religious beliefs. Latter-day Saints do not feel threatened by arguments made against an unembodied God, nor, for the most part, do we care about the means by which creation came about. Striving to understand God’s moral perfection and the moral purposes of creation takes precedence over concern for the how of creation. Being eternal beings in our own right means we do not need to defend God as the unembodied creative power and necessary anchor for the existence of all reality. Knowledge of the “how” of creation, thus, while interesting to us, is not imperative for our faith or salvation. We are thus free to concentrate on understanding God’s moral perfection and on the moral purposes for which the world was created. We can acknowledge the limitations of reason without lapsing into relativism and meaninglessness because we have confidence in the reality of our experience of a real being and the knowledge that comes from revelation. Latter-day Saints in general feel that, in the final analysis, the weight of evidence from both science and reason, not to mention the weight of faith and human experience, will ultimately come down on the side of the existence of God and the reality of the foundation of the Christian faith. Our obligation, and our privilege in these intellectually troubled times, as Peter said it, is to “be always ready to give an answer to every man that asketh you a reason for the hope that is in you… Having a good conscience” (1 Peter 3:15).

NOTES

1. This short but clear and useful definition is taken from the Online Etymology Dictionary at www.etymonline.com.

2. Indeed, one might well say that the project of a Mormon theology has never really gotten “under way” because there has never been any compelling sense that it was needed. As Roger Olsen (1999) points out in his impressive volume, The Story of Christian Theology: Twenty Centuries of Tradition and Reform, “Theology was born as the heirs of the apostles began to reflect on Jesus’ and the apostles’ teachings to explain it in new contexts and situations and to settle controversies about Christian belief and conduct” (pp. 25–26). Given that Latter-day Saints claim to be led by modern prophets and apostles, receiving direct revelation from Christ, a formal theology to clarify doctrine, orthodoxy, and the meaning of revelation would seem unnecessary since the living oracles of God can do this for themselves without needing to rely on the efforts of trained philosophers, theologians, or other such scholars.

3. David Bentley Hart (2009) makes this point in a most eloquent fashion in his Atheist Delusions: The Christian Revolution and its Fashionable Enemies when he writes: “Can one really believe—as the New Atheists seem to do—that secular reason, if finally allowed to move forward, free of the constraining hand of archaic faith, will naturally make society more just, more humane, and more rational than it has been in the past? What evidence supports such an expectation? It is rather difficult, placing everything in the scales, to vest a great deal of hope in modernity, however radiantly enchanting its promises, when one considers how many innocent lives have already been swallowed up in the flames of modern ‘progress.’ At the end of the twentieth century—the century when secularization became an explicit political and cultural project throughout the world—the forces of progressive ideology could boast an unprecedentedly vast collection of corpses, but not much in the way of new moral concepts” (p. 222).

4. This last issue in the list is unacceptable as an explanation of our nature because it denies both the eternal and preexistent nature of intelligence and our moral agency.

5. Some have remarked that to be Mormon is to be in important ways more concerned with orthopraxy (right conduct) than with matters of orthodoxy. Indeed, one is reminded of Joseph Smith’s response to the case of Pelatiah Brown, who had been called before the High Council because of some of his teachings. Joseph said that he “did not like the old man being called up for erring in doctrine. It looks too much like the Methodist, and not like the Latter-day Saints. Methodists have creeds which a man must believe or be asked out of their Church. I want the liberty of believing as I please. It feels so good not to be trammelled. It does not prove that a man is not a good man, because he errs in doctrine” (cited in B. H. Roberts, A Comprehensive History of the Church of Jesus Christ of Latter-day Saints (6 vols.), Provo, UT: Brigham Young University Press, 1965, 5:340).

6. There is an interesting question to be addressed, a question worthy of our greatest intellectual efforts. It is simply how and why a process of creation grounded in distinctly and inherently random processes such as genetic mutation and natural selection could or would be employed to produce with some assured specificity that condition which would be just right for a planned and designed moral purpose to be achieved across a broad range of individuals and contexts. We are sincere about this question and hope someone takes it up with some seriousness.

7. Some of the New Atheists may take an occasional swipe at other religious traditions, but they seem to be at best, “glancing blows.” Their central interest seems to be in refuting monotheistic religions that have not been the victims of historical prejudice and whose adherents enjoy no status as minorities. Christianity and its supporting rational theology have been the prime targets. While they may attack religion in general, the largest guns are trained on Christianity (see, e.g., Loftus, 2010).

8. Draper’s History of the Conflict of Science and Religion and White’s A History of the Warfare of Science with Theology
in Christendom, though undoubtedly influential in shaping academic perceptions of the relationship between science and religion, have nonetheless been all but discredited as hopelessly partisan and inaccurate by more careful and recent scholarship (see, e.g., Brooke, 1991; Ferngren, 2002; Numbers, 2009).

9. We should note here that the “truths” or doctrines of most religions can be rendered in rational terms.

10. One need only recall the recent controversies surrounding the appointment of Francis Collins as director of the National Institutes of Health. Some argue that despite his impressive scientific credentials, Collins is not fit to serve as the director of a scientific organization such as the NIH because of his personal religious beliefs.

11. This is related to what Pope John Paul II referred to as the “ontological discontinuity” between human beings and other beings (see Barr, 2006, p. 31). But the “ontological gap” we refer to is not between humans and other species, but between ontological realms taken to be constitutive of the reality in which human beings find themselves.

12. Although “processes” as processes seem already to be of a different ontological order than substances, this issue is never addressed. As Dan Robinson (personal communication) has articulated this problem, the “Big Bang” not only produced all at once all the matter comprising the universe but also the very laws by which such matter is governed. This is clearly quite a feat.

13. This, it bears noting, does not mean that we believe that the brain is irrelevant to such phenomena. After all, in the case of dysfunction, the brain can clearly function as a constraint on such things. However, constraint is not at all the same thing as causation (for a more detailed treatment of this distinction, see Martin & Sugarman, 1999).

14. Indeed, as reflected in the title of his recent book, even Owen Flanagan (2009), whose commitment to scientific naturalism is obvious and deep, recognizes this to be The Really Hard Problem.

15. There is a fundamental irony in atheists’ and other radical materialists’ insistence on the rejection of our own experience as a source of real knowledge, when coupled with an insistence on the empiricism of science as the only trustworthy source of knowledge. This seems a stretch even if we have a lot of confidence in the methods of empirical science to refine our experiencing faculties.

16. We should not neglect entirely, however, other New Atheist arguments regarding their perception of the supposed universally negative results of religion, including ignorance, tyranny, superstition, and almost all other social ills (see, e.g., the title of Christopher Hitchens’ 2007 book, God is not Great: How Religion Poisons Everything). Whichever of these accusations are not simple fictions or myths are largely exaggerations or misrepresentations. The New Atheist strategy is to draw cartoons of religion and then point out how hollow, shallow, and overly simple religion is. Such is perhaps a good rhetorical strategy, but nonetheless poor scholarship and thin thinking.

17. Although this doctrine raises a number of questions, it does put to rest the question of the existence of God, and clarifies that He is not intangible spirit, and therefore, not totally unlike us.

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