

# GOD?

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A DEBATE BETWEEN A CHRISTIAN  
AND AN ATHEIST

William Lane Craig  
Walter Sinnott-Armstrong

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## PREFACE

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The question of whether or not God exists has been debated vigorously for millennia. It's easy to see why so many people remain intensely interested in this issue. According to traditional believers, human existence finds its ultimate fulfillment only in relation to God. Moreover, in the minds of many, eternal life hangs in the balance. The effects of belief or disbelief in God can also be dramatic in this world. Beliefs about God often influence positions on important and controversial issues, such as sexual behavior, abortion, medical research using stem cells, and, of course, prayer in public schools and government support for religious schools and charities. Many decisions in daily life—not just on Sunday—also depend on belief or disbelief in God. Social action has often been motivated by belief in God. Friendships, communities, and political alliances frequently form or break down because of common or conflicting beliefs about God. We all need to decide where we stand on the issue of God's existence.

Despite the antiquity of this question, new aspects of this debate have arisen recently, partly because of developments in science and philosophy. Big Bang cosmology is the best-known example, but each year brings new results of research into the origins of life and of our universe. Novel philosophical theories of causation, knowledge, and morality also bear on the arguments for and against the existence of God. Ongoing psychological research and the quest for the historical Jesus by biblical scholars also introduce relevant considerations. That is why these debates must be renewed continually.

Unfortunately, many debates about God overlook such recent developments and degenerate into simplistic rhetoric or mutual misunderstanding. Other discussions of God's existence become so technical that only experts can follow them. Neither of these extremes

serves the needs of those who are sincerely concerned about whether or not to believe in God.

Our goal in this book is to steer a middle course between these extremes. We have formulated our positions in light of recent science and philosophy, but we have also avoided technical details that would be confusing or distracting to most readers. We try to focus on the arguments that are uppermost in the minds of non-specialists. For example, instead of investigating modal versions of the ontological argument, which even professional philosophers find obscure, we discuss religious experience, the Bible, evil, eternity, the origin of the universe, design, and the connection or lack of connection between morality and the existence of God. These considerations are what most people want to understand when they are deciding whether or not to believe in God.

We also try to avoid the mutual misunderstandings that plague debates about God. Many discussions get confused because theists defend non-traditional accounts of God that atheists do not deny or because atheists deny outmoded views about God that theists no longer defend. To avoid such misunderstandings, we agreed from the start that we were going to talk about God as He is usually defined within the Judaeo-Christian tradition. This ensures that what one of us claims is what the other denies. Moreover, our debate is not just about whether God can be known to exist. Agnostics deny that we can know that God exists, but agnostics do not deny that God exists. In contrast, Sinnott-Armstrong denies that God exists, whereas Craig claims that God exists. Our disagreement is not about the limits of knowledge but, instead, directly about whether God exists.

The style of our book results from its origin in live debates. Craig had already debated the existence of God with several philosophers around the United States, when he was invited to participate in another debate at Dartmouth College on November 4, 1999. Sinnott-Armstrong had never publicly debated or written on this topic, but he had expressed his views to students, one of whom asked him to face Craig. In that first debate, Craig argued for the existence of God, and then Sinnott-Armstrong criticized Craig's arguments and offered arguments to the contrary. The ensuing discussion was both fun and illuminating. The return match was held at Wooddale

Church in Eden Prairie, Minnesota on April 1, 2000. There Sinnott-Armstrong opened by arguing against the existence of God, and then Craig criticized Sinnott-Armstrong's arguments and offered arguments to the contrary. The extremely positive reactions to both of these debates were what made us decide to expand them into this book.

To retain the lively character of the debates, Craig developed his opening remarks at Dartmouth into Chapter 1 of this book, while Sinnott-Armstrong expanded his opening remarks in Minnesota into Chapter 4 of this book. After exchanging those chapters, Sinnott-Armstrong polished his criticisms at Dartmouth to produce Chapter 2 of this book, and Craig elaborated his remarks in Minnesota to create Chapter 5 of this book. Finally, after we exchanged Chapters 2 and 5, Craig wrote Chapter 3 in response to Sinnott-Armstrong's Chapter 2, and Sinnott-Armstrong constructed Chapter 6 as a reply to Craig's Chapter 5. Although we did later change a little wording and a few details in the chapters that were written earlier, we agreed not to change anything significant that would affect the other author's main criticisms in the chapters that were written later. Revisions and responses were saved for the closing chapters of each Part, Chapters 3 and 6. This order of composition means that, although each of us might prefer to make some changes in the chapters that were written earlier, our book as a whole should read more like an ongoing conversation where positions emerge and qualifications accumulate, much as they do in a live debate.

This origin in live debate also explains our conversational style. We do not pull our punches or go off on technical tangents. We give concrete examples and use common language. We are both aware that many details would need to be added if we were writing for an audience of professional philosophers of religion, but we chose to simplify our writing in order to increase our book's accessibility and liveliness.

We are also committed to fairness. That is why Craig gets to set the terms of the debate by going first, but Sinnott-Armstrong gets the last word. Also to ensure fairness, just as speakers are limited to the same time in real debates, we agreed to limit ourselves to approximately the same total number of words in each corresponding chapter. This plan forced us to make some of our points very con-

cisely, but our brevity should enable our book to keep the attention of even the most impatient reader.

Or so we hope. Whether we succeed in these goals is, of course, for you to judge.

William Lane Craig would like to thank Craig Parker, who is a Campus Minister with the Navigators at Dartmouth College, *Voces Clamantium*, which is a Dartmouth student group that explores intellectual life from a Christian point of view, and the Cecil B. Day Foundation for their help in organizing and sponsoring our first debate. He also thanks Ken Geis, associate pastor at Wooddale Church in Eden Prairie, Minnesota, and Prof. David Clark of Bethel Seminary for arranging our second exchange. Finally, thanks are due, of course, to Walter Sinnott-Armstrong for being such a charitable and engaging partner, not only in each debate but also in the production of this book.

Walter Sinnott-Armstrong would also like to thank the sponsors of our two live debates, as well as William Lane Craig for providing such spirited and genial opposition. In addition, Sinnott-Armstrong is very grateful to all of his colleagues in various departments at Dartmouth College who helped him with details in their areas of expertise. These friends include, especially, Susan Ackerman, Rob Caldwell, Julia Driver, Bernie Gert, Marcelo Gleiser, Jack Hanson, Sam Levey, Laurie Snell, Christie Thomas, and James Walters, as well as many others whom he bothered with numerous questions on these issues over the years. He is also grateful to all of his students who encouraged him in this project, especially those who had the courage to stand up to him and argue against his views. In addition, a great debt is due to his magnificent research assistant, Kier Olsen DeVries, whose help in this project and many others has been simply outstanding. Finally, Sinnott-Armstrong would like thank Robert Miller at Oxford University Press for his support and encouragement, as well as the reviewers for the press, especially Ed Curley, for their detailed comments. Thanks to you all.

GOD?

## CHAPTER 1

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# *Five Reasons God Exists*

*William Lane Craig*

Does God exist? In order to answer that question rationally, we need to ask ourselves two further questions: (1) Are there good reasons to think that God exists? and (2) Are there good reasons to think that God does not exist?

Now with respect to the second question, I'll leave it up to Dr. Sinnott-Armstrong to present the reasons why he thinks that God does not exist, and then we can discuss them. For now I want to focus on the first question: What good reasons are there to think that God does exist?

I'm going to present five reasons why I think theism (the view that God exists) is more plausibly true than atheism (the view that He does not). Whole books have been written on each one of these reasons, so all I can present here is a brief sketch of each and then go into more detail as Dr. Sinnott-Armstrong responds to them.

As travelers along life's way, it's our goal to make sense of things, to try to understand the way the world is. The hypothesis that God exists makes sense out of a wide range of the facts of experience.

### **1. God Makes Sense of the Origin of the Universe**

Have you ever asked yourself where the universe came from? Why everything exists instead of just nothing? Typically, atheists have said that the universe is just eternal, and that's all. But surely this is unreasonable. Just think about it a minute. If the universe never had a beginning, that means that the number of past events in the his-



tory of the universe is infinite. But mathematicians recognize that the existence of an actually infinite number of things leads to self-contradictions (unless you impose some wholly arbitrary rules to prevent this). For example, what is infinity minus infinity? Well, mathematically, you get self-contradictory answers. For example, if you subtract all the odd numbers  $\{1, 3, 5, \dots\}$  from all the natural numbers  $\{0, 1, 2, 3, \dots\}$ , how many numbers do you have left? An infinite number. So infinity minus infinity is infinity. But suppose instead you subtract all the numbers greater than 2—how many are left? Three. So infinity minus infinity is 3! It needs to be understood that in both these cases we have subtracted identical quantities from identical quantities and come up with contradictory answers. In fact, you can get any answer you want from zero to infinity!

This implies that infinity is just an idea in your mind, not something that exists in reality. David Hilbert, perhaps the greatest mathematician of the past century, states, “The infinite is nowhere to be found in reality. It neither exists in nature nor provides a legitimate basis for rational thought. . . . The role that remains for the infinite to play is solely that of an idea.”<sup>1</sup> Therefore, since past events are not just ideas, but are real, the number of past events must be finite. Therefore, the series of past events can’t go back forever; rather the universe must have begun to exist.

This conclusion has been confirmed by remarkable discoveries in astronomy and astrophysics. The astrophysical evidence indicates that the universe began to exist in a great explosion called the “Big Bang” around 15 billion years ago. Physical space and time were created in that event, as well as all the matter and energy in the universe. Therefore, as Cambridge astronomer Fred Hoyle points out, the Big Bang theory requires the creation of the universe from nothing. This is because, as one goes back in time, one reaches a point at which, in Hoyle’s words, the universe was “shrunk down to nothing at all.”<sup>2</sup> Thus, what the Big Bang model requires is that the universe began to exist and was created out of nothing.

Now this tends to be very awkward for the atheist. For as Anthony Kenny of Oxford University urges, “A proponent of the big bang theory, at least if he is an atheist, must believe that the . . . universe came from nothing and by nothing.”<sup>3</sup> But surely that doesn’t make sense! Out of nothing, nothing comes. In every other

context atheists recognize this fact. The great skeptic David Hume wrote, “But allow me to tell you that I never asserted so absurd a Proposition as that *anything might arise without a cause*.”<sup>4</sup> The contemporary atheist philosopher Kai Nielsen gives this illustration: “Suppose you suddenly hear a loud bang . . . and you ask me, ‘What made that bang?’ and I reply, ‘Nothing, it just happened.’ You would not accept that. In fact you would find my reply quite unintelligible.”<sup>5</sup> But what’s true of the little bang must be true of the Big Bang as well! So why does the universe exist instead of just nothing? Where did it come from? There must have been a cause that brought the universe into being. As the eminent physicist Sir Arthur Eddington concluded, “The beginning seems to present insuperable difficulties unless we agree to look on it as frankly supernatural.”<sup>6</sup>

We can summarize our argument thus far as follows:

1. Whatever begins to exist has a cause.
2. The universe began to exist.
3. Therefore, the universe has a cause.

Given the truth of the two premises, the conclusion necessarily follows.

Now from the very nature of the case, as the cause of space and time, this supernatural cause must be an uncaused, changeless, timeless, and immaterial being which created the universe. It must be uncaused because we’ve seen that there cannot be an infinite regress of causes. It must be timeless and therefore changeless—at least without the universe—because it created time. Because it also created space, it must transcend space as well and therefore be immaterial, not physical.

Moreover, I would argue, it must also be personal. For how else could a timeless cause give rise to a temporal effect like the universe? If the cause were a mechanically operating set of necessary and sufficient conditions, then the cause could never exist without the effect. For example, the cause of water’s freezing is the temperature’s being below 0° Centigrade. If the temperature were below 0° from eternity past, then any water that was around would be frozen from eternity. It would be impossible for the water to *begin* to freeze just a finite time ago. So if the cause is timelessly present, then the effect should be timelessly present as well. The only way for the cause to be time-

less and the effect to begin in time is for the cause to be a personal agent who freely chooses to create an effect in time without any prior determining conditions. For example, a man sitting from eternity could freely will to stand up. Thus, we are brought, not merely to a transcendent cause of the universe, but to its personal Creator.

What objections might be raised against this argument? Premise (1) **Whatever begins to exist has a cause** seems obviously true—at the least, more so than its denial. Yet a number of atheists, in order to avoid the argument's conclusion, have denied the first premise. Sometimes it is said that sub-atomic physics furnishes an exception to premise (1), since on the sub-atomic level events are said to be uncaused. In the same way, certain theories of cosmic origins are interpreted as showing that the whole universe could have sprung into being out of the sub-atomic vacuum. Thus the universe is said to be the proverbial “free lunch.”

This objection, however, is based on misunderstandings. In the first place, not all scientists agree that sub-atomic events are uncaused. Many physicists today are quite dissatisfied with this view (the so-called Copenhagen Interpretation) of sub-atomic physics and are exploring deterministic theories like those of David Bohm.<sup>7</sup> Thus, sub-atomic physics is not a proven exception to premise (1). Second, even on the traditional, indeterministic interpretation, particles do not come into being out of nothing. They arise as spontaneous fluctuations of the energy contained in the sub-atomic vacuum; they do not come from nothing.<sup>8</sup> Third, the same point can be made about theories of the origin of the universe out of a primordial vacuum.<sup>9</sup> Popular magazine articles touting such theories as getting “something from nothing” simply do not understand that the vacuum is not nothing, but is a sea of fluctuating energy endowed with a rich structure and subject to physical laws. Philosopher of science Robert Deltete accurately sums up the situation: “There is no basis in ordinary quantum theory for the claim that the universe itself is uncaused, much less for the claim that it sprang into being uncaused from literally nothing.”<sup>10</sup>

So what about premise (2) **The universe began to exist**? The typical objection that is raised against the philosophical argument for the universe's beginning is that modern mathematical set theory proves that an actually infinite number of things can exist. For ex-

ample, there are an actually infinite number of members in the set  $\{0, 1, 2, 3, \dots\}$ . Therefore, there's no problem in an actually infinite number of past events.

But this objection is far too quick. First, not all mathematicians agree that actual infinities exist even in the mathematical realm.<sup>11</sup> They regard series like  $0, 1, 2, 3, \dots$  as merely *potentially* infinite; that is to say, such series approach infinity as a limit, but they never actually get there. Second, existence in the mathematical realm does not imply existence in the real world. To say that infinite sets exist is merely to postulate a realm of discourse, governed by certain axioms and rules that are simply presupposed, in which one can talk about such collections.<sup>12</sup> Given the axioms and rules, one can discourse consistently about infinite sets. But that's no guarantee that the axioms and rules are *true* or that an actually infinite number of things can exist in the *real* world. Third, in any case, the real existence of an actually infinite number of things would violate the rules of transfinite arithmetic. As we saw, trying to subtract infinite quantities leads to self-contradictions; therefore, transfinite arithmetic just prohibits such operations to preserve consistency. But in the real world there's nothing to keep us from breaking this arbitrary rule. If I had an actually infinite number of marbles, for example, I could subtract or divide them as I please—which leads to absurdity.

Sometimes it's said that we can find counter-examples to the claim that an actually infinite number of things cannot exist, so that this claim must be false. For instance, isn't every finite distance capable of being divided into  $1/2, 1/4, 1/8, \dots$ , on to infinity? Doesn't that prove that there are in any finite distance an actually infinite number of parts? The fallacy of this objection is that it once again confuses a potential infinite with an actual infinite. You can continue to divide any distance for as long as you want, but such a series is merely potentially infinite, in that infinity serves as a limit that you endlessly approach but never reach. If you assume that any distance is *already* composed out of an actually infinite number of parts, then you're begging the question. You're assuming what the objector is supposed to prove, namely that there is a clear counter-example to the claim that an actually infinite number of things cannot exist.

As for the scientific confirmation of premise (2), it is true that there are alternative theories to the Big Bang theory that do not in-

volve a beginning of the universe. But while such theories are possible, it has been the overwhelming verdict of the scientific community than none of them is more probable than the Big Bang theory. The devil is in the details, and once you get down to specifics you find that there is no mathematically consistent model that has been so successful in its predictions or as corroborated by the evidence as the traditional Big Bang theory. For example, some theories, like the Oscillating Universe (which expands and re-contracts forever) or the Chaotic Inflationary Universe (which continually spawns new universes), do have a potentially infinite future, but turn out to have only a finite past.<sup>13</sup> Vacuum Fluctuation Universe theories (which postulate an eternal vacuum out of which our universe is born) cannot explain why, if the vacuum was eternal, we do not observe an infinitely old universe.<sup>14</sup> The Quantum Gravity Universe theory propounded by the famous physicist Stephen Hawking, if interpreted realistically, still involves an absolute origin of the universe, even if the universe does not begin in a so-called singularity, as it does in the standard Big Bang theory.<sup>15</sup> In sum, according to Hawking, “Almost everyone now believes that the universe, and *time itself*, had a beginning at the Big Bang.”<sup>16</sup>

In light of the evidence, both of the premises of the first argument thus seem more plausible than their denials. Hence, it is plausible that a transcendent Creator of the universe exists.

Some atheists have charged that the argument’s conclusion is incoherent, since a cause must come before its effect, and there is no moment before the Big Bang. This objection, however, is easy to answer. Many causes and effects are simultaneous. Thus, the moment of God’s causing the Big Bang just is the moment of the occurrence of the Big Bang. We can then say that God existing alone without the universe is either (i) before the Big Bang, not in physical time, but in an undifferentiated metaphysical time or else (ii) strictly timeless, but that He enters into time at the moment of creation. I am not aware of any incoherence in either of these alternatives.

Sometimes people will say, “But if the universe must have a cause, then what is God’s cause?” But this question reveals an inattentiveness to the formulation of the argument. The first premise does not state **Whatever exists has a cause**, but rather **Whatever begins to exist has a cause**. The difference is important. The insight that

lies at the root of premise (1) is that being cannot come from non-being, that something cannot come from nothing. God, since He never began to exist, would not require a cause, for He never came into being. Nor is this special pleading for God, since this is exactly what the atheist has always claimed about the universe: that it is eternal and uncaused. The problem is that the atheist's claim is now rendered untenable in light of the beginning of the universe.

In sum, we seem to have a good argument for God's existence based upon the origin of the universe.

## **2. God Makes Sense of the Fine-Tuning of the Universe for Intelligent Life**

During the last 30 years or so, scientists have discovered that the existence of intelligent life like ours depends upon a complex and delicate balance of initial conditions given in the Big Bang itself. Scientists once believed that whatever the initial conditions of the universe were, eventually intelligent life might evolve. But we now know that our existence is balanced on a knife's edge. It seems vastly more probable that a *life-prohibiting* universe rather than a *life-permitting* universe like ours should exist. The existence of intelligent life depends upon a conspiracy of initial conditions that must be fine-tuned to a degree that is literally incomprehensible and incalculable. For example, Stephen Hawking has estimated that if the rate of the universe's expansion one second after the Big Bang had been smaller by even one part in a hundred thousand million million, the universe would have re-collapsed into a hot fireball.<sup>17</sup> British physicist P. C. W. Davies has calculated that in order to be suitable for later star formation (without which planets could not exist) the relevant initial conditions must be fine-tuned to a precision of one followed by a thousand billion billion zeroes, at least.<sup>18</sup> He also estimates that a change in the strength of gravity or of the weak force by only one part in  $10^{100}$  would have prevented a life-permitting universe. Roger Penrose of Oxford University has calculated that the odds of the Big Bang's low entropy condition existing by chance are on the order of one out of  $10^{10(123)}$ .<sup>19</sup> There are around 50 such quantities and constants present in the Big Bang that must be fine-tuned in this way if the universe is to permit life. And it's not just *each* quantity that must be exquisitely finely-tuned; their *ratios* to

one another must be also finely tuned. So improbability is added to improbability until our minds are reeling in incomprehensible numbers.

Now there are three possibilities for explaining the presence of this remarkable fine-tuning of the universe: natural law, chance, or design. The first alternative holds that the fine-tuning of the universe is physically necessary. There is some unknown Theory of Everything that would explain the way the universe is. It had to be that way, and there was really no chance or little chance of the universe's not being life-permitting. By contrast, the second alternative states that the fine-tuning is due entirely to chance. It's just an accident that the universe is life-permitting, and we're the lucky beneficiaries. The third alternative rejects both of these accounts in favor of an intelligent Mind behind the cosmos, who designed the universe to permit life. Which of these alternatives is the most plausible?

On the face of it, the first alternative seems extraordinarily implausible. It requires us to believe that a life-*prohibiting* universe is virtually physically *impossible*. But surely it does seem possible. If the matter and anti-matter had been differently proportioned, if the universe had expanded just a little more slowly, if the entropy of the universe were slightly greater, any of these adjustments and more would have prevented a life-permitting universe, yet all seem perfectly possible physically. The person who maintains that the universe must be life-permitting is taking a radical line, which requires strong proof. But there is none; this alternative is simply put forward as a bare possibility.

Moreover, there is good reason to reject this alternative. First, there are models of the universe that are different from the existing universe. As John Leslie explains, "The claim that blind necessity is involved—that universes whose laws or constants are slightly different aren't real physical possibilities . . . is eroded by the various physical theories, particularly theories of random symmetry breaking, which *show* how a varied ensemble of universes might be generated."<sup>20</sup> Second, even if the laws of nature were necessary, one would still have to supply initial conditions. As P. C. W. Davies states,

Even if the laws of physics were unique, it doesn't follow that the physical universe itself is unique. . . . the laws of physics must be augmented

by cosmic initial conditions. . . . There is nothing in present ideas about ‘laws of initial conditions’ remotely to suggest that their consistency with the laws of physics would imply uniqueness. Far from it. . . .

. . . it seems, then, that the physical universe does not have to be the way it is: it could have been otherwise.<sup>21</sup>

The extraordinarily low entropy condition of the early universe would be a good example of an arbitrary quantity that seems to have just been put in at the creation as an initial condition. Thus, the first alternative is not very plausible.

What about the second alternative, that the fine-tuning of the universe is due to chance? The problem with this alternative is that the odds against the fine-tuning’s occurring by accident are so incomprehensibly great that they cannot be reasonably faced. Students or laymen who blithely assert, “It could have happened by chance!” simply have no conception of the fantastic precision of the fine-tuning requisite for life. They would never embrace such a hypothesis in any other area of their lives—for example, in order to explain how, overnight, there came to be a car in their driveway.

But it’s important to understand that it’s not just the probability that’s at stake here. After all, fantastically improbable events happen every day—your own existence, for example, is the result of an incredibly improbable union of a certain sperm and a certain egg, yet no one would infer that their union was therefore designed. Rather, what is at stake in eliminating the hypothesis of chance is what theorists call “specified probability”: the demonstration that the event in question is not only improbable but also conforms to an independently discovered pattern.<sup>22</sup> Any sequence of letters hammered out by a chimpanzee seated at a typewriter is equally improbable; but if upon entering the room we find that a beautiful sonnet has been typed, then we know that this is not the result of blind chance, since it conforms to the independently given pattern of grammatical English sentences. In the same way, physics and biology tell us independently of any knowledge of the early conditions of the universe what the physical conditions requisite for life are. We then discover how incredibly improbable such conditions are. It is this combination of a specified pattern plus improbability that serves to render the chance hypothesis implausible.



With this in mind, we can immediately see the fallacy of those who say that the existence of any universe is equally improbable and therefore there is nothing here to be explained. It is not the improbability of some universe or other's existing that concerns us; rather it is the specified probability of a life-permitting universe's existing that is at issue. Thus, the proper analogy to the fine-tuning of the universe is not, as defenders of the chance hypothesis often suppose, a lottery in which any individual's winning is fantastically and equally improbable but which some individual has to win. Rather the analogy is a lottery in which a single white ball is mixed into a billion billion billion black balls, and you are asked to reach in and pull out a ball. Any ball you pick will be equally improbable; nevertheless, it is overwhelmingly more probable that whichever ball you pick, it will be black rather than white. Similarly, the existence of any particular universe is equally improbable; but it is incomprehensibly more probable that whichever universe exists, it will be life-prohibiting rather than life-permitting. It is the enormous, specified improbability of the fine-tuning that presents the hurdle for the chance hypothesis.

How can the atheist get over this hurdle? Some thinkers have argued that we really shouldn't be surprised at the finely tuned conditions of the universe, since if the universe were not fine-tuned, we wouldn't be here to be surprised about it! Given that we are here, we should expect the universe to be fine-tuned. But such reasoning is logically fallacious. The statement "We shouldn't be surprised that we do not observe conditions of the universe incompatible with our existence" is true. If the conditions of the universe were incompatible with our existence, we couldn't be here to observe them. So it's not surprising that we don't observe such conditions. But from that statement it does not logically follow that "We shouldn't be surprised that we *do* observe conditions of the universe which *are* compatible with our existence." Given the incredible improbability of such finely tuned conditions, it is surprising that we observe them.

Theorists who defend the alternative of chance have therefore been forced to adopt an extraordinary hypothesis: the Many Worlds Hypothesis. According to this hypothesis, our universe is but one member of a greater collection of universes, all of which are real,

actually existing universes, not merely possible universes. In order to ensure that somewhere in the World Ensemble there will appear by chance a universe finely tuned for life, it is further stipulated that there are an infinite number of universes in the collection (so that every possibility will be realized) and that the physical constants and quantities are randomly ordered (so that the worlds are not all alike). Thus, somewhere in this World Ensemble there will appear by chance alone finely tuned universes like ours. We should not be surprised to observe finely tuned conditions, since observers like us exist only in those universes that are finely tuned.

Is the Many Worlds Hypothesis as plausible as the design hypothesis? It seems not. In the first place, it needs to be recognized that the Many Worlds Hypothesis is no more scientific, and no less metaphysical, than the hypothesis of a Cosmic Designer. As the scientist-theologian John Polkinghorne says, "People try to trick out a 'many universe' account in sort of pseudo-scientific terms, but that is pseudo-science. It is a metaphysical guess that there might be many universes with different laws and circumstances."<sup>23</sup> But as a metaphysical hypothesis, the Many Worlds Hypothesis is arguably inferior to the design hypothesis, because the design hypothesis is *simpler*. According to a principle known as Ockham's Razor, we should not multiply causes beyond what is necessary to explain the effect. But it is simpler to postulate one Cosmic Designer to explain our universe than to postulate the infinitely bloated collection of universes required by the Many Worlds Hypothesis. Only if there were a comparably simple mechanism for generating many worlds would the Many Worlds Hypothesis be as simple as theism. In the absence of such a mechanism, the design hypothesis is to be preferred.

Second, there is no known way for generating a World Ensemble. No one has been able to explain how or why such a collection of universes should exist. Moreover, those attempts that have been made require fine-tuning themselves. For example, although some cosmologists appeal to so-called inflationary theories of the universe to generate a World Ensemble, the only consistent inflationary model is Andrei Linde's Chaotic Inflationary Theory, and it requires fine-tuning to drive the inflation. As Robert Brandenburger of Brown University writes, "Linde's scenario does not address a crucial problem, namely

the cosmological constant problem. The field which drives inflation in Linde's scenario is expected to generate an unacceptably large cosmological constant *which must be tuned to zero by hand*. This is a problem which plagues *all* inflationary universe models.<sup>24</sup>

Third, there is no evidence for the existence of a World Ensemble apart from the fine-tuning itself. The postulation of a World Ensemble thus represents an effort to multiply one's probabilistic resources without warrant just to increase the chances of obtaining the desired result. In the absence of independent evidence for a World Ensemble, the many-worlds theorizer is guilty of the Inverse Gambler's Fallacy (the attempt to render an event more probable by hypothesizing the existence of a previous series of unsuccessful throws of the dice). By contrast, not only is the hypothesis of a Cosmic Designer free of this fallacy, but it is again the better explanation because we do have independent evidence of the existence of such a Designer in the form of the other arguments for the existence of God.

Fourth, the Many Worlds Hypothesis faces a severe challenge from biological evolutionary theory.<sup>25</sup> First, a bit of background: During the nineteenth century, the German physicist Ludwig Boltzmann proposed a sort of Many Worlds Hypothesis to explain why we do not find the universe in a state of "heat death" or thermodynamic equilibrium, in which energy is evenly diffused throughout the universe.<sup>26</sup> Boltzmann hypothesized that the universe as a whole *does*, in fact, exist in an equilibrium state, but that over time fluctuations in the energy level occur here and there throughout the universe, so that by chance alone there will be isolated regions where disequilibrium exists. Boltzmann referred to these isolated regions as "worlds." We should not be surprised to see our world in a highly improbable disequilibrium state, since in the ensemble of all worlds there must exist by chance alone certain worlds in disequilibrium, and ours just happens to be one.

The problem with Boltzmann's daring Many Worlds Hypothesis was that if our world were merely a fluctuation in a sea of diffuse energy, then it is overwhelmingly more probable that we would be observing a much tinier region of disequilibrium than we do. In order for us to exist, a smaller fluctuation, even one that produced our world instantaneously by an enormous accident, is inestimably more probable than a progressive decline in entropy over billions of years to fashion the world we see. In fact, Boltzmann's hypothesis, if

adopted, would force us to regard the past as illusory, everything having the mere appearance of age, and the stars and planets as illusory, mere “pictures” as it were, since that sort of world is vastly more probable, given a state of overall equilibrium, than a world with genuine temporally and spatially distant events. Therefore, Boltzmann’s Many Worlds Hypothesis has been universally rejected by the scientific community, and the present disequilibrium is usually taken to be just a result of the initial low entropy condition mysteriously existing at the beginning of the universe.

Now a precisely parallel problem attends the Many Worlds Hypothesis as an explanation of fine-tuning. According to the prevailing theory of biological evolution, intelligent life like ourselves, if it evolves at all, will do so as late in the lifetime of the sun as possible. The less the time span available for the mechanisms of genetic mutation and natural selection to function, the lower the probability of intelligent life’s evolving. Given the complexity of the human organism, it is overwhelmingly more probable that human beings will evolve late in the lifetime of the sun rather than early. In fact, Barrow and Tipler list ten steps in the evolution of human beings, *each of which* is so improbable that before it would occur the sun would have ceased to be a main sequence star and incinerated the Earth!<sup>27</sup> Hence, if our universe is but one member of a World Ensemble, then it is overwhelmingly more probable that we should be observing a very old sun rather than a relatively young one of only a few billion years. If we are products of biological evolution, we should find ourselves in a world in which we evolve later in the lifetime of our star. In fact, adopting the Many Worlds Hypothesis to explain away fine-tuning also results in a strange sort of illusionism: it is far more probable that all our astronomical, geological, and biological estimates of age are wrong, that we really do exist very late in the lifetime of the sun and that the sun and the Earth’s appearance of youth is a massive illusion.

Thus, the Many Worlds Hypothesis collapses and along with it the alternative of chance that it sought to rescue. Both the natural law alternative and the chance alternative are therefore implausible.

We can summarize this second argument as follows:

1. The fine-tuning of the universe is due to either law, chance, or design.

2. It is not due to law or chance.
3. Therefore, it is due to design.

What objections might be raised to the alternative of design? According to this hypothesis there exists a Cosmic Designer who fine-tuned the initial conditions of the universe for intelligent life. Such a hypothesis supplies a personal explanation of the fine-tuning of the universe. Is this explanation implausible?

Detractors of design sometimes object that the Designer Himself remains unexplained. It is said that an intelligent Mind also exhibits complex order, so that if the universe needs an explanation, so does its Designer. If the Designer does not need an explanation, why think that the universe does?

This popular objection is based on a misconception of the nature of explanation. It is widely recognized that in order for an explanation to be the best, one needn't have an explanation of the explanation (indeed, such a requirement would generate an infinite regress, so that everything becomes inexplicable). If the best explanation of a disease is a previously unknown virus, doctors need not be able to explain the virus in order to know it caused the disease. If archaeologists determine that the best explanation of certain artifacts is a lost tribe of ancient people, we needn't be able to explain their origin in order to say justifiably that they produced the artifacts. If astronauts should find traces of intelligent life on some other planet, we need not be able to explain such extraterrestrials in order to recognize that they are the best explanation. In the same way, the design hypothesis's being the best explanation of the fine-tuning doesn't depend on our being able to explain the Designer.

Moreover, the complexity of a Mind is not really analogous to the complexity of the universe. A mind's *ideas* may be complex, but a mind itself is a remarkably simple thing, being an immaterial entity not composed of parts. Moreover, a mind in order to be a mind must have certain properties like intelligence, consciousness, and volition. These are not contingent properties that it might lack, but are essential to its nature. So it's difficult to see any analogy between the contingently complex universe and a mind. Detractors of design have evidently confused a mind's thoughts (which may be complex) with the mind itself (which

is pretty simple). Postulating an uncreated Mind behind the cosmos is not at all like postulating an undesigned cosmos.

Thus, the design hypothesis does not share in the implausibility of its competitors and is a familiar sort of explanation that we employ every day. It is therefore the best explanation of the amazing fine-tuning of our universe.

### 3. God Makes Sense of Objective Moral Values in the World

If God does not exist, then objective moral values do not exist. When I speak of *objective* moral values, I mean moral values that are valid and binding whether anybody believes in them or not. Thus, to say, for example, that the Holocaust was objectively wrong is to say that it was wrong even though the Nazis who carried it out thought that it was right and that it would still have been wrong even if the Nazis had won World War II and succeeded in exterminating or brain-washing everyone who disagreed with them. Now if God does not exist, then moral values are not objective in this way.

Many theists and atheists alike concur on this point. For example, Bertrand Russell observed,

. . . ethics arises from the pressures of the community on the individual. Man . . . does not always instinctively feel the desires which are useful to his herd. The herd, being anxious that the individual should act in its interests, has invented various devices for causing the individual's interest to be in harmony with that of the herd. One of these . . . is morality.<sup>28</sup>

Michael Ruse, a philosopher of science at the University of Guelph, agrees. He explains,

Morality is a biological adaptation no less than are hands and feet and teeth. Considered as a rationally justifiable set of claims about an objective something, ethics is illusory. I appreciate that when somebody says 'Love thy neighbor as thyself,' they think they are referring above and beyond themselves. Nevertheless, such reference is truly without foundation. Morality is just an aid to survival and reproduction . . . and any deeper meaning is illusory.<sup>29</sup>

Friedrich Nietzsche, the great nineteenth century atheist who proclaimed the death of God, understood that the death of God

meant the destruction of all meaning and value in life. I think that Friedrich Nietzsche was right.

But we must be very careful here. The question here is *not*: “Must we believe in God in order to live moral lives?” I’m not claiming that we must. Nor is the question: “Can we *recognize* objective moral values without believing in God?” I think that we can. Nor is the question: “Can we formulate an adequate system of ethics without reference to God?” So long as we assume that human beings have objective moral value, the atheist could probably draft a moral code that the theist would largely agree with.

Rather the question is: “If God does not exist, do objective moral values exist?” Like Russell and Ruse, I don’t see any reason to think that in the absence of God, the herd morality evolved by *homo sapiens* is objective. After all, if there is no God, then what’s so special about human beings? They’re just accidental by-products of nature that have evolved relatively recently on an infinitesimal speck of dust lost somewhere in a hostile and mindless universe and that are doomed to perish individually and collectively in a relatively short time. On the atheistic view, some action, say, rape, may not be socially advantageous, and so in the course of human development has become taboo; but that does absolutely nothing to prove that rape is really wrong. On the atheistic view, there’s nothing really *wrong* with your raping someone. Thus, without God there is no absolute right and wrong that imposes itself on our conscience.

But the problem is that objective values *do* exist, and deep down we all know it. There’s no more reason to deny the objective reality of moral values than the objective reality of the physical world. As John Healey, the Executive Director of Amnesty International, wrote in a fund-raising letter, “I am writing you today because I think you share my profound belief that *there are indeed some moral absolutes*. When it comes to torture, to government-sanctioned murder, to ‘disappearances’—there are no lesser evils. These are outrages against all of us.”<sup>30</sup> Actions like rape, cruelty, and child abuse aren’t just socially unacceptable behavior—they’re moral abominations. Some things are really wrong. Similarly love, equality, and self-sacrifice are really good. But if moral values cannot exist without God and moral values do exist, then it follows logically and inescapably that God exists.

We can summarize this argument as follows:

1. If God does not exist, objective moral values do not exist.
2. Objective moral values do exist.
3. Therefore, God exists.

Again, let's consider possible objections that might be raised against this argument.

Some atheist philosophers, unwilling to bite the bullet and affirm that acts like rape or torturing a child are morally neutral actions, have tried to affirm objective moral values in the absence of God, thus in effect denying premise (1). Let's call this alternative Atheistic Moral Realism. Atheistic moral realists affirm that moral values and duties do exist in reality and are not dependent upon evolution or human opinion, but they insist that they are not grounded in God. Indeed, moral values have no further foundation. They just exist.

I must confess that this alternative strikes me as incomprehensible, an example of trying to have your cake and eat it, too. What does it mean to say, for example, that the moral value *Justice* simply exists? I don't know what this means. I understand what it is for a person to be just; but I draw a complete blank when it is said that, in the absence of any people, *Justice* itself exists. Moral values seem to exist as properties of persons, not as abstractions—or at any rate, I don't know what it is for a moral value to exist as an abstraction. Atheistic moral realists seem to lack any adequate foundation in reality for moral values, but just leave them floating in an unintelligible way.

Further, the nature of moral duty or obligation seems incompatible with Atheistic Moral Realism. Let's suppose for the sake of argument that moral values do exist independently of God. Suppose that values like *Mercy*, *Justice*, *Love*, *Forbearance*, and the like just exist. How does that result in any moral obligations for me? Why would I have a moral duty, say, to be merciful? Who or what lays such an obligation on me? As the ethicist Richard Taylor points out, "A duty is something that is owed. . . . But something can be owed only to some person or persons. There can be no such thing as duty in isolation. . . ." <sup>31</sup> God makes sense of moral obligation because His commands constitute for us our moral duties. Taylor writes, "Our moral obligations can . . . be understood as those that are imposed by God. . . . But what if this higher-than-human lawgiver is no longer



taken into account? Does the concept of a moral obligation . . . still make sense? . . . the concept of moral obligation [is] unintelligible apart from the idea of God. The words remain but their meaning is gone.”<sup>32</sup> As a non-theist, Taylor therefore thinks that we literally have no moral obligations, that there is no right or wrong. The Atheistic Moral Realist rightly finds this abhorrent, but, as Taylor clearly sees, on an atheistic view there simply is no ground for duty, even if moral values somehow exist.

Finally, it is fantastically improbable that just that sort of creature would emerge from the blind evolutionary process who corresponds to the abstractly existing realm of moral values.<sup>33</sup> This seems to be an utterly incredible coincidence, when you think about it. It is almost as though the moral realm *knew* that we were coming. It is far more plausible to regard both the natural realm and the moral realm as under the hegemony or authority of a divine Designer and Lawgiver than to think that these two entirely independent orders of reality just happened to mesh.

Thus it seems to me that Atheistic Moral Realism is not a plausible view, but is basically a halfway house for philosophers who don't have the stomach for the moral nihilism or meaninglessness that their own atheism implies.

What, then, about premise (2) **Objective moral values do exist**? Some people, as we have seen, deny that objective moral values exist. I agree with them that IF there is no God, then moral values are just the products of socio-biological evolution or expressions of personal taste. But I see no reason to think that that is in fact all that moral values are. Those who think so seem to commit the genetic fallacy, which is trying to invalidate something by showing how it *originated*. For example, a socialist who tried to refute your belief in democratic government by saying, “The only reason you believe in democracy is that you were raised in a democratic society!” would be guilty of the genetic fallacy. For even if it were true that your belief is totally the result of cultural conditioning, that does absolutely nothing to show that your belief is false (think of people who have been culturally conditioned to believe that the Earth is round!). The truth of an idea is not dependent upon how that idea originated. It's the same with moral values. If moral values are *dis-*

*covered* rather than *invented*, then our gradual and fallible apprehension of the moral realm no more undermines the objective reality of that realm than our gradual, fallible apprehension of the physical world undermines the objective reality of the physical realm. We know objective moral values exist because we clearly apprehend some of them. The best way to show this is simply to describe moral situations in which we clearly see right and wrong: torturing a child, incest, rape, ethnic cleansing, racism, witch burning, the Inquisition, and so forth. If someone really fails to see the objective moral truth about such matters, then he is simply morally handicapped, like a color-blind person who cannot tell the difference between red and green, and there's no reason to think that his impairment should make us call into question what we see clearly.

From the truth of the two premises the conclusion follows logically that (3) **Therefore, God exists**. Thus, God makes sense of ethics in a way that atheism really cannot. So in addition to the metaphysical and scientific arguments for God, we have a powerful moral argument for God.

#### **4. God Makes Sense of the Life, Death, and Resurrection of Jesus**

The historical person Jesus of Nazareth was a remarkable individual. New Testament critics have reached something of a consensus that the historical Jesus came on the scene with an unprecedented sense of divine authority, the authority to stand and speak in God's place. That's why the Jewish leadership instigated his crucifixion for the charge of blasphemy—in effect, for slandering God. He claimed that in himself the Kingdom of God had come, and as visible demonstrations of this fact he carried out a ministry of miracle-working and exorcisms. But the supreme confirmation of his claim was his resurrection from the dead. If Jesus did rise from the dead, then it would seem that we have a divine miracle on our hands and, thus, evidence for the existence of God.

Now in discussing this issue, I'm not going to treat the New Testament as an inspired and therefore inerrant book, but simply as a collection of ordinary Greek documents coming down to us from the first century. I'm not interested, therefore, in defending the infalli-

bility of the gospels. Rather I'm interested in determining, first, what facts concerning the fate of Jesus of Nazareth can be credibly established on the basis of the evidence and, second, what is the best explanation of those facts.

So let's look at that first question. There are at least four facts about the fate of the historical Jesus that are widely accepted by New Testament historians today. It's worth emphasizing that I'm not talking just about conservative scholars, but about the broad mainstream of New Testament scholarship.

*FACT #1: After his crucifixion Jesus was buried by Joseph of Arimathea in a tomb.*

This fact is highly significant because it means that the location of Jesus' tomb was known to Jew and Christian alike in Jerusalem. New Testament researchers have established the fact of Jesus' honorable burial on the basis of evidence such as the following:

1. Jesus' burial is attested in the very old information (ca. < AD 36), which was handed on by Paul in his first letter to the church in Corinth, Greece.
2. The burial story is independently attested in the very old source material used by Mark in writing his gospel.
3. Given the understandable hostility in the early Christian movement toward the Jewish leaders, Joseph of Arimathea, as a member of the Jewish high court that condemned Jesus, is unlikely to be a Christian invention.
4. The burial story is simple and lacks any signs of legendary development.
5. No other competing burial story exists.

For these and other reasons, the majority of New Testament critics concur that Jesus was in fact buried by Joseph of Arimathea in a tomb. According to the late John A. T. Robinson of Cambridge University, the burial of Jesus in the tomb is "one of the earliest and best-attested facts about Jesus."<sup>34</sup>

*FACT #2: On the Sunday after the crucifixion, Jesus' tomb was found empty by a group of his women followers.*

Among the reasons that have led most scholars to this conclusion are the following:

1. In stating that Jesus “was buried and he was raised on the third day,” the old information transmitted by Paul in I Cor.15 3–5 implies the empty tomb.
2. The empty tomb story is also multiply and independently attested in Mark, Matthew, and John’s source material, some of which is very early.
3. The empty tomb story as related in Mark, our earliest account, is simple and lacks signs of legendary embellishment.
4. Given that the testimony of women was regarded as so unreliable that they were not even permitted to serve as witnesses in a Jewish court of law, the fact that it is women, rather than men, who are the chief witnesses to the empty tomb is best explained by the historical facticity of the narrative in this regard.
5. The earliest known Jewish response to the proclamation of Jesus’ resurrection, namely, “The disciples came and stole away his body” (Matt. 28: 13–15), was itself an attempt to explain why the body was missing and thus presupposes the empty tomb.

One could go on, but I think enough has been said to indicate why, in the words of Jacob Kremer, an Austrian specialist on the resurrection, “By far most exegetes hold firmly to the reliability of the biblical statements concerning the empty tomb.”<sup>35</sup>

*FACT #3: On multiple occasions and under various circumstances, different individuals and groups of people experienced appearances of Jesus alive from the dead.*

This is a fact that is virtually universally acknowledged among New Testament scholars, for the following reasons:

1. Given its early date, as well as Paul’s personal acquaintance with the people involved, the list of eyewitnesses to Jesus’ resurrection appearances, quoted by Paul in I Cor. 15.5–8, guarantees that such appearances occurred.
2. The appearance narratives in the gospels provide multiple, independent attestation of the appearances.

Even the skeptical German New Testament critic Gerd Lüdemann

therefore concludes, “It may be taken as historically certain that Peter and the disciples had experiences after Jesus’ death in which Jesus appeared to them as the risen Christ.”<sup>36</sup>

*Finally, FACT #4: The original disciples suddenly and sincerely came to believe that Jesus was risen from the dead despite their having every predisposition to the contrary.*

Think of the situation the disciples faced following Jesus’ crucifixion:

1. Their leader was dead, and Jewish Messianic expectations included no idea of a Messiah who, instead of triumphing over Israel’s enemies, would be shamefully executed by them as a criminal.
2. According to Old Testament law, Jesus’ execution exposed him as a heretic, a man literally accused by God.
3. Jewish beliefs about the afterlife precluded anyone’s rising from the dead to glory and immortality before the general resurrection of the dead at the end of the world.

Nevertheless, the original disciples suddenly came to believe so strongly that God had raised Jesus from the dead that they were willing to die for the truth of that belief. Luke Johnson, a New Testament scholar at Emory University, states, “Some sort of powerful, transformative experience is required to generate the sort of movement earliest Christianity was.”<sup>37</sup> N. T. Wright, an eminent British scholar, concludes, “That is why, as a historian, I cannot explain the rise of early Christianity unless Jesus rose again, leaving an empty tomb behind him.”<sup>38</sup>

In summary, then, there are four facts concerning the fate of Jesus of Nazareth that are agreed upon by the majority of scholars who have written on this subject: Jesus’ honorable burial by Joseph of Arimathea, the discovery of his empty tomb, his post-mortem appearances, and the origin of the disciples’ belief in his resurrection.

But that leads to our second concern: what is the best explanation of these facts? I think that the best explanation in this case is the one that was given by the eyewitnesses: God raised Jesus from the dead. In his book *Justifying Historical Descriptions*, historian C. B. McCullagh lists six tests that historians use in determining which is the best explanation for a given body of historical facts.<sup>39</sup> The hypothesis “God raised Jesus from the dead” passes all these tests.

1. It has great *explanatory scope*. It explains why the tomb was found empty, why the disciples saw post-mortem appearances of Jesus, and why the Christian faith came into being.
2. It has great *explanatory power*. It explains why the body of Jesus was gone, why people repeatedly saw Jesus alive despite his earlier public execution, and so forth.
3. It is *plausible*. Given the historical context of Jesus' own unparalleled life and claims, the resurrection makes sense as the divine confirmation of those radical claims.
4. It is *not ad hoc or contrived*. It requires only one additional hypothesis: that God exists.
5. It is *in accord with accepted beliefs*. The hypothesis "God raised Jesus from the dead" does not in any way conflict with the accepted belief that people don't rise *naturally* from the dead. The Christian accepts *that* belief as wholeheartedly as he accepts the hypothesis that God raised Jesus from the dead.
6. It *far outstrips any of its rival theories* in meeting conditions 1–5. Down through history, various alternative explanations of the facts have been offered; for example, the conspiracy theory, the apparent death theory, the hallucination theory, and so forth. Such hypotheses have been almost universally rejected by contemporary scholarship. No naturalistic hypothesis has, in fact, attracted a great number of scholars. Thus, the best explanation of the established facts seems to be that God raised Jesus from the dead.

Thus, it seems to me that we have a good inductive argument for the existence of God based on the evidence for the resurrection of Jesus. It may be summarized as follows:

1. There are four established facts concerning the fate of Jesus of Nazareth: his honorable burial by Joseph of Arimathea, the discovery of his empty tomb, his post-mortem appearances, and the origin of his disciples' belief in his resurrection.
2. The hypothesis "God raised Jesus from the dead" is the best explanation of these facts.
3. The hypothesis "God raised Jesus from the dead" entails that God exists.
4. Therefore God exists.

### 5. God Can Be Immediately Known and Experienced

This isn't really an argument for God's existence; rather it's the claim that we can know that God exists wholly apart from arguments simply by immediately experiencing Him. This was the way people described in the Bible knew God, as Professor John Hick explains:

God was known to them as a dynamic will interacting with their own wills, a sheer given reality, as inescapably to be reckoned with as destructive storm and life-giving sunshine. . . . They did not think of God as an inferred entity but as an experienced reality. . . . To them God was not a proposition completing a syllogism, or an idea adopted by the mind, but the experiential reality which gave significance to their lives.<sup>40</sup>

For these people, God was not inferred to be the best explanation of their religious experience and so they believed in Him; rather in their religious experience they came to know God *directly*.

Philosophers call beliefs like this “properly basic beliefs.” They aren't based on some other beliefs; rather they are part of the foundation of a person's system of beliefs. Other properly basic beliefs would be the belief in the reality of the past, the existence of the external world, and the presence of other minds like your own. When you think about it, none of these beliefs can be proved. How could you prove that the world was not created five minutes ago with built-in appearances of age, such as food in our stomachs from the breakfasts we never really ate and memory traces in our brains of events we never really experienced? How could you prove that you are not a brain in a vat of chemicals being stimulated with electrodes by some mad scientist and made to believe that you are now reading this book? How could you prove that other people are not really automata who exhibit all the external behavior of persons with minds, when in reality they are soulless, robot-like entities?

Although these sorts of beliefs are basic for us, that doesn't mean that they're arbitrary. Rather they are grounded, in the sense that they're formed in the context of certain experiences. In the experiential context of seeing and feeling and hearing things, I naturally form the belief that there are certain physical objects that I am sensing. Thus, my basic beliefs are not arbitrary, but appropriately grounded in experience. There may be no way to prove such beliefs, and yet it is perfectly rational to hold them. You would have to be

crazy to think that the world was created five minutes ago or to believe that you are a brain in a vat! Such beliefs are thus not merely basic, but *properly* basic.

In the same way, belief in God is for those who seek Him a properly basic belief grounded in our experience of God, as we discern Him in nature, conscience, and other means. Now, someone might object that atheists or adherents to some non-personal religious faith like Taoism could also claim to know their beliefs in a properly basic way. Certainly, they could *claim* such a thing; but what does that prove? Imagine that you were locked in a room with four color-blind people, all of whom claimed that there is no difference between red and green. Suppose you tried to convince them by showing them red and green objects and asking, "Can't you *see* the difference?" Of course, they would see no difference at all and would dismiss your claim to see different colors as delusory. In terms of *showing* who's right, there would be a complete stand-off. But would their denial of the difference between red and green or your inability to show them that you are right do anything logically either to render your belief false or to invalidate your experience? Obviously not!

In the same way, the person who has actually come to know God as a living reality in his life can know with assurance that his experience is no delusion, regardless of what the atheist or Taoist tells him. In a recent discussion,<sup>41</sup> philosopher William Alston points out that in such a situation neither party knows how to demonstrate to the other that he alone has a veridical, rather than delusory, experience. But this stand-off does not undermine the rationality of belief in God, for *even if the believer's process of forming his belief were as reliable as can be*, he'd still have no way of giving a non-circular proof of this fact. Thus, the believer's inability to provide such a proof does not nullify the rationality of his belief. Still, it remains the case that in such a situation, although the believer may *know* that his belief is true, both parties are at a complete loss to *show* the truth of their respective beliefs to the other party. How is one to break this deadlock? Alston answers that the believer should do whatever is feasible to find common ground, using logic and empirical facts, by means of which he can show in a non-circular way whose view is correct. That is exactly the procedure that I have sought to follow in this chapter. I know



that God exists in a properly basic way, and I've tried to show that God exists by appeal to the common facts of science, ethics, history, and philosophy.

Now if, through experiencing God, we can know in a properly basic way that God exists, then there's a real danger that proofs for God could actually distract one's attention from God Himself. If you're sincerely seeking God, God will make His existence evident to you. The Bible promises, "Draw near to God and He will draw near to you" (James 4.8). We mustn't so concentrate on the proofs for God that we fail to hear the inner voice of God speaking to our own heart. For those who listen, God becomes an immediate reality in their lives.

In summary, we've seen five good reasons to think that God exists:

1. God makes sense of the origin of the universe.
2. God makes sense of the fine-tuning of the universe for intelligent life.
3. God makes sense of objective moral values in the world.
4. God makes sense of the life, death, and resurrection of Jesus.
5. God can be immediately known and experienced.

These are only a part of the evidence for God's existence. Alvin Plantinga, one of America's leading philosophers, has laid out two dozen or so arguments for God's existence.<sup>42</sup> Together these constitute a powerful cumulative case for the existence of God. Unless and until we're given better arguments for atheism, I think that theism is the more plausible world view.

### Notes

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## CHAPTER 2

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# *There Is No Good Reason to Believe in God*

*Walter Sinnott-Armstrong*

In arguing for the existence of God, Craig uses a shotgun strategy. He shoots lots of arguments hoping that one will hit his target. This tactic has rhetorical advantages. A critic must try to block or dodge every argument. If the critic overlooks a single one, Craig can claim that it is a killer. Also, since there are so many arguments, a critic with limited space cannot build an impenetrable defense against any argument. Such is my predicament. I will try to refute Craig's main arguments, but I am bound to miss some lesser points, and my criticisms must be too brief.

The task of covering so many arguments can be reduced by mentioning three fallacies that recur. First, it is crucial to specify what an argument is supposed to prove. Here we agreed to debate the existence of a traditional Christian God, who is:

- All-good (= always does the best that He<sup>1</sup> can)
- All-powerful (= can do anything that is logically possible)
- All-knowing (= knows everything that is true)
- Eternal (= exists outside of time)
- Effective (= causes changes in time)
- Personal (= has a will and makes choices)

Craig's arguments do not focus on these features. What he argues for is a creator or a designer or an external source of religious experience. Then he adds, "and this is God." That conclusion does not

follow. Even if there were a creator or designer or an external source of religious experience, it might not be all-powerful or all-good, or eternal. Consequently, it is a mistake to inflate a claim about a creator, designer, or cause of experience into a conclusion about God. This is the fallacy of *bloated conclusions*.

Second, many of Craig's arguments attack competing views. This is usually easy, since there are problems for any position in this area. However, showing that some competitors are false does not establish that God exists unless these are the only possibilities. They never are. In particular, it is a mistake to assume that either Jesus rose from the dead or his tomb was not empty, that either God caused the Big Bang or nothing did, and that either God forbids rape or rape is not immoral. In each case, additional alternatives are available, so an argument against one alternative gives no support to the other. To overlook extra possibilities is the fallacy of *false dichotomy*.

Third, Craig cites many authorities: Hawking, Healy, Hick, Hilbert, Hoyle, and Hume, just in the Hs. Watch out for authorities, especially when someone cites too many. This is the fallacy of *excessive footnotes*. It's fine to cite some authorities, but they must be cited accurately, in context, and on topics on which they really are authorities. Moreover, authorities have biases. Craig claims that most New Testament scholars believe that Jesus' tomb was empty. (23) Maybe so, but this should come as no surprise, since most people do not spend their lives studying the New Testament unless they accept Christianity to begin with. Most importantly, authorities are useless where controversy lives, as in philosophy. For every philosopher whom Craig cites, I could quote others who claim the opposite. Almost no view is so absurd that you can't find some philosopher who held it. But the fact that a philosopher says something is no argument that what that philosopher says is true. That goes for me, too. You have to judge for yourself.

### 1. Morality

One example of a questionable appeal to authority occurs in Craig's argument from objective morality. Craig quotes Russell, Ruse, and Nietzsche, saying that there could not be objective values without God. Then he claims that there are objective values. He concludes that God exists.

It is important to get this argument out of the way right at the start, because it leads many religious believers to think that all atheists are immoral and dangerous. This is false. Many atheists are nice (including me, I hope). Craig admits this, but then he writes, "On the atheistic view, there's nothing really *wrong* with your raping someone." (18) Such misleading and inaccurate allegations inhibit mutual understanding.

In fact, many atheists are happy to embrace objective moral values. I agree with them. Rape is morally wrong. So is discrimination against gays and lesbians. Even if somebody or some group *thinks* that these acts are not morally wrong, they still *are* morally wrong, so their immorality is objective by Craig's own definition (17). Craig and I might not always agree about what is objectively morally wrong, but we do agree that some acts are objectively morally wrong.

This admission implies nothing about God, unless objective values depend on God. Why should we believe that they do? Because Russell, Ruse, and Nietzsche say so? But their claims are denied by many philosophers, atheists as well as theists. Even Russell and Ruse themselves denied these claims at other times in their careers. So Craig needs a reason to believe some authorities rather than others.

Craig does give some reasons to back up his authorities. One is that atheists see morality as a biological adaptation, but moral values are not objective if they depend on our biology. This argument commits a fallacy of *equivocation*. When anthropologists talk about a culture's morality, they describe a group of beliefs about what is right and wrong or good and bad. In contrast, when philosophers present a moral system, they seek a set of rules or principles that prescribes what really *is* morally right and wrong or good and bad. Morality in the philosophical sense can be objective, even if people's beliefs about it are subjective. After all, scientific beliefs have biological and cultural origins as well. Just as it is objectively true that the earth moves around the sun, although biology and culture lead some people to believe otherwise, so rape is objectively morally wrong, although biology and culture lead some people to believe otherwise. At least this position is not excluded by the biological and cultural origins of moral beliefs, so atheists can recognize those origins and still consistently believe in objective values.

Craig next asks, “If God did not forbid rape, what makes rape immoral objectively?” This question is supposed to be hard for atheists to answer, because Craig seems to assume that on “the atheistic view” (which one?) what makes rape wrong is some cost to the rapist or to society. (18) These views are inadequate because rape would still be immoral even if the rapist got away with it and even if society was not harmed. But atheists can give a better answer: What makes rape immoral is that rape harms *the victim* in terrible ways. The victim feels pain, loses freedom, is subordinated, and so on. These harms are not justified by any benefits to anyone. Craig still might ask, “What’s immoral about causing serious harms to other people without justification?” But now it seems natural to answer, “It simply is. Objectively. Don’t you agree?”

This simple answer implies nothing like “in the absence of any people, *Justice* itself exists,” so atheists can agree with Craig that they “don’t know what this means.” (19) Atheists can also agree with Craig and Taylor that “A duty is something that is owed. . . . But something can be owed only to some person or persons.” (19) The duty not to rape is owed to the victim. Thus, Craig’s criticisms of “Atheistic Moral Realism” attack a *straw man*.

Craig suggests a deeper problem when he asks, “what’s so special about human beings?” (18) If harm to the victim is what makes rape immoral, why isn’t it also immoral when a lion causes harm by having forced sex with another lion? Atheists can answer that lower animals, such as lions, are not moral agents. They do not make free choices. Their actions are not determined by any conception of what is moral or not. That explains why moral rules and principles do not apply to lower animals any more than they apply to avalanches that kill people. You don’t need to add that humans were made in God’s image or that we are His favorite species or anything religious.

Philosophers still might long for deeper explanations of why it is immoral for moral agents to cause unjustified harm. Many atheists offer various explanations, but I do not want to commit myself to any particular account here. And I don’t need to. Even if atheists were stuck with saying, “It *just is* immoral,” that would be a problem for atheism only if theists could give a better answer. They cannot.

In the end, Craig himself says, “If someone really fails to see the objective moral truth about [rape], then he is simply morally handi-

capped.” (21) This is no better (or worse) than saying, “Rape just is morally wrong.”

Theists might give deeper accounts of morality, but atheists can adopt or adapt the same accounts—with only one exception. The only theory of morality that atheists cannot accept is one that refers to God, such as when theists claim that what makes rape immoral is that God commands us not to rape. This view faces a difficult question: Why should we obey God’s commands? The answer cannot be that God will punish us if we disobey, since might does not make right. Even if a government commands you to turn in runaway slaves and will punish you if you don’t, that does not make it morally wrong to hide runaway slaves. Some theists answer that we should obey God’s commands because God gave us life. But our parents also gave us life, and yet, at least in modern societies, we do not have to marry whomever our parents tell us to. Theists might answer that it is simply immoral to disobey God, but that claim is no more illuminating than when atheists say that it is simply immoral to cause unjustified harm. A better answer is that God has good reasons for his commands. God commands us not to rape because rape harms the victim. But then that harm (not the command) is what makes rape immoral. Rape would be just as harmful without God, so rape would be morally wrong without God. To think otherwise is like a boy imagining that, once his parents leave, he may beat up his little sister, because the only thing that makes it wrong for him to beat up his sister is that his parents told him not to.

This basic point was presented long ago as a dilemma in Plato’s dialogue, *The Euthyphro*: Is rape immoral because God commanded us not to rape or did God command us not to rape because rape is immoral? If God forbids rape because it is immoral, rape must be immoral prior to His command, so His command is not necessary to make it immoral. On the other hand, if God forbids rape but not because it is already immoral, God could have failed to forbid rape, and then there would be nothing immoral about raping whenever we want. That implication is unacceptable. Theists often respond that God cannot fail to command us not to rape, because He is good, and rape is bad. That response brings us right back to the first horn of the dilemma. If God’s nature ensures that He will forbid rape because of how bad rape is, then God’s command is not needed to



make rape wrong. Rape is immoral anyway, and God is superfluous, except maybe for punishment or as a conduit of information.

This dilemma arises not only for rape but for all kinds of immorality. God's commands are arbitrary if He has no reason to command one act rather than another; but, if He does have reasons for His commands, then His *reasons* rather than His *commands* are what make acts immoral. Divine command theorists think that they can solve this dilemma, but all of their solutions fail, in my opinion. Anyway, I don't need to claim that much here. My current task is only to refute Craig's argument, so all I need to show is that atheists can coherently believe in an objective morality. They can, and I do.

## 2. Miracles

Craig's other arguments do not refer to morality. The next one refers to the resurrection of Jesus. If that resurrection occurred, it would be a miracle.

Some atheists try to prove the impossibility of miracles. One attempt defines a miracle as a violation of a law of nature and defines a law of nature as a generalization without any exception. Then, if Jesus walked on water, this act would be an exception to generalizations about buoyancy that we took to be laws of nature, so those generalizations would not really be laws of nature, and Jesus' walk on water would not really be a miracle. This is a cheap verbal trick. If anyone walks on water without any natural explanation, that is a miracle in my book. Such miracles are *logically possible*. I agree with Craig about this.

It is still a big step to the claim that we have *adequate evidence* to believe in any miracle. When people declare that a miracle occurred, we need to look at the evidence for and against their claims. The evidence *against* the miracle includes all of the evidence for the generalization that the miracle violates. Our common generalizations about buoyancy are supported by copious observations, plentiful testimony, numerous experiments, abundant explanations, and ample theories. To outweigh so much evidence, one would need a very strong reason to believe in any miracle.

I doubt that this burden is carried for any alleged miracle, but here I will focus on Craig's claims about the resurrection of Jesus. What is Craig's evidence for this miracle? First, "Jesus' tomb was

found empty by a group of his women followers.” (22) Unfortunately, our records come from years later. Craig describes the Gospels as “very early” and cites a date “ca. < AD 36.” (22) The scholars whom I consulted suggested that dates > AD 50 are more likely. In any case, Craig’s own dates imply years after Jesus’ death, which is plenty of time for distortions to spread. The supposed witnesses were surely prompted often in the intervening years. They were likely subjected to tremendous social pressures. Their emotions undoubtedly ran high. They probably had neither the training nor the opportunity nor the inclination to do a careful, impartial investigation. Most people at that time were gullible, as shown by the plethora of cults. These are exactly the kinds of factors that psychologists have found to distort memory and eyewitness testimony in many cases. We would and should heavily discount witnesses like these in legal trials.

To defend his sources, Craig suggests that Jesus’ followers had no expectation that Jesus would rise from the dead. (24) Witnesses *with* expectations are less reliable, but this does not show that witnesses *without* expectations *are* reliable. Moreover, we can’t know that Craig’s supposed witnesses had no expectations. Narratives like the story of Jesus’ resurrection were common in that area around that time. One similar tale was about Mithras, a Persian warrior-god whose cults flourished just before the time of Jesus. Early Christians associated the two, and Roman soldiers referred to Mithras as “the Soldier’s Christ.”<sup>2</sup> In addition, Jesus was supposed to have raised Lazarus from the dead, so it would have been natural to ask, “If Jesus could raise Lazarus, why couldn’t God raise Jesus?” Finally, even if the story of resurrection was new, “new” does not imply “true.” So it is hardly clear that the tomb was empty.

Suppose it was empty. There are still (at least!) two possibilities: (1) Jesus’ body disappeared and rose into heaven, or (2) someone took the body without being caught. Which is more likely? The answer is obvious, because lots of items are taken without the thief being caught. In this case, the women were supposed to have found the door open and a person inside. (Mark 16:4–5) If so, many people had motive and opportunity to move the body. On the other hand, we have tons of evidence that bodies do not disappear and rise into heaven. Craig claims that Jesus’ resurrection is “*plausible*,” “*in accord with accepted beliefs*,” and “*not ad hoc*.” (25) To the con-

trary, nothing could be more *ad hoc* than a unique exception to otherwise accepted physical principles. Just imagine that I return from a hard day at the office to find that my favorite ice cream, which I had saved for tonight, is gone from my refrigerator. My wife and kids all deny that they took it. They are honest. Still, I wouldn't seriously consider the possibility that my ice cream ascended into heaven and sits at the right hand of Ben and Jerry. Analogously, nobody would think that about Jesus' body if they did not already believe in God. Any reasonable person who looks at the evidence without prejudice would conclude that either the tomb was not empty or someone took the body, even if we don't know which.

Similar considerations apply to Craig's claim, "On multiple occasions and under various circumstances, different individuals and groups of people experienced appearances of Jesus alive from the dead." (23) Craig describes these reports as "independent," (23) but how can he possibly know that some of his supposed witnesses did not hear stories about the others? There were years for these stories to spread. Once one person claimed to see Jesus, it would naturally have become a badge of honor for anyone to make similar claims. In these circumstances, the multiplication of proclamations hardly "guarantees" (23) anything. I cannot explain every one of these reports, because there is so little evidence and so much uncertainty about the circumstances. Nonetheless, these gaps in our knowledge are no reason to give up well-established physics on the basis of decades-old reports by self-interested parties who faced social pressures and promptings with predispositions to believe. Craig's burden of proof cannot be carried by such feeble testimony.

### 3. Experiences

Religious beliefs are sometimes based not on testimony by others but on religious experiences *of the believer*. The question then is whether personal religious experiences provide adequate reasons to believe in God.

There is no doubt that many people have experiences that seem to them to come from a higher power outside of themselves. The problem is that *too many* people have such experiences. Different people with different religious beliefs have different experiences that seem to come from different gods, even though the experiences seem

quite similar from the inside. The resulting beliefs conflict, so they cannot all be right. Indeed, the majority of them must be wrong, if only Christian experiences are correct, as traditional Christians claim. It follows that religious experience in general cannot be reliable, according to the Christian perspective itself.

Religious experiences also occur only when emotions run high and only to those who were predisposed to believe. Analogously, many people think that they see and hear ghosts when they are filled with fear and already believed in ghosts. These experiences are no evidence for the existence of ghosts, because they depend on emotions and prior belief. The same sources of error permeate religious experience. Craig says, "If you're sincerely seeking God, God will make his existence evident to you." (28) No surprise there! Take a pinch of belief in God, add a dash of desire to experience God, stir in emotion to taste, and you have a recipe for religious experience. This recipe has been franchised by preachers who induce religious experiences during worship services and elaborated by ascetics who starve themselves in order to see God. The problem is that such recipes work regardless of whether or not there is any God to cause the experience. That is why such experiences are *not* reliable indicators of God.

Some religious experiences might occur in circumstances that are more conducive to reliability. Indeed, some particular religious experiences might be accurate. I do not deny that this is *possible*. The point here is about *evidence*. Disagreement, prejudice, and emotion are so widespread in religion that any religious experience needs independent confirmation. To understand why, imagine three friends camping in the woods late one night. Ann believes that bears live nearby, so she bets that the next animal they see will be a bear. Betty thinks that the area is filled with deer, so she bets on a deer. Cathy refuses to be a part of their stupid bet. Then Ann looks deep into the forest. She sees a dark object. It moves. She thinks it is a bear. Betty sees the same dark object, but she thinks it is a deer. Cathy looks carefully at the same spot, but she sees only shadows. Given their disagreements, predispositions, and motivations, Ann is not justified in believing that she really saw a bear any more than Betty is justified in believing that she really saw a deer. If they find bear tracks in the morning, then they will have independent confirma-

tion. Without independent confirmation, however, either one might be right, but neither one has enough evidence for justified belief or knowledge. Why? Because known disagreement, along with reliance on emotion and predisposition, creates the need for independent confirmation. The same standards should apply to religious experience and belief, so religious believers also need independent confirmation that their experiences are accurate or reliable.

Craig denies this when he claims that religious beliefs based on religious experience are “properly basic.” (26) As examples of properly basic beliefs, Craig refers to “the belief in the reality of the past, the existence of the external world, and the presence of other minds like your own.” (26) Such beliefs “aren’t based on” any other beliefs and “are part of the foundation of a person’s system of beliefs.” (26) That makes them *basic*, but it does not explain what makes it *proper* to treat these beliefs as basic, that is, to believe them without any confirmation. So what does make them *properly* basic? Craig’s first answer is that “none of these beliefs can be proved.” (26) However, he cannot say this about religious beliefs, since he is trying to give arguments for God. Besides, even if they *cannot* be proved, that is not enough to show that they *need not* be confirmed. I also cannot prove that there is life on Mars, but that does not make me justified in accepting this belief without any evidence. Craig’s second answer is better: “You would have to be crazy to” reject beliefs that there was a past, there is an external world, and there are other minds; and that makes these beliefs “*properly* basic.” (26–27) But then a belief in God cannot be properly basic in the same way, unless “you would have to be crazy to” be an atheist. Even if you disagree with me, I hope you don’t think I’m crazy. At least, not all atheists are crazy. So Craig has no good reason to claim that religious beliefs are properly basic.

In the absence of any better argument, there is no reason to deny and much reason to agree that religious beliefs need independent confirmation. Can this need be satisfied in the religious case? I don’t see how. God leaves no tracks or other physical evidence, as a bear does. We cannot appeal to the internal character of religious experience, because the same kind of experience can be produced without God. Thus, the need for independent confirmation in religion cannot be met. But the need persists. That is why people are not justified in basing their religious beliefs on their religious experiences.

## 4. Origins

The remaining two arguments, which Craig gave first, are more abstract and technical. That is why I saved them for last. One is cosmological. The other is teleological.

Craig's cosmological argument is that "God makes sense of the origin of the universe." (3) The basic premises are: (1) the universe had a beginning, (2) God explains that beginning, and (3) nothing else explains that beginning as well. I doubt all three premises, but all I need to show here is that one or more of these premises is not supported by enough reason for us to be justified in believing that it is true. If even one premise is unjustified, the whole argument fails to justify belief in God.

Let's start with premise (1). To support (1), Craig uses mathematical and scientific twists and turns.

### 4.1. Mathematical Twists

Craig argues that the universe must have had a beginning, because it cannot be infinite. Why not? Craig answers, "[W]hat is infinity minus infinity? Well, mathematically, you get self-contradictory answers. . . . [I]nfinity minus infinity is infinity . . . [and] infinity minus infinity is 3! . . . This implies that infinity is just an idea in your mind, not something that exists in reality." (4)

This argument never mentions minds or reality before its conclusion. Its premises refer only to numbers. Consequently, if the argument showed anything about infinity, it would also show that there cannot be an infinite number or an infinite series of numbers. If the number itself or our idea of it implied a contradiction, there could not be any such number or any consistent idea of it. Calculus would be out the window. Let's hope that we can avoid that result.

Luckily, we can. Craig derives his contradiction by subtracting infinity from infinity. How do mathematicians avoid this contradiction? They simply limit the operation of subtraction to a certain domain, so that you are not allowed to subtract infinity. Why not? Because it gets you into contradictions! What better reason could you want? There is nothing strange or dubious about this limit on subtraction. Mathematicians also limit the operation of division. You can't divide any number by zero. Why not? Because this would also yield contradictions. That does not show that zero is not a number

or is not real. The actual number of pink elephants in this room really is zero, believe me. So the limit on subtraction also does not show that infinity is not a number or is not real or is only in your mind or anything like that.

I admit that infinity is puzzling. It seems strange that the number of odd integers is equal to the total number of integers (both odd and even) in the sense that there is a one-to-one correspondence between the members of the sets. That's weird. But it is not contradictory. So this can't show that infinity does not exist in reality (whatever that means).

Many people's views on infinity do lead to outright contradictions. Even some mathematicians bungle it and end up claiming that actual infinities are impossible. Craig quotes David Hilbert, who was a great mathematician, but Craig's appeal takes an authority out of context. Craig's quotation is from a paper published in 1926.<sup>3</sup> Hilbert himself soon recognized that his finitist project was undermined by Gödel's incompleteness theorems in 1931.<sup>4</sup> More importantly, even if Hilbert had not recanted (or reCantored?), almost all mathematicians today recognize that infinity can be handled without contradiction. If you want to see how, just take a mathematics course on real analysis.

Craig might admit that infinity is not self-contradictory, but still deny that anything infinite actually exists. However, actual infinities are not hard to find. First, there is an infinite number of real numbers between one and two. Craig cites one mathematician who regards this set as "merely *potentially* infinite," because "such series approach infinity as a limit, but they never actually get there." (7) This spatial metaphor is misleading. If I count to 10 and then stop, I potentially count to 20, but I do not actually count to 20. That fact does not even begin to show that the number 20 is not real. The number 20 actually exists whether or not my counting actually gets there. Some numbers are so high that nobody has ever counted to them or could ever count to them. Maybe we can "never actually get there," but the number series itself actually exists anyway.<sup>5</sup> The same goes for infinity. If someone asked how many real numbers exist between one and two, the answer would be, "Actually, it's infinite."

Craig later adds, "existence in the mathematical realm does not imply existence in the real world." (7) Is he denying the reality of

numbers? On what basis? Anyway, even if numbers did not count (ha!), actual infinities also abound in the physical world. To see one, just wave your hand. When your hand moves a foot (ha, again!), it goes through an infinite number of intervening segments: half, then half of that, then half of that, and so on. It also travels for half the time, half of that, and so on. Craig again claims that this “confuses a potential infinite with an actual infinite,” (7) but he is the one who is confused. We cannot measure or distinguish all of these spatial and temporal segments, but that does not show that they do not actually exist. These areas of space and periods of time really exist, regardless of our limitations and actions. When you think them through, such simple experiments are enough to reveal actual infinities “in the real world.” Consequently, no mathematical argument could show that the universe cannot also be infinite.<sup>6</sup>

#### 4.2. Scientific Turns

Craig also cites Big Bang theories as empirical evidence for a first moment and, hence, against an infinite past and, eventually, for God. Claims like this have been common since a Big Bang theory was first developed by a priest named Lemaitre. In 1951, Pope Pius XII cited this Big Bang theory as evidence for God. Lemaitre responded, “As far as I can see, such a theory remains entirely outside any metaphysical or religious question. It leaves the materialist free to deny any transcendental Being. . . . For the believer, it removes any attempt to familiarity with God.”<sup>7</sup> Craig is no more justified than the Pope in inferring God from the Big Bang.

One reason is that Craig’s inference to God depends on a questionable interpretation of the physics of the Big Bang. Craig emphasizes, “Physical space and time were created in that event, as well as all the matter and energy in the universe,” (4) so there was no time or space or matter or energy at all in any form before the Big Bang. Some scientists do talk this way, but none of this speculation is essential to the physics or required by the evidence. That is why contrary hypotheses, such as a non-empty quantum epoch (discussed below), are still seen as live options that are not ruled out by the evidence.<sup>8</sup> But then why do any scientists deny time before the Big Bang? They are talking about time *as we know it*. When Hawking is more careful, he says, “the *classical* concepts of space and time



break down as do all *known* laws of physics.”<sup>9</sup> We cannot know anything about time before the Big Bang, and no claim about time before the Big Bang is needed or could be used to explain or predict anything that we observe now. Still, none of this implies that there was no time at all in any form before the Big Bang (*when* was that?). Scientists *ignore* temporal relations that are needless, useless, and unknowable, but to go further and *deny* such relations is at best conjecture. It is not required by theory or evidence. We just can’t know one way or the other.

When physicists do speculate on such matters, they adopt differing views. Some say that before the Big Bang all space, time, matter, and energy were collapsed into a point called a singularity. This singularity is a unique sort of reality, but it is still real,<sup>10</sup> if only because it has infinite density. So even this theory does not require creation out of nothing. (Slogan: Singularity forever!)

Most physicists today reject the idea of a singularity. One reason is that recent discoveries produce doubts that gravity is always attractive, which is a key assumption in the argument for a singularity. Instead of a singularity, many physicists propose that the classical epoch governed by classical physical laws began with the Big Bang, but before that was a quantum epoch with no beginning. All that existed during this quantum epoch was “a sea of fluctuating energy,” but it was “not nothing.” (6) The Big Bang then arose probabilistically with no determinate cause, in some way analogous to the decay of radioactive atoms according to quantum theory. Hence the name “quantum epoch.”

In response, Craig denies that any event can be uncaused, but this claim is contrary to standard quantum theory. Craig is right that “not all scientists agree that [some] sub-atomic events are uncaused,” (6) but many scientists do agree with this. The lack of universal agreement hardly shows that most scientists are wrong to postulate uncaused events, and the fact that some scientists accept Craig’s premise is hardly enough for a positive argument for God. On the other issue here, Craig is also right that indeterministic quantum theory does not imply that particles come into existence out of nothing. (6) However, the quantum epoch’s “sea of fluctuating energy” is also not nothing, even if we cannot know what it is. Thus, the principle that nothing comes from nothing creates no trouble for the hypothesis of a quantum epoch.

Anyway, I do not need to claim that there was a quantum epoch. My point is only that we cannot rule out a quantum epoch. It is as likely as other hypotheses. We just don't know which hypothesis is true. Our ignorance is confirmed by many recent fundamental developments and discoveries in this area. As recently as February 8, 2001, while I was finishing this chapter, scientists announced their discovery of previously unknown particles lurking in the sub-atomic sea that is supposed to resemble the quantum epoch. These results seem to undermine the Standard Model of sub-atomic physics and might affect theories about the origin of the universe. But nobody knows yet. Only one thing is clear: When so little is known, this is a very shaky foundation for any argument, despite all of Craig's footnotes.

Many mysteries remain. Maybe no physical theory will ever fully solve them all. But God won't solve them either. Here's why: A cause of an event is supposed to explain why that event occurred when it did rather than earlier or later and in the way it did rather than some other way. God cannot explain why the Big Bang occurred 15 billion years ago instead of 5 or 25 billion years ago, because, if the traditional God exists at all, He existed equally and in exactly the same way 5, 15, and 25 billion years ago. Furthermore, the hypothesis of God cannot explain why the Big Bang has any of the features it has, since, if the Big Bang had different features, God would be just as good (or bad) at explaining those other features. I will develop these points in Chapter 4, but it should already be clear why an eternal God adds nothing to the scientific explanations. To cite God as the cause of the Big Bang is to explain the obscure by the more obscure, which gets us nowhere.

Craig sketches the beginnings of a response when he argues that the cause of the Big Bang "must also be personal. For how else could a timeless cause give rise to a temporal effect like the universe?" (5) I agree that there is no *other* way, since there is *no* way, even for persons. Persons live within time. Yesterday at 6:00 p.m. I chose to order a pizza. As soon as it arrived (no earlier and no later), I willed to take my first bite. All such decisions must occur at some time rather than another. Otherwise, I could never order pizza again at a different time (which would be sad). Thus, it makes no sense when Craig says, "A man sitting from eternity could freely will to stand

up.” (6) A decision to stand up occurs at a specific time, but an eternal being exists outside time, so a truly eternal or “timeless” being cannot choose to sit up or do anything else. Even if there could be decisions outside of time, they could not explain why an event occurs when it does instead of at some earlier or later time, since a timeless decision would not occur at (or before) one time instead of another. So eternal beings cannot be causes, even if they are persons.

Craig tries to avoid these problems by saying, “God existing alone without the universe is either (i) before the Big Bang, not in physical time, but in an undifferentiated metaphysical time or else (ii) strictly timeless but that He enters into time at the moment of creation. I am not aware of any incoherence in either of these alternatives.” (8) They both seem incoherent to me. If something is “strictly timeless” by its very nature, how can it ever “enter into time”? And if “undifferentiated metaphysical time” is time, then there was *some* kind of time before the Big Bang. Metaphysical time is “not nothing.” So I don’t see how either of these moves can help the traditional God make sense of the origin of the universe.

A lot is unknown here, so one final point is perhaps worth adding. Craig says, “both of the premises of the first argument thus seem more plausible than their denials. Hence, it is plausible that a transcendent Creator of the universe exists.” (8) This does not follow. Compare this argument: When I pick a card from a standard deck without looking, (1) it is not a spade, (2) it is not a heart, (3) it is not a diamond, (4) it is not a club, so (5) it is not any suit. The conclusion, (5), is obviously false, even though each premise taken individually has a probability of 3/4, so each premise is more plausible than its denial, which has a probability of 1/4. Analogously, Craig’s conclusion might be implausible, even if each of his premises taken individually is more plausible than its denial. Small doubts about each premise can accumulate into large doubts about the conclusion. Anyway, no such subtlety is needed here, where large doubts about each premise accumulate into even larger doubts about Craig’s conclusion.<sup>11</sup>

## 5. Tuning Out

Craig’s next argument also concerns the beginning of our universe, but from a different angle. The issue now is fine-tuning.

Intelligent life depends on “a complex and delicate balance of ini-

tial conditions.” (9) Craig claims that God explains this fine-tuning, because God is supposed to have designed these conditions to serve His purpose. Without a designer, the occurrence of just the right conditions for intelligent life looks like an unlikely cosmic coincidence. This is supposed to show that God is the best explanation of the fine-tuning and of intelligent life, so God exists.

To support the crucial premise that intelligent life is improbable without a designer, Craig appeals to very big numbers “until our minds are reeling.” (10) These probabilities are suspect. We can calculate the probability of picking an ace out of a deck if we know that the deck includes 4 aces in 52 cards. We cannot determine the probability of picking an ace out of a random pile of cards if we have no idea how many cards or aces are in the pile. Analogously, there is no non-arbitrary way to count either the total number of possible values for initial conditions in the universe (infinite?) or the range of values that could support some form of life (given interactions among factors). Thus, there is no way to calculate reliable probabilities here.<sup>12</sup>

Nonetheless, let’s grant that intelligent life is improbable. This assumption alone would hardly imply a designer. In a big lottery, if you buy only one ticket, it is unlikely that you will win. Still, if you do win, you wouldn’t conclude that God (or anyone else) must have fixed the lottery in your favor. You might just have been lucky. Similarly, when you win the lottery of life, there is no reason to infer that God or any designer exists. The same response applies regardless of how many tickets were sold, and regardless of whether your numbers fit some pattern, so Craig’s big numbers (9) and talk about patterns (11) cannot save his argument.

Craig responds by substituting a different lottery that might have no winner “in which a single white ball is mixed into a billion billion billion black balls, and you are asked to reach in and pull out a ball.” (12) Suppose you pick the white ball. You would and should be very surprised; but you still should not jump to the conclusion that the lottery was rigged, if you have no reason to assume that anyone was in a position to rig the lottery. A house in Connecticut is reported to have been hit by two meteors years apart. If the reports are true, this coincidence is very unlikely, but it hardly shows that God is throwing stones at that house.

It might be reasonable to conclude that the lottery was fixed if you had independent reason to believe that someone had opportunity and motive to fix it. If you already know a lottery official who likes you, then it might make sense to suppose that this official made you win. However, the analogous assumption in the fine-tuning argument would be that God had an opportunity and motive to rig the universe in our favor. That assumption would blatantly beg the question in an argument for the existence of God. Thus, although the fine-tuning argument might seem convincing to theists who already assume that God was there to design the universe, the argument itself gives them no reason to believe that assumption.

Craig might complain that atheists also beg the question if they assume that there was no God to fix the lottery of life. Atheists do not need this assumption, however, because they are not arguing against God (yet). They are (so far) merely criticizing Craig's argument. To refute an argument, one need not show that its premises are false. It is enough to show that its premises are unjustified. Thus, all that atheists need to claim (so far) is that fine-tuning leaves open the question of whether or not there is a designer.

This point can be made more technically by distinguishing likelihood from conditional probability. The likelihood of fine-tuning and intelligent life, given that a traditional God exists, seems high. Nonetheless, the probability of such a God, given that intelligent life exists, still might be low. To see which figure is relevant, consider another analogy: The likelihood of hearing noises in your attic, given that there are ghosts in your attic, is high. In contrast, the probability of ghosts, given noises in your attic, is low. This low probability shows why noises give you no good reason to believe in ghosts, even if you have no other explanation for the noises. The point is not that ghosts are inherently improbable, but only that there are too many other possibilities to justify jumping to the conclusion that ghosts caused the noise, without assuming that there are ghosts in the area. You also should not believe that the noises were caused by bats until you have additional independent reason to assume that there are bats in the area (and that the noise was caused by bats as opposed to squirrels, birds, wind, and so on). Analogously, intelligent life is no evidence for God, even if we have no other explana-

tion for intelligent life, unless we assume that God was there to design the universe. But that assumption would beg the question.

Some atheists disagree. They admit that belief in God *would* be justified *if* we had no other explanation for fine-tuning. Craig's argument still fails, however, because several competing explanations are available: (1) the Christian God, (2) one Big Bang and only chance, and (3) multiple cosmoi, each with its own Big Bang. If there are enough cosmoi, it becomes probable that at least one contains intelligent life. We live in one that does. That should come as no surprise, since otherwise we would not be alive to tell the tale.

Craig rejects this multiple-cosmoi hypothesis as "arguably inferior to the design hypothesis, because the design hypothesis is *simpler*." (13) However, the multiple-cosmoi hypothesis postulates more tokens of the same type (Big Bangs), whereas the design hypothesis postulates a wholly new type of thing (God). What matters is new types, not new tokens. To see this, compare a scientist who postulates a wholly new type of element when the evidence can be explained just as well by postulating only new samples of the same old types of elements. This scientist's new-element hypothesis would and should be rejected as less simple than the old-elements hypothesis. For the same reasons, the God hypothesis should be rejected as less simple than the multiple-cosmoi hypothesis.

In addition, fine-tuning might be explained by another recent hypothesis: (4) tracker fields.<sup>13</sup> In tracker fields, so-called constants adjust toward the values that make matter and life possible. As a result, matter and life would occur no matter which of a wide range of values these constants had at the time of the Big Bang. This makes intelligence more intelligible.

These scientific hypotheses are not merely on the same footing as the hypothesis of God. Evidence supports them because they follow from theories that make predictions that have been confirmed.<sup>14</sup> No such observational evidence supports the hypothesis of God.

I am not endorsing either (3) multiple cosmoi or (4) tracker fields. Both hypotheses face problems. Craig is right that we do not know how multiple cosmoi or tracker fields are generated. (13–14) There are also many mysteries about the rate of evolution, which Craig mentions, (15) although punctuated equilibrium theory helps here.

However, none of these persistent puzzles proves God. That would be a bad argument from ignorance. We just don't know enough in this area to supply stable support for belief in God.

It is hard for us to admit our own ignorance. We evolved with a strong urge to seek explanations for what otherwise seems random. Nonetheless, we should not jump to supernatural explanations as a quick fix for ignorance. Such appeals to God cause more trouble in the long term, because they cut short inquiry. If God fine-tuned the initial conditions, it would be pointless to seek any deeper explanation, such as tracker fields. In contrast, when atheists ascribe fine-tuning to chance, they admit the possibility of deeper explanations. This stimulates inquiry that increases our knowledge while also raising new questions that themselves demand further answers. This useful process is undercut when observations are explained by postulating God. In this way, religious beliefs get in the way of science and the progress of knowledge.

These objections undermine Craig's argument, even if the design hypothesis would explain fine-tuning. But it wouldn't. No matter what happens, one can always postulate someone who designed things that way. If the universe expands, God designed it to expand. If the universe contracts, God designed it to contract. Since God could design it either way, the hypothesis of God cannot explain why anything happens one way rather than another. Moreover, the design hypothesis works only if God can cause changes to tune the universe for life. I argued in section 4.2 that an eternal God cannot cause such changes in our temporal world, and I will develop that point in Chapter 4. The design hypothesis, thus, becomes incoherent if the designer is supposed to be an eternal God.

## 6. Conclusions

Craig has not given us any adequate reason to believe either in a divine source of morality or in the resurrection of Jesus or in a superhuman cause of religious experience or in a creator or designer of the universe. Moreover, Craig's conclusions are bloated. Even if Craig's arguments did establish some conclusions, they would not show the existence of God with all of His traditional features. In particular, even if some commander did dictate morality, that commander still might not be good or have the power to punish dis-

obedience by humans. Even if Jesus did rise from the dead, maybe he was abducted by aliens or maybe raising Jesus tired out God, so God lost His power. Even if religious experiences were some evidence for some external source, the most vivid religious experience could result from a God who is only very strong and pretty good. Even if some creator or designer could be proven, this creator or designer might have died a long time ago. Indeed, if God designed this universe, there is much reason to doubt that He is all-good, as we will see in Chapter 4. For such reasons, nothing like the traditional God would follow even if Craig's arguments did work part way.

Craig might respond that all of his arguments work together. However, the combined set still would not show all of the traditional features of God, since none establishes that God is all-powerful. If there were a creator, that creator would have to be *very* powerful, but need not be able to control *all* small-scale events for *all* time. Moreover, even if all of God's features were covered, it would still not be clear that Craig's different arguments are about the same being, since a creator might be separate from the commander of morality and also from the source of religious experience. To assume identity is just another way to bloat conclusions.

There always might be better arguments for the existence of God. Theologians are inventive. However, until someone gives a better argument, we have no good reason to believe that a traditional God exists.

### Notes

1. I refer to God as "He" because Craig and other traditional theologians use this masculine pronoun, although, as many have pointed out, it is not clear how God could have any gender.

2. Thanks to Susan Ackerman for this information.

3. David Hilbert, "Über das Unendliche," *Mathematische Annalen* 95 (Berlin, 1926): 161–90. Craig cites a reprint of a translation.

4. Kurt Gödel, "Über formal unentscheidbare Sätze der *Principia Mathematica* und verwandter Systeme I," *Monatshefte für Mathematik und Physik* 38 (1931). Thanks to Sam Levey for help on this paragraph and elsewhere.

5. Mathematical constructivists might deny this, but Craig is no constructivist, and it is hard to imagine any good reason to be a constructivist about numbers if you believe in God, since constructivism is motivated by skepticism about entities like gods.

6. For more detailed criticisms of Craig's mathematical arguments, see



Quentin Smith, "Infinity and the Past" in William Lane Craig and Quentin Smith, *Theism, Atheism, and Big Bang Cosmology* (Oxford: Clarendon Press, 1993).

7. Quoted in Marcelo Gleiser, *The Dancing Universe: From Creation Myths to the Big Bang* (New York: Penguin, 1997), 287. Thanks to Marcelo Gleiser for help at several points in sections 4.2 and 5.

8. Craig does criticize this theory: "Vacuum Fluctuation Universe theories . . . cannot explain why, if the vacuum was eternal, we do not observe an infinitely old universe." (8) However, the universe that we observe is (in a way) infinitely old in this view, even if its classical phase (which is the phase that we observe) is not infinitely old. So it is not clear what Craig's objection is.

9. S. W. Hawking, "Breakdown of Predictability in Gravitational Collapse," *Physical Review D* 14 (1976): 2460 (my emphasis).

10. On the reality of a singularity, see Quentin Smith in Craig and Smith, *Theism, Atheism, and Big Bang Cosmology*, p. 208.

11. For more detailed criticisms of Craig's scientific arguments, see Quentin Smith, "Atheism, Theism, and Big Bang Cosmology" and "A Defense of the Cosmological Argument for God's Non-existence" in Craig and Smith, *Theism, Atheism, and Big Bang Cosmology* (chaps. VII and IX).

12. On the technical problems with calculating these probabilities, see Timothy McGrew, Lydia McGrew, and Eric Vestrup, "Probabilities and the Fine-Tuning Argument: A Sceptical View," *Mind* 110 (2001): 1027–1037.

13. Jeremiah Ostriker and Paul J. Steinhardt, "The Quintessential Universe," *Scientific American* 284 (2001): 51–52. Tracker fields are just one example of a dynamical system in which physical observables, responding in part to feedback with the environment, evolve inevitably toward a certain final state, which is insensitive to the initial conditions. Tracker fields make fine-tuning understandable in the same way as do many other such dynamical systems throughout nature. Thanks are due to Rob Caldwell here and at other points in this chapter.

14. *Ibid.*; on multiple cosmoi, see Alan Guth, *The Inflationary Universe* (Reading, Mass.: Addison-Wesley, 1997), 245–252.