

Faith, Reason, and Alternatives to Genesis 1:1

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IN TEACHING, a good question can be worth a thousand words. Here's one of my favorites:

If I were God, I'd give humans	
(a) conclusive	evidence for my existence.
(b) strong	
(c) weak	
(d) no	

I have students think about the alternatives and then vote for one by raising their hands. I tell them that, since they're just expressing their own mind, there's no right or wrong answer beyond that. I also say I'd be disappointed if some options don't get any votes.

Who picked option (a)? Typically, only about 10 percent of the class raise their hands (although this varies by group). So why would you, as God, give humans *conclusive evidence* for your existence? Students say "It's important for humans to know clearly that I exist, in order to live their lives, so I'd give clear evidence about this." How would you make your existence so clear? Students say things like "I'd give a loud voice from the sky to talk about myself, and I'd tell and do extraordinary things." Often students who pick (a) are skeptical about God's existence and surprised that so few of their classmates pick (a).

Strong evidence option (b) gets a substantial 40 percent of the vote. Supporters say "While it's important for humans to have some strong indication that there's a God, it's also important for them to struggle with this issue – so their belief is to some extent their personal choice."

Weak evidence option (c) also gets a substantial 40 percent of the vote. Supporters say "While it's important for humans to have

some sign that there's a God, this needs to be weak and ambiguous, so one's belief is mostly a matter of personal struggle and choice."

No evidence option (d) gets only 10 percent of the vote. Supporters say "Humans need to struggle and form their own personal belief about whether there's a God; it's less important that we get the right answer."

In my opinion, although some may think otherwise, the Catholic tradition tends to favor the *strong evidence* view (b). While this tradition values personal struggle about belief (and doesn't want to say we're *forced* into belief), it emphasizes arguments and evidence for God's existence. But individual Catholic thinkers vary on this, some tending more toward (a) and others more toward (c).¹

In 1973, when I studied at the Jesuit School of Theology in Chicago, I did a directed study where I surveyed and evaluated as many arguments for or against the existence of God that I could find. My overall conclusion was that the evidence for the existence of God was *weak*. I think the evidence has got stronger in the intervening years, and so now I'd rate it as *strong*. I'll say more about this later.

My class question has a multiple-choice format, which constrains students to the listed options. I'd likely get a wider range of responses if students wrote essays. Perhaps some would say:

(e) As God, I'd give strong evidence for my existence, but I'd make humans have to work hard to get, understand, or apply this evidence.

This would perhaps have been the answer of Augustine, who earlier struggled about belief in God but later came to see the evidence for God's existence as strong. In a sermon about God's providence, he describes in detail the constitution of the human person, especially physical details, and concludes that the only good explanation for the existence of such human persons is to be found in God:

This setting up of a rational animal, this arrangement of soul ruling and flesh serving, of mind and spirit, of head and body and unseen natural parts, of knowledge and action; intelligence, sense, and movement, the reservoir of memory, the lessons of

¹ This discussion typically occurs in my "PL235 – Christian Thinkers" course. Our text is one I edited with James C. Swindal, *The Sheed & Ward Anthology of Catholic Philosophy* (Lanham, Md.: Rowman & Littlefield, 2005).

knowledge, the decisions of the will, the use and adornment of the body's limbs and organs, and everything by which human beings are human – whom could it have as its author but God?¹

As a logician, I'd put this into a stricter argument, as an *inference to the best explanation*:²

1. We ought to accept the best explanation for the existence of humans.
2. The best explanation for the existence of humans is that they were caused by an intelligent being (the alternative is that they came to exist by chance).
3. Hence, we ought to accept that humans were caused by an intelligent being (God).

What explains the existence of humans? The two options back then were *chance* (humans were caused by a random mixing of material elements) or *design* (humans were caused by an intelligent being). The *chance* option is implausible; you can't get a human by putting different material elements into a box and shaking the box randomly. And so the *design* option is better and thus what we ought to accept.

Darwin gave a third option: humans, and other biological species, came into existence by an evolutionary process involving *mutation* and *selection*. *Mutation* means that a species randomly produces organisms with slight differences; so some are bigger and some can move faster. *Selection* means that those with some features are more likely to survive and produce offspring with these same features. Repeating the mutation-selection process many millions of times produces radically new life forms, including complex forms like human beings. The agnostic Thomas Huxley in 1866 saw the implications for religion:

[Darwin's work] did the immense service of freeing us [especially agnostics and atheists] forever from the dilemma – Refuse to accept the creation hypothesis, and what have you to propose

¹ *Anthology of Catholic Philosophy*, 109. This gem was found in a pile of old manuscripts in 1995. It's "Sermon (Dolbeau 29) – On God's Providence," in *The Works of Saint Augustine, Part III – Sermons, Volume 11: Newly Discovered Sermons*, ed. John E. Rotelle, trans. Edmund Hill (Hyde Park, N.Y.: New City, 1997), 55–62.

² See my *Introduction to Logic*, 2nd ed. (New York: Routledge, 2010), 111–2.

that can be accepted by any cautious reasoner? In 1857 I had no answer ready, and I do not think that anyone else had. A year later we reproached ourselves with dullness for being perplexed with such an inquiry. My reflection [after studying Darwin] ... was, "How extremely stupid not to have thought of that!"¹

So Darwin killed the best-explanation argument for the existence of God (by killing its premise 2). Or maybe not – more on this later.

Let's return briefly to my class question. Here's another answer:

(f) As God, I'd give stronger evidence for my existence to some individuals or eras than I would to other individuals or eras.

In Augustine's time, the best evidence for God's existence was strong. After Darwin, it was weak. Today, again, I think it's strong.

Genesis 1:1 and three alternatives

The Bible starts boldly: "In the beginning, God created the heavens and the earth." We can rephrase this into two statements: "There's a God-Creator" and "The world had a beginning in time." Let's shorten this (but understand it as above) and call it "classical theism":

Classical theism (G & B):

There's a God and a beginning.

I'll call the three truth-functional alternatives by colorful names:

Eternal-world theism (G & not-B):

There's a God but no beginning.

Classical atheism (not-G & not-B):

There's no God and no beginning.

Big-bang atheism (not-G & B):

There's no God but there's a beginning.

¹ *Selected Essays and Addresses of Thomas Henry Huxley*, ed. Philo Melvyn Buck (New York: Macmillan, 1910), 297.

We'll consider first the two theist forms, then the two atheist forms.¹

Christendom has mostly been happy with *classical theism*: there's a God-Creator and a beginning of the world in time. The medievals asked: "Can it be proved that the world had a beginning in time?" Bonaventure and many Arabs said yes, Aquinas said no. But for a long time Christians had little doubt that the world *did* have a beginning in time, whether this be accepted from reason or from revelation (Genesis 1:1).

With the rise of modern science, which seemed at first to accept the eternity of the world, some Christians opted for *eternal-world theism*: there's a God-Creator, but there's no beginning of the world in time (since the world is eternal). God is still a creator, but not in the sense that he started the world into existence (since an eternal world doesn't start). Instead, God is a creator in the sense that the world is eternally dependent on God for its existence, as an eternal light might depend on an eternal flame. An eternal world goes against Genesis; but the Genesis-details conflict (as has been known at least since Origin²) and so can't all be taken literally. However, eternal-world theism has less attraction now that science has moved away from the world being eternal.

Until recently, the standard atheist alternative to Genesis 1:1 was what I call *classical atheism*: there's no God, and the world had no beginning (it always was and always will be). While many believers contended that the world needs a cause, atheists objected that a world with no beginning or cause was just as plausible as a God with no beginning or cause. Many atheists saw their view as *simpler*: they accepted one principle (an eternal, uncaused world), while believers accepted two (an eternal, uncaused God + a caused world with a beginning).

There seemed to be a stalemate between two views:

¹ The ideas that follow are much expanded from my "God, Science, and the Golden Rule," *Catholic Philosophy Anthology*, 523–31. This is a dialogue between Aristides (perhaps the first professional Christian philosopher) and Socrates. It will also appear as "Chapter 4: A Socratic Dialogue" in my *magnum opus* on the golden rule: *Ethics and the Golden Rule* (New York: Routledge, 2012).

² See *Catholic Philosophy Anthology*, 75.

Classical atheism
(the materialist view):

There's no God,
and the world had
no beginning.

Classical theism
(the religious view):

There's a God,
and the world had
a beginning.

The terms “materialist view” and “religious view” are from C.S. Lewis, who describes the stalemate:

Ever since men were able to think they have been wondering what this universe really is and how it came to be there. And, very roughly, two views have been held. First, there is what is called the materialist view. People who take that view think that matter and space just happen to exist, and always have existed, nobody knows why; and that the matter, behaving in certain fixed ways, has just happened, by a sort of fluke, to produce creatures like ourselves who are able to think. By one chance in a thousand something hit our sun and made it produce the planets; and by another thousandth chance the chemicals necessary for life, and the right temperature, occurred on one of these planets, and so some of the matter on this earth came alive; and then, by a very long series of chances, the living creatures developed into things like us.

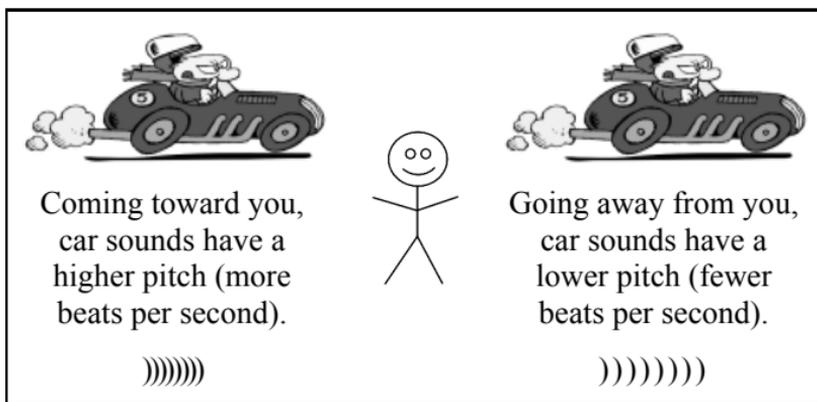
The other view is the religious view. According to it, what is behind the universe is more like a mind than it is like anything else we know. That is to say, it is conscious, and has purposes, and prefers one thing to another. And on this view it made the universe, partly for purposes we do not know, but partly, at any rate, in order to produce creatures like itself – I mean, like itself to the extent of having minds.

Please do not think that one of these views was held a long time ago and that the other has gradually taken its place. Wherever there have been thinking men both views turn up. And note this too. You cannot find out which view is the right one by science in the ordinary sense.¹

¹ *Mere Christianity: A Revised and Amplified Edition, With a New Introduction* (New York: Macmillan, 1952), 21–2. Lewis tried to resolve the stalemate using an ethics argument for the religious view; but I don't think his argument works.

After Lewis wrote this, science raised doubts about two parts of the materialist view: the eternity of the world and how easily a random world can produce life.

First, science seemed to show that the world, far from being eternal, began to exist about 13.75 billion years ago in an explosion we call “the big bang.” Part of the evidence for this is the *redshift* combined with the *Doppler effect*. Let me give a simplified explanation. The *Doppler effect* is the change in sound (or light) waves from an object that’s coming toward you or going away from you. Imagine that a race car is coming toward you, passes you, and then goes away from you; the sound from the car goes from a higher pitch to a lower pitch as the car passes you:



To visualize this, hum a high-pitched car sound as the car comes toward you, and then switch to a lower pitch as it goes away from you. Motion toward you compresses the sound (more beats per second, higher pitch) while motion away from you expands the sound (fewer beats per second, lower pitch). The same shift happens with *colors*. A yellow car would look slightly greenish as it comes toward you and slightly orangish as it goes away; but this effect would be unobservably small, unless the car is one of those new science-fiction models that go a tenth of the speed of light.

The *redshift* is the observed fact that light from distant stars gets shifted toward the red end of the color spectrum and away from the purple end. So a heated element (e.g. hydrogen) that’s known to give off yellow light becomes more orangish. Scientists explain this redshift by the Doppler effect and the idea that distant stars are speeding away from us. So they think we live in an expanding world, where distant stars are speeding away from us. If we wind back the process,

we can figure out when the world exploded from an initial point, in an event called “the big bang.” Scientists are getting better at dating this event (see “Age of the universe” in Wikipedia); the current figure is between 13.6 and 13.9 billion years.

A longer story would talk about background radiation (which strengthens the case for the big-bang), the entropy argument for the world having a beginning (the world would have reached almost complete entropy had it existed forever), and much math. We won’t go into these details. But I should mention the former popularity of a multiple-big-bang theory, which says that the world goes through an infinite cycle of expansions and contractions. Fewer hold this today, since the force that would contract the world is gravity, and calculations show that the density of matter in the world isn’t enough to make the world contract.¹ So our best science supports the view that the world is a one-shot process and had a beginning in time.

But if the world began to exist long ago, then surely something had to cause it to begin to exist – and what else could this be but a great mind? The kalam argument (so called because it resembles a medieval Islamic argument) argues this way to the existence of God:

1. Whatever begins to exist has a cause. (commonsense metaphysics)
2. The world began to exist. (This is based on current physics, and perhaps also on arguments about the impossibility of an actual physical infinite.)
3. Hence, the world has a cause.
4. If the world has a cause, then a personal being caused the world. (Causes are either material [operating through antecedent conditions and causal laws] or personal [operating through free will]; here the former is excluded, since matter itself couldn’t without circularity cause the beginning of the totality of matter [which is the world].)
5. Hence, a personal being (God) caused the world.

I take this to be a fairly strong argument. Now what does J.L. Mackie, my favorite atheist philosopher, say about it? Mackie is convinced on the basis of the problem of evil that there’s no God. So he concludes

¹ Steven Hawking, *A Brief History of Time*, tenth anniversary edition (New York: Bantam Books, 1998), 45–9. Hawking also argues that an eternal, static (non-expanding and non-contracting) world wouldn’t be stable, since gravity over an infinite period of time would eventually pull it together and make it collapse.

that one of the premises here is wrong; he raises doubts about 1 and 2. Against premise 1, perhaps the world just popped into existence without a cause. (I see this as weird and implausible, but not entirely refutable, like the student excuse “An uncaused elephant popped into existence and ate my homework.”) Or against premise 2, maybe current science is wrong and the world is eternal. (This is possible, but the evidence is much stronger than when Mackie wrote; and this option makes atheism look bad, since it rejects our best current science on religious grounds.)¹

Many atheists, accepting that the world is about 14 billion years old, moved from *classical atheism* to what I call *big-bang atheism*:

<p>Classical atheism:</p> <p>There's no God, and the world had no beginning.</p>

<p>Big-bang atheism:</p> <p>There's no God, but the world had a beginning.</p>

Big-bang atheism is the less plausible of the two. Before the big-bang theory, how many atheists thought the world had a beginning? Very few, if any. And I pity atheists who now have to explain to their children: “We atheists believe the world just popped into existence, without any cause, about 14 billion years ago!” This would cause children who were brought up atheist to begin to question their faith.

But wait, it gets worse for the atheist.

Fine tuning

In a passage quoted earlier, C.S. Lewis says the materialist view sees humans as coming into existence by chance. Given a star, he says, there's about a one-in-a-thousand chance of *each* of these events happening:

- The star produces planets.
- One such planet evolves life.
- Human (thinking) life evolves.

¹ J.L. Mackie, *The Miracle of Theism* (New York: Oxford Univ. Press, 1982), 45–9. For a kalam defense, see William Lane Craig, *Reasonable Faith*, rev. ed. (Wheaton, Ill.: Crossway, 1994), 91–125.

So, given a star, there's about a one-in-a-billion chance that human life will result. While human life is a fluke, it'll likely happen many times, since the world has (according to a recent estimate on the Web) 70,000,000,000,000,000,000,000 stars. If human life evolves in a billionth of these, we'll have human life on 70,000,000,000,000 planets. Even if these numbers are way off, still a random but huge world can easily evolve thinking life.

Or maybe not. A 1973 paper by Brandon Carter, a Cambridge physicist, encouraged scientists to investigate what physical laws and constants are needed for thinking life to exist.¹ It turns out that the physical laws and constants governing our world have to be very precisely accurate to make life possible. Steven Hawking (Carter's colleague at Cambridge) gives this example: "If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand million million, the world would have recollapsed before it ever reached its present size."² This would have prevented the evolution of life. So the expansion rate has to be correct to the 17th decimal place for life to evolve. Hawking goes on (my italics):

The laws of science, as we know them at present, contain many fundamental numbers, like the size of the electric charge of the electron and the ratio of the masses of the proton and the electron.... The remarkable fact is that *the values of these numbers seem to have been very finely adjusted to make possible the development of life*. For example, if the electric charge of the electron had been only slightly different, stars either would have been unable to burn hydrogen and helium, or else they would not have exploded. Of course, there might be other forms of intelligent life, not dreamed of even by writers of science fiction, that did not require the light of a star like the sun or the heavier chemical elements that are made in stars and are flung back into

¹ His "Large Number Coincidences and the Anthropic Principle in Cosmology" proposed the *anthropic principle* ("What we can expect to observe must be restricted by the conditions necessary for our presence as observers," 291) and the *strong anthropic principle* ("The Universe (and hence the fundamental parameters on which it depends) must be such as to admit the creation of observers within it at some stage. To paraphrase Descartes, 'cogito ergo mundus talis est.'" 294; the Latin means "I think, therefore the world must be such"). He also talks about what some specific physical constants have to be like in order for thinking life to exist. <http://adsabs.harvard.edu/abs/1974IAUS...63..291C> has his paper.

² Hawking, *History of Time*, 126 (see also 125–31).

space when the stars explode. Nevertheless, it seems clear that there are relatively few ranges of values for the numbers that would allow the development of any form of intelligent life. Most sets of values would give rise to universes that, although they might be very beautiful, would contain no one able to wonder at that beauty. *One can take this either as evidence of a divine purpose in Creation and the choice of the laws of science or as support for the strong anthropic principle.* [The latter is what we'll call *parallel worlds*; Hawking goes on to criticize it.]¹

Could the world by pure chance be so finely tuned that it can produce life? This seem very improbable. It's more likely that the world was created by an intelligent being (God) who designed it very carefully so it could bring forth life.

I created a Windows computer game to illustrate this *fine-tuning argument*. Go to <http://www.harryhiker.com>, click Software at the top, and then click on Genesis. When you start the program, a message comes up:

The object of this game is to set up the basic laws of your universe in such a way that life will eventually evolve. If your universe brings forth life, you win; otherwise, you lose.

Then the program appears:

¹ Hawking, *History of Time*: 129–30. For a popular presentation of this fine-tuning argument, see Patrick Glynn, *God: The Evidence* (Rocklin, Calif.: Prima, 1997), 21–55. For a detailed discussion, see Richard Swinburne, *The Existence of God* (New York: Oxford Univ. Press, 2004), 172–88.

Genesis - The Fine-Tuning Game

Create your own biosphere - set values and then click "start big bang."

Gravitational constant "g"	32
"Strong" nuclear force	480
Charge of proton	.073
Mass of proton	.23
Speed of light	186,000
Electron energy	610
Density of ice	.92
Total mass of universe	97,920,000
Universe expansion rate	54.352

Start Big Bang

Atheists click here:

Create Random World

You set values for the various constants, and then you click "Start Big Bang." You'll get a loud noise and a message that says:

Sorry, but your world self-destructed and didn't produce life. Please try again.

Or you can look under the words "Atheists click here" and click "Create Random World." This puts random numbers into the constants and then attempts to create a world. You'll again get a loud noise and a message that says:

Sorry, but your world self-destructed and didn't produce life. The RANDOM button gives you a chance to produce life of one in 100 trillion.

Students enjoy this program (which I use in class and students can use at home), and it quickly teaches what fine tuning is about.

My program, however, has various limitations:

- It needs more decimal places. As Hawking noted, the universe expansion rate has to be correct to the 17th decimal place for life to evolve.
- It lacks units. Should you give the speed of light in *miles per hour* or *kilometers per second*?
- It needs more physical constants (I give only nine). I don't know how many there are.¹
- The chance of producing life by giving random numbers to the values is *much less* than one in 100 trillion. I don't know what the number is.
- It doesn't have a parallel-worlds option. This could be added; a checkbox could open multiple copies of the program with randomly different values for the constants.
- There's no way to beat the program and produce life. Since I didn't know the correct values, I didn't have my program accept them.
- A better program would give words and images for the world that results from your values: maybe your world would lack stars, collapse quickly, or contain only hydrogen. A computer game that describes and shows this would be awesome, but it would require much scientific and programming expertise. Does anyone want to help me produce such a game?

Despite these limitations, the program serves a useful purpose to help students understand fine tuning.

We need to express the fine-tuning argument more precisely. First, let's say that a world is *fine tuned* provided that the physical laws and constants governing it (like the gravitational constant "g," the charge and mass of the proton, the density of water, and the total mass of the world) are in the narrow range of what's required for life to be possible. Then we can express the fine-tuning argument as an *inference to the best explanation*:

1. We ought to accept the best explanation for the world's fine tuning.
2. The best explanation for the world's fine tuning is that the world was created by an intelligent being intending to create

¹ <http://www.godandscience.org/apologetics/designun.html> presents 34 constants and tells about what happens to your universe if these constants are a little too high or a little too low. <http://www.godandscience.org/apologetics/quotes.html> has quotes from many scientists about the design of the universe.

life (this is better than the *chance* and *parallel-worlds* explanations).

3. Hence, we ought to accept that the world was created by an intelligent being (God) intending to create life.

Premise 1 rests on the idea that the world is fine tuned, which in general seems very solid even though there are controversies about details. The big dispute is how this fact of fine-tuning is to be explained, and whether it even needs an explanation.

The *chance explanation* says that it just happened that the world was finely tuned for life. Sure, it was a long shot; but long shots sometimes pay off – hey, people *do* win the lottery. This gives a third atheist alternative to Genesis 1:1:

Big-gamble big-bang atheism:

There's no God, the world about 14 billion years ago just popped into existence without a cause, and the basic physical laws and constants just happened (in a zillion-to-one coincidence) to be in the narrow range which would make life possible

But this seems extraordinarily implausible.

The *parallel-worlds explanation* uses the notion of “parallel worlds,” which are complete and real universes entirely separate from each other (so there can't be causal interaction between them or travel from one to another). This explanation proposes that there are an infinity of parallel worlds, each governed by a different physics, and that it was highly likely that *some* of these parallel worlds would produce life. There can be no evidence that there are such worlds; but they do permit an atheist worldview that makes the emergence of intelligent life probable. This gives us a fourth atheist alternative to Genesis 1:1:

Parallel-worlds big-bang atheism:

There's no God. But there are an infinity of parallel worlds. Each popped into existence without a cause, and each is governed by a different set of basic physical laws and constants. Our world happens to be one of the very few that produced life.

This too seems extraordinarily implausible. One of my students called it an “Ockham’s razor nightmare.” Classical theism (Genesis 1:1) is far simpler and more intuitive.

I ask my students to vote on which atheist explanation they prefer: *big gamble* or *parallel worlds*: “If you were an atheist, which would you pick?” While students have a hard time taking either alternative seriously, those of a science-fiction bent generally pick the parallel-worlds option.

I take fine tuning to be a strong argument. The simplest and best explanation for fine tuning involves God: the world was caused by a great mind who “fine tuned” its physical laws to make possible the emergence of life. This argument somewhat resembles Augustine’s argument, referred to earlier, but it avoids the evolution objection by talking about the conditions needed for evolution to work; evolution cannot explain why the physical constants are just right.

Now what does J.L. Mackie, my favorite atheist philosopher, say about the fine-tuning argument? Unfortunately, Mackie died in 1981, before fine tuning became popular. But he did make two brief comments about fine tuning, as part of a general discussion of the argument from design:¹

- Mackie says we have no idea what worlds would result from alternative physical constants, and so we can’t say they couldn’t have produced life. But actually, we do know much about what worlds would result. Hawking and others mention that specific changes would result in worlds that immediately collapse, or lack stars, or have only light elements like hydrogen, or whatever; and these worlds would be lifeless.
- Some debunk fine tuning by saying, “Of course the physical laws and constants are just right to allow us to have evolved! We shouldn’t find this so surprising, since otherwise we

¹ *The Miracle of Theism*, 141.

wouldn't be here!" Mackie doesn't think this is a good objection, since we *can* consider alternative possibilities (which do not include our being there to experience them).

We'll see later that some still raise a form of the second objection, the one that Mackie dismisses.

Antony Flew, who spent much of his lifetime writing books and articles against belief in God, is my second favorite atheist philosopher. What did Flew say about the fine-tuning argument? Actually, he accepted it and came to believe in God (a deistic God, not one who reveals himself). Late in life, he wrote a book about his conversion and about fine tuning.¹

Francis Collins, who led the important Human Genome Project that mapped human genes, was an important atheist scientist who encountered the fine-tuning argument. What did Collins say about it? He too accepted it and came to believe in God, in part on this basis. Unlike Flew, he went further and become a committed Christian. He too wrote a book about his conversion and about fine tuning.²

Some philosophers reject premise 1 ("We ought to accept the best explanation for the world's fine tuning") by arguing that fine tuning, even if a fact, requires no explanation. Elliott Sober writes:

The standard criticism of this [fine-tuning] argument invokes some version of the *anthropic principle*. The rough idea is that, since we are alive, we are bound to observe that the constants are right, regardless of whether the values of those constants were caused by ID [Intelligent Design] or by Chance. We are the victims of an *observational selection effect*.³

¹ *There Is a God* (New York: HarperCollins, 2007), 113–21.

² *The Language of God* (New York: Free Press, 2006), 63–84. Publications and Web sites about fine tuning give many further examples of atheist or agnostic scientists coming to believe in God on the basis (at least in part) of fine tuning.

³ "Absence of Evidence and Evidence of Absence: Evidential Transitivity in Connection with Fossils, Fishing, Fine-tuning, and Firing Squads," *Philosophical Studies* 143 (2009): 63–90; the quote is from 77. Sober's use of the term "ID" is misleading; the *fine-tuning* argument (which accepts evolution) differs greatly from the popular *intelligent design* (*creationism*) argument, endorsed mostly by biblical fundamentalists, which seeks to show that human life could not have evolved.

The idea here is that *of course* observers can conclude, since they are alive, that the actual laws of physics are consistent with their being alive. Thus the fine-tuning fact (that the laws of physics happen to be consistent with the existence of human life) can be expected, is unremarkable, and requires no explanation.

This objection is based on a confusion. If observers are bound to observe some fact, that doesn't show that this fact requires no explanation. Here are examples:

- You're reading this sentence. This shows *that* you know English. But it doesn't explain *why* you know English. The explanation might be that you learned English as you grew up in an English-speaking country.
- You hurt your neck in a car accident. This shows *that* there was a car accident. But it doesn't explain *why* there was a car accident. The explanation might be that another driver was sending a text message, lost control, and went into your lane.
- You typed 8709265562088453 for your credit card number, and this was accepted. This shows *that* it's a valid credit-card number. But it doesn't explain *why* it's a valid credit-card number. The explanation might be that it's listed in the official Visa database.
- The concert pianist supremely brags about how good your piano sounds. This shows *that* it's finely tuned. But it doesn't explain *why* it's finely tuned. The explanation might be that you recently had a piano tuner tune the piano.
- You exist. This shows *that* the laws of physics happen to be consistent with the existence of human life. But it doesn't explain *why* the laws of physics happen to be consistent with the existence of human life. The explanation might be chance, or parallel worlds, or design.

This approach suggests a fifth atheist alternative to Genesis 1:1:

Observation-selection big-bang atheism:

There's no God, the world about 14 billion years ago just popped into existence without a cause, and the basic physical laws and constants just happened (in a zillion-to-one coincidence) to be in the narrow range which would make life possible. But, since the fact that we exist shows *that* the laws of physics happen to be consistent with the existence of human life, we needn't worry about *why* the laws of physics happen to be consistent with the existence of human life.

This is as crazy as the *big gamble* and *parallel worlds* options.

Conclusion

The more we pursue alternatives to Genesis 1:1, the crazier they get – and the better classical theism and Genesis 1:1 appear.

The kalam and fine-tuning arguments for the existence of God seem strong. Why shouldn't we view them as *conclusive*? For several reasons:

- While these theistic arguments are based on our best current science, science tends to change over time. Maybe science will later go in the opposite direction.
- While alternatives to these theistic arguments (like the world popping into existence without a cause, big gamble, parallel worlds, and observation selection) seem flimsy, we can't show with certitude that they're impossible.
- Many intelligent people reject these theistic arguments. While their objections seem weak, maybe we're missing something – or maybe stronger objections will appear later.
- The fine-tuning argument uses an *inductive* inference-to-the-best-explanation, which isn't as clear cut as *deduction*.¹

¹ See my *Introduction to Logic*, 112–7. We can raise questions like these: On what grounds should we evaluate one explanation as *better* than another? Should we accept the *best possible* explanation (even though no one may yet have thought of it) or the *best currently available* explanation (even though none of the current explanations may be very good)? And why is the best explanation most likely to be the true one?

So the kalam and fine-tuning arguments, while strong, don't *force* belief on us. There's still an element of struggle and personal choice.

Let me end by giving yet another answer to the question I started with: "If I were God, what evidence would I give humans for my existence?" If I were God, I'd make people as distinct individuals; some would be more like Augustine (who struggles about faith) and some more like his mother Monica (who accepts belief more easily but has other challenges). I'd give my people somewhat different paths to follow toward me – like feelings, religious instincts, and reasoning. For those who pursue reasoning, I'd make it possible (but not easy) to find me this way too. Everyone would have some sign of my existence; but for no one would this sign be absolutely conclusive. Which signs are most important would depend on which path a person is following. And for a scientific age, where many people are inclined to reject me on the basis of science, I'd give scientific signs of my existence.

Right before I wrote this paper, I heard about a much acclaimed new book by Robert J. Spitzer, S.J., called *New Proofs for the Existence of God: Contributions of Contemporary Physics and Philosophy* (Grand Rapids, Mich.: William B. Eerdmans, 2010). A blurb on the back by our JPA secretary/treasurer, Joseph W. Koterski, S.J., calls it "a gripping and compelling account of the best current arguments for theism." I got the book from Amazon but kept it unopened on my desk until I finished the first draft of this paper. When I finally opened the book, I was delighted, especially with its convergence with my paper. (I view it as a minor miracle when Jesuits agree on anything!) Spitzer also thinks the arguments for God's existence have got stronger the last forty years or so, and he puts particular emphasis on the kalam and fine-tuning arguments (also presenting three philosophical arguments that don't depend on recent physics). I highly recommend his discussion of kalam and fine-tuning in the first part of his book, which strengthen my arguments; but be warned that his discussion gets very technical.