



PARENT GUIDE

THE GREATEST DEBATE

A Simple Defense Against Atheism

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Sending a child off to college is scary. There's the additional financial burden, concerns about whether your daughter will be safe as she walks around campus alone, and worries about whether your son will ever do a load of laundry—and if he attempts to do so, whether the washing machine will survive.

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For Christian parents, there's another source of anxiety: Will our children lose their faith in college?

This worry is well-founded. President of the Barna Group, David Kinnaman, reports that in 2019, 64% of 18-24 year olds “who were once regular churchgoers have dropped out at one time or another.” There's not a single cause that's responsible for this massive drop, but one major contributor that needs to be addressed is naturalism.

Sean Carroll, a theoretical physicist from Caltech and leading advocate for naturalism, defines this view as “a philosophy according to which there is only one world – the natural world, which exhibits unbroken patterns (the laws of nature), and which we can learn about through hypothesis testing and observation. In particular, there is no supernatural world – no gods, no spirits, no transcendent meanings.”

This definition alone makes it abundantly clear that naturalism is incompatible with Christianity, and its advocates make no apologies about it.

Furthermore, naturalism is a pervasive worldview at the university, especially among philosophers and scientists. In 2020, 1,800 philosophers from North America, Europe, and Australasia completed a survey that included the question, “Are you a naturalist, a non-naturalist, or something else?” Just over 50% of these philosophers identified as naturalists and only 31% identified as non-naturalists.

Demonstrating what percentage of scientists are naturalists is more difficult as we don't know of a sociological study that directly asks scientists about their worldview, but there are several studies that ask scientists about their religious beliefs, and these are a fairly reliable guide to the scientist's views on naturalism.

One sociological study of the religious beliefs of scientists from the Pew Research Center showed that 41% of scientists identified as atheists. Using this data, it's reasonable to conclude that a similar percentage are naturalists.



Maybe you pictured the university as an institution exclusively staffed by Marxist atheists with axes to grind. In that case, these numbers may come as a relief—but they are still significant.

According to that same Pew Research Center study, at least 95% of the general population are not atheists, so college professors are atheists (and thus a similar percentage are naturalists) at ten times the rate of the general population. To make matters worse, college professors are some of the most influential, intelligent, and persuasive people on the planet, and your student is going to spend hundreds of hours each semester carefully listening to them.

We don't mean to imply that university professors are systematically targeting and shaming Christian undergrads, as that's not been our experience. In fact, something much more dangerous is happening: professors are using naturalism as a framework to make sense of several of life's most important questions in a winsome way. It's no wonder that a significant number of our students leave the faith!

In order to help you best prepare your student to face this challenge, we present four challenges to naturalism that aim to show that it cannot make sense of many of life's most important questions. More specifically, we argue that naturalism does a poor job in explaining the origin of the universe, the design of the universe, morality, and lastly, that if it were true, it would undermine much of what we think we know. We've tried to make this guide as accessible as we can without oversimplifying the naturalists' position, but if you're unfamiliar with philosophical writing, there might be some parts that are challenging. This is par for the course though—parenting, as we're sure you know, is not for the faint of heart.



Will coming to understand naturalism and its flaws actually help teens hold on to their faith? In a **2006 sermon**, Tim Keller cited a 6,000 person study designed to assess the factors affecting why some young people embrace the faith of their parents while others don't. Keller paraphrased the study's findings, saying, "Kids [that] said my parents understand the real world, and they understand my world, and if I had a problem, I think they'd understand it... the kids that said that were much much much more likely to embrace their parents' faith."

This finding makes sense. To see this, imagine that C.S. Lewis was your father. Lewis, raised in a Christian home, became an atheist at 15, fought in World War I at 19, was educated at Oxford, and then returned to the Christian faith when he turned 32. With this wealth of experience, would you have any doubts that your dad understood the world? He had seen the best of what atheism and Christianity had to offer. In the light of those experiences, he found Christianity irresistible. Wouldn't knowing that your dad had gone on an epic quest that culminated in Christianity increase your trust in Jesus?

How To Use This Guide

In the next few pages, we're offering to be your guide on a quest that will:

- **Help you to come to a greater understanding of naturalism**
- **Help you understand the world of the university that your students are about to enter**
- **Fortify your faith**

We also have designed some conversation starter questions that will aid you in starting a dialogue with your student on these issues. Often the hardest part of talking about these weighty issues is getting started, and these will help with that! We recommend that you don't wait until your student has gone off to college to initiate this conversation, but if you do, that's fine. There's never a bad time to start talking about these important issues.

This guide is a tool for you to use in the way that works best for you and your family. If your student is highly interested in science, it might be helpful to focus in on the origin or the design challenge. If they're more of a humanities kid, then looking at the ethical challenge might be better.

CONVERSATION STARTERS



How do you think the community at college will be different than your current community?

Do you think shifting into this new community will affect any of your beliefs?





ORIGIN CHALLENGE:

Kalam Cosmological Argument

There's a long tradition of philosophers arguing that the natural world's origin requires a non-natural explanation. There are many different paths of thought that argue for a non-natural origin to all we see. Aristotle appealed to an unmoved mover, Thomas Aquinas appealed to the absurdity of infinite causal chains and the nature of contingency, and Gottfried Leibniz appealed to the principle of sufficient reason.

The argument we consider in this section, the Kalam Cosmological argument, is from the Islamic tradition called the *Ilm al-kalam*, the scholastic defense of Islamic theology that reached its height in the middle ages. Christian philosopher William Lane Craig revived this argument from obscurity in the early 1980s, and it's been of interest to philosophers ever since.

Craig uses this argument to establish that the cause of the universe is some sort of personal being. We're less ambitious than Craig: we only aim to use this argument to show that naturalism is false, and **any** non-natural cause of the universe, personal or otherwise, is sufficient to accomplish this.

Here's the argument in a nutshell:

1. Everything that begins has a cause.
2. The universe began.
3. So, the universe has a cause. (from 1 and 2)
4. If the universe has a cause, then naturalism is false.
5. **Therefore, naturalism is false. (from 3 and 4)**



The premises (1-4) of this argument entail the conclusion (5). This means that if all these premises are true, then the conclusion must be as well. **Let's look at each in turn.**



Kalam Premise (1)

Why think that everything that begins to exist has a cause? Why shouldn't we think that things could just pop into existence, uncaused?

To start, all our experience testifies that this is the case. To see this, scan around your environment and take inventory of a dozen or so things. No matter where you're at or what you pick, all of these things have something in common: they all began to exist and they were all caused to exist by something else.

**Is this enough to establish this first premise?
We don't think so, though it's a good start.**

Here's an analogy to explain why this isn't enough: We've seen loads of Teslas and all of them have flush door handles, but this isn't enough to establish that Teslas must have flush door handles. Why? Because we can easily and coherently imagine a Tesla with non-flush handles.

What about things that began to exist uncaused, can we also coherently imagine those? Give it a try. You might imagine something like this: you're sitting in your living room and all of the sudden a cow appears, out of nowhere, obscuring your view of the UT Longhorns game. (It's fine. You're not missing anything important. They've been way ahead for a few quarters now.)

This scene is easy to picture, but think carefully about it and you'll notice that you still think that there is

... it's painfully difficult to coherently imagine a case in which something begins to exist uncaused ...

some cause for the cow appearing. Maybe what you've imagined is a dream sequence, in which case your brain would have caused a dream cow to appear, or maybe you've imagined some sort of virtual reality simulation, in which case some computer program has caused a digital cow to appear.

If you are very careful to do your best to imagine a real world version of this silly scenario, you'll notice that it's impossible to resist coming up with some sort of cause for the cow's appearance. Maybe it was beamed into your living room à la *Star Trek*, or perhaps it's a time traveling cow à la *Terminator*.

Regardless of whatever cause you come up with, this exercise makes it clear that it's painfully difficult to coherently imagine a case in which something begins to exist uncaused, and this, in addition to the overwhelming confirmation from our experiences, constitutes a strong case for the Kalam's first premise.

Kalam Premises (2) and (3)

Why should we think that the universe began? There's two main lines of evidence here, but, before we get to those, it's valuable to notice that this claim enjoys a venerated status among scientists. An article on NASA's [website](#) states that, "...with advances in technology and the development of new techniques, we now know the age of the universe is 13.7 billion years." While there are some disagreements about the age of the universe, there's virtually no one that holds the view that the universe has just been hanging out in a steady state for eternity.

Scientists usually have no qualms about disagreeing with each other, but they all seem to agree about this. Why?

It's due to the strong supporting evidence from the second law of thermodynamics and the expansion of the universe.

Credit: Jeffrey Newman (UC Berkeley) and NASA



The second law of thermodynamics states that “the entropy of a thermally insulated system cannot decrease” and thus such systems will tend towards a state of equilibrium. That’s a mouthful, but the underlying thought is easy enough to understand. Suppose you heat up a slice of pizza, but just before you can enjoy it, you get an important phone call that lasts an hour. When you’re done with the call, what’s the state of the pizza? It’s room temperature. Why? Because, in accordance with the second law of thermodynamics, the thermally insulated system of the pizza slice and your kitchen have reached a state of equilibrium, and since there’s way more kitchen than pizza, the slice has cooled off considerably and the kitchen has warmed only slightly.

Now consider our universe. Stars are analogous to our slice of pizza and the vacuum of space is like the kitchen. Of course, stars are much hotter than fresh pizza, but the vacuum of space is much much colder than the kitchen, and **there’s waaaaay more empty space than matter in the universe**. Given enough time, the heat death of the universe will occur.

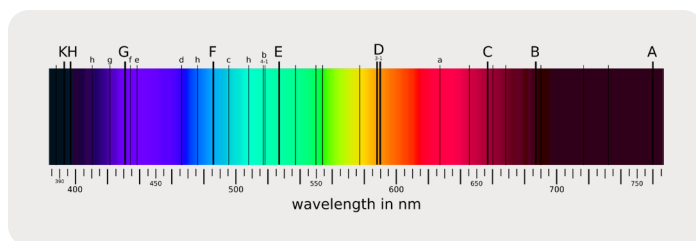
According to Fred C. Adams and Gregory Laughlin, astrophysicists at the University of Michigan, “heat death occurs when the universe as a whole reaches thermodynamic equilibrium; in such a state, the entire universe has a constant temperature at all points in space [...]. Without the ability to do physical work, the universe “runs down” and becomes a rather lifeless place.”

If the universe had existed for eternity, then it would have undergone heat death. But, we know it hasn’t undergone heat death, because it contains life—so it must have been around for only a finite amount of time. Therefore, the universe began.

The expansion of the universe also helps to establish that the universe began. Here’s the thought: if the universe is expanding, then, using natural laws, we can extrapolate backwards in time and discover that, at some point in the finite past, all the matter of the universe was condensed into a singularity—a volume so small it’s difficult to describe. Maybe that volume was so small that it was literally zero, and thus the universe expanded out of nothing, or as Christians like to say, *ex nihilo*. Another option is that it expanded from some pre-existing stuff that was just very tightly packed.

On the first option, the universe obviously began. On the second option the universe began too, at least in the same sense that your car began at some point even though all the stuff it’s made of existed before it. Either way, the universe began.

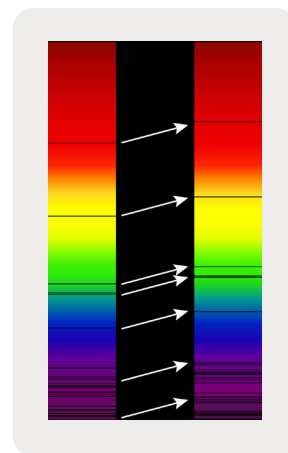
So, what’s the evidence for this expansion? It starts with spectroscopy, “the study of the absorption and emission of light and other radiation by matter.” When light passes through some substance, that substance absorbs light at particular wavelengths depending on its chemical makeup, and when a prism is used to split this light, dark lines appear in that spectrum **where the light has been absorbed**. This allows scientists to identify the chemical makeup of an object just by inspecting the light that it emits.



When this technique was used to try and discover the chemical composition of distant galaxies, some puzzling data emerged: the absorption lines for these galaxies were very similar to the absorption lines for our sun, except that all of these lines from other galaxies were shifted towards the red end of the spectrum.

[See illustration at right.]

What’s the explanation for what scientists call “redshift”? If you stood on the back of a pickup truck that was driving 60 mph, and threw a baseball forwards at 40 mph, the ball would achieve a speed of 100 mph. But, if you threw it at the same speed, but backwards, the ball would only be going 20 mph.



Something similar happens with waves that are emitted by moving sources. For example, when a race car zooms past a stationary observer, its sound **transitions from a higher pitch to a lower pitch**. The sound of the car’s engine is analogous



to the baseball: the car's movement compresses the soundwave and this increases its frequency and pitch as it approaches an observer, and the car's movement elongates the sound waves and this decreases the frequency and lowers the pitch it as the car travels away from an observer. This is known as the Doppler effect.

The Doppler effect also occurs with light waves. If an object is moving towards an observer, this will increase the perceived frequency of the light it emits, shifting it towards the blue end of the spectrum, and if an object is moving away from an observer this will decrease the perceived frequency of the light it emits, shifting it towards the red end of spectrum. And here's the thing— all but a few galaxies are redshifted. This means that almost all galaxies are moving away from us, and thus the universe is expanding.

So goes the case for the first two premises of the Kalam. If this case is successful, that is, if everything that begins has a cause and the universe began, then logically premise (3) must be true: the universe has a cause.

Kalam Premises (4) and Conclusion

This leaves the final premise, the claim that if the universe has a cause, naturalism is false.

Why believe this? The thought here is that when it comes to natural things, the universe is all there is. If this is right, then whatever caused the universe cannot itself be natural, and since naturalism is the view that only natural things exist, it follows that naturalism is false.

Naturalists know about this argument, and they have formulated responses, but before we get to those, let's first turn to another argument against naturalism, the challenge from design.

CONVERSATION STARTER

Does the Big Bang seem like a challenge to the Christian worldview, or is it something that Christians can embrace?





DESIGN CHALLENGE:

Fine-Tuning

Like the origin objection to naturalism, there's also a long tradition of philosophers arguing that the world is designed by a non-natural designer. To take just a few examples, the Stoics argued that the universe is designed because it's analogous to human artifacts that are known to be designed.

Aquinas noticed that things that lack intelligence "move towards an end" and this, he claimed, cannot happen unless these things are designed to do so. Isaac Newton appealed to the motion of heavenly bodies to argue that they are designed. All three claim that this design is due to a non-natural designer.

Since the early 2000s, Richard Swinburne, Robin Collins, Michael Rota, and William Lane Craig have appealed to the universe's fine-tuning to argue that God exists. **What does it mean to say that the universe is fine-tuned for life?** The idea here is that there are several physical constants, e.g. the strength of gravity, and if they were slightly different, life of any sort wouldn't be possible.

Thinking about an FM radio is helpful here. If you don't have the tuner dialed precisely to the right frequency, then your sound system won't relay the radio signal. All you'll get is static.

Similarly, if the physical constants are not tuned to the right values, the universe would not be able to sustain any life. This is the argument that we consider in detail in this section. Here, again, we're restraining our ambition: we only aim to use this argument as an objection to naturalism, not to establish that God exists.

Here's the argument:

1. Fine-tuning is best explained by necessity, chance, or design.
2. Necessity isn't the best explanation.
3. Chance isn't the best explanation.
4. So, fine-tuning is best explained by design. (from 1, 2, and 3)
5. If fine-tuning is best explained by design, then naturalism is false.
6. **Therefore, naturalism is false. (from 4 and 5)**



These premises (1-5) entail the conclusion (6), and thus, so long as they are true, naturalism must be false.

Are these premises true?



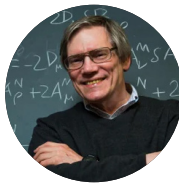
Fine-Tuning Premise (1)

There's an abundance of evidence that the universe is fine-tuned for life. For example, according to Simon Friederich, who has two earned PhDs (one in philosophy, the other in theoretical physics), "If gravity had been absent or substantially weaker, galaxies, stars and planets would not have formed in the first place. [...] If, in contrast, gravity had been slightly stronger, stars would have formed from smaller amounts of material, which would have meant that, inasmuch as still stable, they would have been much smaller and more short-lived."

A trickier but even more compelling example is something called the cosmological constant.

The cosmological constant measures the level of vacuum energy in the universe. According to **an interview with MIT theoretical physicist**

Alan Guth, "vacuum energy drives a repulsive force when it's positive, and vacuum energy can also be negative in which case it would drive an implosive force." These forces are significant because they "strongly affect the lifetime of the universe."



How strongly? Guth says that, "a typical positive vacuum energy universe would fly apart in 10^{-30} of a second," and that, "a universe with typical negative vacuum energy would implode on a time scale of 10^{-30} ." This time frame, of course, is not life permitting. So, the universe requires the cosmological constant to be close to zero to be life permitting, but how close does it need to be? For reference: the value of the cosmological constant in the universe is very close

to zero. It's 10^{-120} in Planck units. (If it's been a while since you've worked with scientific notation, that's a decimal point with 119 zeros behind it and then a 1.)

To get a sense of how small this number is, consider that there are only (roughly) 10^{80} atoms in the entire universe. How much larger could this constant be before the universe would be so short lived that galaxy formation would be impossible? Guth responds, "[this constant] could be as much as five or ten times larger than what we observe and life might still evolve." But, ten times larger is just one decimal point! Thus the life permitting range for the cosmological constant is somewhere between zero and 10^{-119} Planck units. Guth finds this evidence compelling and so do we: the cosmological constant is fine-tuned for life.

The gravitational and cosmological constants aren't the only examples of fine-tuning. Other natural laws are fine-tuned to sustain life, including mass of electrons, the relationship between proton and neutron masses, the electromagnetic force, and the strong and weak nuclear forces.

These incredible facts cry out for an explanation. What are the options? To start, either these constants have their values as a matter of necessity, or not. If not, then these constants were intentionally designed to have the values that they do, or these values came about by chance. These three explanatory options—necessity, design, and chance—exhaust all the possibilities, and thus, barring some sort of tie, one of them must be the best.

Three explanatory options—necessity, design, and chance—exhaust all the possibilities, and thus, barring some sort of tie, one of them must be the best.



Fine-Tuning Premise (2)

Necessity isn't the best explanation, because there's good reason to think that these physical constants could have been different. To see this, we need to think generally about how we know things could have been different.

Let's consider an example: some time earlier today, you ate something, but things could have been different: you could have skipped all your meals. This is something you know. But, not everything could have been different, after all some truths are necessary. For example, suppose you draw a triangle. No matter how you draw it, the triangle will have exactly three sides—no more, no less. This is also something you know.

How do you know these things? The answer lies in your imagination. First, notice that you can coherently imagine a day that is just like today, except that you skip all your meals. Of course that day will be different than today in some ways. Maybe you get fifteen minutes more sleep because you don't have to make breakfast, or you will have spent less money because you don't stop by Chipotle for lunch, but all of these are coherent. Things are different in the triangle case: you cannot coherently imagine drawing a triangle that has more or less than three sides. After all, drawing a triangle with more than three sides would be to draw a shape

that both has exactly three sides and does not have exactly three sides, and that's incoherent.

The lesson this pair of cases teaches is that being able to coherently imagine something being different is how we know that it could have been different, and that not being able to coherently imagine something being different is the grounds for how we know that it couldn't have been different.

So, can we coherently imagine that the physical constants have different values than they do? It sure seems like it! Take the Guth interview from above. He says that a universe with a cosmological constant in the typical range, which is larger than it actually is, "would fly apart in 10^{-30} of a second." This imagined scenario isn't compatible with there being any life, but it is coherent—it doesn't contain any contradictions, so that's good evidence that it could have been the case. Or consider the gravitational constant. Can't you coherently imagine it being a little weaker? Emily Driscoll, writing for *Scientific American*, has no trouble with this. She writes, "If gravity were weaker, Earth would be gigantic, and it might be oddly shaped like some asteroids—or a potato." This is strange, but it's coherent, and this again is good reason to think that the physical constants could have been different. They are not necessary.

Fine-Tuning Premise (3)

Is chance the best explanation of the fact that the universe is fine-tuned for life? When, generally, is chance the best explanation of something? Suppose that you're at the top of a skyscraper and you're trying to set **the world record for highest basketball shot**. There's a basketball goal 800 feet below and it's surrounded by a bunch of stuff that's not basketball goals. You toss off your first shot and it catches a wind current and lands nowhere near the basket, smacking an AC unit. You're not discouraged: you've got time, money, and most importantly, loads of basketballs, so you spend the next week trying to break the record. You take thousands of shots, and in this process pedestrians are traumatized, cars are dented, and basketballs are battered. You start to feel discouraged and then, on a shot that feels just the same as all the others, your dream comes true and the ball goes in.

While each individual shot you took had a very small chance of going in, the overall chance of one of these shots going in, given a sufficient number of attempts, is quite high—high enough to make it very probable. Therefore, chance is the best explanation for this shot going in.



What about the fact that our universe is fine-tuned for life, is it also best explained by chance? Let's inspect this carefully by comparing the basketball case with the universe. Notice first that it's far more likely that you hit the basketball shot than it is that the universe is fine-tuned for life. Consider the cosmological constant: the range that it needs to be in to permit life is somewhere between zero and 10^{-119} . Because this is such a mind bogglingly small range, there's proportionally far more values that the cosmological constant could have had that would not have permitted life. And this is just one of the physical constants. Accordingly, the chance that the universe is fine-tuned for life is extremely low—much much lower than the basketball going in.

This alone, however, isn't enough to establish that chance isn't the best explanation for the fact that our universe is fine-tuned for life. Remember that the main reason that it ended up being very probable that some basketball went in by chance was that *so many shots were taken*. If it were established that our universe is just one of many universes and any of these had a "shot" at being fine-tuned for life, then, supposing there were enough of them, it would be very probable that one of these ended up fine-tuned for life just by chance. This is a fascinating conjecture, but until it's established, that's all it is—conjecture. Unless there's good evidence that the universe is just one of many, chance is not the best explanation of the fine-tuning.

Fine-Tuning Premise (4)

To recap: the best explanation for the fact that the universe is fine-tuned for life is either necessity, chance, or design. Furthermore, there's strong reasons that show that necessity and chance aren't the best explanations, so that only leaves design.

What does this explanation amount to? This is the view that the universe's physical constants were intentionally set by something—or Someone. This explanation fits, and it's a kind of reasoning that we use all the time.

For example, suppose you happen across a piano. It's a collection of wood and metal, and it's clear that there's lots of ways this collection could be arranged differently, so this piano isn't explained by necessity. Furthermore, only a tiny percentage of these arrangements are capable of making music, so it also isn't explained by chance. This only leaves design, and this is the right explanation: pianos are intentionally made by people. This same reasoning applies to the universe and so the best explanation of why the universe is fine-tuned for life is design.

Fine-Tuning Premise (5) and Conclusion

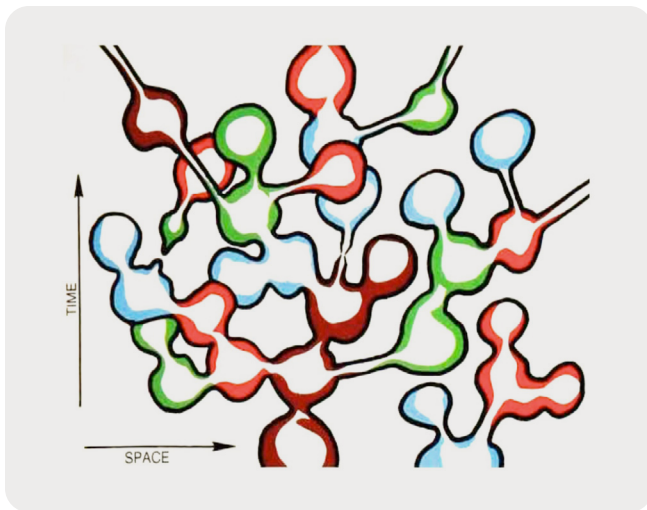
This spells trouble for naturalism. The thought here is that if something designed the universe, it would have to exist outside the universe—it would have to be non-natural because the universe is the sum total of all the natural things. If this is right, then whatever designed the universe cannot itself be natural, and since naturalism is the view that only natural things exist, it follows that naturalism is false.

How do naturalists respond to these two challenges?

CONVERSATION STARTER

How do we know whether something is the result of chance or whether it's designed?





Naturalist Response: Multiverse Theory

Many influential naturalists advocate for something they call “multiverse theory.” Sean Carroll, theoretical physicist at Caltech and advocate for this theory, expresses it neatly: “The thing we call ‘the universe’ is just one of an infinite number of regions in a much larger universe of universes, or multiverse.”

Stanford theoretical physicist Andre Linde, in his article “**A Brief History of the Multiverse**,” goes a bit deeper. According to him, multiverse theory “describes our world as an eternally growing self-reproducing fractal consisting of many locally homogeneous parts (mini-universes).” Furthermore, “the laws of the low-energy physics and even the dimensionality of space in each of these mini-universes may be different.”

Other prominent advocates for this view include MIT’s Max Tegmark and Alan Guth, Columbia’s Brian Greene, Tufts’ Alexander Vilenkin, Cambridge’s Martin Rees, and Nobel prize winner Steven Weinberg.

This is some cause for excitement for Marvel and DC fans. So long as your favorite superhero’s power doesn’t violate any natural laws, then they actually exist! For example, Batman and the Joker are certainly out there in some other universe duking it out—but don’t get your hopes up for a real Superman or Dr. Strange as their abilities seem to violate natural laws, and there also very probably can’t be any universe-hopping the likes of which features in *Spiderman: No Way Home*.

Multiverse theory promises disaster for premise (3) of the fine-tuning challenge, the claim that the universe’s fine-tuning is not best explained by chance. We anticipated this earlier when we wrote that if it were established that our universe is just one of many universes and any of these had a “shot” at being fine-tuned for life, then, supposing there were enough of them, it would be very probable that one of these ended up fine-tuned for life just by chance. Multiverse theory promises to do just this: it supplies an infinite number of universes and a random distribution of the values of the physical constants in these universes.

Multiverse theory might also have the resources to meet the origin challenge posed by the Kalam by showing that premise (4) is false. Premise (4) is the claim that the universe requires a non-natural cause, and it’s because of this that naturalism is false. If multiverse theory is established, it would constitute a clear counterexample to this claim since our universe would have a natural cause.

This objection, however, is not deep. While it would defeat our particular version of the Kalam, there’s another iteration of the argument that neatly sidesteps this objection. Namely, we could run a Kalam-style argument for the whole multiverse, and so long as the multiverse begins, this argument will cause just as much trouble for naturalism as our first version.

According to multiverse theory, does the multiverse begin? It depends on the version of the theory. MIT physicist Alan Guth writes, “Alex Vilenkin, Arvind Borde, and I showed that [the inflation that creates mini-universes] cannot have extended eternally into the past, but instead the inflating region must have had a past boundary of some kind.” So, if Guth is right, then we can “Kalam” the multiverse. But maybe he’s not right, maybe the multiverse doesn’t have a beginning. If a theory like that could be established, then it would constitute a deep objection to the Kalam.

“The thing we call ‘the universe’ is just one of an infinite number of regions in a much larger universe of universes, or multiverse.”



Problems with Multiverse Theory

All of this raises a big question: can such a multiverse theory be established? **What's the evidence for this theory?**

George Ellis, physicist from the University of Cape Town and a multiverse skeptic, puts his finger on the issue:

The basic problem with all multiverse proposals is the presence of a cosmic visual horizon. The horizon is the limit to how far away we can see, because signals traveling toward us at the speed of light (which is finite) have not had time since the beginning of the universe to reach us from farther out. All the parallel universes lie outside our horizon and remain beyond our capacity to see, now or ever, no matter how technology evolves. In fact, they are too far away to have had any influence on our universe whatsoever. That is why none of the claims made by multiverse enthusiasts can be directly substantiated.



Scientific experimentation requires observation of some sort, and the cosmic horizon makes such observations impossible, so this makes multiverse theory unscientific in an important sense.

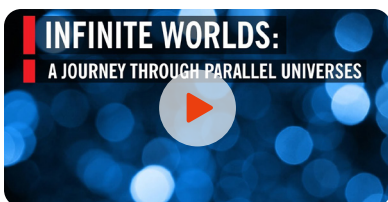
Multiverse theory advocate **Andrei Linde** knows about this problem, and in response to it he writes:

I do believe that we already have strong experimental evidence in favor of the theory of the multiverse. [...] The anomalously small value of the cosmological constant, the extreme smallness of the electron mass, the near coincidence between the proton and neutron masses, as well as the fact that we live in a 4-dimensional space, are experimental data, and the only presently available plausible explanation of these and many other surprising experimental results has been found within the general framework of the theory of the multiverse.



What exactly is the argument here? Perhaps it's something like this: if there's a multiverse, then we expect to find that the universe is fine-tuned for life. Hey look, we do find that the universe is fine-tuned for life, so therefore, there is a multiverse.

We seriously doubt that this is Linde's argument because it's obviously fallacious. It's an example of **affirming the consequent**. The logic of this argument is the same as: If Axis CEO David Eaton is Batman, then no one will have ever seen David Eaton and Batman in the same room together. In fact, no one has ever seen David Eaton and Batman in the same room together, therefore, David Eaton is Batman! The premises of this Batman argument don't entail its conclusion, as there are lots of people who have never been seen in the same room as Batman who are not Batman.



Similarly, there are explanations other than multiverse theory for why our universe is fine-tuned, e.g. design. So, Linde must be making a different argument.

Linde is not the only physicist that uses the fine-tuning facts to support multiverse theory. In **a panel discussion**, when Oxford physicist Nick Bostrom was asked what the evidence for multiverse theory is, he answered, "One of the reasons for taking [multiverse theory] seriously is [...] the fine-tuning problem."

Then Bostrom goes on to say that there are only four possible explanations for the fine-tuning facts, and this should sound familiar at this point: necessity, design, and he splits the chance category into two options—chance without a multiverse and chance with a multiverse.

He makes the same points about necessity and chance without a multiverse that we've made here, and then when he gets to the design option he says, "You could believe that God designed it to be like this, but that explanation has all sorts of other problems that are well known,"... and he leaves it at that.



This response is illuminating. Bostrom is arguing for multiverse theory by saying that it's the best explanation of the available data, and if we're charitable to Linde we think he's doing the same when he wrote, "the only presently available plausible explanation" of the fine-tuning facts is multiverse theory.

What's interesting here is that both Linde and Bostrom dismiss the design explanation out of hand, without giving any reason. This is incredible given the history of intellectual giants, many of whom founded modern science, who endorsed the design explanation. Why would they be so dismissive? The only thing that makes sense of this is that they're assuming naturalism is true. This would do the trick, for naturalism is a powerful objection to any sort of non-natural design. (Further corroborating evidence that it's an assumption of naturalism doing all the work here is that **Bostrom** isn't opposed to design as an explanation for the fine-tuning facts so long as the designers are purely naturalistic. Evidence of this is that he believes that there's a one in three chance that the universe is just a **computer simulation** being run by super intelligent posthumans. Yeah, you read that right.)



This sort of response has led critics of multiverse theory—like Paul Davies, an Arizona State physicist—to say, "invoking an infinity of unseen universes to explain the unusual features of the one we do see is [...] ad hoc."

What does it mean for an argument to be ad hoc? **The Internet Encyclopedia of Philosophy** characterizes the fallacy in this way, "Psychologically, it is understandable that you would try to rescue a cherished belief from trouble. When faced with conflicting data, you are likely to mention how the conflict will disappear if some new assumption is taken into account. However, if there is no good reason to accept this saving assumption other than that it works to save your cherished belief, your rescue is ad hoc."

We agree with Davies that multiverse theory is ad hoc. These physicists have a cherished belief that's in trouble: naturalism. But, there's a way out. If they just **postulate** a new assumption, the multiverse, this conflict disappears. While employing this strategy is a tempting way to try to rescue naturalism, it's a bad way to reason unless there's some independent line of evidence for multiverse theory, and we've already seen that the cosmic horizon makes obtaining this evidence impossible.

Furthermore, this defense of multiverse theory, one that assumes the truth of naturalism, cannot properly be used as a defense against the fine-tuning challenge to naturalism. This is because it's always inappropriate to assume the truth of a view in order to defend it from an objection.

For example, suppose that someone objected to Christianity by claiming that the Bible is full of contradictions and thus couldn't be inerrant. It would be inappropriate to respond to this objection by quoting 2 Timothy 3:16, which says that all scripture is God-breathed, because this response assumes the truth of inerrancy, and this view is what is at issue.

... it's always inappropriate to assume the truth of a view in order to defend it from an objection.



Finally, multiverse theory has a serious simplicity problem. According to philosopher Alan Baker, “Most philosophers believe that, other things being equal, simpler theories are better.” It’s not just philosophers that incorporate simplicity into theory evaluation—scientists adopt the same line. For example, Cornell scientist Hugh Guach writes, “The principle of [simplicity] recommends that from among theories fitting the data equally well, scientists choose the simplest theory.”

These principles constitute a cost for multiverse theory because the multiverse is as complex as things come. It’s hard to get an intuitive grip on large numbers, and thus it’s all the more difficult to get a sense of infinity. Regardless, it’s important to try and get some grip on how wildly complex something like the multiverse would be.

Admirably, multiverse theory proponent **Brian Greene** doesn’t shy away from describing the complexity of a hypothetical multiverse. He writes,



In the far reaches of an infinite cosmos, there’s a galaxy that looks just like the Milky Way, with a solar system that’s the spitting image of ours, with a planet that’s a dead ringer for earth, with a house that’s indistinguishable from yours, inhabited by someone who looks just like you, who is right now reading this very book and imagining you, in a distant galaxy, just reaching the end of this sentence. And there’s not just one such copy. In an infinite universe, there are infinitely many.

The multiverse is vast, and in it, anything that’s physically possible actually exists... an infinite number of times. Because of this, any alternate theory that can explain the data that the multiverse theory explains should be preferred.

Multiverse theory should be rejected. In principle the multiverse is impossible to observe, so it can never be scientifically tested, it’s grossly ad hoc, and it’s monstrously complex. Accordingly, multiverse theory cannot rescue naturalism from the origin and design challenges, and in this light, one should reject naturalism.



CONVERSATION STARTERS

Do you think that there is someone who is a perfect duplicate of you who exists in a different universe?

If they did, how would we know?





ETHICAL CHALLENGE

The Argument from Objective Morality

For over 2,000 years, the vast majority of philosophers – like most people in general – have thought that morality (or ethics) is real and objective. As moral philosophers usually use the term, to say that morality is objectively real is to say that it is mind-independent: moral facts and features exist, and they exist independently of anything going on inside our minds.

The great theories of ethics – from Aristotelian or Confucian virtue ethics, to Immanuel Kant’s deontology, to John Stuart Mill’s utilitarianism – have all held that there were moral truths out there in the world awaiting our discovery. Since at least the medieval period, this fact has been leveraged as rational support for the existence of God. We will stop short of that, though, and trace a line from the objectivity of morality to the falsity of naturalism.

Perhaps no version of this argument has had more impact than that laid out by C. S. Lewis in Book 1 of his classic *Mere Christianity*. Lewis begins his argument with the simple observation that all of us think, talk, and act as if there is an objective law to rule our behavior; in just a handful of pages, he delivers us the conclusion that there must be something immaterial or nonnatural behind that law!

We can capture his line of reasoning as follows.

1. There is a “moral law”, which is objectively real and non-natural.
2. If there is something non-natural, then naturalism is false.
- C. So, naturalism is false.**



As with the Kalam argument, premises (1-2) logically entail the conclusion (3) that naturalism is false. So, to avoid the conclusion, one must reject at least one premise. Can either of the two premises be reasonably rejected? **Let’s examine each.**



Initial Defense of Lewis's Premises (1) - (2)

We can make quick work of premise (2). Premise (2) is true by definition, since naturalism just is the view that there is nothing beyond the natural realm.

Now to the real action: premise (1). Why should we believe that there are moral facts which are objectively true (or moral features which are objectively real) and not natural? An important first step here is to see that we all assume that there are moral facts and features. This is because we all have moral beliefs (such as, "I should not harm a baby for no reason."), and to believe something is to believe it to be true.

So there seems to be no real doubt about the existence of what Lewis calls the "moral law;" the only question is about the nature and cause of its existence. Very well, then – but why think that the truth of moral claims, or the reality or moral features, is an objective matter, as the premise says?

The simplest and most general argument is this: by definition, morality must be either objective (mind-independent) or subjective (mind-dependent). But Lewis' observation is that we simply do not treat morality as if it were a subjective matter. "The Moral Law", he says, "is not a mere fancy, for we cannot get rid of the idea... And it is not simply a statement about how we should like men to behave for our own convenience... [it] must somehow or other be a real thing—a thing that is really there, not made up by ourselves."

The point can be made most effectively when thinking about horrendous evils. We all want to say that the events of the Holocaust were evil. And when we say this, we mean that they were really, truly, objectively evil – we do not merely mean that they happen to run contrary to our preferences, or that they disagree with our current customs, or anything like that. Now, perhaps there is, after all, some material force that causes us to treat such things as an objective matter when in fact they are not (see objection 2 below). But for now, the point is simply that morality does not seem to us to be a subjective thing at all.

For all that we have said, morality might be objectively real in the same sense that material and natural things are objectively real – and so the crucial premise of Lewis's argument might still be resisted. Just as there are laws of physics, one might think, there are also laws of morality woven into the fabric

of the natural world. The problem again, though, is that this simply does not seem to be true. Here Lewis observes what philosophers have called the "is-ought gap," or the distinction between the "prescriptive" and the "descriptive." Laws of nature, Lewis observes, *describe* what is and what happens, but moral claims seem to belong to another category, *prescribing* what should happen. He writes, "The law of gravity tells you what stones do if you drop them; but the [moral law] tells you what human beings ought to do."

Think of it another way: where in the world do we perceive moral facts and features with our senses? If we were to cut open the brain of a serial killer, none of us would expect to find, even with the best scientific equipment, little bits of evil which caused him to do what he did. Indeed, the very idea of trying to locate the evil inside the physical brain seems silly from the start! That is because morality does not seem to be like that; it is not something we can get at with our senses – and that readily leads to the suspicion that it is not a part of the natural realm.

It may help to note, in summing up our initial case for premises (1) and (2), that even opponents of atheism grant this commonsense argument in favor of an objective and non-natural morality. For example, J. L. Mackie, noted for his infamous arguments against the reality of both morality and God, agreed that for there to be moral facts would require there to be "objective prescriptions", "utterly different from anything else in the [material] universe."

In other words: people on all sides tend to agree that, as contemporary moral philosopher David Enoch wrote, "What no theory can do... is ignore the very strong appearance that morality is objective."



CONVERSATION STARTERS

Can you think of something which you are confident would be wrong even if the majority of people around you agreed that it was acceptable?

How would you try to persuade someone who rejected that idea?



Naturalist Response: Reject the Objective Reality of Ethics

Appearances, though, can be deceiving. We have made a common sense case that morality very much seems to be objectively real and nonnatural; but perhaps that sense is illusory. The two most formidable responses to this argument claim just that: one by claiming that morality is not objectively real, and a second by claiming that these moral intuitions can be given a natural explanation. We shall treat them in turn, with the second response itself leading to an additional powerful argument against naturalism.

Those who reject the objective reality of morality tend to work toward the idea that ethics is subjective in the sense we described above: they hold that whether a moral claim is true is mind-dependent. They claim that whether something is right or wrong (or good or bad) is determined by the attitudes (or mental states) of some person or persons. From there, non-objectivists tend to argue either that moral claims are true only relative to some predetermined standard (this is what moral relativism holds), or else that the subjectivity of morality shows that there is nothing there even worth acknowledging as real (this is what moral anti-realism or moral nihilism holds).



Those who reject the objective reality of morality tend to work toward the idea that ethics is subjective ...

It might be worth pausing to reflect on the fact that almost nothing else in the world seems to be deeply subjective in this way. Consider a few examples. As nice as the story of Peter Pan is, you cannot alter the fact of gravity simply by believing or wishing that you could fly. Physical forces are not mind-dependent. Or imagine that everyone in Russia agreed that George Washington was *not* the first President of the United States. That would hardly make it true that, when you are in Russia, Washington is not the first American President. Whether a claim of history is true is not dependent upon our agreements. Or suppose instead that I believe and insist that I am a very good three-point shooter, when in fact I have only made one three-point shot in my 1,000 attempts. Even most evaluative judgments (concerning what is “good” and “bad”) seem to be obviously objective.

Given that almost nothing in the world is subjective in the sense we are discussing and given further that, as we just saw, it seems to be a bit of common sense that morality is *objective*, why would anyone believe that it is subjective?

Far and away the most powerful argument for subjectivism has been the argument from disagreement. The argument, in a nutshell, holds that the presence of deep widespread disagreement (between individuals, cultures, or societies) is conclusive evidence that morality is not an objective matter. This argument is not new – it is discussed explicitly in several works by the ancient Greek philosopher Plato.

However, the argument found renewed interest in the 20th century in no small part due to findings in anthropology and sociology that seemed to reinforce the idea that there is widespread disagreement about



ethics. The argument is often made rhetorically effective by observing that, for example, had you been an American born and raised in the antebellum South, you would have very likely believed that slavery was morally permissible. How, then, can you assert with confidence that it is objectively true that slavery is morally wrong? Would it not be more reasonable and humble to admit that your belief is subjective?

The crux of the argument can be represented as follows.

1. If there is widespread disagreement about something, then there can be no objective fact of the matter about that thing.
2. There is widespread disagreement about morality.
3. **Therefore, there are no objective facts of morality.**



Now, the structure of the argument is pristine – if premises (1) and (2) are true, the conclusion logically follows. However, both premises seem to be clearly false. We will focus on the more crucial premise, (1).

If premise (1) is true, then you should be able to run the same line of reasoning on any issue – not just controversial ones in areas such as ethics, politics, or religion. For example, premise (1) implies that, since there is disagreement among cosmologists and physicists as to when the material universe began, there is no objective fact of the matter as to when it really did begin. But that is clearly absurd! Either the universe did begin to exist 13.7 billion years ago, or it did not; and the fact of the matter does not change with our altering beliefs or desires (or even expert consensus) on the issue. Rather, we assume that our inquiries are discovering (not creating) some fact of the universe that holds true regardless of whether we think it true.

That is all well and good, someone might say – but these are issues of science, which everyone admits are objective. At this point, though, it is the proponent of ethical subjectivism who needs to explain why we should think that moral claims are any different from the objective claims of science, mathematics, history, and, come to think of it, just about every other area of inquiry known to man. And, of course, it will do no good to respond by saying that ethics is different because there is widespread disagreement about ethics; for that response essentially smuggles in the very point awaiting proof: the idea in premise (1), that widespread disagreement is evidence of subjectivity.

It is worth mentioning that there is plenty of opportunity to go on the offensive here. Not only is the main argument in favor of subjectivism a bad one (as we have just seen); subjectivism is

itself riddled with philosophical problems. For one thing, the view seems to lead to contradictions. If we now believe that slavery is wrong, but those in the antebellum South believed that slavery is permissible, a view that makes moral truth relative to culture seems required to say that both beliefs are true. But it obviously cannot be true that “Slavery is wrong and slavery is not wrong.”

Relativists often reply that, since morality is relative to culture, we cannot evaluate the practices of another culture from within our own. But this rejoinder only creates more problems – the worst one being that it seems to imply that every ethical standard-bearer is infallible. Since whatever the individual, culture, or society in question judges to be right *just is* right, they can never be wrong, or be corrected according to a different standard. The idea is clearly implausible: it seems obvious that individuals, cultures, and societies all err in their moral judgment at least occasionally.

And these are only two critiques of subjectivism; in his seminal work, *The Right and the Good*, renowned moral philosopher W. D. Ross enumerates no less than a dozen such critiques, each devastating on their own, in capturing why ethicists as a whole have tended to reject such views.



CONVERSATION STARTERS

What do you tend to do when you find that one of your peers disagrees with you about something?

What do you think is the reasonable way to respond to disagreements?



Epistemological Challenge: The Evolutionary Argument Against Naturalism

Even if there were good arguments in favor of subjectivism about ethics, and even if there were not good arguments against subjectivism about ethics, the subjectivist would still owe us an explanation (as David Enoch pointed out) for the strong appearance of the objective reality of morality. If morality is, after all, not objectively real, then why has almost every human being in history had the strong sense that it is?

This question is made more pointed by the fact that the objective character of moral judgements seems to be quite plain – the statement that “Torturing infants for fun is wrong” seems almost as much an item of commonsense as the statement that “Things fall to the ground when dropped”. How could human beings as a whole be so consistently wrong about something so basic?

What this challenge is asking for is what philosophers call an *error theory*: an explanation as to how there could be widespread error about something that seems clear and obvious. Among ethicists, error theories are usually endorsed by anti-realists who wish to argue that, although it sure looks like there are objective moral truths, there are actually no moral truths at all – objective, subjective, or otherwise.

As before, there is far and away one idea that anti-realists tend to circle around here: what philosophers have called ‘evolutionary debunking’. The general strategy is to appeal to evolutionary forces as the explanation of our beliefs about morality in just the same way that one might appeal to evolutionary forces as the explanation of any of our other

physiological features. The most important piece of the appeal is the point that evolutionary forces select for survival rather than truth. The upshot is supposed to be that, since our moral beliefs are just a product of an evolutionary process which does not aim at truth, we have no reason to trust that they are true.

For present purposes, let us leave aside doubts about the truth of evolutionary biology and psychology, the degree to which such theorizing is merely speculative, or whether it can be made to agree with a Biblical worldview. For the sake of this discussion, let us simply grant the truth of evolutionary theory.

C. S. Lewis does just this in his own discussion, anticipating the objection that what he has called the ‘moral law’ is really just a “herd instinct”. Lewis’s own response is twofold. First, he replies that our sense of the moral law is often the thing that urges us toward one instinct or another (say, toward the instinct to help others instead of the instinct to preserve self-interest) – as such, it cannot itself be one of the instincts. Second, Lewis argues that, given the authority we ascribe to the moral law, relegating it to the status of an “instinct” would be to suppose that there is, inside each of us, an instinct which is never at fault. But we all know from experience that none of us possess such an instinct.

Now, we think that Lewis’s arguments are good as far as they go, but they could go farther, especially given the place of societal prominence that evolutionary theory (the contemporary placeholder for Lewis’s “herd instinct”) now holds.

One Christian philosopher, **Alvin Plantinga**, has developed an argument specifically designed to undermine the naturalist’s appeal to evolutionary theory. It is called “The Evolutionary Argument Against Naturalism” (EAAN). It begins by supposing, as our naturalist does, that evolutionary theory is true. Then, it reasons roughly as follows.



1. If evolutionary theory is true, then it is highly unlikely that our cognitive faculties reliably deliver us true beliefs.
2. If it is highly unlikely that our cognitive faculties reliably deliver us true beliefs, then we all have reason to doubt the truth of each of our individual beliefs.
3. If we all have reason to doubt the truth of each of our individual beliefs, then one who believes naturalism has reason to doubt the truth of naturalism.
4. Therefore, if evolutionary theory is true, one who believes naturalism has reason to doubt the truth of naturalism.



... once you cast evolutionary forces as the cause of our general belief-forming processes, it is not just moral beliefs that are undermined – no belief is safe!



Here, premise (1) is a consequence of the assumption that evolutionary forces aim for survival, not truth. As such, it is unlikely that any faculty we have is designed to produce true beliefs.

Premise (2) is just an unfolding of the idea of a reliable cognitive faculty or a reliable process: if we have reason to believe that the process which produces our beliefs is not aimed at truth, then we also seem to have reason to believe that each belief resulting from that process is not itself true. This includes a belief that naturalism is true – which is what premise (3) specifies. Logically, it follows that, as the conclusion (C) states, belief in evolution rationally undermines belief in the truth of naturalism.

The genius of Plantinga's argument is that it takes the naturalists' key point about evolution (that evolution does not select for truth) and fires it back at them. For what the argument shows, if successful, is that one cannot rationally hold both naturalism and evolutionary theory to be true – since belief in evolutionary theory would undermine rational justification for all other beliefs one has, including the belief that naturalism is true!



Philosopher **Katia Vavova** explicitly connects this observation to the attempt to use evolutionary theory to undermine the claim that morality is objectively real. For the idea, recall, was supposed to be that casting our moral beliefs as a “herd instinct”, or the result of evolutionary forces, undermines our reason for thinking that they are true. But once you cast evolutionary forces as the cause of our general belief-forming processes, it is not just moral beliefs that are undermined – no belief is safe!

So, a fatal dilemma awaits the naturalist here: either give up your best error theory explaining the strong appearance of an objective and non-natural morality, or else embrace evolutionary theory to the discredit of all your beliefs.

In a surprising turn, if the crux of the EAAN is correct, then evolutionary theory is far from being a threat to the idea of an objective and non-natural morality, or even from being a plausible explanation of our strong intuition that there is an objective and non-natural moral reality. Indeed, it seems that evolutionary theory cannot be the basis of any objection to moral realism without also undermining naturalism in just the same way. In evolutionary theory we might actually find an additional powerful argument against naturalism.



CONVERSATION STARTERS

What do you think is the best explanation of our moral beliefs – our sense of right and wrong?

Why do you in particular have the moral beliefs that you do?
Why in general do you think human beings have moral beliefs?



Conclusion

We started off by observing that a major threat to your student's faith is the prevalence of the naturalist worldview in the university and beyond. Prevalent though this worldview may be, we can see that it does not hold up well in the face of rational scrutiny.

In order to explain the origin and apparent design of the material world around us, the naturalist is pushed to endorse the idea that there is an infinite number of material universes, which have collectively existed eternally. In order to explain the simple existence of our moral intuitions and the objective reality of morality, the naturalist is pushed to endorse the unlikely hypothesis that, as a happy accident, evolution blessed us with true beliefs about morality—despite the fact that evolutionary forces narrowly target survival rather than truth.

In both cases, the naturalist retreats to positions that are weak in both logic and evidence. It appears that the naturalist is guilty of something Christians are often criticized for: blind leaps of faith!

None of the explanatory strategies from the naturalist is very intellectually satisfying. On the other hand, the Christian worldview can offer simple, elegant, satisfying explanations of all of these things by postulating just one thing: the existence of a certain kind of God. This idea has the advantage over naturalism that it is independently supported by **hundreds of credible arguments**.

If there is any threat to the Christian faith due to naturalism, then, it is *not* because there is rational pressure to adopt naturalism. Christian parents can have confidence that, if their students genuinely set their minds to know the truth by following the evidence, the Lord will strengthen their faith, and, as Paul wrote in Colossians 1:23, not allow them to be “moved away from the hope of the gospel which they have heard.”

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