

# OpenTheo

## Should you take a leap of faith? | Praveen Sethupathy

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### The Veritas Forum

PART OF A SPECIAL 6-WEEK SERIES | This season, we've talked with people at the intersection of science and God — scientists, mathematicians, engineers, and a historian of science — all of whom are Christians. For them, they see no fundamental conflict between their faith in God and their faith in science. But what about you? Are you skeptical? For our final episode, we talk with Dr. Praveen Sethupathy, a genomics researcher and professor at Cornell University, about his journey to Christianity. Praveen's interest in Christianity grew as he was developing his skills as a scientist — and he used those skills to approach the Christian faith. Listen to learn how you can reason through what you believe — and why — and what to do when you find yourself with gaps of knowledge in front of and behind you. Like what you heard? Rate and review *Beyond the Forum* on Apple Podcasts to help more people discover our episodes. And, get updates on more ideas that shape our lives by signing up for our email newsletter at [veritas.org](http://veritas.org). Thanks for listening!

### Transcript

This season, we've talked about the relationship between science and God, and in particular Christianity. Is it a relationship of conflict, of independence, of complexity? And we've talked with people right at the intersection of both science and God — scientists, mathematicians, engineers, and an historian of science, all of whom are Christians. For them, they see no fundamental conflict between their faith in God and their faith in science.

And in their minds, faith is very important. It's vital to both science and God — a faith in each that is not blind but is based on evidence. In fact, from guests to guests, we've heard that.

Not only do they not see conflict, they actually have found that their scientific research and discovery bolsters their faith in God — and vice versa. But what about you? Are you skeptical? Today's guest is Praveen Sethupathy, a biology professor at Cornell University. Praveen was not raised in a Christian home, but he had a crisis of faith in college that led

him to explore Christianity.

And he approached his journey of religious discovery with the mindset of a scientist, looking for falsifiability, evidence, and proof. He wanted to uncover the truth about the world and its origins. While you listen to our conversation, I hope you ask yourself questions about how you view the relationship between science and God, and how you came to think that way.

Are you open to seeing their relationship in a new light? And if so, how might that change? Not just your mind and perspective, but even how you might live your life today. This is *Beyond the Forum*, a podcast from the Veritas Forum and PRX that explores the ideas that shape our lives. This season, we're talking about the intersection of science and God.

I'm your host, Bethany Jenkins, and I run the media and content work at the Veritas Forum, a Christian nonprofit that hosts conversations that matter across different worldviews. Praveen Sethapathy is an associate professor of biomedical sciences at Cornell, and he runs a research lab that has 14 lab members studying DNA. As head of the lab, Praveen operates like a CEO of a small company.

At any particular point in time, I'm thinking about budgetary issues, financial considerations, human resources type of issues, and then, of course, everything that comes with being a scientist from how to effectively present and articulate and communicate my work to different kinds of audiences, scientists and non-scientists alike, how to effectively train the next generation of aspiring scientists to be the best versions of themselves in this profession, and also how to ask the right questions. So, at times, it can feel like there are just constant gear shifting going on. It's a part of what is so exhilarating about my work, and it's also exhausting.

Praveen's specific field of study is genomics, which is not to be confused with genetics. Genetics refers to the study of individual genes and the ways that certain traits are passed down through generations. Genomics, on the other hand, refers to the full sequence of the human DNA as a collective, which together is called the genome.

All of us have the same structure to our genomes. They're basically identical. When we zoom into the sequence level, we start to see what accounts for our differences, like I might be taller or shorter than you.

I might have darker or lighter skin. And if you unfurled the human genome like a fruit roll-up, it would be about six feet long. It's just remarkable that such a long chemical is actually compacted and tightly wound within a single cell of our body, which is microscopic.

So, the level of compaction that's going on here is mind-boggling. It's not really a fruit roll-

up, but it is actually packaged in a way that allows it to fit, not just inside of a cell, but inside of a nucleus that's inside of a cell. So it's really a phenomenal process.

And if you were to actually take all the DNA from all the cells of an adult body and lay it out end to end, you could travel on that to the sun and back many, many times. And what really excites me every time I think about this is that you can not only fit it into the tiniest of spaces, but you can still use it. It's not like you're just fitting it in there and then you're shoving it into the closet.

You're manipulating it and using it and activating genes and making sure it's the right genes. So the ability that the cell has to be able to do that is phenomenal. It wasn't until the 1990s that the Human Genome Project was launched.

It was a collective project of scientists around the world, and its goal was to map all of the genes in the human genome. And in 2000, at the announcement of the completion of an initial sequencing of the human genome, then President Clinton called it, quote, "the most important, most wondrous map ever produced by humankind." In this past summer, the map was announced as complete. One of the scientists who worked on the project said that creating this map was like looking at close-up pictures of Pluto.

He told The New York Times, quote, "You could see every crater, you could see every color, from something that we had only had the blurriest understanding of before. This has just been an absolute dream." For Perveen, the mapping of something like the human genome isn't at odds with his faith. If anything, he said in a Veritas Forum event that the experience of awe in the face of creation is a shared value between both science and Christianity.

Science and religion definitely are compatible, and they always have been. Science is a set of tools that we use to explore the natural world around us. And religion fundamentally is the opportunity to worship the one who gave us those tools.

I've actually found in my experience that there are a lot of shared values between science and my experience in science and my experience as a Christian. One of those shared values is a sense of awe and joy in discovery. I think that it's really fundamental to the scientific enterprise that it doesn't detract from my humanity, it encourages it.

It persuades me almost on a daily basis to open my eyes to the kind of overabundance, even though it might even say prodigal, amount of created things all around us, the sheer vastness of the created order, the diversity and complexity of created things. It's just awe inspiring, and I get to be in that space on a regular basis. It's not so different from in the religious space in the song "How Great Thou Art," I sing "O Lord, My God," when I in awesome wonder consider all the works thy hands have made.

And so there are these really beautiful, wonderful and natural touch points between my

experience as a person of faith and as a scientist where I find that there are shared values that are often overlooked. Some people think that God only works in big ways, that something big and instantaneous has to happen for it to be attributed to God, and everything ordinary and daily is just how the world works. But Praveen says that it's in the everyday comings and goings that he sees God at work too, and this is one reason why he doesn't find the idea of creation and the theory of evolution to be at odds.

One of the fundamental problems with this is that sometimes it feels as though there is something sort of more divine and more supernatural to God doing something instantaneously than God doing something through a process over a really long period of time. I think it is just as beautiful and wonderful and divine and godly no matter how he chooses to do something. If God has done it, it is of God.

So if God authors a natural process or God does something supernaturally instantaneously, I don't really find one or the other to be more wonderful, to be somehow a little bit more godly. They're all, everything is under the purview of God to me. I've had conversations with friends who call giving birth a miracle, and I disagree with them.

They usually don't like that too much. But it's not that I don't think giving birth is wonderful and amazing and one of the most amazing things, if not the most amazing thing that humans do, but it's not a miracle. A miracle sets aside the laws of nature to say walk on water or raise someone from the dead.

Giving birth is natural, but don't hear me wrong. They're both to me divine. That's exactly right.

That distinction about what's miraculous versus not in terms of what supersedes natural processes God had originally authored and put in place, but one isn't any more godly or beautiful than the other to me. At the forum event, Praveen explored this distinction even further. Finding how something works naturally doesn't give me any less awe than believing in a supernatural explanation for something such as the resurrection of Christ, which is also a very important thing.

Which is also awe-inspiring. Both are authored by God. And so I find both of them to be thrilling and to be under the purview of God.

One is just something that we have the tools to be able to explore and that's science, right? The other, we have to use different kinds of tools, not scientific tools. But one challenge to Praveen's idea that creation and evolution are complementary is the idea of randomness. Inherent to evolutionary process is randomness.

And I think that it's really difficult for people sometimes to see how God authors a process that has randomness or stochasticity at its core. But I think what people miss is that apparently random processes lead to ordered predictable outcomes all the time.

And it's all around us.

And it's actually pervasive. And a really wonderful example of this is the formation of each of our human bodies in our mother's womb. It's said that our cells play dice en route to becoming a fully formed heart cell or lung cell or liver cell.

But despite this underlying randomness, it's a human body that emerges every time. And there was an article in Nature quite a while ago now that provided a really poetic answer to this. And they said, if cells play dice, various geometric and temporal constraints on the cells can weight the dice, thus disrupting perfect randomness to convert noise into orchestrated sounds.

And so the idea is that randomness doesn't have to imply lack of order or purpose, at least the way scientists usually refer to it. And it's because even apparently random processes are constrained by the parameters of the system in which they operate. And these constraints help shape the final outcome.

Right? So it's a lot of the way that we think about randomness in an evolutionary process context as well. Praveen says that sometimes when people come to the idea of evolution, they unknowingly come with the idea of the God of the Gaps. This is the idea that John Lennox spoke about in episode two of this season of the podcast.

It basically says that God is a useful stand-in to explain what we don't yet know, the gaps of our understanding. And the assumption is that the more we come to understand, the less we need God. When you come upon something that just seems so complex, so incredible that it's hard for you to envision how this could have come across through some long evolutionary process, we insert God into it and say, well, it must have been God.

Now, again, going back to my first point, doing something instantaneously doesn't make it any more God than doing something over a process. But secondly, that kind of thinking often leads to a problem where over time science advances to a point where we are able to model and envision how such a thing could have come about through an evolutionary process. And then what happens? Does our faith in God get diminished or mitigated or devalued? That's what I would really worry about with something like God of the Gaps.

We can't call upon some kind of instantaneous design for something simply because at this moment in time, we're not able to see how it could have come about.

[MUSIC] Hi all, this is Carly Regal, the assistant producer of Beyond the Forum. If you're loving the podcast so far, we want to invite you to continue engaging in these important conversations by signing up for our newsletter.

Each month, you'll receive thoughtful content about the ideas that shape our lives, updates from our students and faculty partners, and other Veritas news and events. You

can sign up today by visiting [veritas.org](http://veritas.org). Thanks for tuning in and enjoy the rest of the show. This season, we've talked a lot about science's relationship to God and God's relationship to science.

I asked Pervene about how he approaches the relationship since he's both a committed scientist and a committed Christian. I fall into what I like to refer to as the evolutionary creationist camp. I like that moniker because I'm not a non-creationist.

I believe God created the world. What we're really talking about here is how I think Genesis is just fundamentally uninterested in that question, or at least a lot less interested in that question relative to a number of other questions that I think God is really cogently tackling. We cogently tackling there for us and trying to help us to see.

And so I think the juries out from a scriptural standpoint about the mechanisms, the physical, chemical and scientific means by which things came about through God's speech and through his actions. And I think that's a part of what he's invited us to uncover. But Pervene isn't a tribal thinker.

He doesn't think people who agree with him have everything figured out, and those who disagree don't. I think every single one of these camps has open questions. And I actually believe that folks within these camps would be able to have more productive conversations with each other.

If everybody recognized, well, okay, I hold to this camp for x, y, and z reason. But listen, I haven't worked out every job of the implications of this, physical and theological. And so we need to continue to be in conversation to sharpen one another.

And part of the reason that he wants to approach learning and researching and thinking about these things in community, even and especially with people who disagree with him, is theological. If God is as big as Pervene thinks he is, then surely there will be things that human beings simply can't understand about him. And we need to have intellectual humility toward one another in the process of discovery and inquiry.

I'm not convinced that we are going to ever work out the implications of any one of these positions, because I think that oftentimes God is more interested in our process than in our end point. I don't think it's so much about having the final answers to these things as much as it is about being honest, being open, being vulnerable, being willing to have a faith that can be challenged, and then sharpening one another in the process and growing, I think, closer to each other and to him in the process. Somehow I suspect God cares more about that than the final answers to some of these things.

In the forum event when Pervene was in conversation with someone who isn't a Christian, he talked more about this idea of openness and intellectual humility and how they apply to both science and religion. I mentioned earlier about shared values between

science and faith. Well, I really believe that humility and curiosity are actually shared values, but if we don't appreciate those two as shared values, that's where the problem comes in.

But the willingness to have a strong foundation and then inquisitiveness and curiosity to enhance that foundation as a value for life, that's where you find really the beauty of the connection. The interesting thing about Pervene's approach to science and Christianity in particular is that Pervene wasn't raised as a Christian. He was a Hindu for the first 18 years of his life, and he kind of discovered his two vocations as both a scientist and a Christian at the same time when he was a college student at Cornell.

I think probably the most salient way in which my scientific mind was brought to bear in my spiritual journey was in the realization that many of the faith traditions that I was studying were falsifiable. They were making historical claims that could be evaluated. I appreciated the tradition from which I came, and I still do.

But through various events on campus when I came on as a freshman, it became evident to me that I really didn't understand what it meant. I had gone through the motions of being a Hindu for most of my life and yet couldn't really cogently articulate what it meant to me and how it shaped and influenced my life. Being somewhat embarrassed by that, I decided to undertake a more serious and rigorous study of Hinduism, which then led to a study of a lot of other major faith traditions of the world because I became sensitive to this idea that they're all making truth claims.

I need to sort of get a sense for whether they're all potentially true, just sort of different cultural manifestations, or none of them are true because they're all just sort of meager attempts to try to understand something beyond us. But as he studied various religions, he said that it quickly became evident to him that all of them being true was simply intellectually untenable. As much as I wanted it to be true, I mean, I desperately wanted at the end of this whole journey to have all of these faith traditions hold hands and sing kumbaya, right? But it just was increasingly evident to me when you have claims about the truth of God and the way that he's interacted with mankind to be fundamentally different, even diametrically opposed at some points, that it was really challenging to continue to accept or pursue this notion that they could all be true.

So I had to take seriously these claims and see whether they were consistent with my experience and also be able to evaluate them if they were falsifiable. And that was something special about Christianity and Islam in particular because both presented truth claims that could be evaluated. Efforts could be made to study history, to study cultural contexts and look into what scholars have said about how much evidence there is from an ideological standpoint about X, Y, and Z. Buddhism and Hinduism were harder to evaluate that way because they are much, much older faith traditions.

But Christianity for Pervene was entirely different. It wasn't mainly advice for how to live

or rules to follow. If Jesus didn't really exist or if he really was not crucified and resurrected, Paul himself says, "We are to be pitied among all people," right? Because this is vacuous otherwise.

So that it was so tightly coupled to something that happened in history, gave, anchored me, and it gave me something to evaluate. And that's really where my scientific mind kicked in. I was like, "Okay, well, how can I evaluate this? What are the ways in which I have a lot of different models available? How do I go about determining which explanatory model is far more plausible than other explanatory models that are available to me? There are a bunch of different models available, and you got to do some experimentation and some figuring out and determine which of those models are probably a better way to understand the system than the others.

The only difference is that when it comes to something as weighty as who God is, science or reason is not going to take you all the way across the finish line. I think it can bring you so far, as far as preventing you from rashly or unnecessarily denying the possibility of X, Y, or Z. Beyond that, however, there is a leap of faith that one has to take. There is this sort of intermingled reason and intuition and something sort of mysteriously spiritual that has to kick in to take that leap of faith.

Because I do think that there is more to human in the decisions we make than just reason and math and science. Praveen's story of coming to faith in God reminded me of another man's story that I read years ago. Sheldon Van Auchten and his wife, Davie, married young and were committed to their love for one another, and adamantly against any type of divine or Godlike love.

In the 1940s, Van Auchten was a college professor in the United States and took a sabbatical at Oxford to study British literature. While he and Davie were at Oxford, they became friends with several other Oxford students. And much to their surprise, these friends were intellectually serious Christians.

Eventually, Davie "crossed the room" as Van Auchten put it, and became a Christian. At this point, out of his love for his wife and a curiosity about her newfound faith, Van Auchten himself began to explore Christianity. In his autobiography, "A Severe Mercy," he wrote, "Christianity, in a word the divinity of Jesus, seemed probable to me.

But there is a gap between the probable and the proved. How was I to cross it? If I were to stake my whole life on the risen Christ, I wanted proof. I wanted certainty.

I wanted to see him eat a bit of fish. I wanted letters of fire across the sky. I got none of these, and I continued to hang about on the edge of the gap." Van Auchten continued to spend months exploring Christianity, testing it, trying it on, listening to and engaging his friends.



And after he spent so much time asking questions and learning about Jesus and Christianity, he realized that there wasn't just a gap in front of him, there was also a gap behind him. He had to leap either way." He wrote, "The position was not as I had been comfortably thinking all these months, merely a question of whether I was to accept the Messiah or not. It was a question of whether I was to accept Him or reject.

My God, there was a gap behind me too. Perhaps the leap to acceptance was a horrifying gamble. But what of the leap to rejection? There may be no certainty that Christ was God, but by God there was no certainty that He was not.

If I were to accept, I might and probably would face the thought through the years. Perhaps after all, it's a lie I've been had. But if I were to reject, I would certainly face the haunting, terrible thought.

Perhaps it's true, and I have rejected my God. This was not to be born. I could not reject Jesus.

There was only one thing to do. Once I had seen the gap behind me, I turned away from it and flung myself over the gap toward Jesus. I asked Praveen if this story resonated with him, if it described his journey somewhat too.

That is very, very much so my experience. It isn't one directional. There's a bidirectional decision here, right? It's really important that people understand that, because what is the alternative? I suppose indecision is also an option or this notion that a decision could never be made.

Perhaps that's approaching sort of agnosticism. But putting that aside for a minute, there is this point at which you feel like you either leap in one direction or the other. And at that moment in time, you don't really know, perhaps whether it's forward or backward.

For Praveen, his choice to love God and commit to faith in Christianity wasn't all that different from another big decision in his life. It's not unlike deciding to propose to my wife 20 years ago. I had accumulated as much data as I think I could have about whether she really loved me.

I had spoken to enough of my friends and loved ones who wanted the best for me about whether this was a good match and whether this was a good direction to go in. So I had done my homework as far as the logic and the reason was concerned. And what it was pointing to was the model that she loves me.

I love her. We're both committed to God. This is going to work.

This is the right thing to do. That was the model that was staying for me. But had I proven it in any sort of scientific sense of it? No, I'm not sure that I could have.

When Sheldon Van Alken was at Oxford, C.S. Lewis was there too as a professor. And they exchanged letters while Van Alken was exploring Christianity. When he finally decided to leap forward, he wrote Lewis about it.

"I choose to believe in the Father, Son, and Holy Ghost. In Christ, my Lord, and my God, Christianity has the ring, the feel of unique truth, of essential truth. Piot life is made full instead of empty, meaningful instead of meaningless.

A choice was necessary, and there is no certainty. One can only choose a side. So I, I now choose my side." Throughout this season, we've talked about science in God, logic in God, and reasoning in God.

And we've uncovered the fake news that these poles are fundamentally in conflict. Perhaps you're like Van Alken or Praveen were. You're not quite there yet.

But you almost know too much now to reject it. So why not take the leap forward instead of backward? As Cullen, our guest in episode four this season asked, "What do you have to lose?" If you're curious about the Christian faith and its resonance with science, we have tons of content on our YouTube channel that you can explore. And our other show, called the Veritas Forum Podcast, is a weekly conversation that explores this tension too.

Also, we'd love to hear from you. So feel free to email us at [veritas.media@veritas.org](mailto:veritas.media@veritas.org) and follow us on any social media platform and engage. Season three will be coming in a few months, and we can't wait to introduce you to more of our favorite thinkers about some of our favorite topics.

Hi again, this is Assistant Producer Carly Riekel. To end our second season, we at Beyond the Forum want to take time to say thanks to all the folks who have to skip the show together. Our first thanks goes to our guest for this episode, Dr. Praveen Sethupathy.

Thank you for joining us and for sharing your expertise in such an incredible field. It was amazing to hear how you see God in the tiniest molecules of DNA. We also want to thank our tireless and wonderful production team at PRX.

Jocelyn Gonzales makes even Zoom audio sound great. Genevieve's sponsor provides fantastic and crucial edits on our narration. Morgan Flannery pulls audio in mixes like a pro, and Jason Saldana keeps everything running.

Thank you so much. We love having you on our team. We also love that we have such amazing forum events to draw from.

If you've helped plan a forum, attended a forum, or contributed in any other way, thank you. And of course, we want to thank the John Templeton Foundation and all of our donors for their generous support of our conversations and the Beyond the Forum podcast. Our final thanks goes to you, the listener.

We're so glad that you've joined us for another season, and we're so looking forward to season three. Alright, that's all from me. Thanks for listening to Beyond the Forum.

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