Return of the God Hypothesis with Dr. Stephen Meyer

(March 26, 2021)

Ladies and gentlemen, is there a war going on between science and religion? Is it wrong to say that God somehow could be a cause, either of the universe, or of life, or of subsequent life forms? Is that out of bounds if you're a scientist? Well, there's a book that I've been waiting for several years now, because my friend Steven C. Meyer said he was going to write it, and it's coming out March 30. If you're listening to this after March 30, you can pick it up right away. The brand new book by Stephen Meyer...you know, Stephen has written, *Signature in the Cell* and *Darwin's Doubt*, and they have been fabulous works. But the brand new book is called, *Return of the God Hypothesis*. I'm about halfway through this book, right now. It's 500 pages, but it doesn't read as an academic work. It does have academic information in it, but it is very well written very easy to understand. Anybody can understand what Stephen is saying in this book, and you need to see what he's saying in the book.

So, we're gonna have him on, not only today, but next week as well, because there is so much in this book. And for those of you who don't know, Steven Meyer, you ought to. He has his PhD from the University of Cambridge in Philosophy of Science. He has written, as I mentioned, several New York Times bestsellers, including *Signature in the Cell* and *Darwin's Doubt*, and this one is destined to be a best seller as well. He is a senior fellow. Actually, he directs part of The Discovery Institute. And he has been in this field for more than 35 years looking at the origin of life, subsequent life forms and also cosmology. So, it's always great to have Steve on. Steve, how are you?

Stephen:
I'm very well Frank and always enjoy talking to you. It's great to reconnect over Zoom.

Frank:
Yeah, I know, man. We've been all locked down. I know you've been locked down even more so out there in Seattle. But it's a great privilege to have you on. And I'm telling you this book is very well written and very well resourced. By the way, I don't know how many pages of

footnotes you have in here, Steve, but I start reading the footnotes and I'm going man, that's a book in itself. How long did it take you to pull this together?
Stephen: I've been thinking about it for 35 years, as you mentioned, but the actual writing took about three and a half years. So, it's been the most formidable of my three big projects.

Well, you know what I like about it, too Steve? It's not just a bunch of information. It's actually a story. It's part history book and part science book and you put it together to say this is, sort of, the history of science and this is where we're heading. Now, why is, the God Hypothesis returning? First of all, what is the God Hypothesis, in a nutshell, and why is it returning?

Stephen:
Well, right. The God Hypothesis is the idea that the existence of God explains key events better than other competing metaphysical or scientific hypotheses. Key events in the history of the universe and life, in particular, the origin of the universe, the origin of what physicists call its fine tuning, and the origin of the information needed to explain the origin of life and the subsequent development of life. So, there are big events in the history of life and the universe that are best explained by positing a certain kind of intelligence, an intelligence that has the attributes that Jews and Christians have long ascribed to God; transcendence, intelligence, therefore, a personal agency, and also an agent who is active in the creation. Not a deistic creator who only works with the beginning, not a space alien who only works from within the cosmos, but an agent that can create the universe as a whole with its finely tuned structure that allows possibility of life.

So, I call it a hypothesis because, from our point of view, we are trying to explain the world that we see around us and we, as part of the function of human reason, we postulate ideas about what might exist that can explain the things we say. And it turns out that the postulation of the existence of God does the best job of explaining crucial events about biological and cosmological origins. That doesn't mean, as some of my friends on Facebook have been saying, that God is only a hypothesis, only something in the human mind. It just means that if we, from our vantage point as humans postulate the existence of God, we find that we can best explain the observations that we make around us, which is a reason to think that God does actually exist, by the way. Yeah.

Frank:
Well, I know, people who are watching right now, or listening right now, are thinking already, oh, this is a big God of the Gaps book. This is all just God of the Gaps thinking. We're gonna get to that. If we don't get to it in this show we'll get to it in next week's show. But Steve, you just...

Stephen:
Oh right. I didn't get to the second part of your question.

Frank:
Go ahead.

Stephen:
What's the story? You know, because there's a big story here. Right?

Frank:
Yeah.

Stephen:
And, in fact, the title invites the telling of a story.

Frank:
Yeah, the point I was gonna make here, Steve, is the fact that those three things you mentioned, the origin of the universe, the fine tuning of the universe, and the information found in biological life, are really the three major discoveries you're looking into. But go ahead with the story.

Stephen:
Right, exactly. Well, the title invites a story because, to say that the God Hypothesis has returned, is to say that there was a time when the theistic perspective about the natural world was lost. And in fact, that's the case that, in the late 19th century, a worldview known as Scientific Materialism became dominant. But to say that it's returned is to say that it also was present long before that. That it was present, in fact, and this is the argument of the book is that the theistic perspective, in fact, a biblical perspective, was crucial to the rise of modern

science during the period of roughly 1300 to 1750. And especially in the very crucial period of between 1500 and 1750 when historians of science describe the rapid expansion of scientific investigation of the development of systematic methods for investigating nature first arose and arose in Western Europe in a decidedly Judeo Christian milieu.

And what I show is that numerous historians of science now recognize the role of Judeo Christian ideas in the formulation of what we now think of as modern science and that that didn't happen in Western Europe for an accident. It happened there because there were certain ideas in currency that made the investigation of nature seem, A) possible and B) a kind of natural extension of the religious piety that many people felt. They thought that studying nature was a way of studying God's handiwork. And they expected to find lawful order, evidence of design, and they expected to be able to understand it. They had a key watchword, which was intelligibility. They believe that nature was intelligible. It could be understood because it had been made with the guidance and design of a rational creator, the same creator who had made our minds in his image and had endowed us with rationality, so that we could understand the rationality, the design, and the order that had been built into nature.

That was a unique set of presuppositions that existed in Western Europe that made science possible. And once these early scientists began to investigate nature, they also found that having investigated it, there was, in fact, ample evidence of design and order. And that became what historians called, The Scientific Revolution. So, early on we had that theistic perspective, it gave rise to science in the late 19th century in the wake of figures like Darwin, Marx, Freud, Huxley, and others. That was lost, a new worldview came to dominate our perspective on science, known as Scientific Materialism, and the argument of the book is that there have been three great discoveries that have been made over the last 100 years: first in cosmology, then in physics, then finally, in biology, that are bringing back that theistic perspective, or at least should. And I make that case in the book.

Frank:
Well, this is the book to get, friends. The book, again, is called, *The Return of the God Hypothesis*, and Stephen gives you a history of science and history of thought on this, as he's giving you the evidence for those three great discoveries he just mentioned. And when we

come back from the break, we're going to get a little bit into that evidence, after we talk a little bit more about the history of science.

You're listening to, I Don't Have Enough Faith to Be and Atheist, with Frank Turek on the American Family Radio Network. Our website is CrossExamined.org. Steve's website is discovery.org. And you can also type in, the return of the god hypothesis, and get the website for the book, and maybe even get on a Zoom with Steve coming up on April 24, if you buy the book in advance. So, if you want to be a part of that, check out ReturnOfTheGodHypothesis.com We're back in two minutes. Don't go anywhere.

Return of the God Hypothesis, a brand new book by New York Times best-selling author, Stephen C. Meyer, Dr. Steven C. Meyer. And this book is even more of an important book than his first two, which were critical books in the field, *Signature in the Cell* and *Darwin's Doubt*. This actually takes elements of both those books and goes further. In fact, Steve actually arrives at a place where he is going to say that there is a being called God out there from these discoveries that he talks about in the book. He didn't say that so much in the first two books, but he does so here, and we're going to talk about it here in just a minute.

Before I do, I want to mention that our brand new course on the great book of Romans starts on the 30th of March. Same day, *Return of the God Hypothesis* comes out. If you want to be a part of it, go to CrossExamined.org, click on online courses, you'll see it there. If you take the premium version, you'll be on Zoom with me on nine different occasions for Q&A. So, I hope to see you in the great book of Romans course.

Steve, something really struck me. In fact, I started in the book when I was reading it on page 21, and you hinted at this a minute ago, but I want you to unpack it a little bit. You said this, "the Chinese invented the compass, block printing and gunpowder, the Romans built great roads and aqueducts, and the Greeks had great philosophers, some of whom studied nature extensively. Yet none of these cultures developed the systematic methods for investigating nature that arose in Western Europe between about 1500 and 1750." Why not? Who brought the idea to systematize nature?

Stephen:
Well, this was a Judeo Christian idea and many historians have asked exactly this question: Why then, why there? And they've looked for the answer to the, why then why there, question in the realm of the material conditions for doing science. You have to do science, you have to have a certain level of affluence, you have to be some people who can devote time to that, not just do raising, you know, the basic necessities of life, you have to have a certain level of technical sophistication. But all of those conditions existed in these other earlier and very sophisticated cultures. But what happened in Europe, and this is what the historians of science have come to, is that there was a shift in the world of ideas. It was one great historian, Herbert Butterfield, said there had to be a transposition of thinking, in particular in Western Europe, from the Greek approach to looking at nature, to the more Judeo-Christian one.

The Greeks were great at armchair philosophizing and many of them actually studied nature as well. And they even believed that there was an order in nature, but they believed that the order was derivative of a kind of intrinsic logic that had this concept of logos. And that there was a logic that was built into nature that governed everything. But it didn't come from a personal God, and in their view, it had to be, because everything was logical, things had to be logically necessary, they had to appear to be what seemed most logically sensible to us. So, they assume that all orbits, for example, must be circular. Why? Because this circle is the perfect shape. But it turned out that that's not the kind of order that was actually present in nature. Kepler later discovered that they were elliptical.

And what the Judeo-Christian contribution to this was, is that there was the concept of what was thought of as an impressed order. Just as there's lots of different ways to skin a cat, or lots of ways to make...I used to use this example when I was teaching...a paintbrush. You've got 15 different kinds of paint brushes, and they all are the same basic kind of thing, but they are tailored to the type of painting you want to do. And so, what the Christians realized was that because nature was creation, it wasn't a logically necessary system that had always been here. It was a creation of a creator. Yes, there was order in it, but it could have been many different kinds of order. Maybe we have ellipses, maybe we have circles. Who knows? Maybe the orbits were square. We don't know. You have to go and look. And that was the key idea, that nature was convention not a creator, therefore, we can't reason to what it must be, we have to go and examine what it is.

Robert Boyle said, "We shouldn't ask what the creator must have done. We need to go and look and see what he did do." In other words, inspired an empirical approach to the study of nature, not just thinking about it deductively, which the Greeks had done. And so, as you look at the many conditions for getting science going, it happens that the Judeo-Christian worldview provided those, the intellectual pre-suppositions, the idea that nature is contingent and needs to be examined empirically, that it's intelligible because it was made by a rational creator who made our minds, the idea that it's orderly because God is a God of order, and so on. So, there were multiple intellectual contributions to the Judeo-Christian worldview that inspired science. And one of which was the simple desire to glorify the creator by examining his works.

The Book of Romans says that we can know about the attributes of God, His eternal power and divine nature, from the things that have been made. One of the earliest works in biology by John Ray had the title, The Works of God Manifested in Nature in Two Parts, and it was a simple paraphrase of Romans one. So, this desire to glorify God was part of the inspiration for science. In fact, Rodney Stark, one of the great historians of science, wrote a book with Princeton University Press called, For the Glory of God, which was all about exactly this inspiration for modern science.

Frank:
Again, the book is called, *Return of the God Hypothesis*. Part of the story that you tell, Steve, is that the founders of modern science were all, or mostly Christian, because of this very idea that they believed in an order in nature, because they believe God is orderly, and we're thinking God's thoughts after him, or we're discovering...

Stephen:
A quote from Kepler. Yeah, exactly.

Frank:
Yes. So, I can hear the atheist saying, well, you know, that was all pre Darwin. You know, nobody thinks that way anymore. How would you respond to that?

Stephen:
Well, I think we're now post Darwin, is the short answer. But the story I tell in the book is, you know, there's a lot in the book about Newton, who was an extraordinary figure. He had a deep theology of nature. In other words, he brought these biblical pre-suppositions about the nature of God and about nature to his study of nature. But he also, upon observation of systems in the natural world, made very elegant design arguments. He had a design argument in the optics, his study of light, which was, at the time, far and away the most advanced study of optical phenomenon that had ever been undertaken. And he made this argument for the design of the eye, not just because of the structure of the eye, but also because of the way the eye anticipated the properties of light. And he said that suggested a foresight that was very hard to explain otherwise.

He had a beautiful argument in the General Scholium to the Principia, the epilogue to his great work, in which he provided the kind of theological significance, explained the theological significance of the work. And there he made a beautiful, initial condition, fine-tuning argument about the origin of the solar system. So, Newton made these wonderful design arguments. But it is true, in the late 19th century, Darwin came along and argued that we don't have any evidence of actual design, only the appearance of design, because there's an unguided, undirected process, namely, natural selection acting on random variations, that can explain the appearance of design without itself being guided or directed in any way. In other words, his natural selection idea was a designer substitute. It was a process which he thought could mimic the powers of a designing intelligence without any design or guidance involved.

And that did, I think, in very large measure, produce an intellectual shift within the scientific community. After Darwin, for quite a long time, the scientific materialist worldview has dominated. It still dominates as a default way of thinking in many of our research universities, especially in western countries. But I think that's beginning to change. And I think the science, the evidence, of the last 100 years, first in cosmology, then in physics, but also in biology, have shown that we have evidence of actual design, not just the appearance of design.

And of course, in my first two books, and a bit in this one as well, I talk about and discuss the evidence for design that we find to very foundation of life in the digital code that's present in the DNA, and in the complex information processing system that's at work in every living cell.

This is evidence that has not been explained, the Darwinian mechanism has done a very poor job of explaining the origin of information, because random mutations degrade information, they don't generate it. And therefore, we need a different type of explanation to explain the origin of the information that we now know is necessary to build every living organism on the planet.

Frank:
I know we're going to get into that in more detail, either later in this show or next week, Steve. But I want to pause here for a second and ask this question. Again, the book is called, *The Return of the God Hypothesis*, by Stephen C. Meyer. You need to get this book. Trust me. I was reading this morning, you were talking about Sean Carroll, and he was saying he's a materialist, so he thinks everything happens by natural laws, right. Natural forces cause everything. Of course, he never stops to think that, if natural forces caused everything, those natural same natural forces caused his thought that natural forces caused everything, so why should he believe it? But let me leave that aside for a second. My question is, do people like Sean Carroll, or any other naturalist, any other atheists out there, ever try to explain where the laws of nature come from and why they are so precise and accurate and so consistent? Where do the laws come from, Steve?

Stephen:
Well, this is a very deep question in the philosophy of science that very few scientists actually engage. I appreciate Sean Carroll among the scientific naturalists for several reasons. One, Carroll acknowledges that scientific naturalism is a worldview, and it is his worldview, and that there are other worldviews, and so, he takes the time to defend it and to argue for it. Many scientists that you encounter today simply assume a, kind of, scientific naturalistic or materialistic worldview, without even being aware that they're bringing a set of worldview assumptions to their claims about science. They make science and their worldview equivalent. Carroll doesn't do that. He actually says, look, this is a worldview, and here's why I hold it. He makes the argument.

As to the laws of nature, there's a very deep question as to what they are. Are they mere human descriptions of regularities that happened, we know not why? Are they entities within nature? Or are they human descriptions that actually correspond to the way God has chosen to

order nature? In other words, is there a cause behind the laws of nature that explains their universality, their regularity, their mathematical precision? That third view was the view of Isaac Newton and it was the view of the early founders of modern science. After all, the idea of the laws of nature is a metaphor and it turns out that it's a juridical metaphor of theological origin. I'm quoting one of the leading historians of science on this. Literally, the concept you find in the book of Job, and it's appropriated by scientists during this period of late medieval Catholic theology, and then the early period of the Reformation.

And so, I had a memorable tutorial with my Cambridge supervisor my first year, on exactly this topic. And he said, your view of the laws of nature makes sense and my view makes sense...his view was they were just human descriptions...but the one view that doesn't make sense is the view that most physicists hold, which is that they are somehow the laws or entities that cause things to happen. We don't see the laws of nature...

Frank:
Hold the thought. We're going to come right back because we're coming up against a hard break. You're listening to, I Don't Have Enough Faith to Be an Atheist, with Dr. Frank Turek. My guest is Dr. Stephen C. Meyer. The new book, *Return of the God Hypothesis*. Get it. We're back in two.

The return of the god hypothesis with Dr. Stephen Meyer. He's my guest today. Actually, the actual title of the book is, *Return of the God Hypothesis*. We're talking about this fabulous new book that looks at three major discoveries over the past century or so. They have to do with the origin of the universe, the fine tuning of the universe, and the discovery of vast quantities of very specified and complex information in the biological world. And Steve has done a wonderful job pulling all the information together on that, as well as putting it in its historical context. As we said at the top of the program, although he doesn't look as old as he is, he's been doing this for 35 years in the field with some of the best scientists in the world. And this book has, so far, been very well received. It's got some amazing reviews up at Amazon. You can see them there. And Steve, just before the break, we were talking about the laws of nature and maybe we could just review that again. You say there are three kind of hypotheses about where the laws of nature come from, or what they are. Can you go over that again?

Stephen:
Yeah, exactly. I mean, we talk about the laws of nature, especially if you're trained in the sciences. You want to generate laws of nature to describe regular phenomena in nature. And they're often invoked as ultimate explanatory principles. But if you ask: Well, what is a law of nature?, then you get into a little bit of a deeper question. It's a question of the philosophy of science and there are three basic views. One is that the laws of nature are mathematical descriptions of regularities that happen. We know not why. They're not causes, they're just descriptions of the things that always happen; sunup, sundown, all unsuspended bodies fall, if you think of gravity, you could describe it that way, and so on.

Another view is that the laws of nature are entities, or things, that cause things to happen, that cause the regularities. But that's a very curious view because the mathematical laws of nature are nothing more, they are written down on a piece of paper and with a mathematical expression. So, it begs the question: How does a mathematical idea that we hold in our minds, or we may perceive, but which we cannot see cause actual material movements or interactions to occur? It's curious. Many scientists, kind of, default to that way of thinking, but it's philosophically really hard to defend.

And then the third view, which is was the view of the early modern science scientists, is that the laws of nature are descriptions, mathematically precise descriptions, of regularities in nature, which, if accurate and true, correspond to the way God is holding the universe together. Newton in the General Scholium to the Principia, roughly paraphrased the first chapter of the book of Colossians, when he said that, "in him all things move and are held together". I may have gotten the quote a little bit wrong, but he thought...and in fact, one of my Cambridge supervisors said that, if you miss Newton's theism, you've missed everything. That he thought the laws of nature were a mode of constant spirit action. And this view of the laws came about, in part, because of this very poignant and spirited disagreement he had with a German philosopher Leibniz.

Leibniz attacked Newton's universal law of gravitation developed in the Principia, because Newton described this mysterious aspect of gravity which was known as action at a distance. If you drop a wallet or a ball, there is no physical interaction between the Earth and that object that moves from one place to another. The moon is thought to cause tidal action, yet the moon

does not touch the water on the earth. It doesn't push it but somehow there is a force being transmitted through a distance. And Leibniz said, how is that scientific to explain gravitation by reference to action? There's no pushing and pulling there, there's no cause being cited. And prior to that time, the early scientists were trying to develop mechanical models for explanation. Sometimes scientists were called mechanical philosophers. There needed to be a pushing and pulling mechanism to provide an adequate explanation. Newton didn't do that. Newton precisely described the force of gravity that was at work, or the degree of attraction, if you will, but there was no physical interaction in his account of gravitation.

So, Leibniz said, either this is a recourse to absurdities, either gravity is false, or it's recourse to perpetual miracle. And Newton, in a private correspondence...Newton didn't want to admit to the perpetual miracle idea, that what we call gravity, and describe precisely with this beautiful mathematics, is an expression of divine action. Is a mode of divine action. But in a private correspondence with a man named Bishop Bentley, who was giving the Boyle lectures on natural theology in 1691, he acknowledged that he thought that gravitational force was actually produced by something immaterial, that was constantly acting universally throughout the universe. And Bentley actually set up the question by saying, well, is this a mode of divine action in your view? And he said, I like that view very much. I tell the story in the book.

And so, one of my Cambridge supervisors summarized Newton's view of the laws by saying that Newton thought that what we call the law of gravity is a mode of constant spirit action. There's no material cause so it must be an immaterial cause. And yet it applies everywhere and always throughout the universe with and can be quantified precisely mathematically, can be described mathematically with precision. And in this one tutorial I had, this supervisor was a sociologist of knowledge, who thought that even scientific knowledge was just relative to persons or groups. And he said, my view of the laws makes sense. I believe their mere descriptions. Your view makes sense, because they're descriptions that correspond to an actual cause that is adequate to explain the universality and mathematical precision of the law. But the one view that doesn't make sense is the view that's held by most physicists, which is, the laws are entities, or things, that cause things to happen. He said, we don't see those, you know. Where are those laws? Physicists who purport to be strict empiricists believe that laws that they can't see are doing something. So, that doesn't makes sense.

Frank:
Would it be more accurate to say this then, Steve? That when we say natural laws do X, Y, or Z, what we really mean is that the four natural forces we know about; gravity, strong and weak nuclear forces, and electromagnetism, are in some way combining to cause the effect in question? Where do the flushes come from?

Stephen:
And that's the key mystery at the foundational level of physics. You have these regularities that occur, and we describe them with these four fundamental laws, the four fundamental forces, but we can't say exactly what's causing the things to occur. There's the regularities, and it hasn't changed with our new ideas about gravity, for example. You know, Einstein supplemented Newton, but his idea of what causes gravity is the curvature...massive bodies, curved space, or space time. But space is empty, yet its curvature somehow also influences how then things move through space.

So, you again, you have no pushing and pulling, there's no mechanical interaction. That's in turn being, possibly, replaced by ideas coming out of string theory with gravitons, and so forth. But gravitons aren't pushers either. They're massless pullers, they're attractors again. So, there's something very mysterious about these fundamental laws of physics where everything is held together in a in a regular way that we can describe mathematically, but we cannot ascribe to them material causation, material efficient causation. And so, there's something very mysterious about them and we do not really know what causes gravitation, or the strong or weak nuclear force, or electromagnetic. We use those terms to describe what always happens, we know not why.

Frank:
In him we live and move and have our being. And the writer Hebrew says that God sustains all things by his powerful word.

Stephen:
This was the original concept of the laws of nature, that it was a sustaining power of God that manifested itself in the orderly concourse of nature. My atheistic sociologists of science

supervisor said we really haven't moved beyond that, you know, Newton's concept of laws in 300 years or so.

Frank:
But it seems related to Aristotle's unmoved mover, who was saying, there had to be a consistent cause every second. Aquinas picks that up and says, this is going to be my fifth way to argue for God, final causality. Nature's going in a direction. It seems like Newton's saying the same thing. Am I right?

Stephen:
Well, those teleological arguments were a little different. And maybe we can get into that in the next segment when we talk about some of the evidence for God beyond this conundrum about what exactly the laws of nature are.

Frank:
Let's do that. Let's move into it. Let's start with cosmology if you can.

Stephen:
Sure.

Frank:
The creation of the universe out of nothing, that appears to be the case from the evidence. What kind of evidence do you provide in, *Return of the God Hypothesis*, for that?

Stephen:
Well, three main lines of evidence. The first come from a whole class of evidence from observational astronomy, the evidence of so-called red shift. The light coming from the distant galaxies, we now understand, is being stretched out. And if light waves are elongated than the spectral lines that we get from the light will be shifted towards the red end of the electromagnetic spectrum. Your listeners will know that if you shine light through a prism it will separate from red to violet. The red light corresponds to light with longer wavelengths, the violet shorter. So, if you have objects that are moving away, and the light looks redder than it should otherwise look, that's an indication of their recessional velocity. They're moving away

from you, stretching out the light, kind of like the Doppler effect with sound. The train whistle moves away on the train, the pitch will drop, corresponding to that stretching out of the sound waves. So that was one of the big initial pieces of evidence.

Additionally, there was the discovery in the 1960s of something called the cosmic background radiation, which was again, long wavelength, the remnant heat radiation leftover from the point in the early universe when all of the matter and energy would have been congealed into one hot, dense point right after the beginning. Something that the Big Bang Theory predicted, but the alternative theory of the steady state did not, so when it was discovered in the 1960s. And there have been another number of other lines of evidence in observational astronomy.

But then, in addition, there have been developments in theoretical physics, the application of Einstein's theory of general relativity, to understanding the origin of the universe. If matter is bending space time, if it's curving space time, if we back extrapolate in an expanding universe, the matter of the galaxies would have been closer and closer and closer and closer together as you go back progressively in time. And as matter got more densely compacted, space would become more tightly curved. And there is a point in the finite past...and this was established by Stephen Hawking in his PhD dissertation in 1966, and then by Hawking and Penrose, and then by Hawking in conjunction with the great physicist George Ellis from South Africa...showing that there is a limiting case where, if you go back far enough, the curvature of space goes to an infinite, corresponding to zero spatial volume, marking the beginning of the universe.

Frank:
We're going to talk about that right after the break. That's the creation point, and Stephen has just given us some of the evidence for that. Again, the book is, *Return of the God Hypothesis*, by Dr. Steven C. Meyer, a New York Times best-selling author. He is also one of the leaders at the Discovery Institute. Discovery.org. We've got one more segment with Steve this week, and then all next week as well, so don't miss next week's show. I'm Frank Turek. Back in two minutes.

Welcome back to, I Don't Have Enough Faith to Be an Atheist, with Frank Turek. My guest is Stephen Meyer. Before I get back to Steve, I want to mention that on Saturday, April 10, I'll be at the Navigate Worldview Conference in Fort Worth, Texas. And the next day, I'll be speaking at Christ Chapel Bible Church in Fort Worth as well. All the details are on our website,

CrossExamined.org. Just go to events and you'll see the calendar there. Now Steve, before we get back to the topic here, are you going to be speaking about this book anytime soon anywhere? Can you tell people where they can see you?

Stephen:
Well, right now I'm doing a lot of media, either through Zoom or talk radio, I'm doing a webinar tonight, I did a lecture yesterday to a bunch of Guatemalan professors. So, right now I'm doing, you know, mainly virtually. But yeah, there'll be speaking engagements, I'm sure, in the fall as things start to open up. So, will keep you posted.

Frank:
If you want to interact with Steve, you can. You at least have an opportunity to. Steve, if they preorder the book right now, which means in the next couple of days they got to do it, they can go to what website and maybe get on a Zoom with you. How do they do that?

Stephen:
Go to ReturnOfTheGodHypothesis.com and they'll find everything they need to do a pre-order. And then with the pre-order, I guess our guys are offering an 80% discount on an online course I've done on intelligent design, a booklet I've written about intelligent design, a little advanced peek at the book, and then this opportunity to participate in a freewheeling Zoom Q&A. So, we'd be happy to have more people part of that.

Frank:
Look out for that. ReturnOfTheGodHypothesis.com. But you got to do it in the next couple days. Now Steve, we were just talking about, you went through some of the cosmological evidence that the universe literally had a beginning, but I can already hear a theist saying two things. Number one, how do we know the universe came from nothing and not, say, a dense pellet? And number two, shouldn't we just choose agnosticism here, Steve? Okay, the universe had a beginning but, you know, how do we know what caused it?

Stephen:
Well, let's start and put this in a broader context then I'll get back into the cosmology. Richard Dawkins has a wonderful quote where he says, "The universe has exactly the properties we

should expect, if at bottom, there was no purpose, no design, nothing but blind, pitiless indifference. In other words, the universe has the properties we should expect if scientific materialism were true." And I use that as a framing device in the book. It's wonderful for a couple of reasons. One, because it defines the key issue. Secondly, it implies that metaphysical hypotheses, or worldviews, are every bit as testable against observations as scientific hypotheses. And so, I take Dawkins at his word and I say, okay, well, are the properties of the universe what we would expect if scientific materialism were true or are they more what we would expect if theism were true.

And in the book, I argue that the three big discoveries that we made about biological cosmological origins, namely, the universe had a beginning, the universe has been finely tuned from the beginning, and that we have discovered this digital code in the foundation of life arising since the beginning of the universe, are things that you would expect given theism, given the god hypothesis, given a God who's both transcendent and active in the creation, but they're not at all what you would expect on the basis of scientific materialism or scientific atheism. Now, that's not to say that defenders of scientific materialism can't invent auxiliary hypotheses that attempt to accommodate those uncomfortable facts within their system. And, of course, they do. But what I show in the book is that, when they do that, the alternative hypotheses they generate, such as the multiverse, or such as something called quantum cosmology, end up having subtle or implicit theistic implications. themselves. But they don't get around the god hypothesis by inventing these auxiliary hypotheses.

Now back to the cosmology. It is true that you can't absolutely prove that the universe had a beginning because no one was there to observe it. So, you can't prove it in that sense. But, both the multiple lines of evidence we have from observational astronomy, and then these developments within theoretical physics, the proof by Hawking, then by Hawking and Penrose, and then by Hawking and Ellis, that there was a true singularity...and that singularity means that there was a point in time when time began, there's a finite beginning to the universe, and even a finite beginning to space...that there was a point where the curvature of universe went to an infinite, that was a limiting case, and at that point, it's no longer possible to reason physically beyond that. The laws of physics break down, there's no place to put anything material if there's no space, and time itself begins. So, you can talk about time before time on our timeline.

So, as the physicist, Paul Davies has said, reasoning beyond that physical extremity becomes impossible, physical reasoning. So, that means you can't posit a materialistic explanation for the origin of the universe, because it's matter, space, time and energy that come out of the singularity. You can't posit an explanation by reference to the laws of physics, because they begin at that point and do not exist before them.

Now there is a way around that There is an auxiliary hypothesis that's been developed. It's called quantum cosmology and it acknowledges, or it's based on the recognition that there are energy conditions that have to be met for general relativity to apply. And in the very smallest, tiniest smidgens of space, right after the beginning, those energy conditions might not have applied, and therefore we can't, with absolute certainty back extrapolate to this ultimate beginning. Now, it turns out that there's another proof, not based on general relativity, but one based on special relativity...which I explain in the book, and it's actually pretty easy to understand...that shows that there was, even without respect to those energy conditions, they don't need to be met for special relativity to apply. And this is called the Borde–Guth–Vilenkin theorem. It's based on special relativity and it too proves that there was a beginning to time.

But if you set that aside and say, okay, let's not go with a relativistic understanding of the origin of the universe, let's do a quantum understanding of the origin of the universe, the way to understand the early universe is, with the math of quantum physics because the universe was, after all, very small at the beginning. And those theories, called quantum cosmology, have been posited as refutations of the beginning, or at least refutations of the singularity theorem, an alternative view of the origin of the universe that doesn't involve a singularity. But I show in the book that they, too, have theistic implications. In particular, they explain the universe is coming out of math, out of what's called a universal wavefunction, importing ideas from quantum physics. But that's very weird, because math exists in the conceptual realm of the mind.

And one of the physicists who actually developed this idea, Alexander Vilenkin, is recognized that and says, what could have existed? What tablet could these quantum laws of physics have been written on before there was matter, space, time and energy. Math exists in the realm of the mind, are we therefore saying that a mind predated the universe, and so even these ideas that have been used to circumvent the indications of an absolute beginning, have ended up

having theistic implications for other reasons. And that's in philosophy, we call that a robust line of argument where, no matter which path you take, you end to this at the same conclusion.

Frank:
So, when they say, Steve, why not just be agnostic and say we don't know what caused the universe, your response would be?

Stephen:
My response is that every indication we have is that the universe had a beginning, from observational astronomy, from general relativity and from special relativity. But if you want to circumvent that by going with a quantum cosmological origin of the universe, then you end up with a theistic conclusion for other reasons, and so, you haven't eliminated the God Hypothesis whichever way you go. Whichever cosmological model you use, you end up with a theistic implication.

Frank:
So, space, time and matter had a beginning. Is it fair to say that the cause must transcend space, time and matter?

Stephen:
That is exactly right. You can't invoke matter to explain the origin of matter because there was no matter before matter to do the causing. And interestingly, even in the quantum cosmological models, the singularity is presupposed. Hawking made a big deal out of his temporary elimination of the singularity via the process of a series of mathematical calculations where he transforms his depiction of the universe into the realm of complex numbers of imaginary time. But in his technical papers, he makes nothing of that, because that's not really the object of what he's trying to do. And in any case, he acknowledges the mathematics of complex numbers, the use of imaginary time has no physical meaning. And yet he draws both a physical and a metaphysical implication of that in the brief history of time, something he doesn't try to do in his technical papers on quantum cosmology.

Instead, in those papers, he presupposes still, a cosmological singularity, presupposed in all of the work on quantum cosmology. So, even there, they don't get rid of the beginning, but they

try to give an alternative account of the universe in terms of the laws of physics, that allows them to say things like Lawrence Krauss has said, I can explain the origin of the universe from nothing. But what he really means is, he's explaining the origin of the universe from math, the mathematical laws of quantum physics. And that raises a really profound philosophical issue, which is, how does math cause things to happen? In our experience, math alone doesn't, only math used by agents does. And math always exists in the mind of an agent. So, are we really saying that the universe came from a mind? I think that is what is implied in quantum cosmology.

Frank:
Well, Steve, we only got a couple of minutes to go. But what you just said there, and in fact your whole education, you're a PhD in the philosophy of science, lays waste to the claim of both Krauss and Hawking who said, philosophy is dead, and I don't care what a philosopher says, that's what, you know, Krauss said. Why is philosophy so important to science? I you mean, you need to interpret the data, right?

Stephen:
Exactly. Well, all scientists are making philosophical claims, they just often make philosophical claims that are poorly justified. And one of those is the one that Hawking made in relation to this quantum cosmology. He said, because there is a law such as gravity, the universe can and must come into existence. But the laws of nature describe how matter and energy within the cosmos interact. They don't explain where matter and energy and the cosmos came from. That's not what laws do. So, there's a category error, that's basic philosophical error, in the thinking of folks like Hawking. As great a physicist as he was, here he does the philosophy of science very badly, and it leads him to an erroneous conclusion.

Frank:
It shows the wisdom of Einstein's quip that the man of science is a poor philosopher, unless he has a PhD from the Philosophy of Science from Cambridge, which you have. So, friends, if you want to go further, you need to get...and you do want to go further...*Return to the God Hypothesis*, by Steven C. Meyer. As I say, it comes out on March 30. And you want to be here next week, because Steve and I are going to get together again, and then get into fine tuning of the universe, and also biology, the two other main discoveries of the past 100 years, other than

the creation of the universe out of nothing that show God is back. Steve, thanks so much for being on the show.

Stephen:
Thank you and thanks for the great questions. Can't wait to talk about the biology and the digital code that's been discovered that the foundation of life, the software that makes the cell run, looks like there was a master programmer.

Frank:
That's right. That's next week, friends. Thanks for being with us. I'm Frank Turek. See you next time. God bless.