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Can Faith & Science Coexist? | Dr. Ian Hutchinson

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The Veritas Forum

Dr. Ian Hutchinson, a nuclear scientist at MIT, takes to the stage at the University of Virginia to discuss the sometimes tense relationship between faith and science while challenging scientism; the belief that everything can be explained through science. Please like, share, subscribe and review this podcast. We really appreciate your support.

Transcript

Welcome to the Veritas Forum. This is the Veritas Forum Podcast, a place where ideas and beliefs converge. What I'm really going to be watching is which one has the resources in their worldview to be tolerant, respectful, and humble toward the people they disagree with.

How do we know whether the lives that we're living are meaningful? If energy, light, gravity, and consciousness are a mystery, don't be surprised if you're going to get an element of this involved. In today's episode, Dr. Ian Hutchinson, a nuclear physicist at the Massachusetts Institute of Technology, takes to the stage to discuss whether or not faith and science can coexist. Can Faith & Science coexist? Many people think that there is a stark choice between faith and science, that they're somehow so incompatible that they can't coexist.

These people have heard that the history of science is dominated by conflicts with religion doggedly opposing science's progress, but eventually being overcome by science's success. To accept that view, though, is to accept and believe a myth. Next, please.

This myth was deliberately promulgated in the 19th century as part of a campaign to secularize higher education. This gentleman is Andrew Dixon White, who was the supreme champion of that myth, and he wrote a very famous book called *A History of the Warfare of Science with Theology in Christendom*. But the myth, including the errors, many errors of A.D. White, has been thoroughly debunked by historians of science during the past few decades.

The truth is that people of deep Christian faith were instrumental in the founding of the scientific revolution, and highly influential in its development ever since. Next, please. I come from MIT.

MIT is, if you like, the high temple of science and technology in the US, and perhaps in the galaxy. And as befits a temple, it has pseudo-Greek temple architecture, including fluted columns. And at the top of the fluted columns, if we were truly in a Greek temple, there ought to be the bacchanelian freezes of the drunken orgies of the gods.

We don't have those at MIT. Instead, what we have are the names of the great heroes of science and technology over history. And some would say that the drunken orgies take place across the river in the fraternities.

Well, a few years ago, we tried to make an assessment of what fraction of the great heroes of science over history, as represented by the names on the architecture of MIT, were Christians. It's a hard estimate to make, but the estimate we came up with was something like 50 or 60%. So that's the first point I'd like to make.

Next slide, please. Serious Christians, believers, were a high proportion of the most influential natural scientists in the first few centuries of modern sciences development. And these people, such as these folks here, are just a small selection of the giants of physical science, who were deeply committed to their faith.

Now, then, there's the big question about the history of ideas. Modern science grew up almost entirely in the West, where Christian thinking held sway. There were, at that time, civilizations of comparable stability, prosperity, and in many cases, technology, in China, Japan, India, and so on.

Why did they not develop science as we know it? If it were true, as AD White claimed, that the Christian church's opposition had stunted scientific development for hundreds of years, why didn't science rapidly evolve in these other cultures? Next slide, please. A cogent case has been made that far from being an atmosphere stifling to science, the biblical worldview of the West proved to be the fertile, cultural, and philosophical soil in which science grew and flourished. The ways in which Christian theology contributed to scientific attitudes include these.

A free contingent creation requires experimental study, not just armchair philosophy. A good creation is worthy of study. A world that is not itself God is safe to investigate without violating the divine.

A world for which humans have been given responsibility calls for study as a duty. Our rationality reflecting God's gives optimism that we can understand the creation, and God's role as a steadfast law giver leads us to seek general laws that govern the world. These are philosophical and theological encouragements to the work of empirical

science, and when combined with the impulse of Christian charity to benefit humankind through practical knowledge, they led to a true revolution in understanding the world.

So that's a second point. Next slide, please. I observed over the years in my interactions with Christians in academia that far from scientists being weakly represented among the ranks of the faithful, as one would expect if science and faith can't coexist.

Actually, they're strongly overrepresented, and the sociological evidence shows the same thing. It's been studied systematically, for example, by Robert Waffner, whose data I'm showing here. He established that while it's true that academics generally are believers in lower proportion than the US population as a whole, nevertheless among academics, scientists were proportionately at least as likely to be Christians, and often more likely to be Christians than those in the non-scientific disciplines.

So next slide. So history doesn't support the perceived problem of coexistence between science and faith, nor is it supported by the prevalence of faith among scientists. Christianity grew from a fertile biblical worldview.

It was founded by predominantly Christian pioneers, and it still attracts Christians into its ranks today. So where does the perceived problem of coexistence come from? It comes in part, I believe, from a misunderstanding of faith. Next slide, please.

The anti-theists of today say that you can either base your beliefs on evidence, or you can base them on faith in some authority. And of course, they say that their secular opinions are rational and based on evidence, while religious people are just some kind of irrational faith heads who just believe whatever they like or whatever they're told. But this is nonsense.

Christian belief is not without or against evidence. The first Christians had the evidence of their eyes. They had walked the roads of Galilee with Jesus of Nazareth, and heard his teaching, and seen his healings, and watched him crucified, and over 500 of them had seen him resurrected.

And that was their evidence. It was sufficiently persuasive to them that they spread out from Jerusalem, and in many cases sacrificed their lives in order to tell others what they had experienced. And those who heard them and responded had their own experience of Christ.

So the Bible doesn't teach that faith is the opposite of evidence or of rationality. It teaches that faith should be our response in the face of uncertainty, or in the very frequent situations where rationality can't give us all the answers. The Bible cites as examples of faith the acts of men and women who trusted God through adversity and challenge, and were loyal to what they knew even though there was much that they didn't know.

And down through the centuries the church has sought and found evidence and intellectual understanding, which inspired it to create universities and centers of learning and scholarship. So we need to develop a better understanding of what faith is. Next view graph please.

The word faith has several different meanings. They can be summarized as being of three different types. Belief in propositions, confidence or trust in a person or thing, and loyalty to some person or ideal.

And in Christianity all three meanings are important, but actually the emphasis is on the second and third meanings, trust and loyalty. Notice though that faith is not inherently religious. It can be perfectly secular.

I had faith in the sense of trust in the aeroplane that I flew down on from Boston this morning. I also have faith in the sense of trust in my wife, and I try to act in faith in the sense of loyalty towards her. There is such a thing as blind faith that's sometimes called "believism".

It's the kind of thing that when asked why do you believe it, the only answer that's given is, well, I just believe it, that's all. But Christians aren't called to blind faith. They're called to live out consistently a relationship with God that has evidential support, even when there's uncertainty, and what we do know falls short of proof.

Next view, please. Authority is a related concept that's often disparaged today. It's true that the religious belief of many people is founded on an acceptance of what they are taught by religious authority.

Is it then authority that is the problem? Well, not really, because it's just as true that their scientific belief is an acceptance of the teachings of their scientific authorities for most non-scientists, and even for scientists, because there are many elements of faith in science itself, for example belief in the consistency of the world, or trust in other scientists' truthfulness and loyalty to a research group or to close collaborators. And if we realize that faith rightly understood plays a vital role in science itself, and in its reception by non-experts, then we begin to solve the perceived problem of coexistence. But the perceived problem of coexistence also partly comes from a misunderstanding of science.

Next view graph, please. What I mean by science is natural science, the sorts of things that are discovered by physics and chemistry and biology and geology and cosmology and so on. That probably seems obvious to many of you.

But a lot of confusion arises because long ago that was not the meaning of the word science. In the 18th century the word was often used to speak about any systematic knowledge. After all, the meaning of the Latin word "scientia" from which science is

derived is just knowledge.

But today, when using the unqualified word science, most people mean, and I mean natural science. It is natural science that has gained enormous epistemological prestige based on its amazing success in describing the world of nature and the powerful technologies that it has spawned. Next view graph, please.

The particular strategies that science relies upon to obtain its knowledge are reproducibility that different people can use. Different people can get the same results from repeated experiments or observations and an insistence upon descriptive clarity so that the results of an experiment, even if perhaps not its interpretation, are expressed in unambiguous ways that all scientists can agree upon and understand. That often means, for example, measurement.

Next view graph, please. If you want more details about this, then please read my book, "Monopolizing Knowledge." This is the shameless advertising section of the talk. It's an examination of scientism.

scientism is the belief that science is all the real knowledge there is. scientism has been enormously influential in our society and in the academy for the past couple of hundred years. But scientism is usually implicit rather than explicit.

In other words, people don't just get up and declare their allegiance to scientism. More often they simply presume it implicitly. I've given a couple of examples of more explicit scientism on the view graph, but implicit scientism is rife in the writings of the militant atheists of this century.

So, for example, Richard Dawkins in his book, "The God Delusion" writes as follows. Did Jesus raise Lazarus from the dead? Did he himself come alive again three days after being crucified? There is an answer to every such question, whether or not we can discover it in practice, and it is strictly a scientific answer. The methods we should use to settle the matter would be purely and entirely scientific methods.

Well, look, the resurrection isn't a scientific claim, it's an historical claim. Next view graph. The way you establish the truth of historical claims, like the resurrection, or for example, the Julius Caesar was stabbed to death on the steps of the Roman Senate on the Ides of March in 44 BC, is of course not by, quote, purely and entirely scientific methods.

No, we need to use methods that are appropriate to the claim being made. The evidence that we seek for historical claims isn't scientific evidence, it's historical evidence. That'll be predominantly for things like documentary evidence, personal and maybe even eyewitness testimony, perhaps some archeological evidence, and all gathered together, taking advantage of our general understanding of what makes people tick and of the

attitudes and the thinking and the background history of the times in which the events occurred.

Now the reason why scientism is so important in the present context is that the critics of belief in God are fond of saying that religion is irrational because there's no evidence for God. But what they're really saying is that there's no scientific evidence, there's plenty of historical evidence for the claims of Christianity. I'll agree that history and the truth of Christianity cannot be established scientifically, but my position is that science is obviously not all of knowledge.

It's not the only route to knowledge, and because scientism is simply a mistake. And the most important clarification in understanding the relationship between science and faith is to recognize that there are many different routes to knowledge and science is just one of them. If you artificially elevate science into a monopoly of knowledge, then yes, you undermine religion, but you also undermine lots of other non-scientific disciplines like history or philosophy or literature or the law or the arts and so on.

Next slide please. So scientism is the biggest barrier to coexistence. It misleads many to think that the non-scientific disciplines need to be turned into science.

It misleads some scientists to overreach and pretend that science has refuted religion. It misleads Christians into thinking that gaps in scientific knowledge ought to be a cause for satisfaction. These mistakes are what undermine coexistence.

The key antidote to scientism, I believe, is to realize that science is not all the knowledge there is, and in particular that different descriptions of phenomena at different levels can simultaneously be valid. This is commonplace within the natural sciences, but it also needs to be advocated for the levels of description that go beyond science. There can be scientific descriptions which avoid purposeful explanation as an operational presupposition of science, and there can be human and personal and purposive explanations, all of which can simultaneously be true.

So to illustrate this, next view graph please, consider the human person. You might say that I am an assembly of electrons and quarks interacting through quantum chromodynamics and the electroweak forces. Next.

I am a mixture of a wide variety of chemical elements, hydrogen, oxygen, carbon, etc. Next. I am a wonderful assembly of cooperating cells guided by genetic codes.

Next. I am a biochemical machine powered by bioenergy. I am a mammal next with warm blood and hair.

Next. I am a human with consciousness and intelligence. Next.

I am a husband, a lover, a father, a teacher. Next. I am a sinner saved by grace.

Next. I am an eternal spirit beloved by God. Next.

I am all of these things, and not one of them rules out the others once we set aside scientism. Well, let me close by talking a little bit more about faith. And here is why I say that my Christian faith is reasonable.

Next, please. It's based upon an assessment of many different types of reasons. Most of those reasons for belief in God are not scientific, but they are nevertheless logical and rational.

The most important types of reasons for me personally are a combination of the historical evidence and personal religious experience. So my faith is based on experience, but not the certainty of reproducible scientific experiments. Still, that's not a reason to discount it, because like everyone else, I make small and large decisions almost every moment of my waking life on minimal evidence beyond personal preference and impulse.

That's what it means to be sentient. If history is any judge, it is people who act boldly and with determination and commitment, even in the face of risk and in the absence of complete information, who are successful in the world, and such people are called men and women of action. They act in accordance with a view of the world which is plausible but unproven.

That is, they act on faith. And I think my religious faith is quite simply the same principle applied to matters of God and the Spirit. That's actually not all or everything that the Christian faith is, because Christians over the centuries have experienced by faith what we take to be a personal relationship to God.

Next, please. Arthur Stanley Eddington was the discoverer of galaxies and of the internal physical structure of the stars, and he put his view like this. In the case of our human friends, we take their existence for granted.

We could read philosophical arguments designed to prove the non-existence of each other and perhaps even be convinced by them and then laugh together over so odd a conclusion. I think it is something of the same kind of security we should seek in our relationship with God. Next.

Can science explain even something as familiar as friendship? No, rather obviously not. Sciences methods don't lend themselves to that topic. Does the fact that science can't explain friendship means there's no knowledge or reality in friendship? Of course not.

Friendship is a reality that can't be discovered or explained by science. Science obviously coexists with friendship, and it can coexist equally well with Christianity. In fact, what I've tried to show you very briefly this evening is that there is a much more constructive relationship between science and Christianity than mere coexistence.

There is a sense in which the Christian faith leads to science. And though I haven't developed this idea this evening for lack of time, there's also a sense in which science leads to God. The Christian faith concerns personality, intention, and significance.

Topics that sciences methods preclude it from studying. Christians like me say that those topics are actually the most important because the universe is the creation of a personality. And that belief can coexist with science, but not with scientism.

But then scientism is a fallacy. [Applause] And of course, if you'll remarks, you said that scientism is the biggest barrier to coexistence. And then the last thing you said was scientism is a fallacy.

That's provocative. In fact, you made two provocative statements, one, or claims. You expanded faith beyond what we're used to.

Faith is much larger. It's an appeal to authority in science or religion or whatever else. But then you restricted science much more than we're used to.

And in fact, in your book, you actually restrict science to the natural sciences and claim that the too often in our culture science is understood to be the only valid knowledge. I wonder if you could just say a little bit more about the scientism and how pervasive it is because I think that's something that's a real barrier to those of us who want some sort of scientific verification for the existence of God or for our religious faith. And I think you would see that as a category mistake.

Yeah, I think it's a category mistake. And I mean, insofar as science has unqualified words, science is referring to a particular way of finding out about knowledge. The natural science has methods that I alluded to briefly and didn't unpack that really are restrictive of its knowledge.

Fundamentally, the reason why natural science, as I mean by the unqualified word science, the reason why natural science is limited is precisely because it relies on reproducibility and the clarity of careful measurements and unambiguous representations. And there are many things in our world which don't possess those kinds of clarity. And history was the example that I gave.

So it's true that referring to scientism is a little bit controversial. When I've done so in many audiences, I get a whole stream of different kinds of reactions. Some people think, "Oh yes, of course he's talking about something I'm very familiar with, that scientism is all around us." And there are other reactions which go all the way towards saying, "Well no, this is a straw man, you're setting up a straw man, people don't actually believe in scientism." But the fact is, scientism in various guises has been around for nearly 200 years now.

Sometimes it's referred to as positivism and there are various different reflections of it. It

leads to an over emphasis on technology and we see that of course, all around us all the time. And my purpose is not to disparage the non-scientific disciplines, those that I refer to as non-scientific.

It's quite the contrary. I want to affirm that disciplines whose methods are not scientific are still vital and important. And I think particularly if I'm to take it a little further, this question of personality is terribly important.

I mean science describes things in terms of efficient causes, in a certain sense of mechanisms. And so science is not examining the why or the reasons for things, it's examining the how or the mechanisms, the way that things come about. And that's the difference between how and why questions.

But the why questions are just as important to us. In fact, there are in many ways more important to us. And so science cannot describe what, for example, individual intentionality.

It's not part of its purview. And so of course, you know, science can't describe human intentionality, which it can't. And it's kind of course encompassed God's intentionality.

The title of your book is monopolizing knowledge. Thank you, keep the promotion. It's a great book.

And the implication is that that that scientism is a kind of, claims a kind of monopoly on knowledge. Are there ways that you would recommend that we might break that monopoly culturally, or perhaps in our own lives? Perhaps pursuing different ways of knowing other than scientific and giving those a greater place in our lives? Well, I think that clearly we do. I mean, many people do find meaning and reality in many other things.

And I think most people do. But I think it's important also to acknowledge that difference exists. And I mean, in all honesty, scientists are often guilty of scientism.

They're not the only people that are guilty of scientism, but many science popularizes take the view that science is the supreme root to knowledge, the royal root to knowledge, and give that impression. Don't get me wrong. I'm not knocking science.

I think science is tremendously important. That's why I've devoted my career to it. It's just that it's not all the knowledge there is.

So here's a question that's related. If scientific justification of God is unavailable for reasoning, how do you know that the historical evidence is credible? Well, you know that the historical evidence for any event of history is credible, not on the basis of science. So if any history is credible, then it's conceivable that the historical claims of Christianity are credible.

And the way you find out the credibility of historical claims is to examine the history. And so, you know, historians have ways of going about trying to make sense of documents, of testimony, of archaeological finds of all the things that speak about the past. I don't think that there's some kind of knockdown proof about any particular event of history.

Historians don't depend upon scientific proofs. They marshal the evidence, and they make the case that the most plausible explanation for some sequence of events or whatever it might be in history is that, you know, it came about because of so-and-so, or that such and such was what really happened. It's the same kind of approach that we need if we want to address the Christian faith and the claims of the Christian faith, which are, of course, embodied predominantly in the New Testament.

Here in there in the New Testament, we have, you know, the life of Jesus laid out for us, the experience of the early church, the spreading out of the gospel through the Roman world and so forth. And we've got to ask ourselves the question, how credible are these accounts? So if you're approaching the Christian faith from a purely intellectual point of view and you want to say, "Well, you know, do I find this credible?" Those are the kinds of questions you need to ask yourself. Those of us who have a personal faith and have a personal experience of Jesus, you know, tend to lean towards trusting the Bible even more than that.

We believe that there is an inspiration associated with the Bible, but when you approach it from a purely intellectual point of view, as someone whose mind is open and just wants to say, "Well, how plausible is Christianity?" I don't think you need to believe the Bible is perfectly true before you can read it. I think you should read it. The question about your "I am" phrases at the end, does one of the "I am" phrases have priority over the other in your eyes? Does one make up of our body have priority when observing how we are composed? Well, the point I'm trying to make is about these "I am's" is that they're all true, okay? So I don't particularly intend to prioritize them.

Priorities imply you have some kind of value. There is no sense in which, from the purely descriptive point of view, any of those are any more true than any other. And that's the point I'm trying to make.

So I wouldn't want to prioritize them, but I do think that some of those descriptions are accessible to some people. They can understand them, and some of them are not. So, you know, if you're not a physicist, then you probably don't really know what a quark and a glue on is.

So, okay, that's not something that's a very useful description. But most people can at least understand the human descriptions. But the point I was trying to make is that there are many different levels at which you can describe any object, and that's under human is a particularly complex object, and so it's a particularly good example.

And they can all be true simultaneously, and I think that's very helpful, because even if we go into a look at the Bible, the plenty of places in the Bible where the Bible talks about God acting in the world, but they talk about him acting in the world there's a perfectly clear-cut natural explanation for whatever it is that's going on. So, for example, I usually use the example of the founding miracle of the Hebrew faith, which was the exodus of the people of Israel from slavery in Egypt and their crossing of the Red Sea. Well, you know, we, those of us in my age, and probably you two, many of you, have seen the film The Ten Commandments with this wonderful Cecil B. DeMills and a cast of thousands, you know, crossing the Red Sea with the Red Sea Party and so forth.

Well, we probably have in our minds that image, but actually that isn't the image that the Bible really gives, because if you read it carefully, what it says is that in the Bible, that there was in a sense a perfectly natural reason why the Red Sea was parted, and that is that there was a strong east wind that blew all the night. And so there's an example in the Bible where it says, God was acting in a miraculous way to save his people, but at the same time, there was, in a certain sense, a natural explanation for how it took place. Of course, the timing was also miraculous.

But the point is that just because something has a natural explanation doesn't mean that God didn't do it, and the same can be applied to almost anything else that you want to think about. Here's a question. "Church's founded universities before science had advanced as far back when much was unknown, and many scientists were looking for God, not science.

Would they do the same thing now with scientists having discovered as much as they have now?" Okay, well, yeah, of course, that's true. The universities were founded predominantly in the early days as Christian study centers, in a certain sense, and many of them were training grounds for priests and for scholars. I don't think that today we could go back to that, okay? And there is a sense in which science has reached the point now where it has its own momentum, and it goes ahead regardless of its roots.

So I pointed to some of the Christian roots of modern science as we know it. But there is a sense in which, of course, these days, scientists have taken off, and science has taken off in a way that's left behind many of its roots. And so I certainly wouldn't argue that you have to be a Christian to do science or anything like that.

I mean, that's simply not the case anymore. I do think that there are Christian virtues which science depends on, and it depends on them in the way that our society does for its function, very often depend upon Christian virtues. That we often take for granted, these include things like truthfulness and logic and respect and those kinds of things.

Science as an institution functions very much on those basis. But I would hate to give the impression that what I'm talking about science, I'm talking about all of the university, because I think the university needs to be far, far broader than just science. Is it the case

that there's a kind of science in the here that because the topic of science is the topic of study for science are precisely those things that are repeatable and have more unambiguous evidence that there's a greater degree of certainty and that other fields and disciplines want that greater degree of certainty, perhaps even including in religious faith or other areas, and so there's an attempt to.

Well, that's certainly there is a temptation to try to cash in on the what I call the epistemological prestige of science. So I think many things these days call themselves sciences, primarily because the word science carries a certain cache, okay, and they don't really bear any relationship or any resemblance to the natural sciences again. By saying that I don't mean to disparage them, I just I'm just saying that they don't, they don't use the same methods.

But I do think that science has a degree of confidence and certainty about its knowledge that many other disciplines don't. And I don't mean to again, I don't mean to say that that's a criticism of those other disciplines. I think it's a sign that science has decided to tackle those things in which the world is reproducible.

And when you depend upon reproducibility, you have the ability to go back and cross check and make more observations or make more measurements. And this is a marvelous way of eventually ironing out and sorting out the disagreements that exist and coming to conclusions that have great power and great conviction behind them. But not everything is like that, not everything is susceptible to that.

So I sometimes say, and I don't mean to, I'm not just being facetious here, I'm, I think there is a sense in which science has chosen the easy questions. There are the questions that can be sorted out on that basis, but there are other very important questions that can't be. So here's a hard question.

How should questions respond to the claim of evolution as the basis of life on earth? If there is evidence for a common ancestor of all living things, isn't claiming creation as the truth contradicting science? Well, it depends what you mean by evolution and it depends what you mean by creation. So what I mean by evolution is really two important scientific concepts. One is common descent, the idea that species have developed from one another over the long history of the earth.

I mean the earth may be 4 billion years old and it's had a long time for things to develop. The other is Darwin's concept that's natural selection can bring about over long periods of time this development of other species. And so those two concepts which were of course laid forth and argued for very strongly in Darwin's book, *The Origin of Species*, those are what I mean by evolution.

But there is a meaning of evolution which is a kind of scientific view which is to say that because the exquisite adaptation of biological species to their environment can be

explained through these mechanisms of common descent and a natural selection. Therefore, God could not have had anything to do with it. Well, that's not science.

That's a philosophical extrapolation that I don't for a moment accept. It doesn't bother me at all if God chose at the way he was going to develop the enormous diversity and complexity of the biosphere to use a mechanism such as natural selection. And I see no difficulty in my Christian faith with accepting that evolution has taken place.

We know evolution takes place. I mean my wife's going into hospital on Wednesday to have knee surgery. And one of the most dangerous things about going into hospitals these days is that you might get an infection because the infections that you get in hospitals are very often of drug resistant to the disease.

Drug resistant, antibiotic resistant bacteria. And the reason is because those bacteria have evolved in the last 10 or 20 years to resistance to the antibiotics that we've developed. So we know that evolution takes place, that species evolve.

And the evidence that Darwin had for common descent was not all that strong when he wrote the book. But the evidence for common descent is now far, far stronger. The scientific evidence for common descent is far, far stronger than it was when Darwin wrote his book.

And particularly in the area of genomics, which has developed in the last 20 years, the evidence for common descent has become so scientifically overwhelming that no serious scientist really doubts that common descent has taken place. So we have some other related questions. Could you explain why the age of the earth according to the Bible differs from the age of the earth according to the science community and then also did God make the universe through the Big Bang? Okay, thanks.

So let me tackle the Bible question first. You know, the Bible is a tremendous selection of literature. There are all types of literature in the Bible.

There is prophecy. There is history. There are proverbs.

There is poetry. There are songs. There are letters.

There is biography and on and on. But the one type of literature that is not in the Bible is scientific literature. There was no such thing as science as we conceive it today when the Bible was written.

So it's not surprising. There's no scientific literature. And so I think that the first thing one should bring to a sensible reading of the scriptures is a realization that we should not read the scriptures as if it were a scientific description.

So if you read the first few chapters of Genesis, particularly chapter one, where we talk,

where we see creation taking place over six days and then God resting on the seventh. It seems to me really rather unnatural way of interpreting the Bible to attribute 24 hour periods to those seven days. If you read Genesis one, the way I think it was meant to the people for whom it was written.

It was much more of a liturgical or even a worshipful celebration of God's creation than it was some kind of scientific description of how he did it. In fact, the most important message of Genesis one is not how God created the world, but that he created it. Because the most important thing that the Hebrews needed to know in those days was that their God, Yahweh, was not like all of the tribal deities of the people around about them.

That if God is God, then God is the creator of everything. And that was the most important message of Genesis. So I take the message of Genesis one to be that God is the creator of everything at the whole shebang.

And so that's the way I interpret that chapter and we could talk about some of the later chapters later if you like. But now the question of the big bang. Everything we know in physical science basically goes together to support the fact that the universe and the earth is very old.

As far as the universe is concerned, we now know when the big bang took place with remarkable accuracy. It's something like 13.7 or 13.8 billion years ago. There are very complex interpretations of the microwave background and its uniformity and so forth that go to tell us what that dating is.

But in so far as we know the laws of nature, we can deduce when it was that the universe got going. Again, I don't have a problem with the idea that God created the universe in a very small size and that it's been expanding ever since. I don't see why that's a problem and I don't have a problem with it.

There are so many thoughts on the following. The distinction between theological faith and secular faith seems to be that one can validate secular faith, perhaps scientific faith here, faith in science, and hold it accountable. But there's no tangible way to hold theological faith accountable.

Thus secular, perhaps scientific faith seems distinct from theological faith to the point where comparing the two seems unfair. I think I agree with that comment. Yes, there are ways in which we have faith in things and there is accountability in the secular world.

And I think there are also ways in which we have faith in ideas in religious respects and these are accountable. The accountability is actually not all that terribly different. In science, there's a sense of accountability.

People can make all kinds of claims that they claim to be scientific claims. Scientists, as

a community and as an organization and as an institution, have ways of testing those claims. And if those claims are found not to be consistent with the science as we know it, then we discount them.

So if someone writes a scientific paper that starts by saying that Maxwell's equations, which is the equations of the government electromagnetism, that's my stock in trade. If it starts by saying that Maxwell's equations are wrong, then I don't spend a great deal of time reading that paper because I know that here is a set of ideas which has gathered authority within the scientific community because it's been tested over many decades, over hundreds of years, and been established in lots of different ways. So actually, there are similar kinds of things in religious faith.

I mean, the church, various churches have mechanisms of holding people accountable. So denominations, for example, have procedures that they go through for deciding whether someone should be ordained to become a professional clergyman. And congregations hold their pastors to account.

And if they misbehave in certain ways, well, they're not acting in ways that are consistent with their Christian faith. And what's more, the Christian faith has been tried over centuries by Christians over history, and there are certain things that basically are known and established as Christian doctrine and others which have been tried and have been found wanting and so forth. So, you know, I think it's true that some things in the secular world are more definite.

Certainly in science, they're more definite, and there are good reasons why science is more definite than other things. But I don't think that there's a big division between faith as practice in secular world and faith has practiced in the religious world. Similar to that, you've established that there may be multiple avenues to truth, but you haven't addressed what to do when two or more of those avenues are directly at odds with each other, which one is a stronger indicator of the truth.

Well, I mean, that's a rather hypothetical question. I mean, how can Maxwell's equations contradict Bach's B minor mass? I mean, they don't contradict each other. And so, I think that the questioner is putting forward a little bit of a hypothetical that I can't really tackle.

There are ways in, let me simply focus it down on the question of science and Christianity. There are certain beliefs in Christianity that have taken place within Christianity over the centuries that are inconsistent with science as we know it. So here's an example.

In 1500, practically all Christians, like everyone else in society, believed that the sun orbits the earth. Now, essentially, nobody, whether they're Christians or anyone else, believes that the sun orbits the earth. We all know that the earth orbits the sun.

At least, I hope most of us know this. Sometimes surveys show that not as many people know this as ought to know it, but okay, I think everyone here at UVA knows it, right? So that old belief, that old Christian belief, you could call it, okay, but it was actually the belief of everybody in society is inconsistent with modern science. But actually, well, you know, what's happened in that situation is when those kinds of confrontations take place, apparent contradictions with one another take place.

You have to go back to your roots and you have to ask, is the science right or is the interpretation of the Bible right, okay, or our interpretation of what we see right? And so there's a process of testing and reinterpretation. And I think that that is what happens when there are these apparent contradictions or real contradictions. I don't think you can declare from day one, well, you know, it's always going to be this particular discipline or that particular discipline that's going to win.

It depends on the question being asked. So why did you choose Christianity? As opposed to what? >> Opposed to other religions. >> Well, I became a Christian when I was an undergraduate at Cambridge University.

The reason I became a Christian was because I became persuaded that the evidence for the resurrection is actually very strong. That wasn't the only reason. There were lots of other reasons.

There were lots of processes that I had gone through and there's a personal psychological history which I won't embark upon because it's way too long. But that was fundamentally the reason I became a Christian. So there was a sense in which I became a Christian, you know, before I was a theist, well, perhaps at the same time I became a theist.

So, I mean, there is a sense in which I believe in God because I believe in Jesus. So for me, it wasn't a question of, well, I became a believer in God and then I sort of said, all right, fine, I've got an array of religions that I better choose the best one. For me, it was a very different process than that.

Having said that, I think there are very good reasons why in hindsight, Christianity is as powerful and widespread a faith as it is. And these are rational reasons. For one thing, Christianity, more than practically any other faith than perhaps Judaism, depends upon history and makes claims about evidence, historical evidence, that supports the fact that there's no reason for that.

And of course, that evidence and those teachings are focused on the person of Jesus Christ and many of the things surrounding that. So I find Christianity from a purely rational point of view very persuasive on that basis. I don't want to be dis, again, I don't want to be dismissive of other religions, but I think that there is a sense in which there is a uniqueness to the Christian faith in its dependence upon historical evidence.

So that question was about other religions. This question is about non-Western science. Why is there such dismissiveness of non-Western science? The Christian worldview is not the only thing that allows for science to grow.

One can see the advancement of anatomy and medicine in China as well as Middle Eastern and Indian understandings of mathematics, which eventually made the way to Europe before being adopted by the Europeans. Your argument seems very dismissive of other cultures. No, it's not at all dismissive.

It's simply recognizing the historical facts. Of course, there were contributions to Christian culture and to Christian learning and scholarship and eventually to science that came from other cultures. Islam was very important in preserving Greek science and philosophy as it then was.

And this was then eventually translated into Latin and brought into Christianity. Not at all dismissive of that. Mathematics was very important and was developed by both the Greeks and the Arab nations in many important ways.

But none of those developed modern science as we know it, empirical science outside of Christianity. So if you don't accept that the scientific revolution was a revolution, then clearly my remarks about the scientific revolution taking place in the West are not going to appeal to you. But I think you would be in a minority in doing so.

So of course, there's a long history of what we could call science that leads up to the enormous explosion of scientific activity that took place in the late 16th and early 17th century and grew almost exponentially over the next one or 200 years. But it is a fact that the scientific revolution took place in Europe predominantly and that was Christian. Now of course interpreting history, I don't want to try to make too strong a case here.

I mean, the reasons why the scientific revolution took place in Europe, you know, are matters that historians can argue about. But what I want to point out is that far from being stifling to science, Christianity as the culture of the West was in fact the place where science grew and there's a good argument that there were good reasons why Europe was the place where modern scientific revolution took place. How can we as humans take that leap of faith and fully trust God even though there seem to be many things that show that God exists or perhaps doesn't exist.

Why is it that God has all his plans for us? It leads us to him in the most confusing and ambiguous ways. I think this is a question really about why God isn't obvious, okay? Because I mean, I would argue that there are evidences but I think the questioner is right that those evidences don't seem to be as decisive or as obvious or as clear or unambiguous as many of the things, for example, that we discover in science. I mean, you know, we don't really have a lot of trouble believing in gravity because if we don't believe in gravity, we're in big trouble.

You know, well, okay, why is God hidden? I think there are lots of reasons why God is to a certain extent hidden. The most important are that God is not like us, that God is not part of his creation, that God is the creator, he's not part of the creation. And so it's important not to think of God as something that's essentially governed by this world because it's the other way around, this world is governed by God.

I also think that, and by the way, this question of the hiddenness of God is to a large extent wrestled with in the Bible inside. There are a lot of questions that surround that. But I think that people in the Bible actually did feel that in many ways that God was nearer to them than we perhaps feel today.

And that's perhaps because they lived closer to the earth and their lives were more bound up with the earth. So one of the reasons why the Bible gives for why God is hidden is because God is overwhelming. So when Moses went up on the mountain, when he came down, his face shone and the people didn't want to look at him.

Because it was too scary. So maybe many of us feel like we want to have a direct encounter with God and that would persuade us. We then have no more doubts.

But actually a direct encounter with God as the Bible reports it might be the most devastating of experiences. And it might be something that we would be, the last of us would be happy to have. So holiness might well be an important reason why God seems veiled from us.

Because the holiness and majesty of God may be something that we creatures are not well equipped to withstand. Thank you very much for listening. If you like this and you want to hear more, like, share, subscribe and review this podcast.

And from all of us here at the Veritas Forum, thank you.

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(gentle music)