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Can a Scientist Believe in Miracles? | Ian Hutchinson & Robert Lue

October 14, 2017



The Veritas Forum

Last Spring, Ian Hutchinson (MIT) and Robert Lue (Harvard) sat down at Harvard's Science Center with Anne Harrington (Harvard) to discuss miracles. Do they happen? Does scientific thinking undermine belief in them? What does the existence (or non-existence) of miracles mean for the larger discussion on science and faith?

Transcript

Many of the great scientists like Newton or Boyle or Dalton or Faraday or Maxwell, many, many others, were Christian believers who saw their science as consistent with a God who is active in the world and who on occasion performs miracles that go beyond the scientific laws that they were in the process of discovering. Last Spring, in Harvard Science Center, Ian Hutchinson, a professor of nuclear engineering at MIT and Robert Lue, a professor of molecular biology at Harvard, sat down with Anne Harrington, a professor of the history of science at Harvard to discuss miracles. Over the course of their dialogue, Lue and Hutchinson explore the complicated relationship between the miraculous and the scientific.

Do miracles happen? Decentific thinking undermine belief in miracles. And what does the existence or non-existence of miracles mean for the larger discussion surrounding science and faith? My job in tonight's event is to provide a kind of holding space for what we hope and expect will be a genuine conversation with surprises, with opportunities for true learning and for your engagement. I am a historian of science and medicine, but Michelle, I didn't tell her, I actually have a deep and longstanding interest in both the historical and contemporary relations, particularly between medicine and religion.

So I'm really thrilled to have the opportunity to facilitate an honest and searching conversation on these kinds of themes. We have two stellar speakers or interlocutors to enable the conversation with us this evening. Ian Hutchinson on my right is a professor at MIT.

He's a plasma physicist in the Department of Nuclear Science and Engineering at MIT. I was talking to him a little bit before the session and they actually create control nuclear fusion in their lab and they work with plasma that is hotter than the sun. And I was just imagining, I wasn't really going to knock something over.

And I was quite aware of what it does. And all in the service of trying to develop new forms of energy sources to help us all. In addition to that, Ian speaks often about questions of the relationship between science and faith, particularly Christian faith.

And so he's a wonderful asset for us this evening. Robert Liu to my left is someone that the Harvard undergraduates here may well already know because he's an award winning biology teacher as well as the faculty director of the box center. He's a professor for fostering innovative teaching and learning at Harvard colleges.

Biology research focuses on cancer biology, particularly tumor suppression. And he also shared with me just before the event started that this is actually the very first time that he's ever spoken about these issues in public. But he feels it's important.

So we're really again thrilled to have you both here. What the way the format will work is they will each speak for sort of set out some issues for about 12 minutes each. And then we'll bring them back and you see this looks a little bit like a living room and a little bit like a church.

I'm not quite sure. Not a very comfortable. But I think the message of the visuals is that we're here to again to have a true dialogue.

So without further ado, I'll invite Ian to take the podium. [APPLAUSE] Well, thank you very much for inviting me a little bit up the Charles River to these hallowed halls from MIT. Actually, the last Veritas Forum that I spoke at at Harvard was in 1992 or 3. So here I am, 25 years later, up the creek again.

Can a scientist believe in miracles? You know, we could settle this question pretty quickly. I'm a scientist. I believe in miracles.

Therefore, the answer is yes. But maybe I'm lying or maybe I'm deceiving myself. So perhaps you shouldn't take my word for it so quickly.

Like other Christians, I believe that Jesus, the Son of God, died on the cross for our sins and rose miraculously again on the third day. And we just celebrated that fact last Sunday. Every Christian worthy of the name believes at least in that miracle.

The God I believe in is active in history and in the world today. But there are lots of people in this world who think that science is simply impossible if we take seriously such things as miracles and that miracles are simply impossible if we take seriously modern science. So how do I square that? Well, it's pretty straightforward.

The presumption that the laws of nature are inviolable, immutable, is just not a doctrine of science. Science's method and program is to describe the universe in so far as it is reproducible and follows universal laws. But science doesn't have the slightest need to extrapolate that method and program into a presumption that everything that happens is describable in that way.

And in fact the majority of the great scientists of history didn't make that presumption. Many of the great scientists like Newton or Boyle or Dalton or Faraday or Maxwell, many, many others were Christian believers who saw their science as consistent with a God who is active in the world and who on occasion performs miracles that go beyond the scientific laws that they were in the process of discovering. So you needn't just take the word of me or of any other high profile Christian scientist of today for it.

If scientists couldn't believe in miracles, then most of the great scientists of history weren't scientists. Now, the more interesting question though is not can scientists believe in miracles, but should they believe in miracles? Some would say that perhaps those scientists of history believed in miracles, but we know more science today than they did. We know better now.

And actually in the latter part of the 19th century classical physics reached its pinnacle. Maxwell had unified electricity and magnetism and light. And so the laws of physics were increasingly appearing to be complete and closed.

Even the biological universe appeared to be amenable to description through Darwin's mechanism of natural selection in natural and scientific terms. And so it seemed as if the whole of the universe obeyed deterministic classical equations that meant that if you knew the initial conditions and you integrated the equations forward and solve them, then the future was determined. But since then, the discovery of quantum mechanics and the greatly increased understanding of nonlinear physics and chaos have actually overthrown that view in physics.

Not only do we now know that the solutions of the classical equations are sometimes indeterminable because of their sensitivity to initial conditions. That's the issue of chaos. But also quantum physics shows that there are fundamental aspects of the universe that deterministic laws do not.

And as far as far as we know cannot completely describe. So for, to take a simple example, the radioactive decay of a single nucleus is completely unpredictable based statistics, but we can't predict when it will decay. So in other words, science has labored mightily for centuries to understand the world in deterministic way only to find that the universe resists that description.

Or at least resists complete description in that sense. It might have seemed a good argument in the 19th century to say that science had shown the universe to be governed

by inviolable universal laws. So how could there possibly be such a thing as a miracle? But today that argument is untrue even to our scientific understandings.

So yes, we know more now more than they did. But what we know more today makes the universe look, if anything, even more open than it did to the Victorians. Now suppose then that science doesn't actually rule out the possibility, the theoretical possibility of a miracle.

Still one might ask, if miracles happen, why aren't there by now loads of scientifically demonstrated miracles that would persuade anybody of their reality? It's a good question. But how does science work? It works on the basis of reproducible experiments or observations. If I do an experiment here and now, then someone else needs to be able to do the experiment somewhere else at some other time and get the same result.

That's absolutely fundamental to the methods of science. And that outlook is what makes science what it is. But how do you apply that characteristic approach to a miracle? A miracle is by definition something that's unique, never to be reproduced.

And it's intrinsic to the whole idea of a miracle that it's unreproducible. It's consequently natural science is inherently incompetent to prove that an event is a miracle. And by the way, there are lots of other important aspects of life that don't yield to the scientific method either.

History is a good example. Science can investigate miracles, miraculous claims. It may be able to reveal deception or trickery or misperception.

If someone has been seen levitating in their front room, then if science discovers in their basement a powerful electromagnet, that might cause doubt on the fact that there's anything miraculous going on here. But if science fails to find defeating evidence, one is unable to say one way or the other, whether some reported event is a miracle. Science is incompetent to prove an event is a miracle.

It's unreasonable to demand scientific proof. Now, many people think of miracles or a miracle as being a violation of the laws of nature. That though is not the Bible's definition, nor is it the dictionary definition of a miracle.

A mighty definition, which is pretty close to the dictionary, is very simple. A miracle is an extraordinary act of God. And if you need a bit more qualification, I might add that shows his power and love.

This is far more consistent with the way that the New Testament refers to miracles. The New Testament refers to the miracles as either a sign or a marvel or a mighty work. There are New Testament miracles that have no explanation that is consistent with the normal course of the laws of nature.

For example, water being turned instantly into wine, or for that matter, the resurrection. These are things that aren't consistent with science as we know it. But there are others reported in the New Testament that could just be a coincidence.

Even a nature miracle, like the stilling of the storm by Jesus on the Sea of Galilee, could be just a coincidence. It might be a violation of the laws of nature, but you can't be sure it. So it's a mistake to define a miracle as a violation of the laws of nature.

There's no way to prove such a violation scientifically. And besides, the laws of nature describe the normal working of the world. Miracles are inherently abnormal, and we wouldn't necessarily expect them to be constrained by the normal rules.

But recognizing a miracle does depend upon interpretation of the event. The resurrection of Jesus is not just an anomalous event that seems contrary to science. There are lots of anomalous events that seem contrary to science that happen every day.

Many of them actually take place in scientific laboratories. They're usually mistakes. But if they're not reproducible, then they're quickly put aside so that science can get on with studying the reproducible behavior of the world.

And that's the way science works. The interpretation of an extraordinary event depends upon the context and your presuppositions. And that's by the way one reason why Jesus often says miracles depend on faith.

Because if you're close to the possibility of a miracle, then you're never going to be convinced. That doesn't mean we can't be persuaded by events that God isn't work, but it does mean that we're never relieved of the necessity for interpretation. There's never, I don't think, some totally self-authentic demonstration that cannot be gained set.

Now, skeptics sometimes say that in olden times people didn't understand the workings of the natural world, and so everything seemed miraculous to them. But today we understand so much more, so we can't believe in miracles. Now that's illogical.

Now obviously people in the New Testament times knew a lot less science than we know today. But that doesn't mean they knew nothing about the normal course of events, and they thought everything was miraculous. They knew perfectly well in the first century that blind people blind from birth don't, where their adults suddenly regain their sight, or that water doesn't instantly turn into wine, or that dead crucified people don't come back from the dead.

In fact, if they hadn't known that those things don't happen, those events would not have been considered extraordinary demonstrations of God's power and action in the world. The events functioned for them as miracles logically because they knew that they were humanly impossible. But undoubtedly superstitions abound in history.

And I'm just as skeptical as the next person about the proliferation of popular myths about figures of history or science heroes. Mind you, of course, folks in New England are a lot less skeptical about miracles now after the last football... (Laughter) Those patriots are amazing. But look, miracle stories are not all equal.

The fact that some miracle stories are superstitions doesn't mean that all miracle stories are to be ruled out. It's illogical to rule out miracles simply because they're miraculous. Unless you already know that miracles just don't happen, but there is no such thing as a miracle.

But science does not provide you with proof that that is true. So if you adopt the firm opinion that miracles just don't happen, then you're doing so not as a matter of science, but actually as a matter of faith. The historical evidence supporting the claim that Jesus rose from the dead on the third day is as good as for many events of ancient history that are accepted as unproblemable.

And if you haven't considered that evidence, I invite you to do so. But finally, miracles only make sense if there is a living God who is in touch with the world. We Christians say that we have personal experience of that living God through the Holy Spirit, the counselor who brings comfort and understanding and remembrance and conviction.

And while we don't say that that personal relationship is a miracle because it's not extraordinary, it is nevertheless an important reason why Christians, whether they are scientists or not, can and do believe in miracles. Thank you very much. [Applause] So as Anne pointed out, this is my first time actually discussing this in public, and so I certainly won't have, I think, has fully developed.

And I think that this is a very important argument as Ian has just shared with us sort of a wonderful sort of expression of his view on miracles on God, on the Christian God, and on religion in general. But what I'd like to do is perhaps start with where I begin with this sort of engagement with religion and with miracles. Not Jamaica, New York or Jamaica playing.

And I was raised as a Catholic, but I was raised as sort of a light Catholic, if you will, in that I had engagement with the church, but not the full on every Sunday kind of engagement. I was educated, both in Jamaica, and then when I came to the United States by the Jesuits, and so I had a very deep intellectual engagement with the Catholic church through the Jesuit order. But even before I came to the United States, I think as a high school student, I began to develop in my own mind what my view was of so-called miracles.

When I was in high school, I became very engaged with a group of Jesuits that formed their own sort of subgroup, if you will, with a particular focus on the poor, on the disadvantaged in Kingston, in Kingston, Jamaica. So I spent several years with this group,

every single weekend and actually during the week as well, working with individuals in mental asylums, homeless, and also in poor houses, if you will, in Kingston. And in the 1970s and the 1980s, these were individuals that were really cast aside by society.

It was difficult work, and arguably I saw humanity perhaps at its low point, with mental illness, poverty, drug abuse, violence, all of these things that we think are the opposite of what we feel, makes humanity an elevated part of the world. But it was during that same time that repeatedly I would come across individuals and groups that despite where they came from, despite what they did, nevertheless went beyond themselves for others. This always struck me as remarkably improbable.

And as a biologist, something we know well is that life itself is improbable. And in my view, seeing what people would do, under circumstances where it made absolutely no sense for them to care, for them to reach out, where there was no benefit to them, where there was no pastor or priest or rabbi or imam telling them what they should be doing. To me, that was the miracle.

It was a miracle I saw daily for years. And so I suddenly realized that, you know, are we thinking about, am I thinking about miracles incorrectly? Am I waiting for the burning bush? Am I waiting for the ocean to part sort of before me? And am I in fact missing the real improbability that really calls us to be more? And so it was at that point where I started to realize that ultimately I was not interested in miracles, that one would say expressed the power and glory of a particular God, of a particular deity. What I became interested were the miracles that show us as being more.

Show us as being more than just thinking about ourselves, thinking about what is most adaptive for our benefit. And in my view, that is the miracle that I became very excited about. So that when I came to the United States, I realized ultimately that science, perhaps at its best, is not just defining how things work, but at its best it's defining the boundaries of what we know and what we don't know.

And in that regard, we don't know. We have no evidence, at least in terms of the natural sciences, of an all-powerful God with a plan for each of us. But does that mean that God does not exist? As an agnostic, I would argue no, because I cannot argue either for or against the existence of such a God.

Because I don't feel that the expression of miracles that I first saw as a teenager and that I continue to look for requires that. So to me, the improbability of life is yet a reflection of the improbability of what we do for each other. And that in my view, that expresses what is truly miraculous.

And I don't feel the need to use evidence to try to prove where that comes from, because I have not forgotten my catechism. I have not forgotten the theologians that I read in college. So I may be a scientist, but I had a very strong and continue to have a

strong interest in theology.

Because ultimately, I feel that the ideas of religion, the ideas of how we should treat each other collectively represent a miracle. And that whether or not there is an all-powerful God, to me sometimes I think that invocation can distract us from who we are ultimately. I don't need to go into history what has been done in the name of an all-powerful God.

There's no need for that. But fundamentally, I think, I embrace as a scientist the boundary of what we can know and what we cannot know yet. I even don't feel the need to say that at some point we will develop the instrument that will measure the divine.

I think that is unnecessary. That is unnecessary. Interestingly enough, remember, in the Christian God and in many other gods, the divine is in us.

And so to me, I think the beauty of my definition, at least for me, of a miracle is that we are the miracle. And so I don't need or wait for some abnormality that breaks some rule when we all know that the rules change and that what is improbable is never impossible. So that is my take on the issue of miracles, sort of driven by my early formative experiences in Jamaica.

Thank you. [applause]

[music] I'm going to invite us all now to join Ian and Rob in living room and see if we can start a conversation. And I just think maybe we could begin by just inviting you to respond extremely briefly if you would to the basic message of each other's comments.

So we can sort of see where the common ground is, where we might want to probe more deeply. Well, one issue we need to be careful about is we're clearly defining what we mean by miracle differently. And while I appreciate very much what you shared, and I have actually some experiences that not unlike your own, in terms of seeing people in dire circumstances and seeing the redemption that can come in those types of situations, I very much resonate with what you say about the inspirational aspects of that.

But I think it's, we're in danger of defining these things so differently that we may talk across purposes. And so I would describe what you spoke about as sources of wonder. So they are in that sense marvels in terms of the New Testament terminology.

But they aren't in a certain sense anything that most people would identify as being a miracle other than metaphorically. Would you accept that comment? In other words, you are really using the word metaphorically in a way that I'm not. Right, right.

I agree. I think I am using it in some ways as a metaphor but not completely. So in other words, for me it depends on where I center the wonder, the marvel.

And perhaps as a biologist, all life is marvelous to me. It is a marvel. And quite often students come to me thinking that when you study biology, it's like studying a car.

You understand all the parts, you know how they work. When ultimately we know the variance, the improbability, the chaos, the noise of every living system, frankly every living thing is like a miracle that it exists at all when you think just how messy it is. But that's what gives it life ultimately.

But I do think that, and so to me, I find that fully encompassing and inspiring. In the way I feel that in some ways miracles are also discussed as a source of inspiration. As a source of aspiration for believers.

So for me, that is the inspiration. So it's not just a metaphor. In my world, it functions, I would think, though I'm curious Ian with your take on this, the way your definition of a miracle functions.

In other words, it's like a catalyst to move to faith, to renew, to service, to something. I do think, yes, I would affirm those as being part of what I think Christians throughout history have seen miracles as being important for in terms of sources of inspiration and aspiration, yes. But of course, they've also seen them as having some evidentiary value.

And in particular, the Christian faith as a whole hangs in a certain sense from day one on what I drew attention to, which is the resurrection, which Christians affirm as being an extraordinary act of God. And the resurrection itself is held up by Christians as important evidence for believing in God, for the love of God, for the redemption that is found in Jesus Christ. And so it sounds to me as though that evidentiary part is probably not something which you find particularly appealing or it's not so, it's not really important in your understanding of what miracles are.

That's quite true. That ultimately, there's a part of me, if not all of me, that feels that to apply this notion of evidence, that to be a saint you need to accumulate a certain number of miracles, they have to be suitably documented. Be careful, I'm not a Catholic.

But that being one example, I feel like you're in a lab and it's like you've turned your religion into sort of a lab, where you're gathering enough evidence, you cross a threshold and, "Kaboom, there you are." And to me, it almost diminishes the experience that might be out there and that ultimately it's applying science in a way and perhaps to something and for a purpose that science is not suited for and doesn't address directly. So if I could, I think one of the things I've been struck, both by your initial comments in this conversation, is the degree to which maybe surprisingly both of you take a certain modesty around or have a certain kind of modesty around the ways you define your identity as scientists, that it isn't the kind of hegemonic, you know, if science can't say it's there, there's nothing more to say, from both of you, I think, both of you are implying that you carry your scientific identity alongside other identities, identities that they do

with service and identities to do with your Christian faith. I do want to push now a little bit into new territory and talk a little bit about suffering and disappointment and the moments when you're in Jamaica and it isn't so great and their people don't become the best versions of themselves.

Or we didn't talk up, you know, you didn't talk in your comments very much about people's, the arena where many, many times people hope most for America, which is around health and disease and healing. And although that is a very important part of the scriptural basis for believing in miracles, but not everybody is healed when they pray and ask for healing. And so how one thinks about these challenges and navigates forward either, you know, in spite of that.

So could we talk a little bit about the darkness, the moments when grace isn't present, the moments when God doesn't seem to hear and hear what you have to say? Maybe you'd like to? So since I let off with this sort of discussion of seeing suffering and encountering suffering very frequently, I have to say, for me, it's not a question of why would God allow suffering on this earth? Why would my deity do that? I view suffering as a critical and inescapable aspect of the natural world. There is inequity, there is randomness, you're dealt the wrong set of cards, or structures societally generate suffering. But I view suffering as a potential forge, a forge that makes you who you are ultimately, and it gives you the opportunity to become more.

And all of that, which sounds actually, I suspect quite religious, I say that separately from religion. Because what trips me up is the debate over or the thought that God is lighting the forge for you, to make you better by making you suffer. And in my worldview, I don't see the particular value of invoking that purposefulness to suffering.

Ian, do you have a view? Yeah, I mean, let's see, maybe I can unpack a little bit about some of the things you mentioned at the beginning with which I resonated on. When I was between a bachelor and my doctoral studies, I had some time off, and I volunteered, I was quite a new Christian, I became a Christian as an undergraduate at Cambridge University. And I volunteered to go and work in a men's welfare hostel.

This is basically a hostel for homeless men in a rather depressed area of the north of England. And I worked there for about three months, so I was basically the lowest of the low, and I was just really helping out. And I saw much of the starkness of life at the bottom, in a certain sense, that you mentioned and were striking.

But there was another aspect of that experience, which I found truly inspirational, and that was the people who, unlike me, who was just there for three months, so you can survive anything for three months, okay? We had basically devoted their lives to this service, and these were not intellectual people by and large. They were, you know, salt of the earth type of people, but they were people who were there, and there were people who were there, in this case, because of their Christian faith, because they felt called by

God to minister. So that was a terrifically important thing to me.

I think on this question of the darkness, I think you've already given what I would regard as largely a Christian answer to the problem of suffering and evil, so I don't need to elaborate on that. But I do think as a side of this that one should acknowledge, and that is that certainly Christians regard suffering as a very deep reality, which is not true in all religious viewpoints, okay? And there is in a certain sense when people are in suffering, when someone, when you or anyone else that you know is in suffering, there is no theological or philosophical answer that you can give to someone that makes the suffering somehow more bearable. I don't think that exists.

I think the only thing we can offer in those types of situations is to be alongside that person, if they're a friend, and in a certain sense suffer with them. That's after all the meaning of the word compassion, which means suffering with somebody. And so I think that Christianity takes suffering extremely seriously.

It has explanations such as the ones you offered for ways of understanding what suffering can be and ennobling it in a certain sense. But I think ultimately the message of Christianity goes even further than that, and it says that not only am I called to be compassionate and to suffer alongside those people who are in suffering, but that somehow, in some mysterious way, God has entered into this world and suffered alongside us. And by doing so has brought a redemption to that situation that could otherwise not be brought.

And that to me is terrifically inspirational. I'm just going to push this a little bit more. I think that is inspiring what you both said, but I was trying to get at a sense of the particularity of the miraculous in this area.

Years ago I spent some time with a group of women who suffered from stage 4 breast cancer. And they were part of a support group and they met every week to share their experiences and support one another. But one of the women who was there no one was in apparently permanent remission and believed that she had experienced a miracle.

And she continued to go to the group to be a source of inspiration and hope to the others, but the actual effect, as I learned, was to feel, or in part of the other's folks, was to feel that, well, it's great that that happened to her, but we think we're all going to die. And how come this woman and why not us? And I think there's the sense of the particularity. I mean, you spoke about a God who is active in the world, but it's also about, I think, for many people, this conversation.

It's about does the universe care about me? Is the universe friendly in ways that are particular? And in the end, for many of us, miracles are about quite personal experiences in the sense we make of the lack that we're given. So we can talk about scriptural evidence, but I hope that I think the intimate, there's terrible things that people also do

to one another. Yes.

And there's the innocent child who the parents pray and pray, and nevertheless, she's gone. And I'm not even saying that you need to solve all this, but that we put it on the table and realize that there's very great personal issues at stake. As we try to feel our way forward in this conversation.

Of course there are. Let me just see if maybe we can move this conversation forward just a little bit more. I had a question.

So you spoke about science, I don't remember exactly how you phrased it, but science, in a certain sense, curating the boundaries of what we know and what we don't have. I need to discover what the boundary is. And that puzzled me a little bit, and I wanted to press you a little bit on this.

Certainly science operates at the boundaries of what science knows and what it doesn't know. But I'm wondering whether you mean meant to say that science keeps all boundaries between what we know and what we don't know. Science the gatekeeper.

No, no. I think that one of the things that has struck me over the last ten years, particularly in biology, is the degree to which so many of my colleagues and I have embraced the limitations, the limits. Of what we know, the fact that biology is a much younger science than physics.

And so there is this big bang explosion of knowledge that's happening, and we continue to be surprised by models that have to be revisited. And by things that we thought we understood that we actually don't understand. And so you spoke, I think, very eloquently to the limits around scientific evidence and reproducibility and what that really means.

There is a hot debate right now about the issue of reproducibility and how we fully understand that in biological terms, simply because it makes sense for something to be reproducible if you can control every single variable. And if you focus just on temperature, pressure, space, volume, so on and so forth, those are quite controllable. Any living thing is many millions of variables that are shifting dynamically at a given time.

And what is increasingly of interest is that even with, for example, mice, even with yeast growing in a dish, we cannot control them fully. The variability is so high that we need to rethink the boundaries of reproducibility in terms of certitude, right, for anything. So this is incredibly exciting for biology.

I know this may sound alarming, but it's actually incredibly exciting because it's allowing us to explain biological phenomenon in ways that are much more nuanced and complex than ever before. But so I don't believe that science is the gatekeeper or the, there's not a great wall of science around what the natural world is. But what I want to press you on

is, is there knowledge outside of science? Is science the only path to what we might consider to be? No.

No, science is not the only path to knowledge. So here's the alarming thing that Ian and I may actually end up agreeing, which, I mean, you came here for a cage fight, right? I'm going to push it, I'm going to do my best. No, but yes, I try your best to get it.

You're so complied on the other. No, but, but, but I do think, so to me our fundamental difference though is not around what is knowledge, what are the boundaries of the world. What are the boundaries of knowledge? What are modes of knowledge? For me, from listening to you in the fundamental difference is around deity.

Sure. The fact that I think we could discuss sort of the power of historical knowledge, the power of many thousands, millions of people going in a certain direction based on something that has power, the fact that the social sciences have built an entirely rigorous and compelling sort of structure around qualitative evidence versus quantitative evidence. For me, and it's also the difference around the miracle is the deity.

You would not say that scripture is a source of knowledge, whereas Ian probably would. No, well, actually, scripture is a reflection of a political, of a particular philosophical orientation that has tremendous value. So I go to church, not infrequently, right? And so, but I do it, not because I am certain that there is a deity.

I do it because I feel that the social organization, the construct, the orientation, the ritual, that all of that has tremendous value. But for me, as an agnostic, it's the deity. Right.

I want to just thank you. I have a question, I think I'm actually more for you Ian, than in this instance for Rob. And it is inspired by that list of sponsors that was read out loud at the beginning of the session.

And the fact that not all of the sponsors of this session are Christian. Sure. And, but many of them, it would vary, may have their own miracle traditions and understandings.

And I just wonder, you know, if we had a group of 15 people up here from a range of faith traditions, we'd be having a conversation that wouldn't feel so much like science versus, you know, you in a sense are sort of, you know, religion or script. What do we, you know, what happens to the conversation? What happens to your understanding of the miraculous and, you know, when you are engaging not with an agnostic, but would say a Sikh or a Buddhist or somebody from a tradition that you don't currently share, but that has its own reasons and has, these are her own reasons, own miracles. What kind of conversation do you have then? Well, yeah, that's a good question.

I think that it's important to recognize that miracles serve very different purposes in different religions. And in fact, I would say that Christianity probably places the most

emphasis on the miracles in part because, you know, the founding event of Christianity is the resurrection, which is, which is it. It's a miracle.

But also because the theologies of many other religions don't lend themselves to miracles having much meaning. I mean, for a Buddhist, you know, who many of whom really don't even believe in a personal God, a miracle in the Christian sense that I put forward, namely an extraordinary act of God, is meaningless. It makes no sense within their theology.

Okay? You know, I'm sorry if I'm offending anyone out there who's a Buddhist, but if I'm right, say yes. Okay. No, didn't hear anyone.

Okay. So, so, and I think that the same is true of many other types of religions in which the deity is not important. So if you think of Confucianism or Taoism and so forth.

So I think, you know, obviously today we're very conscious of the diversity of religions throughout the world. But when it comes to Christianity, Christianity has actually wrought some rather almost, I would say, unique outlook on God's interaction with the world in that God is active in, and the way I put it, is God as active in history and in the world. Okay? And so that historical view of the actions of God is not, I would think, something that would be shared by other, many other religions.

Well, it would be sure by the Abrahamic religions. Yeah, to a large degree, although, for example, Islam, I mean, the prophet Muhammad lay claim to no miracles. In fact, emphasized that he wasn't there to give the miracles, was there to give them the Quran.

So again, miracles are in slightly different place for people in Islam. So I think that's one of the things which, which I think is important for Christians, and there may be many Christians here, is to recognize that certainly from my perspective, Christianity is in a certain sense committed to a miracle. And I started off my opening remarks by saying, "We are committed to miracles.

I don't think it's easy for us to weasel out of this." And I think we don't need to weasel out of it, because as you pointed out, there are lots of people today who think they've experienced miracles. And that sort of gives the lie to any view that might be put forward by the secularizers of this world, that of course nobody these days really believes in miracles or thinks miracles really happen. Actually, they do.

We saw the poll at the beginning of the session, and it was, I think, 78% of you. I think that was the final number. You didn't say whether you'd experienced a miracle, but you believe in or are open to the possibility of miracles, however you defined it.

And we're going to give you now a chance to tell us a little bit more about that, because it's your turn now to get involved in the conversation. I'm going to turn things back over to Michelle, who will just tell you now how this more sort of inclusive part of the evening

will work.

[MUSIC] Thank you, Anne, and thank you, Ian and Rob, for all that we heard just now.

As Anne mentioned, now we're going to turn over the mic to you all. We're going to move into the Q&A portion of this evening. Why don't you begin? Sorry, I'm a little tall.

[LAUGH] So let's start with, I'm Alan. I do believe in miracles. Also, my bias is towards Christianity, so everybody knows where my bias leans.

I sort of wanted to talk about almost the ethics of this conversation. So we talk about miracles as a sense of whether or not science and miracles come together, and so my question about ethics is more if a miracle happens from a viewpoint. So if somebody sees a miracle in their eyes, but science can explain it, right? And so a miracle that happened with me, for example, I was hungry after Hurricane Ike, and people of Islam came to our door and invited us there and fed us.

Like we went to Amaz and fed us. That was a miracle that touched my heart. So that, in my view, was a miracle.

So my question is if a miracle happens in somebody's viewpoint, and then science disproves that as a miracle. So I'm somebody being healed, but now all of a sudden a gene we find out is actually what healed them. Or a simple SIBO effect.

What are the ethics of taking away that person's happiness through science, and whether or not that's a good thing or a bad thing? This is more for you, I think. [LAUGH] So your definition of a miracle that you shared with us from your own experience actually aligns very much with mine. There wasn't a parting of the ocean or something like that.

But it could be. It could be. No, of course.

So another way of rephrasing your question and telling me if you agree with this is, do I feel obligated to debunk miracles? Right. If you value in that, right, in and of itself, no, not particularly. It depends.

And here's the qualification in a very specific way. If you are counting on a miracle to cure your child's illness, if you are counting on a miracle to make sure the plane stays up in the air, then I would debunk it. For your sake and for the sake of those around you that could be hurt.

But if you are inspired by something that you feel was the action of the one God, knock yourself out. Yeah, I didn't use your example. Your example was you traveled with Jesuits, and that was something that I guarantee you that from the persons that you were helping, that you were the miracle.

You were the person. And so I think that sometimes miracles are a matter of perspective, more than it is of science versus anything else. Thank you very much.

We're going to take a question from this side now. Hello. Also a little bit taller than this.

So, hello, my name is Jesus. Hello, my name is Dan. I'm an undergraduate at Harvard Freshman.

So I'd just like to thank you all three for coming to the Veritas Forum event and sharing your opinions. So my question is more about the disparity in this debate. So as Anne mentioned in the course of the discussion, you both are pretty modest in your opinions.

You carry multiple identities and you actually agree with each other. I think at least conceptually on lots of points. So my question is you guys kind of represent a minority of the population.

I think it could be argued that a large portion of the population is are there science deniers who write everything off to an act of God, whether this is a drought, a flood, or like election results, for example. But then the other part of the population are scientists who are so empirical in their opinions that they're sometimes lost in the quote unquote "science of it all." And they fail to realize when they're quote "playing God." I think that's the origin of that expression. So my question is in the most practical of senses, what do we do about this? Is it a matter of education? Is it a matter of societal norms, public policy? No.

So the question is about the fact that you were far less polarizing and hostile to each other than many debates of this sort might have been. Yeah, exactly. We didn't have Richard Dawkins up here.

We didn't. But a lot. But the world out there is a lot less friendly.

And so how can, and this is I'm going to, I think, I'd like to hear from both of you actually about, how do we, if we brought in the Richard Dawkins, and how do you move beyond polarization? And still made, is that put up away? Yeah, that's the essence. Yeah, I'll take it if you like. I mean, one of the polarizations which I have been most exercised about is the polarization between science and the Christian fatal, science and religion generally.

And one of the reasons why I participate in these forums is because I think it's a very important topic and that actually it's important that light should be shared on it right now. That should be shared on it rather than heat. The way that I think one goes about this is to recognize that there are people who have deep beliefs, but also there are people who have deep expertise.

From the science side, there has for a long time been a lot of emphasis placed on the kinds of people whose names were just mentioned, who want to declare very loudly that

science has disproved religion. And I think that that has been a very debilitating approach, not merely because it attacks religion, and I'm a Christian, but because it actually brings science into disrepute. Because there are lots of people in this country and in all of the countries of the world who are religious who believe in God.

And if they're told in loud voices that science disproves their God, their conclusion isn't necessarily going to be, well, it's so much the worst for God. Their conclusion is going to be so much the worst for science. And so it's terribly important that we have a balanced and nuanced view of this.

And that's as true for us as Christians as it is for people who are not Christians. A brief response from Rob as well. So not to offer a simplified solution, but one of the reasons why I feel I identify as agnostic is because some of the issues and many of the issues that you speak to really come down to the definition of self versus other.

And one of the things that worries me and we look at this wonderful role of organizations is, well, which God is it? And do I define myself by how I am radically different from someone else and believe something radically different? Or do I believe we're all in this together? And Dawkins and others do exactly the same thing with science. They go extreme, they go beyond the boundaries of what science addresses in a desperate and in my view, foolhardy attempt to prove that they are scientists and to disprove anyone that has any facts form of religious faith. It is a fool's quest in my view and scientifically not rigorous.

And counterproductive. Please. Hi, my name is Christina.

I'm a sophomore at Harvard and I'm unsure about the existence of miracles. So my question is, what do you think about human free will as one expression of perhaps miracle? How do you reconcile it with the ideas of randomness, with the ideas of God and science, especially for people who are in excruciating circumstances who manage to overcome them? Or that's 30 seconds on. Yeah, exactly.

Well, I think that a Christian view is that humans are rather special. That free will is a part of the human experience and reality that we do exert it. I don't know that Christians have an explanation for it.

I don't actually think that we need to have a scientific explanation for it. And as I mentioned in my opening remarks, it isn't any more the case that science has any kind of demonstration or apparent demonstration that free will is impossible because of determinism. That doesn't solve the problems of free will because that only solves the problem of freedom.

It doesn't solve the problem of will. And understanding what the will is and how our personalities and our mental lives interact with our bodies and so forth, that's a tough

problem that no one really knows the answer to. And maybe a miracle in its own right, is that sort of the point? Well, why don't we just leave that as something to chew on because I wanted.

Do you want to respond to that? Well, I would just say that in my view, free will is one of our highest human aspirations. Please. Hello.

Thank you both for being here. We greatly appreciate it. So I'm Jack Lane.

I'm a sophomore. I'm unclear about what I think. So my question to both of you was, could either of you point to a specific scientific phenomenon that's so unbelievable in and of itself that it might be indicative of a good idea? It might be indicative of a God.

It might be indicative of a God. Is there anything, so this is a kind of question to natural theology. Is there anything in the world itself that seems evidence of, it used to be the eye, was evidence of design and the over- You used to be almost anything in biology was pointed to as being an amazing adaptation to its circumstances.

That could only have been produced in the design. And people presumed that this had to have been produced by a direct action of God. I mean, what Charles Darwin and the natural selection did was to undermine that argument or at least to bring it to the point where you couldn't consider it to be a demonstration that there had to be a designer.

It doesn't prove there isn't a designer, but it doesn't prove there is a designer, it would be my position. I actually think there are some big puzzles in science to which we don't know the answer. I'm hesitant to say that they're proofs or, and I certainly wouldn't, as firm as being proofs, but I think they might be suggestive that there's more to this than meets the eye.

One of the things which is widely accepted in physics, although the possible theological interpretation I don't wish to say is widely accepted, is to notice that there are lots of constants that determine the laws of physics, which could be different from the way they are. And if they were even slightly different, then the world would be so different that they wouldn't exist human or even probably biological species. This is a so-called fine-tuning question.

And so I think many non-theists, as well as theists, accept that there does appear to be a finely-tuned universe, and if that's the case, why not answer good answer, it seems to me, for why that's the case might be that God planned it that way. I don't say it's a proof of God, but it's something which I think is worth thinking about. So I can't think of anything in particular that I would put forward as proof of God.

And in my view, looking for that is not a particular quest that I personally would find sort of meaningful. And because there's an argument, an interesting question around design, right? So if there is a God, why would God sort of design? You have gardeners that

create the gardens of Versailles, and you have the English cottage garden where it runs amok, and they're both beautiful, and arguably there's a gardener, but why God would have to design everything? And once we get into that kind of argument that there is a designer, for example, one of the latest break, amazing things in biology, is that species of octopus in very cold water can actually recode their proteins to improve their nervous systems. As far as we know, we can't do that.

And the question is, why would God give that to an octopus in the Atlantic? And not to me, right? I couldn't resist, but no, it's an interesting question, right? We're going to take some more, we're going to keep moving, so hopefully we can get everybody who's here. Thank you very much. My name is Quasi, I'm the body engineering PhD program here at Harvard.

So different people from different religions end up talking about their miraculous experiences, and some of these religions tend to be conflicting in ideology. So you wouldn't expect to attribute their beliefs to the same God, right? So then if we believe in miracles caused by a God, how do you legitimize the different claims of the miraculous in very different worldviews that tend to conflict? And then second, the other question to it is that to an extent also do you think about miracles that are not caused by any being if the premise of science is a cause and effect, that there should be someone causing something for the thing to take effect? So I think the question is, what about miracles in other religions to make a long story short? So maybe I should tackle that. It's important to recognize that Christians don't believe all miracle claims.

We think that a lot of miracle claims are wrong, including a lot of miracle claims that are made by Christians, okay? So for example, the Roman church has a whole process, Roman Catholic church has a whole process for deciding which claims they think are truly miraculous and which aren't. And the most famous Roman Catholic shrine, which is Lords in France, only 1% of the claims of healings, miraculous healings at Lords, have actually been affirmed by the Roman Catholic church in the past approximately 100 years. So Christians don't believe all miracle claims, first very important point.

So nevertheless, it's a fair question to ask. As I said earlier, miracles serve a different purpose in different religions. And I think that's one answer to your question.

But in the end, it comes down to this. I don't think that the miracle claims of other religions are all necessarily false because they belong to other religions because I think God's grace is broader than our narrow viewpoint. But even if they were, it wouldn't basically affect the probability of any Christian miracle being true.

And you can demonstrate that mathematically on the basis of probability, but that would bore this audience far too much, so I'll leave it at that. Please. Hi there, my name is Calvin.

I've been a student at Burger College of Music, actually. And yes, I do believe in miracles and perhaps I should specify that I believe in passive divine construction and also actively winning intervention and also in terms of sovereignty, free will and Christian bottom-up. And I have two questions, if I may, for Professor Hutchinson, second to both of you.

And there's also another movement in Christianity that here to sensationalism, and I'd like to, if you know any refutation or if you support that, that you may be able to expound. Second, my second question would be, would, and this is also to stress that Professor Loew also stresses the importance of evidence and reproducibility of experimentations and documentations. And for me, I witnessed this as well, like as in journalism or forensic science.

And can those be an evidence or a basis of affirmation that you, yes, scientists can't believe in miracles. And I can give you an example if you need me to. So I think we're going to, you know, tackle one of those questions.

I'll tackle the cessationist question if you like. So cessationism, or since the cessationist view is a view that was adopted quite widely in the 18th to 19th centuries by some Christian churches that miracles happened in the early centuries, or in particular in the first century and in, in, in Bible times, but that they no longer happen today. That was a, that was very much a view in the enlightenment and was in large measure reaction to a very rationalist viewpoint.

I don't think it's a view that's very widely held in Christianity today. Pentecostalism, for example, is one of the strongest and most burgeoning of Christian religions and that, you know, that very much focuses on the miraculous. And so I think it's cessationism was, was a an important historical trend within Christianity for a couple of hundred years, but it isn't terribly important now.

One of the things I'm struck by that we've been talking various points about interfaith conversations that even within the Christian tradition, there's tremendous pluralism and opportunity for debate and the Catholic Church with the Vatican's, you know, people sort of the devil's advocates kind of demonstrate almost through scientific methods. And so, you know, there's clearly much more we could have done and many more people we could have had up here. And I think just acknowledging that is important.

Please. Just one question. Hey, my name is Karis and I'm a freshman at the college.

And this is a question for Professor Liu. You talked about the miracle that is like certain human behaviors that can't be explained through pure Darwinism and I guess in Jamaica. But you also mentioned that you don't feel a need to attribute this to a particular deity or to some, you know, and my question is, and I think embedded in their other miracles of the same sort as to like conceptions of morality or meaning that cannot

be explained through Darwinism.

And so my question is if you had to attribute it to something or if you had to dig deeper as to like why these things occur, how would you do that? If Darwinism can't explain it, where do you stand then? Well, so I think that's why I said that free will is the highest human aspiration. I think ultimately the reason why I feel that is because it's through that process of making a decision, a decision that perhaps goes against your own best interests, quote unquote, that we see for a human being one of the highest expressions of what she or he can actually do. And in my view, whether or not that is related to a deity, one of my challenges is that I can't choose which one.

Right, because which one of the deities is the one. I might have, for example, in high school and earlier I was moved by the Christian God and the conceptions and the trappings and the ritual and the ideas around the Christian God. But as I learned about other religions, they're moving as well.

And so I personally don't feel comfortable saying that, well, it's this God versus that God versus a more distributed notion of divinity, if you will. And so for me, in that regard, I guess I'm an expression of humanism, right? I'm an agnostic and a humanist fundamentally. It's all of you.

And this is where I think there is a genuine respectful difference of opinion between our two speakers. I certainly think that I couldn't, not only would I take a different view of what I think is true, but I would also criticize, a little bit, your view that appears to encompass all views as a comparable worth or somehow compatible. I mean, from my point of view, it's pretty obvious that religions are not compatible with one another or many religions are not compatible with one another.

So while they do have common aspirations and there is much in common that we can share and we should participate with people, other faiths or secular faiths, when it comes down to brass tacks, I think there are clear differences. And painting them as if they were all, you know, it was all just sweetness and light. Yeah, that doesn't appeal to me.

So there's more to say here. We're going to try to get the last three people standing up, or the last two people. I'm sorry, standing here.

Just ask to say your questions. We're going to go a few minutes, therefore, beyond the 855 that I was asked to stop up, but please. You probably won't get kicked out.

So my question is primarily for Professor Richardson and relates to your definition of a miracle almost necessitates a belief in divine, some form of faith. And I'm curious on how you reconcile that with your mode of operation as a scientist. So any scientific theory sort of hinges on some form of falsified ability.

If you can't disprove it, it's almost worthless in some sense. I'm wondering if that same

scrutiny applies to faith or faith is excused in some sense, and maybe personally, if there's anything that would make you question your faith. Yeah, thanks.

I think that's a good question. A crucial point I would make concerning that is this. I don't think science is all of real knowledge, and I think that there are lots of other ways of going about getting real knowledge.

And those other ways, for example, disciplines like history, which doesn't depend on the methods of the natural sciences, but it has its own approach to understanding what is real, and it also, and discovering, and evaluating truth, claims, and evidence, and so forth. And so I take the view that when it comes to evaluating the truth, let's say, Christianity, it's very unlikely that theological claims, like the claims of Christianity, are going to be the kinds of things that you can test by science, because they're all about personality, the personality of God, of things that are very different from the types of things that we study in the natural sciences. And so I think that it's an obvious fact that the evidence that is claimed for the Christian faith is predominantly historical evidence and evidence that is not scientific.

That doesn't mean that there's no evidence. So when someone says there's no evidence for Christianity, that makes me bristle. It may well be that there's no scientific evidence for Christianity as a particular form of religion.

That's not what makes me bristle. It's the fact that science is not the only type of evidence. And so I think there's lots of historical evidence for the truth of Christianity, and that can be evaluated in as rigorous and critical and thoughtful way as any other type of evidence.

So bottom line is I don't expect science to prove my face. Rob wants to just query something and then we're going to take the last question here. Because I think I'm starting to see other points of distinction between our positions.

So you made the point that you don't feel that as you phrased it, it's all sweetness and light. I think on questionably that is the case. But do you feel but shouldn't it be? All sweetness and light.

In other words, to me, the convergence of religions around what is important and sort of what is meaningful is something that I would love to see. It is not there now, but I almost hear the fact that you don't feel it should be. That ultimately... I don't feel that it can be.

Which is slightly different. And the reason I say that is pretty straightforward. If Jesus really was and is the Son of God, risen on the third day, then the significance of Jesus is incomparable.

And so the claims of Christianity, just as the claims of other religions, are incommensurate with many other religions. So I think the bottom line... Well, the others

didn't. I'm simply pointing out that as a matter of fact, religions claim things which are incompatible with one another.

And so we may aspire for unity and peace and so forth. I'm sure you and I both agree on that. But where we differ is, I think that there are, if you like, factual truth claims that are different and incompatible in different religions.

And therefore to think or to hope that we will find some simple way of merging these is not my expectation. If I may say I'm just listening to this, I think maybe that you're operating on slightly different levels that there is a question about doctrinal integration. And then there's a question about finding a common purpose in human beings on the planet serving and all needing that we can't afford to.

There's so much division, there's so much hate, there's so much polarization. And I think it's sort of, I see Ian arguing on what's about the level of theology and truth claims and you're much more arguing about the level of how we, what inspires us and how we can come together. And also to me, the use of truth claims in this sort of argument is not something I would use because it's not the same as I claim that the earth is round and you claim that the earth is flat.

That we have different truth claims, but one of us is true and the other one thinks they're true but they're not. The truth claims in religious doctrine are different. But once again it comes down to this notion of what is true.

They're not scientific claims. But there are lots of other types of truth claims which are also not scientific claims like that. It's unjust to practice slavery, for example.

Now there is something where there can be differences of opinion, but some people think that they know the right answer to that question. And so I think that you reach a point where there are truth claims and religions make truth claims, but we as humans also make truth claims and not all of those truth claims are scientific truth claims. And not all can be tested in the way that we approach natural sciences.

And we're sort of stuck with that. We're not going to, they could keep going, but please you have the final word. Hi, I'm Courtney.

I'm a freshman here at the college. I was raised Christian by two physicians, so I've constantly sort of seen the balance between religion and science. And I hope that someday I become a physician myself.

So here about these sort of medical mysteries and the medical miracles. And I was just wondering how you suggest balancing education with religion and science and education, especially in young, impressionable minds before they've had enough sort of life experience to make up their own minds. And one thing that comes to mind more specifically as an example is the 1925 Scopes trial of creationism versus evolution.

And so how do you suggest balancing the two different beliefs when these children are too young to sort of make up their own minds? And who do you think has the right to make that decision in determining what is going to be taught in these schools? So the question really is about where, you know, how science is taught and if science is imposed on young minds prior to, you know, in ways that might suggest that it's incompatible with other kinds of faith traditions. And, you know, there is a in Kentucky, there's a museum called the Creation Museum that exists explicitly to provide an alternative experience of life and the natural world to the secular perspective that is offered by natural history museums. What do we think of that? And, you know, I think that education in the US is in a difficult spot because we as a society have different priorities.

I think there's been a movement in the last 50 years to secularize education, but that it's been taken to the point where religious discussion is banished from high schools. I think that's probably a mistake. I know that people interpret the First Amendment in ways that make them think that that should be the case, but I think it's a mistake.

It's a mistake particularly when you live in a place and you're obliged to pay taxes and those taxes only go to schools where secularism is enshrined. So there are great difficulties to do with education. I favor a view that parents are the primarily people primarily responsible for the education of their children and that they should be assisted and supported by the society in educating their children in the way that they think is best.

And I think there is a place for parochial schools or the equivalent. And it's a shame to me that they are currently excluded in many places from receiving assistance. That's a big talk topic.

And so to me, I think it pains me every time and tonight as well, but when I talk to students, this continued sense that science and religion cannot coexist in a single person. And how you think about them. But I think what's important is to realize in my view, what speaks to what world, ultimately.

And in my view, if you're going to become a physician, you want your biology, your organic chemistry and your physics. I have no objection and I in fact think the teaching of religion is important. It is a particular aspirational and socio-cultural lens to understand the world that's incredibly valuable.

But I wouldn't take that class to cure cancer. It's not an appropriate application of it. And neither.

So, but I don't see a conflict. In my view, there's no need for there to be a conflict. Thank you very much.

Thank you. So I want to thank our speakers, all of you. There is a reception, right, Michelle? Food and things to eat.

There's things to eat outside. And also, I believe an opportunity to speak privately or in smaller groups with the two presenters. But please join me now in giving them a round of applause.

[applause]

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