Fine Tuning and the Reality of God

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SPEAKERS

Brandon McGuire, Hugh Ross



Hugh Ross 00:00

When you have the sun perfectly all called it, the sky goes dark, you can see stars around the sun. And it was Einstein who said, If my theory of general relativity is correct, you'll notice that the positions of stars near the sun will be bent by the gravity of the sun. And it was a 1919 solar eclipse, where a team of astronomers were able to put Einstein's theory to the test and said, Yep, what he predicted is exactly what we see. I mean, that's why I've written seven books on this, you can't get it all into one book.

Brandon McGuire 00:48

You know, the big question comes out of is it an uncreated eternal universe or an uncreated eternal God? And there's sort of is almost like this false equivalency, if you believe that those are both equally theoretically feasible, I want to zoom in on what you were saying about the actual science regarding the universe. And because I think a lot of people it seems like still believe that it could be eternal, even even, even before getting into multiverses. And all of that. It seems like people still, a lot of people hold a steady state type of model in their, in their mind. And I'm just wondering if you can actually kind of talk the audience through what like, what are the what are the options at this point? And what is almost like the development of thought around the origin of the universe? And where are we actually at today to try to clear up some of this confusion.

Hugh Ross 01:43

Well, what bothered me about reading the great philosophers is that they talked about time and space being eternal. I also saw that in the Eastern religions, what I saw in the Bible was that space and time are not eternal. God creates space and time when he creates a universe. So that's a key factor that separates the Bible from the non biblical religions of the world. And I was doing this study, at the same time that physicists in Britain in South Africa, were developing the first of the spacetime theorems, we now have over 30 of the spacetime theorems, and they're based on two fundamental assumptions. The theorem is true if the universe contains maths, and you and I are living proof that the universe indeed contains mass. The second condition is that the equations of general relativity reliably describe the movements of massive bodies in the universe. Now, when I was first, exploring this in my teenage years, astronomers could only prove that to be correct to about one or 2% precision, we can now prove that that's correct and better than 15 places of the decimal. So today, there is no basis for doubting these two conditions. And what the theorem states is that space and time have a beginning, space and time are created, which implies that there must be a causal agent, outside of matter, energy, space and time, that creates a universe of matter, energy, space and time. So the space time theorems basically established, it's the God of the Bible that created the universe, a God who has the power to create space time, dimensions of will, and remove them at will. And so this is what distinguishes the God of the Bible, from the gods of the non biblical religions.

Brandon McGuire 03:44

Now, I think some people here are gonna say, how do you how do we know that it's not? In other words, how did we know that it's a personal being, as opposed to some sort of force or I've heard people talk about, I don't even know what people are making up quantum wins or just, you know, some idea of a power that's capable of this, but that's not necessarily you know, he all way or even a God who has manifested Himself in any particular way.

Hugh Ross 04:12

Or you're correctly describing what's happening in the community of atheists, scientists. I mean, I've got many books written by atheists scientists in my library. But what I've noticed in the last five years, books produced by atheists, physicists and astronomers are conceding deism. I mean, even Lawrence Krauss is saying, on page 173 of his book, a universe from nothing, that we cannot take deism off the scientific table, the force of the spacetime theorems established, there must be a causal agent, beyond space and time that creates our universe. The debate is really shifted, is this. God does deistic God a theistic on is this God a personal being. And that explains why I've written seven books on cosmic fine tuning over my career, because that is the go to evidence to establish, we're dealing not just with a transcendent causal agent, but a personal being. Because what you notice in the Bible, it makes the point repeatedly that God began his works or redemption, before He created anything at all, which implies that everything that God created is for the purpose of making possible the redemption of billions of human beings from their sin and evil. So in my latest book, on fine tuning, designed to the core, I make the point that the universe as a whole, and all of its size scales, subcomponents, going from the cosmic web, down to her Super Galaxy Cluster, our galaxy cluster, or a local group of galaxies, our galaxy, the local bubble in which we're existing, the local fluff our solar system, I mean, our star, the planets, the asteroid and comet belts, our planet, the interior of our planet, the moon, the interior, the moon, every bit of it, is designed to make possible the redemption of billions of human beings from their sin and evil. And we actually are able to establish numbers on the degree of fine tuning, that people want to see that we have at Reason's dot org slash fine tuning, a 300 page Compendium, which gives all the calculations of the degree of fine tuning, that's necessary, for example, just to get human beings on one planet in the universe. And that probability is less than one chance and 10 to the 1600s power at 1600 zeros after the one. And I compare that with the very best examples of human inventiveness and design. And there we get like one chance, or you know, one part in

10, to the 25, or 10, to the 26. So we're getting what the one that created the universe is not 26 zeros after the one, we got 1600 zeros after the one, which makes the point that the one that created the universe, at a minimum is 10, to the 1500 times more intelligent, more knowledgeable, more creative, more powerful, more caring, than we human beings. And those are only attributes, instead of personal being can manifests. But the degree to which we see these personal attributes, again, and isolates a God of the Bible, from the gods of the other major religions of the world, it's the God of the Bible that is so intimate. Lee related with his creation,

Brandon McGuire 08:03

playing devil's advocate for just a second because I know that someone's is going to hear what you said, and have a knee jerk response to to say, well, this is just the privilege that we have, as the winners of this lottery. And so we have the feeling that it's designed for us when really probably, you know, probabilistically, we just are at this place now. And so we're looking back and we have this feeling that it's so unlikely sort of the anthropic principle idea, how how would you address that type of pushback to say, No, this isn't just that we got lucky and things played themselves out, but like, where do you make me Help me help that person to serve why it's more reasonable that this is actually designed rather than just lucky? I'm

Hugh Ross 08:48

not the first one to deal with this. The British philosopher Richard Swinburne more than 30 years ago, responded to that objection. And he came up with an analogy. I mean, you're about to be executed by a firing squad. And so they have you stand blindfolded. And there are 20 sharpshooters with high powered rifles, standing 30 feet away, and they're told to shoot and kill you. And so the 20 of them shoot their guns, and somehow you survive. And you look out at the 20. sharpshooters after they take the blindfold off and said, Wow, they all missed. Richard Swinburne makes the point. The only reason that they would have all missed is either somebody put blanks in all of their guns, or all 20 of those sharpshooters wanted you to live, there is no way they would have not killed you that they had the intent of murdering you or executing you. And likewise, they say when you looked at these incredibly remote probabilities, the only rational conclusion is there's somebody out there who wanted us to live and wanted us to get the victory over this sin in evil in our life, it makes no sense that we're just here by a product of pure chance. Now, what some atheists have done is to propose what's called the multiverse that I've been speaking on fine tuning since the 1970s. And I remember telling audiences in the 1980s, that the evidence for fine tuning points of the God of the Bible is getting a minimum of 1000 times stronger, with every month of new scientific discoveries. It's exponentially increasing and the degree of evidence, and eventually, the case, for personal God is going to become so overwhelming that atheists will have nowhere else to go for proposers, an infinite number of universes, where they're all different from one another. And we happen to live in the one lucky universe where everything is just right. But what I told audiences in the 1980s, whenever any skeptic appeals to infinity, they've got nothing. And basically explain to lay audiences infinity plus infinity is infinity, infinity times infinity is infinity, infinity to the Infinity powers infinity. So by appealing to infinity, you can explain anything you want. Now, what I've done in my book, The crater in the cosmos fourth edition, is to give you an analogy that drives home that point, if there really is an infinite number of universes, where they're all different from one another, you'll have an infinite number of planets, identical to our

present planet Earth. And on those infinite number of planet errs, you're going to have an infinite variety of birch tree species. And birch trees have the property that they peel thin white pieces of bark. But if you get an infinite variety of birch tree species, one of those species, at least one will peel thin white pieces of bark that are perfectly rectangular, that measure eight and a half by 11 inches. And these pieces of bark will fall in soils with random chemicals. And then that will make random markings on those pieces of birch bark, which will duplicate every equation, every photograph, every paragraph, every diagram in every scientific research paper it's ever been published. So there's millions of scientific research papers, they did not come from the minds of scientists, the multiverse did it. So you're basically exposing the philosophical fallacy of appealing to a multiverse to get around the design. If you do that, there is no design anywhere. All of our human designs are negated at the same time.

Brandon McGuire 12:56

That's fascinating. I need to chew on that. But I really I really, I've never heard that before. And I really liked that analogy. It's very interesting. Let's get back for a second to your personal story, because I'm curious now. So far, everything we've covered is, is very much sort of in the realm of your truth quest. And I'm curious, at what point did did this kind of come home for you? And at what point did you actually enter into a relationship with this God that you had been searching for and studying about?

Hugh Ross 13:27

Well, while I was going through the Bible over that 18 month period, trying to determine is this the inspired inerrant word of the one that created the universe. I was also fascinated by the morality I was seeing promoted in the Bible, and realize its moral message is incredibly beautiful and elegant. It's unlike any other moral message I saw in any other religion. I was very attracted to it and said, I want to live that way. So I remember during those 18 months, doing everything I could to live up to the moral standard that I saw in the Bible. But the harder I tried, the more I realized, I don't make that standard. I'm falling short. But as I read through the Bible, I realized that's the message of the Bible, that every human being falls short of God's standard is written as law in the heart of every human being that consciences within it. And all of us have failed to live up to our conscience. And so it told me God does not great on occurred. He demands moral perfection. I don't have it. But as I read through the 66 books of the Bible, I kept seeing repeated over and over again, God wants to do for me what I can't do for myself. He wants to trade my moral imperfection versus moral perfection. And he even sent the creator the universe. God the Sun, the planet Earth, to live a life of moral perfection in front of us. And when I read the Gospel accounts when impressed me, Jesus of Nazareth in front of a large crowd that included his mother and his brothers and his sisters said, Can any of you accuse me of sin are a moral failing? No one could mean you're not going to fool your mother, you're not going to fool your brothers. They all agreed he was morally perfect. And so I said, this is the one. And then Jesus, as it tells us in the Gospel accounts, willingly took upon himself the penalty for all the offenses of every human being that ever lived. And basically said, I will pay for you which you can't pay for yourself. I said, That's a, that's a, that's an offer, I can't turn down. And as I mentioned earlier, also realizing he knows better than I do what's best for my life. And so becoming a Christian is receiving God's offer forgiveness, through his payment on the cross, but also realizing, I need to make them the master of my life, and take direction from him. And what you see in the Gospel accounts as if you do that, God will send you his Holy

Spirit, and your Holy Spirit, step by step day by day, will transform you into the character of Christ. And I've experienced that process. That's the proof that this has really taken home in my life. Because then realize, the character attributes I manifest today are not what I manifested, before I gave my life to Jesus Christ.

Brandon McGuire 16:41

That's so interesting. And I relate to what you're saying very much. I always have an ear out for thinking about, like I said, the breadth of who listens to these videos in this audience? And it makes me curious, because I know some people are going to are going to hear that and they're going to think, Man, this is really mumbo jumbo. You know, this is really, we're getting really woowoo now, but I'm wondering, like, what I'm trying to think of how to formulate this question. Do you think, Well, I guess I should ask this and your experience over the last, however many years you've been doing this decades and decades? Do you? Do you find some common obstacles that that prevent people from understanding what you just described and understanding and something that I very deeply resonate with? Do you think it is a lack of knowledge about the science because you're a far more educated scientists than 99.9% of people in the comment section of a channel like this? So I'm wondering, Is it is it more knowledge that is required? Is it is it unearthing some preconceived notion or pulling apart baggage? Or? Or is it? Or is it something else is? Is it merely a matter of sort of the heart receptivity toward God? I don't know, I don't want to lead this in any particular way. But I just, I personally resonate so deeply with what you said. And I know that to be true, like, my god is my Redeemer. And that's the most important thing about me. But I can imagine someone who some of these dots haven't connected yet they hear that and they think that, you know, we're getting weird now. And I just I just, maybe I'm just trying to anticipate what the obstacles could be. On the front end, Richard

Hugh Ross 18:29

Dawkins, and Richard Dawkins has basically said repeatedly and put it in writing. You know, he recognizes that there's always design in the universe that makes our existence possible. He said, who designed the designer. And so he tries to shift it say, Well, you know, who do who created God. And so what I pointed out, and a couple of my books, especially why the universe is, the way it is, is that Richard Dawkins, and many others are making a category error. Any entity constrained to a single dimension of time, that can't be stopped or reversed, must have a beginning, must have the creation event along that single dimension of time. But the one that created time is not so constrained. And so everything in the universe, all life in the universe is constrained to a single dimension of time. So yes, we must be designed, we must be created. But the one that created space and time is under no such constraint. And this is also something that's unique to the Bible. It says of God, no beginning, no ending, uncreated. You don't see that in the Eastern religions, for example. And so, but that makes sense, if indeed, God is outside of space and time, he's not going to be constrained by space and time. So and then the other pushback I Get it when people say, Well, you've shared a lot of evidence, but I need more evidence. So what I've often said to university audiences of unbelievers is, look, the evidence is getting about a factor of 1000 times stronger with every month that goes by, with respect to the fine tuning argument for God. If you're not persuaded today, wait one month, see what happens. Now the way I personally demonstrate that, I put out an article called today's new reason to believe Barnaby week or two@reasons.org, basically demonstrating the principle you

see in the book of Job and the book of Psalms in the Bible, that the more we learn about nature, the more evidence we'll find for the supernatural handiwork of God. And so just saying, we live in the 21st century, where knowledge about nature is literally exploding. In my own discipline of astrophysics, the knowledge base doubles every five or six years. And so we can put God to the test, and just say, Okay, let's keep looking at the scientific literature. Let's see where the trend line goes. And there reaches a point where you realize, you know, I've seen enough evidence. Now I need to know what I need to do with my life. That's what happened to me in my teenage years, I got to the point where I said, I've seen plenty of physical evidence. Now I need to know what this God wants me to do with my life. And this is where he get into the personal issues. And so for example, I once did a major debate at the International skeptic society, at Caltech. I did beta Victor's standard of particle physicists, in front of an audience of 700 Atheists from around the world. And afterwards, I said, you know, I've seen a new evidence for God just as weakened. Because before my debate, what I noticed is you have five leading world, world renowned physicists, who are atheists, all talk about why God doesn't exist. I noticed the only god they addressed was a God of the Bible, they ignored the other gods. I also noticed they were incredibly passionate about the non existence of this God, and says, what that told me is, they must really believe in this God, because that that wasn't the case, they'd be treating the God of the Bible, like the Easter Bunny, or like Santa Claus, their passion tells me, they really do believe in the God of the Bible, but they don't like them. And what's interesting, as I engage the people in the audience, I said, it's not that we hate the God of the Bible, is that we despise his followers. And they all began to tell me stories of how they've been hurt, how they've been wounded, in their encounters with people who claim to be Christians. And my response to them is, is it rational, to have these people that God declares, are imperfect, are sinful, get between you and a god, that's morally perfect? And actually agree with me on that, that says, Yes, we recognize that that's not rational. But you can't believe the degree to which that we have been wounded by our encounters. And this just leads me to what you see in Matthew seven is a we humans, every one of us, has offended God to a far greater degree than any human being has offended us. And so God wants to recognize the degree to which we've offended him. And he basically says, If you will not forgive others, I will not forgive you. and So forgiveness is a key factor and coming into a relationship with Jesus Christ, he's willing to forgive us. Why are we not willing to forgive a much more minor offense?

Brandon McGuire 24:03

That's a that's a great point. I, I have a lot of friends who fall into that category of church hurt, religious trauma, whatever you want to call it, and then God Himself gets mixed into the bad decisions of people. So that that is it's very true. Given that you're a an astrophysicist. We should talk a little bit about some of that, because I think that that's some of those evidences that you're talking about. I want to I want to drill into them just a little bit, and maybe you maybe we could just put it this way. What are some of the things that you have learned or discovered that that you that are your favorite evidences or that you look at and you have that aha moment of of design of you were talking about the fine tuning? I just want to since this is your field of expertise, I just want to give you a chance to actually educate myself who just hears Things from sort of, you know, a 10,000 feet away. But I don't know just kind of walk me through walk the audience through some of these things that you're saying the evidence is compounding and compounding. And I just I think it'd be neat to go into some of those specific evidences so that people can kind of get an idea of what you're talking about, even though I mean, feel free to dumb it down for me. But at the same time, I just want to give you that platform to do that as well.

Hugh Ross 25:25

Sure, well, I'll try to give you a couple of highlights mean one that's fairly recent, is the recognition that of the 92 elements we see in the periodic table. All but two of them are extremely anomalous, in terms of what we see in the crust of the earth, relative to what we see in Rocky material elsewhere in the universe. The two that are normative are manganese and iron, everything else is anomalous, and some cases extremely anomalous. So for example, the crust of the earth is 630 times as much thorium 340 times as much uranium as what we see in Rocky material in the rest of the universe. And as thanks to that super abundance of uranium and thorium, our planet, long lasting hot core, and that hot liquid iron core, being circulated, has enabled our planet to have a strong Magneto sphere enveloping us, that allows us to be protected from deadly solar and cosmic radiation, and also prevented the atmosphere and the oceans of the Earth from being sputtered away by the particle radiation from the sun. And so excuse me, we now have an understanding of why Planet Earth as such highly anomalous elements, and also pertains to our industrial capacity. So we got 60 times less sulfur, that's what enables us to grow food, you're not going to grow any food or crops on Mars, because there's way too much sulfur there. But you can on the earth, so we're deficient by a factor of 60 times in sulfur. But we're abundant by a factor of 60 times and aluminum, 90 times and titanium, which enables us to construct aircraft that can fly all over the world. These are light metals that have very high strength. And so we have a very anomalous high abundance of these valuable elements. And they're 22 elements we see in the periodic table, that are what we call vital poisons. If they exist in the crust of the earth, at too high of an abundance level, it'll kill us, but too low than abundant, this level, it will also kill us. So we have to have just the right amount of molybdenum, and the crust of the earth, just the right amount of iron, just the right amount of arsenic. There's actually proteins in your body that need arsenic, but you only need a very, very tiny amount, and you get above that tiny amount, the arsenic will kill you. And it has to be at just the right level. And so all 22 of these vital poisons are extremely anomalous, and their abundance level here on planet Earth. And we don't see it anywhere else in the universe. So it really does look like somebody engineered it to get it just right. And astronomers again have discovered how this happen. How the early solar system formed in a gigantic cluster of about 20,000 stars that existed much closer to the center of the galaxy than the solar system exists today. And in that dense cluster of stars, the early emerging solar system got exposed to three different kinds of supernova eruption events, it got exposed to neutron stars merging together to make black holes, where the supernova and neutron star merging events happen at exactly the right time, and the right distance from the earth so that the earth was not destroyed. But on the other hand, got sufficiently enriched in all these elements, and sufficiently depleted and elements would be a problem. And then when all that enrichment depletion was accomplished, we got kicked out of the birth cluster, and driven to a distance twice as far away from the center of the galaxy. What kicked us out, it was a gravitational slingshot, where our solar system was interfacing with four or five very massive stars that slung us out of the birth cluster. And then when we got to the ideal place for advanced life, we again engage another four or five, six Massive stars that halted our movement. And so we were born in the most dangerous part of our galaxy. And we ended up in the safest part of our galaxy, but only after we gotten rich. Now, it's also true that our planet Earth is anomalous compared to all the other planets, and asteroids we see in the in our solar system. And that's because our Earth formed, in a way incredibly different from the other planets, the other planets formed by gravitational accretion. And our solar system began with 10 planets, not eight, five gas giants and five rocky planets. Two of those rocky planets so proto Earth and Thea collided with one another, when the Earth had oceans 1000s of kilometers deep, that very deep ocean cushion the collision, so the earth was not destroyed. In

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fact, what happened, most of the mass of thea got absorbed into the earth. So the earth became bigger, more massive and denser. There is a debris cloud around the new forming Earth, that condensed to make the moon. And so we have this relatively small planet, orbited by a gigantic moon that stabilizes the tilt of our rotation axis. It ensured that at the just right time for human beings, we have a rotation rate slowed down to 24 hours. And that this gas giant planet, it got kicked out by a gravitational interaction with Jupiter and Saturn. And that gravitational interaction basically slimmed down Mars from being a planet about twice the mass of Earth, down to a planet, there was only one night the mass of the Earth. This was called the Smar small Mars problem. It took 20 years for astronomers to determine how did Mars get to be so small, but we now recognize if it wasn't for that transformation of Mars, there'd be no possibility for advanced life to exist on planet Earth. Now, I can give you 400 More examples just like that. But that's just one that basically shows us, Hey, we live in an extraordinarily fine tune universe, galaxy cluster, planetary system, were orbiting a star that's unlike any other star. One of the things I put on my book design to the core, I show you the luminosity stability of our star to the Sun. And right underneath it, I show you the luminosity stability of the second most stable star we found in our Milky Way galaxy, our star, the Sun is five times more stable than the second best Star. And if it wasn't for that extraordinary stability, we wouldn't be able to have this podcast today.

Brandon McGuire 32:58

Wow. Wow, there's so many ways so many directions. I want to go with that. But that is truly remarkable. I feel like I anytime that you that science seems to really look into something they that is the trajectory, isn't it towards more and more depth and complexity. It's really remarkable. I mean, even think I know, this is not your area of expertise, but even thinking about what the cell was known to be in Darwin's day compared to what it is now. And it just seems like everything that we peer into with more and more sophisticated instruments. It just seems like there's just this limitless complexity to everything. And it's it truly is remarkable.

Hugh Ross 33:39

Call You're right. It's not just the discipline of astronomy or physics. We see it in every single scientific discipline. You know, the origin of life. I mean, my colleague, Fazal Ron, our staff, our chemists and I, we've been attending origin of life research conferences. But it's interesting is each successive one the mood is more depressing than the previous meeting. They're trying to find a naturalistic way for the origin of life. But the more they research it, the more they discover how much more impossible it is for this to happen. naturalistically. And fact, there has been papers published just in the past few years, where it says in our attempts to try to explain the origin of life. We're committing the hand of God and dilemma. Yes, we've been able to make amazing achievements in the lab, showing how some of the easy steps for the origin of life could be achieved. But it's only possible if the biochemist intervenes in the experiment. And so we know one atheist biochemist has said, when we publish our papers, we need to tell the readers how many times we commit the hand to God dilemma. We're basically substituting that design of the biochemist for the design of the one They're created life in the first place. And I estimate as I read the scientific literature, I can't think of an example of a lab experiment where there's fewer than 12 such interventions 12 Hand of God dilemmas.



Brandon McGuire 35:16

And that basically just means where the scientist is having to, to do something in order to move the chemistry forward, if you just let it sit, and then it all just dies. Basically,

Hugh Ross 35:27

if he doesn't interfere, you wind up getting degradation rather than a progression towards the origin of life. Maybe that's Sunday, many origin of life researchers have pointed out, yes, there are natural mechanisms that move the chemistry in the direction we want. But at the same time, there's chemical reactions that are destroying what is happening. And so if you let her run, under strictly natural conditions, you get degradation, you don't get progression. And even in the lab, that's very limited, but they've been able to achieve. I mean, they're trying to put amino acids together to make proteins. While in our body, we got proteins with more than 10,000 amino acids in it. The greatest that they've been able to do in a lab experiment, where he got the experimenter very carefully controlling the environment, they can get 40. I think 45 is the extreme limit of the number of amino acids, they can force together to make a short protein chain. But all of our proteins are longer than 40 amino acids. And moreover, they've never been able to solve the homework morality problem. Under you have to have all the amino acids left handed in order to assemble them together. And it'd be don't have human intervention, you have these amino acids 5050, left and right handed, there is no natural mechanism to force them all to be left handed, you got the same problem with a DNA and the RNA, those molecules cannot be constructed. Unless all the ribose sugars are right handed. And again, there is no natural mechanism to force them all to be right handed.

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Brandon McGuire 37:12

Let me ask you a out of pocket question that I'm curious. My mind is going back to when you were talking about the formation of the earth and all of that. What do you think about aliens?

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Hugh Ross 37:22

Well, my sons asked me that when they were growing up, and I said, Well, I pulled my alien resident card out of my wallet. So they went around the neighborhood saying, hey, our dad's an alien. US citizens, so it's like, I don't need an alien card anymore. But I think the question you're asking physical beings like us, that are on other planetary systems. And everywhere we astronomers, look, we see conditions that are hostile for advanced life. Some of my peers speculate, maybe there's microbes that exists for a short period of time, on planets outside the solar system, the literally everywhere we look, we see extremely hostile conditions for advanced life. So looks like we're alone. And that context, as far as the idea that, hey, could God have created beings like us elsewhere? Well, we're talking very, very far away, where we haven't got all the observational details. Yes, there's a possibility that the God of the Bible supernaturally intervene just like he did here on Earth, and created beings like us. There's nothing in the Bible that says that God could not have done that, that Christians have been debating this for 2000 years. Did God create elsewhere? Or did he only create here on Earth, but we do know that they cannot traverse interstellar space. In fact, we astronomers are very eager to send spaceships to the nearest planet outside of our solar system. It's only 4.2 light years away. But we realize the faster we go through interstellar space, the more damage our

craft will have, due to the particles in the dust in interstellar space, and equals CEMs equals MC squared tells us if you double the speed, you quadruple the damage. This astronomers have figured out the fastest you can go is about 1/10 of velocity of light. But also the bigger your spacecraft, the more damage it takes. So you got to make the cross section small to minimize the damage. So we astronomers are actually proposing Let's send 1000 spaceships to the nearest planet outside of our solar system. And let's make all the spaceships smaller than 10 centimeters across. Even though we do that, we know that over half of the spaceships will be totally destroyed. And before they get to that planet, the hope is that the remaining less than one half will only be partly destroyed and partly destroyed in different ways. So hopefully we'll get back some meaningful information. But what that tells us there is no way you or I are going to traverse interstellar space, there is no way a termite can make it across interstellar space, or even a microbe. And so panspermia doesn't work. You cannot have the transport of any kind of light form across interstellar space, it will be killed before it can make that journey. That's

Brandon McGuire 40:39

really interesting. on kind of a similar note, my brother in law, and I were having a debate over Christmas that a couple of months ago, about, we were talking about the position of planet Earth, in the universe. And the debate came around the idea that if we don't actually know how big the universe is, can we actually know our location in it? And I know, Carl Sagan talked about that we're a pale blue.in, a remote part of the universe, we obviously know that we're not in the center of our of our solar system or our galaxy. But it was this question of if, you know, if you don't know how big the table is, how do you know, how can you say that you're not in the middle of it? And I'm not I'm not arguing for that. I'm just I'm just curious if both of us are totally ignorant to so many factors that you might be able to shed some light on in terms of, are we able, am I right in saying that we don't know, the shape or edge of the universe, I guess to begin with? And then if that's true, does it follow that we wouldn't be able to know where we are within it? Does this make sense?

Hugh Ross 41:47

It does. And I addressed the two chapters to that question in my design. So we do know where we are in the observable universe. But the observable universe is not the same as the presently existing universe. Because and we astronomers observe the Universe, we're looking back in time, it takes time for light to travel from a distant galaxy, to our telescope, and the universe is expanding. So the universe we see through our telescopes, is the universe of the past, where the universe was smaller than the universe today. And so the farthest away, we can look as back to the cosmic creation event, which is 13 point 8 billion light years away. But because of the rate of expansion of the universe, we know that the present universe at a minimum has 94 billion light years across. So we're limited to the universe that we can observe. But within the observable universe, we notice that we're off center, and almost every way you can conceive and buy off center, what I mean is, we're not at the center of mass. And so the center of mass for a milky way galaxy is the core of our Milky Way galaxy. But we're off center from that, but we're off center at just the right amount for we to be able to exists. I mean, half the stars in our Milky Way galaxy are in the core of our galaxy. So life's not possible there, you have to be off center. But likewise, our Milky Way galaxy is off center with respect to the center of the mass of the Virgo cluster, and the Virgo cluster as off center with respect to the center of mass at the Lynette, Kaya, Super Galaxy Cluster. And Alanna kya Super Galaxy Cluster is off center with

respect to all the other Super Galaxy clusters that we see in the observable universe. But in every single case, we're off center by the just right amount. And so Copernicus was the one that discovered we're not at the center of the solar system. We're literally off center every way you can possibly imagine. But if we weren't, again, with this podcast wouldn't be happening, we wouldn't be alive. Wow.



Brandon McGuire 44:17

So so the location,

Hugh Ross 44:20

location is fine tuned. We have, there's just one spot within the observable universe, where you get an advanced life with global high tech civilization, and we're living at that spot. The other interesting thing is that location is the one location where observers can actually see the full extent of the observable universe. And it's our capacity to see the full extent of the observable universe that actually allows us to image the cosmic creation event. And so for example, there are telescopes at the South Pole that are determining images Is that show us the state of the universe. When it was 100,000,000th of a trillionth of a trillionth of a second all that so close we can get to the cosmic creation event. And it's our ability to directly observe the cosmic creation event that gives us some of the most rigorous and compelling scientific evidences for the God of the Bible. God wanted us to read the whole book of nature, just like he wanted us to be able to read the whole book of Scripture.

Brandon McGuire 45:31

What is it about this location that makes it such that it's the only point that we can make those observations from?

Hugh Ross 45:39

Well, we're in a very under dense part of the universe, we're in a very under dense part of our galaxy cluster and Super Galaxy Cluster. That means the sky is dark enough at night, that we can see very distant galaxies. And we can see the radiation from the cosmic creation event. And so he knows a lot of light in the universe. And just like, you know, when I bring my telescope out, and I want to look at galaxies in our front yard, I pick a moonless night, the data sky is going up. So when the moon is full, I can't see those distant galaxies, I need a moonless night, or we also need the solar system to be in an exceptionally dark location for that to be possible. And we happen to be in the darkest possible location in the universe, where advanced life as possible.

Brandon McGuire 46:35

So it's an it's a uniquely safe and observed, like, a safe location in the universe is what you were saying earlier, as, as we spun away from, from all the potential dangers, and also a place

where we can make these observations about everything else that's going on from is am i getting that right? Yeah, it's

Hugh Ross 46:58

a second argument for fine tuning is not only is the universe fine tuned to make our existence possible, it's fine tuned so that we can observe the universe. And it's not just that we're at this unique location, we're also at a unique time. So for example, we were created earlier in the history of the universe, life and the cosmic creation event would not have adequate time to travel on the space surface of the universe, and reach our telescopes. On the other hand, if we were created later, the universe would now be expanding at as far this reaches a greater in the velocity of light, which means those objects would cease to be visible in their telescope. We happen to be existing at one time in the history of the universe, when we can observe 100% of the past history of the universe. Again, it really looks like somebody wanted a spiel to read the book of nature. We're at the one location. We're also at the one time, I remember speaking on this to an audience of atheist and agnostic astronomers, they said, We think it's a sheer coincidence that we're here at the just right time. This is yeah, we're also here at the just right location. You're not talking one coincidence, we're talking at double coincidence, and giving a big the universe's the combination of those two coincidences. speaks of purpose, not a pure chance.

Brandon McGuire 48:27

You said you mentioned that, that what we were just talking about was the second fine tuning argument. And that made me think is there Do you have a list in your, in your brain of of what these big ones are? Is there any other ones that we should highlight, because I'm loving this, a lot of what you're saying is, it's just really, really cool. So I just want to squeeze every job we can from this lemon. I think, for example,

Hugh Ross 48:49

we're also living at a time when we get perfect solar eclipses. I mean, the moon is spiraling away from the Earth has been doing so for the past four and a half billion years. But right now, the diameter the moon in the sky, is the same as the diameter of the Sun in the sky, which means there'll be occasions when the moon perfectly occults the sun, as based on those perfect quotations of the Sun by the moon, that we were able to learn about the atmosphere of the sun. You know, and also the corona sphere, the sun. I mean, I was it saw one solar eclipse in 2017. I could see the solar corona out to a diameter of 10 Moon diameters from the center of the Sun. And so and also when you have the sun perfectly all called it, the sky goes dark. You can see stars around the sun. And it was Einstein who said, If my theory of general relativity is correct, you'll notice that the positions of stars near the sun will be He bent by the gravity of the sun. And it was a 1919 solar eclipse, where a team of astronomers were able to put Einstein's theory to the test and said, Yep, what he predicted is exactly what we see with a solar eclipse. And so, thanks to the fact that we had these perfect solar eclipses, were able to learn a whole lot more about our solar system, theories of gravity than otherwise, it'd be possible if we weren't living at just the right time, where we got these perfect solar eclipses. And I can give you a bunch more examples. I mean, that's why I've written seven books on this, you can't get it all into one book, how

Brandon McGuire 50:41

the it's, it's, it jumps off the page to me, and I don't know if that's just that I'm a person of faith or whatever. But when I hear these things, I just think, you know, this is extremely compelling. For for me in terms of evidences for an intelligent designer, it makes

Hugh Ross 51:00

sense for me to like, for example, you know, I eat early read the latest papers published in the scientific literature, because I know that they're going to give me even a stronger case, for my Christian faith. It's just a thrill for me to read these latest published articles and realize, Wow, I got a stronger case today than I had yesterday.

Brandon McGuire 51:25

Why? I mean, I, we kind of touched on this earlier. So I don't I don't want to, you know, have you asked to repeat yourself for anything but I just the same question that's coming up in my mind, which is, why doesn't every scientist believe in God? Maybe that's a silly question, but but when you get down into the details that you're describing, it appears to be so compelling. I'm just imagining you've had conversations with your colleagues over the over the years. And I'm just curious if those conversations distill down into some where you can kind of see where the Crossroads exist in terms of you guys both have access to the same knowledge, you're both looking at the same data. But for some reason, you're not arriving at the same conclusion. And I just I don't know, I just find that fascinating. It

Hugh Ross 52:14

is fascinating. But the Bible tells us that God and doubt as human beings, was wrong, free will, for good reason. If you go weak, Free Will you got weak love, God wanted strong love relationships. So he created us with strong free will. So we shouldn't be surprised that people will sometimes express their strong free will, in rebellion against God. Romans one addresses this, where it says, We're all without excuse, because God has abundantly revealed Himself through what he created, that people look at the creation, and, and instead of giving credit to the Creator, they give credit to the creation. And so I run into scientists, peers, who say, Isn't it amazing what nature has done? So they're transferring the credit for the design, to the creation, rather than the Creator. And Romans one describes this as self imposed ignorance. They know it's true, but they engage in self imposed ignorance. And why do they do that? Because to accept the truth of what's being revealed in creation, means you have to accept the fact that there's a personal God that created all this. And this personal God is evaluating your life. This God is one who is going to hold you in judgment, it means that he is a ruler over your life. And you know, you mentioned Stephen Hawking at the beginning of our talk. I mean, his best selling book, you know, A Brief History of Time. He basically makes the point. I want to be like God, I want to know everything that God knows, including the answer to freewill, including the answer to all the problems of life. And so he was basically doing what we see the early chapters of the Bible describing how the most powerful being that God created Lucifer who



became satan. What was his objective? I want to be like, God, I want to be equal to God. And in many subtle ways, I see my scientist peers, making that same error, just like Stephen Hawking. And so, as I read a brief history of time, he was a Deist. He may became an atheist late in his life, but he really wanted to be the ruler over his life, rather than having God be the ruler over our lives, and it's that rebellion that causes us to engage in self imposed ignorance.

Brandon McGuire 54:51

Yeah, it's interesting. I actually just rewatched an old classic debate with Hitchens and Dr. Tarek thinking was their first one. And I noticed the amount of times that that Christopher Hitchens talked about. God is like a big brother, I don't want someone monitoring my behavior. And he was very clear about his disdain for the idea of there being an authority. That was a that was above himself, which I did think it was interesting. And it reminds me a lot of what you're saying. And I mean that that definitely does make sense. So also, so you brought up Romans chapter one. So now we're talking about Scripture. At the beginning of this conversation, you talked about how you went into scripture, and you did not find contradiction, where as in other world religious texts you did. I'm really curious to hear about that process that you went through, because I think a lot of people would say, Are you kidding me? Look at right here, there's three women at the tomb. And there's two women at the tomb, the tomb, there's a contradiction. And there's a ton of things like this that I see online, these, you know, apparent contradictions. So I'm just curious if you can share a little bit about your journey of searching out those things. And where you said, oh, boy, here is a contradiction. And then how, you know, how did you resolve it just to kind of give a flavor for that? Obviously, we can't cover them all in the next couple of minutes here, but

Hugh Ross 56:18

sculpture and I went through the worlds when I went through the world's holy books, I said, You know what, I'm going to put each of them in the best possible interpretive light. You know, it's easy to discount Sunday, we put it in the worst possible interpretive light. But even when I put the Koran, the Hindu Vedas, the Buddhist commentaries in the best possible interpretive light, it was clear that they had errors, contradictions, misstatements. What I found in the Bible were things that were problems and me and mentioned one, one gospel talks about the rooster crowing. Another one says it's going to crow three times. Well, it is different, but it's not a contradiction. One witness heard one Crow, another witness heard three. They're both valid. It's just that you're getting an incomplete account. From the two witnesses. It's possible that the rooster crowed four times. I mean, we just don't know. And likewise, you know how many women came to the tomb while you're getting what one witness saw. And, you know, I've talked to a number of lawyers about this, they said, we would be really disturbed. If the four Gospel accounts were identical and recording the events. Whenever we see that in a court of law, we know that the witnesses have collaborated to give the identical story, which tells us they're not being truthful. They're witness. So we don't see differences in their testimony. We know that there's a problem. And so we would expect to see differences in the four Gospel accounts. I mean, why four gospels, otherwise just have one gospel. But each gospel gives us part of the story. And the fact is, can you integrate the four parts where there is no contradictions. I went through that exercise during my teenage years, and realized it's more likely that the ministry of Jesus of Nazareth was a four year ministry than the traditional three years, because you're gonna make it a four year ministry, it's much easier to remove possible

problems in the integration of the four Gospels. But as I've gone through the Bible, I've found many issues that are problematic, but they're not provable errors or contradictions. Moreover, during that 18 months, where I was spending an hour to an hour and a half, studying the Bible, by the time I got done, things that were problematic at the beginning, had gotten resolved. By the time I made it to the end of the book of Revelation. And so it's what happens to these anomalies and problems. That tells you whether or not you're on the pathway to truth. It's the same thing we scientists use, there is anomalies and problems and all of our scientific models. But as we study an anomaly, in depth, we can resolve that anomaly. And at the resolution of that anomaly, we're gonna get new anomalies, because you don't know all the anomalies. You only know that if you know everything. But the new anomalies are smaller and less problematic than the anomaly we've already resolved. That tells us are on the pathway to truth, on the other hand, are the new anomalies are more problematic, and more numerous than the anomalies that we've been exposed to? We know we got the wrong model. And they using that approach. You can see through archaeology through biblical scholarship over the past 2000 years. The more we study the Bible, the smaller and less problematic the anomalies become. But guess what? We We still got anomalies, we'll always have anomalies, because we human beings are never going to be able to learn everything about the universe, or everything about what the Bible's intended to teach. But we are making progress. The fact that we're making progress tells us we indeed are on the right path towards truth.

Brandon McGuire 1:00:19

I was reading something you had written about Bible prophecies and then being fulfilled. And I think that's actually a really interesting thing that I that is not talked about quite as often as I think it should be. And so I'd be curious if you could sort of lay some of that out for us in terms of how do we know that the prophecy was written when it is said to have been written and that the fulfillment of that happened when it was said, because if that if there really are truly fulfilled prophecies that we can actually corroborate? And and, and see that they really took place when they are said to have taken place? That's extremely powerful. It is. Yeah.

Hugh Ross 1:01:01

And I got two articles coming out on fulfilled prophecy in March. So a month from now, you'll see a couple of articles@reasons.org. But what I noticed when I went through the world's holy books, they all attempt to predict future historical events. The problem is only the Bible gets everything right. So for example, I went through Mormonism, I found the prophecy that Oliver Cowdery would become a household name. Most Mormons have no clue who Oliver Cowdery is. So you know, that's just one of over 50 prophecies made in the three books that found Mormonism that we know know are incorrect. And that's the case with the other holy books. When you look at the Bible, you don't find just 50 predictions of future historical events, you find several 100 predictions of future historical events. And it gets some All right now there's some that have not yet been fulfilled. Because the Bible actually predicts historical events that haven't happened yet. Most of the prophecy in the Bible has already been fulfilled. I mean, probably the classic example would be the book of Daniel. In fact, I debated the religion, editor of Skeptic magazine, on the book of Daniel. His way was to say, well, it was written in the fifth or sixth century AD. So everything predicted in Daniel was after the fact. But in a debate, I gave the evidence that indeed, the book of Daniel was written in the fifth century, BC, fifth or sixth century BC, not the fifth or sixth century AD, the language is all there. Moreover, notice that the book of Daniel shows up in the Septuagint, which has been carbon 14, dated to the second century BC. So there you got undeniable evidence that of predates the second century BCE. And the book of Daniel predicts the arising of several world empires, that the Babylonian Empire would arise, and then be defeated by the Persian, immediate Empire, which would be defeated by the Greek Empire, and the Greek Empire, would be overtaken by a strong empire, to the west of Greece, which we now know to be the Roman Empire. And so, and the book of Daniel got everything correct in those predictions, and when you look at it, the detail is phenomenal, because of that actually talks about how there would be this strong leader from the west of Persia, that would defeat the Persian Empire. But at the moment of the height of his power, he would die, and how his kingdom will be split into four pieces. And history reveals that indeed, Alexander the Great after he had conquered most of the known world, at age 33, got an illness and died from the illness. And his empire was split amongst his four generals. So, and that's, I mean, probably the most dramatic example, is one that I got coming out in March, which is Psalm 22, written 3000 years ago, 1000 years before the ministry of Jesus of Nazareth. But Psalm 22 predicts in detail how the Messiah would die, and talks about how his feet and his hands would be nailed and pierced. And this was done several 100 years before the invention of the crucifixion as a means of execution. And that talked about and what really got me is Psalm 22 Even predicts the exact words of mockery worrying that will be thrown at Jesus by the religious leaders when he was dying on the cross. And the words of mockery from Gentiles would be thrown at him at the word at the scene of the cross. And you notice in the Gospel accounts, it actually has Jesus on the cross dying. And the first words out of his mouth, oh, my God, my God, why have you forsaken me? That's the opening statement is Psalm 22. The last words of Jesus it is finish the last words of Psalm 22. It is finished. And it tells us there is a Roman centurion, who is in charge of the execution of Jesus and the two thieves. When he heard those words of Jesus, what did he say? Surely this was the Son of God. He was probably a Centurion that was familiar with the Old Testament. It's possible Jesus was quoting Psalm 22, as he was dying on the cross. And in Psalm 22, over 30, specific details of how Jesus died on the cross are recorded there. Every one of them happened. And I can imagine if the century was familiar with Psalm 22, he would have been driven to proclaim, this is surely got to be the Son of God. Word for word, everything in Psalm 22 is being fulfilled right before my eyes. What's

Brandon McGuire 1:06:25

fascinating about that, too, is that you could if you were being skeptical, you can make the argument that Jesus knew about the prophecy. So he said those things to sort of fulfill it, you know, voila. But what's interesting is all of those details in between, are totally outside of his control. Those are things that people were doing without any awareness of that and they would have no reason to, you know, bring about a fulfilled prophecy when their entire intention was that he is

Hugh Ross 1:06:54

proof of that is that there were people who were quote, famous science, said, Okay, we know what the Old Testament says about the Messiah. Let's concoct the fulfillment of those prophecies. The most successful those fake messiahs was a fellow by the name of Bard Jesus. He was able to concoct eight of the 300 prophecies about the Messiah that you find the Old Testament, how many did Jesus of Nazareth fulfill 109. Now you say, what about the other 200? Well, he's going to come again, in a second coming, he'll fulfill the remaining 200. But the fact that he fulfilled 109, without error, tells us, he really is who he claimed to be, as you mentioned, most of those 109 are beyond his personal control, like the one in Zachariah, where it says that he would be betrayed for 30 pieces of silver. And those 30 pieces of silver would be used to purchase a burial ground for the poor in Jerusalem. And that's exactly what Judas did. He betrayed Jesus for 30 pieces of silver. And when he realized that the consequences weren't what he intended, he threw those 30 pieces at the feet of the Jewish religious leaders. And they use those 30 pieces to buy a burial ground for the poor. This was all outside the control of Jesus of Nazareth. And yet it was fulfilled precisely to the letter.

Brandon McGuire 1:08:28

Another thing to think about is how many of these prophecies if the Messiah hasn't come yet, if it wasn't Jesus, they're obsolete. I mean, people don't use silver in that way anymore that I'm aware of. So it's sort of this idea, there's a lot of them that I've kind of looked into that are like that, were there and anachronism that that wouldn't make sense and in the modern world, so I don't know, I don't know if you kind of follow that or not where it's like people aren't willing to do.

Hugh Ross 1:08:56

Daniel chapter nine, actually prophesize the timing of the coming of the Messiah basically says it would be 487 years after the signing of the decree for the restoration of Israel as a nation by the Persian king. So and you know, that's what caused the wise men to come looking for the newborn king, is that they are aware of the prophecy of Daniel. And admittedly there are three different decrees to restore Israel as a nation. But those decrees are within one another in less than a decade. And so the Magi they knew the approximate timing of the coming of the Messiah. They saw this event in the heavens and said, this has got to be the sign. They went to Jerusalem. They didn't know the location, but when they got to Jerusalem, they inquire the religious leaders and say, we know this is the time. Can you help us with a location And they said, Yes, the prophet Micah says that he would be born in Bethlehem. They said, well, thank you. And they went off to Bethlehem. And, you know, Bethlehem is a small village, it wouldn't been that difficult for them to find a couple with a firstborn son, and put their gifts of before him. So yeah, that's just one of another 100 examples that you can pull from the Old Testament that was fulfilled in the life of Jesus.

Brandon McGuire 1:10:30

It's really awesome going to the Holy Land and seeing that geography too, because as you were describing that I remember driving from downtown Jerusalem, the Old City over to Bethlehem, and that's not very far away. I mean, it's totally feasible that they could have made that that hike and been there within you know, a few days easily. So I don't know, it's really cool seeing it when you just read it in the book, you're like, how far is that 100 miles away? You know, what, like, what is it? How does the story even add up? Logistically?



Hugh Ross 1:10:58

It's only 20 miles. So that could conceivably be done in one day. Yeah, wanna take your time?

It's a two day trip.

Brandon McGuire 1:11:05

Yep. Yep. Well, let's end on this note, I know we're running up against our time here. But I wanted to ask you this question. Again, just because I'm aware of the fact that there are, there's the whole spectrum of people on different places in their spiritual journey, who listen to this channel. So I wanted to give you in conclusion, just the opportunity to speak to someone who isn't watching the channel just because they want to be angry at us religious folk, but who actually does have an openness in some capacity to to God, but maybe, you know, maybe they're not fully convinced of this. Or maybe they're just in this place of agnosticism, I guess you could say, and I want to just to, I guess, in by giving you the chance to speak to that person, what advice would you give? Thinking about yourself when you were in that search mode? And that, you know, that truth Quest mode? What would you say to your former self? Or what would you say to a person who's in that place?

Hugh Ross 1:12:07

Well, for me, I just kept searching and kept asking questions, may I have a lot of questions, I had a lot of doubts that I need to work through. And so just keep up with a pursuit. I mean, as you see yourself getting more answers, you realize, you know what, this is working for me. And so I would just say, keep asking questions, keep searching, you know, keep digging in, see and accrue the evidence, and find people you can talk to. And so I mean, I still had a lot of questions after I'd given my life to Jesus Christ. And when I got to Cal Tech, that's where I met a lot of Christians who are research scientists that says, Hey, I got this list of questions. You know, none of them are catastrophic for my Christian faith, but I really want to get some answers. And so just having a dialogue with them and realize, you know, they research this years ago, and they gave me an answer who was really good. So finding the right people, you can talk to me, it's one reason why I and the scholars have reasons to believe, maintain a Twitter page and a Facebook page. We don't tell you what we're eating for dinner, or what we're doing on our, on our backyard. We use our web, our Facebook and Twitter pages exclusively, to engage people with their questions. And so I mean, just today, I probably answered 50 questions on my Facebook and Twitter pages. You personally, by personally, right? And I can't get through all of them. Because you know, Sunday's I get 300 questions posted. But I try to go after the most significant ones. And, and not alone. There's other people you can go to. And people are welcome to write their questions in two reasons to believe we have people that look at those questions seriously. And then look at the books. And so you know, I've now written 23 books, and every book I write, is designed to answer questions. I've heard from skeptics and from unbelievers, and so they can begin there. And hey, they got questions I don't address I'd love to hear it. Because I'm on a mission to write some more books. So I'd love to hear what people think, is something I haven't covered yet, in my books and writings, and they'll find 1000s of articles that they can read for free@reasons.org. And again, are designed to answer people's questions. We're also willing to engage people personally. I've done a number of zoom meetings with skeptics where we just get together say, Hey, let me hear your guestions, and we have a dialogue.



Brandon McGuire 1:14:51

I love that so much because I think that sometimes people feel a sense of that questions are bad doubt is bad, you know? And And I love the heart that you have that and I feel the exact same way questions are good questions or how you bring things to the surface, bring things into the light and know and get to know the truth. So there's a ton of videos I do on this channel where it'll be a q&a, and it's exactly that. Well, what Well, what about hell? How's God good in the face of health? Well, great question. Millions and millions and millions of people have that question, let's, let's answer it. Well,

Hugh Ross 1:15:23

for example, I have a class for skeptics every Sunday. And it's half hour of teaching one hour of q&a and debate. And so we attract a lot of people who all over the world are questions, because that's not only a personal encounter, we make it available online with live streaming. It's a paradoxes.org. So, I mean, I had fun engaging skeptics in Germany in the Philippines. And they both had very different issues that they were dealing with. And it's also a way to get people to work together to say, You know what, these people in the Philippines have actually got a good answer. You know, why don't why don't you set up a dialogue with one another? I don't have to be the one that answers all the questions.

Brandon McGuire 1:16:07

So everybody we're going to leave the link in the description to real reasons.org Correct correct



Hugh Ross 1:16:13

reasons dot Oregon, the classes paradoxes.org Okay, great. Well



Brandon McGuire 1:16:16

put both of those in the description. Dr. Ross, thank you so much for your time. I really really appreciate it. You're very welcome. Anything any thing else that you want me to tag on to the end of that that we didn't cover or anything like that at all?



Hugh Ross 1:16:29

I one thing you can tag on as people can get free copies. Read the chapters from ADA my books at reasons.org/ross