

Faith and Science in an Age of Tribalism: A Virtual Faith Angle Forum

With Dr. Francis Collins, Dr. Deborah Haarsma, and Pete Wehner

Josh Good:

Well, good morning everyone. I'm Josh Good. And on behalf of Faith Angle Forum it's my privilege to welcome you today to a conversation with recently retired 12-year NIH Director Dr. Francis Collins, and his co-conspirator, current president of BioLogos since 2009, Deb Haarsma, as well as Faith Angle advisor and our longtime colleague and friend, Pete Wehner, who writes regularly for *New York Times* and for *The Atlantic*, and elsewhere. We initially planned for this to be an off the record informal conversation of about a dozen journalists in person here in the Michael Cromartie conference room on faith and science and a polarized age, but obviously Omicron had other plans.

So instead we hope this can be a very different kind of on the record conversation, a big think reflection on how a sharp decline in trust impacts science, and our response to COVID, religious faith and our engagement in institutions. And yet the quest for harmony between faith and science, which BioLogos has creatively kept alive since it really launched in 09, since Deb came in 2013 as its president, and since it was sort of created in response to a book, *The Language of God*, bestseller that Dr. Collins wrote back in 2007.

Deb is a graduate of a little Minnesota Christian college called Bethel, and then a PhD from MIT. So she's going to say just a few words, the beginning about this larger topic before introducing our main speaker for today, Dr. Francis Collins. After Francis speaks for about 15 minutes, his longtime friend Pete Wehner will join Deb and Francis to sort of draw out a number of these themes in conversation. And then we'll look to turn quickly to you after that. So to do that, just like at Faith Angle, except unfortunately without the seaside and the retreats and the wine and other good things, if you wouldn't mind, just in the chat [inaudible] with the chat function, or with the raised hand function. I'll keep a cue for that so you can get in with any of the three of them. And then Catherine will have just a brief word for us at the end. Thank you so much for being here. Deb, over to you.

Deborah Haarsma:

Thank you so much, Josh. And I want to thank Josh and everyone at the Faith Angle Forum, we are delighted to be cosponsoring this event with you, for BioLogos to be working alongside EPPC and the great work that you're doing. Thanks to all of you for the journalists who are coming, and those who are viewing us today. This is such a critical topic. We're here to talk about faith, science and tribalism. And I wanted to say just a few words about faith and science, and then how we ended up where we are now in this very tribalistic environment.

So I am a scientist and a Christian. I am an astronomer. I have used telescopes around the world and an orbit to study galaxies, galaxy clusters, the curvatures face in the expansion of the universe. And I love studying these wonders, it's very exciting. And for me though, as a Christian, there's another layer to it, and that the wonder I experience studying God's creation also has this layer of worship, because for me in my work, I see this as the glory of God being displayed in the natural world.

So for me, there's not a conflict between faith and science. I embody them both every day. Even when I'm doing my science I'm not setting aside my faith and being neutral, somehow I'm actually living this as an outgrowth of my faith. So for me, when I study something like the Big Bang, I see the Big Bang as a scientific model, describing how God brought about all of the complexity of the galaxies that we see today from the hot early beginning of the universe. And historically, faith and science have not been in conflict. The Christian faith has been pro-science since the early days. Galileo, Kepler, Boyle, they not only had personal faith, they wrote very eloquently about how they saw their faith being lived out in their scientific work. Boyle even wrote how doing science promoted good Christian character. And of course in this century, since you see Christian doctors and educators founding hospitals in schools and being very pro-science. So how did we end up here with today's polarization over science? Science used to be bipartisan. It was one of the few really bipartisan issues. But in today's world it's become on either side of its divide, where the world has become so aggressively polarized, that it seems like every issue has to land in a red camp or a blue camp. And when you view the world that way, somehow Christian faith gets assigned to red and science gets assigned to blue. And for scientists who are Christians, like myself and Francis Collins, this just doesn't make any sense to us. We see these as going together.

Now, I grew up as an evangelical, so I just wanted to share a few insights of where some of the roots of today's divides. It didn't come out of nowhere. And I'm not a historian of science, but I can share a little bit how I've experienced it. So when I say evangelical, I'm thinking of the evangelical church in which I grew up, not today's meaning. The meaning of the word has changed so much as a much more of a political meaning than a theological meaning. And you can tell that because surveys that have been done that show that now, when you survey those who self-identify as evangelical, 40% of them attend church once a year or less, or not at all. 40%.

Now, in my evangelical church growing up, being evangelical meant being in church three times a week. This is what you did. And it meant reading your Bible, memorizing the Bible, talking about the gospel. And we actually contrasted ourselves with fundamentalists. Remember fundamentalists? That was the more conservative group. That was very conservative in their moral values, and their theological values. And evangelical was this moderate coalition that Billy Graham really led in the middle of the last century. So that's my touchstone for evangelical.

So also in the middle of the century in 1960, you had the publication of a book called *The Genesis Flood* by Henry Morris. And that was the springboard for young earth creationism. A lot of evangelicals don't realize that this idea that the earth literally is 6000 years old, actually is not what the church has viewed for thousands of years. It's really quite a recent development. But in the last 60 years it's been repeated, and white evangelical and fundamental Christians have been told over and over that the Bible teaches that the earth is 6000 years old, science says billions of years, therefore the science and the Bible are at odds. And then the church I grew up we all believed the church that God created in six days, because we believed the Bible.

Now, it took as an adult for me to read more deeply into what biblical scholars said about Genesis, to have a richer understanding of scripture, to see that Genesis wasn't actually teaching, was more teaching that God is the creator and things were created good. And it wasn't attempting to convey scientific information. You can read much more about that biologos.org. But really it was a science versus the Bible debate. Then things kept ramping up in the nineties and in the odds, the rhetoric was

ramping up and you also had it coming from the other side, we had the new atheist movement, voices like Richard Dawkins and Jerry Coyne, saying really extreme things like, "Science rules out religion", "Scientists are really smart, they don't believe in God", "Evolution shows that humans have no meaning or purpose". And when Christians hear these things, well, we say, of course that's wrong. And so therefore I disagree with the scientists who's saying this. And if science is saying that, I guess I don't agree with science.

I can also say that the academy has not always been friendly to Christians. There are many scientists who are believers, and often I've experienced quite a friendly and welcoming environment, but I know a lot of people who haven't experienced that, and Christians are underrepresented in the sciences. So some of that self-selection out and some is that the climate hasn't always been friendly for that. I'll also note that as science, the scientific community is very committed to wanting to improve in representation of among people of color. And this would be a good moment to consider how welcoming they are to people of faith. The data shows that in the black church and the Hispanic church, they have higher rates of church attendance in those groups than in among white evangelicals. So anyway, there's things going on in both sides. And of course we have two sides of a vibe they amp each other up and it just gets worse and worse.

Accepting or rejecting evolution came to imply a host of views on theology and the Bible, and then a host of political views. And today it's really not the Bible versus science, it's us versus them. That's suddenly where we end up. I was recently hearing from a fellow Christian how he told his mother that he accepted the Big Bang, and his mother was upset. He asked why and she said, "Well, the Big Bang, that's what scientists say". Full stop. That's why she couldn't accept it because a scientist had said it. There wasn't a biblical argument there, there isn't a scientific argument there, it was because it's them, it's on the other side. And for scientists who are Christians, it just grieves my heart to have it be in this state. And it is causing problems. It's not a good state to be in. From well before the pandemic, we've seen young people leaving the faith over science. In 2018, the Barna Group reported that 49% of church going teenagers feel that the church rejects much of what science has to say about the world.

So half of our church going teenagers feel like the church has rejected science. And then Barna in another study asked young people, why do you doubt? What is causing you to question or leave your faith? And science was up there as one of the top four reasons. Right up there with hypocrisy of religious people. So it's a huge issue from a faith perspective. It's a huge issue from a big cultural perspective. In the last two years, faith and science have become more weaponized than ever, become weapons in the culture war. And now when we're talking about issues of COVID, and when we're talking about issues of climate change, we're now talking about health and safety and natural disasters and agriculture, all of a sudden the consequences aren't just, it's not just a shouting match, it's people's physical health, physical safety, people are dying from the culture wars.

So these are critical issues. I'm glad we'll be talking about them today. At BioLogos and at the EPPC, we believe this does not have to be the case. Back to the roots of Christianity, to the roots of science, these things do not have to be in conflict. Both of our organizations are committed to thoughtful, nuanced, compelling conversations, and believe that good conversations are possible. At BioLogos we believe Christ centered faith and rigorous science can work hand in hand, instead of being at loggerhead. At BioLogos we're giving voice to scientists who are believers, and we are giving voice to pastors and

theologians who celebrate what science has discovered in God's creation. We're also equipping teachers and parents to guide the next generation to do better, to be informed and faithful leaders in a divided world. If you ask me where my hope is today, a lot of it is that the next generation can do better by than we're doing now. So I look forward to a great conversation today.

Now, let me introduce someone who exemplifies much of what I've been saying. Dr. Francis Collins is a great friend, and he is the Founder and Senior Fellow of BioLogos. Francis Collins is a world leader in biomedical research, including, as we already heard, directing the human genome project, he just stepped down. After 12 years of directing the national institutes of health, serving under three successive presidents. Francis has been pivotal in the fight against COVID 19, forming that coalition of the pharma companies, research, government, to all come together to bring us the safe vaccines that we have today. And Dr. Collins is also a person of deep Christian faith. He told his story of coming to faith in the bestselling book *The Language of God*, and his faith is on display. There's a lot of people who give lip service to faith, or their faith is just a private matter, but you can see in his public life how he has lived out a life of service, and humility, and joy, and excellence, all things that arise out of his faith. So welcome, Francis Collins.

Francis Collins:

Thanks Deb, for a kind introduction, and for your wonderful remarks to really set the stage for what we hope we can be talking about here with members of the press. I just want to say a sincere thank you to EPPC, and particularly to the Faith Angle Forum for making this possible. I have all kinds of warm experiences with Faith Angle over the years, back in the day when Mike Cromartie, my dear friend, was running this, and a couple of memories of gatherings in Florida, where really interesting conversations would break out all over the place. And I hope that will be exactly what happens here this morning. So thank you, Josh Good, for being our moderator here. And thank you to my friend Pete Wehner, for engaging with Deb and me here shortly, as we try to discuss some of these very important issues. And they're very vexing issues as well, as you've already heard.

I won't go through my own life story in any detail, but just to sort of put in context where I'm coming from, I should maybe say that my beginnings in terms of faith interests are different than Deb's. I was not raised in an evangelical church, I wasn't really raised in any church tradition at all. And over the course of high school and college, and then graduate school, migrated into agnosticism and ultimately atheism.

But then in medical school encountering the realities of life and death, and realizing I really didn't have any answers to those questions about why are we all here, and is there a God, and does God care about me, I had some work to do to try to sort that out. I assumed that work would further strengthen my atheism, as a rigorous scientist who was at that point not very interested in things that couldn't be demonstrated in the laboratory, but I discovered that was a way too limiting approach to answering these really important eternal questions about God. And to my surprise, over the course of a couple of years, back and forth and up and down, and conversations with lots of people and lots of exposure to really deep thinkers like C.S. Lewis. To my surprise, I became a Christian at age 27.

I was already at that point deeply interested in genetics, and the way in which medicine and genetics could work together to perhaps be transformative in discovering the causes and the abilities to treat

disease. And so it was predicted that becoming a Christian at that point was not going to be compatible with my professional aspirations. And there would be some sort of horrible conflict, because that's what everybody assumed. And frankly, a lot of people still do. And guess what? It didn't happen. I have never, in my experience as somebody who is a person who really believes in the Christ-centered faith we call Christianity, and who reads the Bible regularly and sees it as a source of truth and guidance about the nature of humanity and the nature of God, I've never seen a conflict between that and what I know as a scientist, and have had the privilege of being able to be engaged in, including the sequencing of the human genome, and then for 12 years leading the National Institutes of Health efforts.

I think when we see conflicts of that sort, we need to basically step back and say, "Okay, what have we done here in terms of an interpretation that needs rethinking?" I'm very fond of the Francis Bacon way in which we talk about faith and science as gifts from God, both of them. Bacon talks about the two books that we've been given. The book of God's words, the Bible, and the book of God's works, which is nature. And if they're both God's books, it would be a problem for us as the readers if we thought there was a conflict. So let's look carefully and see how we might have misunderstood.

Obviously, as Deb has said, a lot of that has focused on two areas, the age of the universe, and the whole issue about how humans are related to other species. And much of the conflict that we have now seen, particularly in the United States, between evangelicals and fundamentalists, and science, are not necessarily those that were seen as that big of an issue in previous centuries. And it is unfortunate that we've arrived at this kind of camp situation between the faith and science communities in an unnecessary way. Biologos.org is the place you can go and read a lot more about all of those things. For me as a scientist and a believer, I don't put these in separate parts of my brain, or deal with them in separate parts of the day. These are all integrated, complimentary. They self-reinforce in interesting ways. Science then becomes not just a detective story, but it is that, and it's a lot of fun in that way alone, it's also an opportunity to glimpse God's creation.

And as Deb used the word a minute ago, science is worship as well. For her, maybe it's studying those far galaxies. For me, it's the mysteries of how a cell does all the things it's doing or how the brain works. But that is awesome. And it also is an opportunity to get a glimpse of God's mind, and to feel this sense of worship. And I am fond of saying, you can meet God in the laboratory, not just in the cathedral, if you're thinking about what it is you're doing. I was a little private at first about my belief. I guess, as Deborah said, the academic community is not always embracing to people of faith, but as I got further along and discovered how many young people were really interested in talking about this, how science and faith might go together, I became more open myself in that kind of conversation.

And ultimately wrote this book called *The Language of God*, which is now 15 years old, and which to my surprise was of great interest, it seems, and continues to be to a lot of people trying to sort out how one can in fact bring together rigorous science and Christ-centered faith. And immediately following that, barraged by lots of questions from people who wanted to go deeper than I had been able to do in that book, it was clear we needed some kind of a meeting place for these kinds of conversations to happen in a gracious, respectful, civil way, with no mudslinging allowed. And that was the basis for the founding of BioLogos back in 2009. And it has been remarkable to see how that has over the course of these years, really expanded into a remarkable place for people to have the kinds of conversations that maybe just weren't happening before.

I can't say enough about how wonderful it has been to have Dr. Deb Haarsma step in as president of that organization in 2013. I had to step away, because as a presidential appointed director of the National Institutes of Health, I was not allowed to have any formal role with any other organization. So I became a cheerleader from the sidelines for this enterprise until I stepped down from NIH directorship just about a month ago. And now I'm happy to say I have this new role as senior fellow. Although my main focus right now is running my research lab in the intramural program at NIH. So I'm still a federal employee, which means, I should tell you, I'm speaking to you today as a private citizen, and not as a representative of the US government. In case there is any doubt about that.

It is an awesome time in science right now. This is like the golden era for life science. The things that are possible, the technologies that have come along to make it even imaginable. We could figure out how the brain works all 86 billion neurons. We have ways that we're approaching cancer with things like immunotherapy, big meeting today at the White House about this. Genomics has just opened up all kinds of opportunities in precision medicine. Gene therapy is now starting, not just to hypothetically do some good, but to cure people with sickle cell disease and other genetic conditions. It has been amazing to see that exponential trajectory in terms of scientific capabilities, that NIH has a chance to nurture and encourage. And of course, we have to talk about COVID, because that has so dominated everything in the last two years and our private lives and certainly in the scientific community as well. And I must say the scientific community responded to this COVID challenge in dramatic ways, dropping any kind of concern about the usual boundaries between who is going to get credit for what, pulling together academia, government, industry, the regulatory agencies, sitting around the same table, designing the most rigorous approach to developing vaccines and therapeutics and diagnostic testing.

And in just 11 months, the result of that coming forward with vaccines that were so compelling in phase three trials, that FDA granted that emergency use authorization. And now two of those, one of them just in the last day, have the full approval.

One of them just in the last day, have the full approval of vaccines that are safe and dramatically effective. I can't tell you how amazing that experience was because we didn't have any right to expect it was going to work. Most of you know vaccine science is not exactly a plug and play. Most vaccines have taken us four or five years to come to fruition. Most have failed before they ever got there. And to try to do this in the presence of a global pandemic that was taking hundreds of thousands of lives, you felt this incredible sense of urgency. And I, as a person of faith was not only doing everything I could to try to steer the scientific ship. Yes, I will admit I was praying about this as well. And when the data appeared one evening in the fall of 2020, from that phase three trial, nobody really knew until they unblinded it, what it was going to look like.

And I had this concern, there might be a safety problem and a concern that the efficacy might not be much better than 40 or 50%, even though the phase one and two trials had looked sort of encouraging. And when the data was emerged, it was unveiled 95% efficacy and no safety concerns in a group of 30,000 people. I was astounded, I was overjoyed. It was an answer to prayer and I kind of lost it. I cried that night about as hard as I have cried in a long time, it was just such a sense of gratitude and relief. And I thought at that point, "Okay, we are going to win this. We are going to vanquish this worst pandemic virus in more than a century. We now have the tools to do this." And of course, everything got

pulled together as fast as we could to try to get the manufacturing scaled up and shots into arms. What happened? Well, we did save hundreds of thousands of lives. Let's be clear about that, but it didn't turn into this full victory that we had expected.

Part of that, of course, was the variance. The Delta, and now more recently Omicron. And those in a certain way had to be expected and planned for, although I don't think we knew that they would be quite as challenging as they were. But a big part of it was that we somehow did not convince a lot of people that they wanted to take advantage of this life-saving medical development. People estimate now more than a hundred thousand lives have been unnecessarily lost because of vaccine hesitancy and resistance. You can read stories about those. The press has done a good job of telling some of those heartbreaking stories of people who for one reason or another decided these vaccines were not for them. Mostly based upon information that was spread to them through social media, through cable news, through political messages. And oftentimes through words, they were hearing from people in their churches. Because we had separated, as Deb said into this red blue situation and the evangelicals unfortunately were caught up in this in a particularly difficult way.

What demographic group is the most resistant to vaccines? It's white evangelicals, 30 to 40% just not interested and very dug in on that. And what is that about? Well, some of it is this carryover of the tension between science and faith that told this story about somebody said, "Well, if the big bang is science, then it must not be something that we believers should accept." Well, if vaccines are said to be safe and effective that's science, so that must be something we shouldn't accept. There were lots of other messages folded in there. It particularly troubling to see political voices, basically contaminating, in many instances, the truth of the situation. And many churches also bringing those on board, even though they were purely political and had virtually nothing to do with the faith traditions that those churches stood for. Truth was harder and harder to find.

And yet people of faith, you would think would've been out in front demanding that we make those decisions. After all Jesus speaking himself to skeptics said, "You will know the truth and the truth will set you free." That's John chapter eight. The evangelical church has not been set free. They've been in other ways enmeshed in a series of misinformation, disinformation, and just lies about the nature of what we know and what we don't know. Now, let me be clear. There have been mistakes made in the communication process about the truth. I've made some myself. But what has been so hard to deal with is the continual barrage of misinformation. And oftentimes spoken very loudly and repetitively to the point where people don't know what to believe. We're in a terribly difficult place here in terms of the tribalism that has affected everything.

And as Deb said, this is a culture war and not just one people can say, "Well, that's too bad." The culture war is literally killing people now. Dialogue therefore is needed more than ever. A place for gracious dialogue, a place where Christ-centered faith and rigorous science can be seen as partners as I see. Where truth matters, but truth doesn't seem to be winning out automatically. On top of truth you need trust. We need everything we can do to rebuild that trust and to make it possible for people to begin to recognize what sources they can lean on for accurate information in which they ought to be skeptical about. That's gotten all muddled up. I worry about the next generation. I get messages and Deb does and BioLogos gets a lot of these from young people who are trying to figure out if the church tells me

something that they say is required as part of the way in which we are believers and science says something else, do I have to choose between these two things?

That's a terrible dilemma to put on the shoulders of a young person who may be the next great scientist that we need. And also somebody whose faith is going to bring a perspective to everything they do just as it does for me and Deb today. I'm glad, therefore that maybe at the end of today's conversation, we'll hear briefly from Katherine Applegate about a new program that BioLogos is just launching this week called Integrate. Which is going to provide the kind of curriculum of high schools, be they homeschoolers or Christian high schools to bring into their attention how Christian, faith, and science can in fact be entirely compatible and integrable. And we think that might be a big contribution to trying to change what has been such a polarized situation and in such a difficult situation for young people. So we look forward to seeing the consequences of that.

Finally, I just want to say, now that I'm no longer NIH director, I aim to do everything I can to try to contribute in a positive way to the dialogue that is clearly needing to happen. And nothing that I have said here I hope is coming across as in some way, denigrating the people who have been hit so hard with the consequences of this breakdown in access to truth. I know there's so many people in those pews on Sunday morning, who must be feeling something isn't right here, but aren't quite sure where to turn to go and get answers. And I am empathetic. My heart goes out to those people as they see this situation, which must be causing them a lot of angst and grief. And what I think I am less empathetic with are those who continue to spread the misinformation. Oftentimes even knowing that that is not so something that I think should just go by without some kind of commentary.

So somehow in our culture, even as we greatly value the first amendment and I do too, we have to figure out how to do a more credible job of getting the fact based information higher on the list so that the conspiracies and the lies that are so readily spread around, have less of a chance of getting purchase on people's decision making. So I will stop with that and turn this back to Pete and Josh.

Peter Wehner:

Great. Thanks you, Francis and Deb, very much for those comments. It's great to be with both of you. See by reputation, but personally, especially you Francis and you've been a great friend, and both of you have walked the walk as well as talked the talk. So I appreciate that very much. My role is fairly limited here. I'm the going to make a very quick comment and then ask a couple of questions of you. And then we'll go to, to the questions that the journalists that are on the call have. The comment is it was a brief one. And it's interesting. It is just an observation, which is, I think that when I consider about the situation that we're facing and even this conversation itself, I think I that I view it less as a conflict between faith and science as I do a conflict between science and sociology, or science and culture, or science and partisanship of which faith is being subordinated to those other things.

And so sometimes I have a sense that the public expression of it is faith versus science. But what I've discovered, what I've observed in my life as a person of the Christian faith is that faith itself is subordinated to other things much more than I would've thought when I began my own journey. And so sometimes I wonder if it's almost a shadow debate that that faith is a proxy for these other things. And the degree to which sociology and culture and partisanship are the core identity to people of faith. And then people go through and proof texts, the Bible to affirm or ratify what they already believe is going

on. So I'm not exactly sure what to do about it. It's just an observation, but maybe one it's worth keeping in, in mind. Francis maybe I'll just start with you, because I want to dive in a little bit deeper with what you talked about in terms of the pandemic.

And if you can reflect a little bit personally on what this was for you. I mean, I know you were working 100 hours weeks for this vaccination. I know what an extraordinarily emotional moment that was when you got the results, which were much higher than you and Tony Fauci had hoped and to have really been an instrument in what qualifies as a medical miracle or very nearly as a medical miracle. And then to have run into what you witnessed, particularly in a subculture that you yourself were familiar, was meaningful to you, had helped shaped your life evangelical subculture. Did you expect the resistance that you encountered? What did you discover? What do you know now that you didn't know then? And what do you do with that as you think about ways to get out of this cul-de-sac?

Francis Collins:

I didn't expect it would have anywhere near the degree of widespread resistance that occurred. Obviously before COVID came along, there was this gathering movement of anti-vaccine sentiment. Much of it really coming more from the left, which was again, based upon suspicion of science and was getting some disturbing headway in terms of resistance against childhood vaccines because of a claim about connection to autism, which has been roundly debunked and was based upon an initial paper that turned out to be fraudulent. I guess I wasn't too surprised when people asked, hypothetically, would you take a COVID vaccine back in the fall of 2020 before we had one? And there seemed to be some like, "Well, I don't know about that." I just assumed that once there was real and the data was made very public, anybody who wanted to see it could do so that would knock down the resistance.

And by the spring of 2021, it sort of looked like, "Okay, we're making real headway here." 4 million people a day were getting vaccinated at one point. And then we kind of hit the wall and I was deeply troubled about that. But then I still thought to myself, "People are going to see what happens. They're going to see the vaccinated people are actually doing a lot better." And by the summer of 2021, when we saw that 95% of the people who were dying of COVID 19 were the unvaccinated. That seemed like, okay, if there was any unwillingness to see the evidence here that will take care of it and it didn't. And then I knew we are in a much deeper hole than I thought. And I wished that a year earlier, we kind of realized that, and maybe even done some intense research to try to stand what's the basis for that kind of belief system that is ready to reject evidence about life and death. That seems so compelling. And what kind of interventions might have helped.

And we're of course, trying to figure that out now, but we haven't made much headway. Most of those people who said, "I'm not going to get injected." They still happens. And yet we continue to see even now more than 2000 people died yesterday, most of them unvaccinated. So how can this in the most technologically advanced country in the world have happened. And Pete, you and I talked about this and I think I had not had full appreciation really of exactly how people make decisions. I was under the impression that we were rational actors because I like to think of myself as one. And I now know better from reading books like *The Righteous Mind* from Jonathan Haidt. And other others that have also pointed out just exactly how much we can be dug into cognitive biases by preexisting belief systems that we don't want to see are shaken.

And it's clear, particularly for evangelicals, that part of that belief system includes a strong resistance to science. And to just simply say, "We'll, look at the data." Is not going to be sufficient. So all the more recent, I think I thought BioLogos was necessary when we started in 2009. Now I it's like critical and it needs to be as widely and as quickly spread as possible at two pastors to people in the pews to young people. To all of those who are trying to sort this out cause we are in a much worse place than I thought we were.

Peter Wehner:

That's really helpful. Thanks. I'll ask one question off of Deb and then we'll go to question from the journalists. And I want to pick up on what Francis said. Deb, and maybe you can dilate a little bit on this. Let me preface it by saying there's a lovely verse in the book of Isaiah, "Come let us reason together." But Hume said that reason is the slaved passion. And I think of Isaiah as an aspiration and Hume as a reality, I guess right now. And so my question to you is it strikes me in some respects that this must be a particularly difficult moment for someone who has a science-oriented mind, because you're trained to believe that reason and facts and evidence within a certain kind of dialogue and context, truth will prevail in a sort of dialectic that goes on.

And we're clearly not as Francis was saying has experienced in a personal way. And I have too, and I'm guessing most people have where sometimes you feel like when you're having a conversation with somebody it's like shooting BBs against a brick wall, it just doesn't penetrate. So I wonder you as a scientist and also a head of BioLogos person who cares about these issues, what does that reality mean for you if you say reason and science and data are much more limited to persuade people than maybe we thought.

Deborah Haarsma:

It's very true. I've experienced it for years actually, long before the pandemic when I would go and talk to people about the age of the earth or about evolution. And I think for many of us who are scientists, the first thing you want to say you're talking to a church is to say, "Look, here's all this cool scientific evidence." And then realizing that doesn't do anything for this audience. They have no reason to trust me or anything I have to say. So it really comes down to trust, which Francis already mentioned. And so a lot of what we've learned at BioLogos logos is before presenting the rational arguments and the evidence you first have to earn the trust. The first has to be the sort of change of heart. And that comes through relationships. It comes through trusted figures.

So we do a lot of events and content where we have a person of faith who's not a scientist, but they're the one saying, "Hey, I think this is trustworthy." And then people are like, "Oh, okay, I'll listen." I've literally talked to people who said, "Oh yeah, sign your website. That Billy Graham accepts evolution, Tim Keller endorsed you." Yeah, I'm on board. I'm like, wow. So sometimes it's as easy as that for people. I think it comes really well through local pastors if they can create the culture in their congregation where at a minute, create a culture where there's some issues we can disagree on that are not essential to the Christian faith. That's another thing. If you can get some issues sort of demoted down. So not everything is a litmus test for being the perfect Christian. And then if you can create a culture in a church where you can disagree about some things that goes a long way, that it is a very hard culture to create. I've seen pastors do it, but it takes years and it takes a lot of church leaders being on board with it.

So yeah, trust relationships, at BioLogos, we are hoping to get the word out to all of our network, which includes a lot of people who they agree with our views, or they've come to agree with our views, but they're tied all sorts of Christian families, churches, organizations, and can help convey it there to people they know personally.

Peter Wehner:

Great. Thanks. Well, Josh, I'll turn it over to you. And why don't you... We've got a lot of smart, wise journalists that are tuning in. And so I'll let Francis and Deb be exposed to the lions.

Josh Good:

You bet. We've got a lot of smart, wise journalists raring to go. Thank you so much, Pete, for steering that and stay on please as a third panelist. Okay? With Dr. Collins and with Deb. First one is Adelle Banks at Religion News Service. Followed by Jonn Ward and please just get in after that. We'll watch the chat and we'll get lots of people in. Adelle, you're...

Adelle Banks:

How are you all? Thank you very much for having us in doing this. There are headlines about developments related to COVID 19 vaccinations soon being available for the youngest of children. What are the plans for BioLogos, for the two of you specifically as well, Francis Collins and Deb Haarsma to address evangelical hesitancy and resistance to those?

Francis Collins:

Well, BioLogos has been very much in this conversation, Deb and her team running podcast and other means of getting information out there to Christians who are wondering what's the real evidence here about vaccines. And certainly when it comes to vaccines for younger kids, and yeah, there is a suggestion that Pfizer is now submitting the data to the FDA on the two dose version for kids from six months to age five, even though they think probably a third dose will be needed. It may as well get started with the process of doing the evaluation. And I know many parents are really anxious to see that happen. So BioLogos, I think we'll be in a good position to convey that kind of science-based information to parents. It is troubling, I got to say. I mean, vaccines have been approved now for kids from 5 to 11 and yet the uptake, even for parents who are themselves immunized has been pretty modest.

I think there is still a concern about whether everything is okay or the data is so public and compelling. And the virus is still out there. And now we've got this BA2 so called stealth Omicron, which might mean we have another bump coming. It would certainly be a good idea for parents to look hard at this. And I would think talk to your pediatrician or go to BioLogos and you can see the data. Deb, you've basically been able to put this organization in a place of being able to be a reliable source. I assume you want to continue that.

Deborah Haarsma:

Oh, of course. We had tons of traffic to our website last year, two and a half million unique visitors, half a million viewing one of our common question on vaccines alone. And my colleague, Katherine Applegate maybe pop into the chat, a few of these links. We've also had immunologists who are moms

themselves sort of talking mom-to-mom about like, here's why vaccine was important and answering those common questions.

Seems important and answering those common questions. We try really hard to have a respectful tone to genuine questions that families have because they're concerned and they're asking good questions and we respect that.

Josh Good:

And thanks. Next up is Jon Ward, national senior correspondent at Yahoo News. Jon.

Jon Ward:

Good morning. Hey everybody. Thank you for doing this. Actually I had two questions on my mind and Pete kind of asked the first one. I'll ask it just to see if it triggers anything of interest for either of you. And then I'll also add on a second one. The first question would just be, if you could spend a year to study something in depth and then go back and do the last few years over, what would that be? And then the second question is to Dr. Collins. You've talked on television, I think it was on Fox News actually, about the emails that were FOIA'd and written up in right wing media as a scandal. I was wondering if you have any lessons from that that you're taking forward. Because you've said, I think that you stand by those remarks, but I'm curious what you learned from that.

Francis Collins:

I hate to say it, but I have to ask which of the FOIA'd emails because there seems to be a never ending opportunity here for some people to turn these comments into something newsworthy. I assume maybe you're talking about the Great Barrington Declaration, which was a statement by three epidemiologists suggesting back in the fall of 2020, that we should just give up on trying to manage the spread of COVID. And except for elderly, who ought to be kept sequestered so that they were less likely to get infected, let everybody else kind of go about their business. Remember this is before there's a vaccine. So we were depending then on things like social distancing and masks. And I thought that was an extremely bad idea at the time, because I think you could make a fairly quick prediction of the amount of harms that would be done and how impossible it would be to actually keep elderly from interacting with others who were infected.

And so in an email, I think I said, this is probably a recommendation that needs to be countered because it seemed as if it might just land out there without a resistance. Now let me say that within the next week or two, no less than five or six major professional societies wrote strongly to criticize this, including the American Public Health Association. So I need not worried. But somehow that now becomes, "Oh, here's Collins trying to squash scientific discussion." No, I just want to be sure both sides of this were going to be heard from. I don't know it is, I'm sorry to say another example of the weaponizing of almost everything related to COVID. And at the time I was serving the Trump administration, I served Obama, I've served Biden. I am not a political person. And yet to have this used as an opportunity for somebody to say, this is a bad behavior by a public health person in the service of the government, it was pretty breathtaking.

And there didn't seem to be any way in which that kind of response gets reigned in. It just continues. It's, I guess, a diagnostic of the way in which we have ended up in such a fractured state in our society.

Just a small example. I don't want to overstate it as having been all that major, but it was surprising. Your first question about what I would do over, I think I hinted at that. If we could go back and spend an intense year and more of behavioral, social science investigation, for public health purposes, how do you do a better job of communicating information that might save people's lives and not have that overtaken by all kinds of other sources of misinformation? I would wish that we would've done that. And maybe we've had a better plan for doing the communication than what ultimately happened.

Deborah Haarsma:

Yes. If I had the last two years to do over again, I think my answer would be the same as Francis Collins. How do you do good messaging on it? I know that a common message that came out was collapse to just trust the science. And I heard that in public service announcements from major actors. I've heard that governors saying that and usually as part of a longer a message, but what a lot of Christians hear is, "You want me to trust the science instead of trusting God?" And they're like, "Why would I trust science?" And so it needs a different message. If the main message had been care for your community, or even be patriotic, it feels like that might have been more effective. But I don't know if anything could have countered the incredible misinformation, the extreme voices who didn't seem to care about public health and just wanted to score points. It's very hard to fight against all of that.

Peter Wehner:

I just want to say very quickly to add to what Deb and Francis said is, and you both touched on it. This is in large part, not completely, but in large part, an issue of trust, not truth per se. That is to say you're dealing with people certainly in the evangelical subculture. The problem isn't that they don't believe in truth, even though I think that many of them, not all by any means, but many of them, are engaged in an assault on truth. But as this philosophical proposition, they're not relativists, they're not nihilists. So if you said, "You need to cherish truth." They would say, "Amen, brother. Preach it. We do." I think that the challenge here is the discernment, the ability to discern truth, which goes to the issue of trust. How do people decide on the authority figures that they're going to listen to or not listen to? And how do you sort through the various claims that are out there? And I do think that social media is a significant part of what's going on. Not exclusively.

But I know in my own conversations with people, for example, I had lunch with a friend. Former neighbor, very bright guy, person of faith. This was in July of 2019. And he was a very strong advocate for hydroxychloroquine as a cure to COVID. And we had a good conversation. We went back and forth afterward and he was just linking to these sites. Now they turned out to be conspiracy websites, but they were smoothly done and he was persuaded by them. And it didn't matter how many CDC studies I sent or any other. He had just decided that the sources of trust that I had were part of a wider conspiracy theory. And he decided to believe what he wanted. So I do think this issue of trust is so intimately connected to this assault on truth.

Jon Ward:

If I could do just add or chime in on that, I thought Deb's point on local pastors was a very good one. I actually texted a friend of mine who pastors a church outside the DC area right after you said that, just to share that with him. And I think it gets to the issue that is down or upstream from discernment, which is discipleship inside the church.

Francis Collins:

Well said. I've done podcasts with Rick Warren, with Tim Keller, with Franklin Graham, to try to see whether there's a way to give pastors a sense of empowerment. Cause if you look at the polls, they are going through a really tough time. And the idea of bringing up a topic that might further create divisions within their congregation, when already things are in pretty rough state, is not very appealing. Even though I think a lot of pastors do kind of get it. Most pastors are in fact vaccinated, but to bring up this issue from the pulpit is not feeling like a comfortable thing and they really need that kind of encouragement and empowerment.

Josh Good:

Thank you, Dr. Collins. So let's flip to Will Saletan. Just got done a quarter century at Slate and is now writing at The Bulwark. Will.

Will Saletan:

Hey, thanks Josh. Can you guys hear me? So my questions about belief in evolution, specifically the denial of human evolution. So I've had this sort of weird theory for a while that this is essentially a compartmentalized thing. Like if I don't have a problem with people denying human evolution, because it just doesn't matter that much in your everyday experience. Whereas if you deny something like antibiotic resistance, I mean that's the kind of evolution that really matters. Are you not going to use an antibiotic because the bacteria will evolve, et cetera, et cetera?

So my question is, what does the COVID experience so far tell us about this kind of thing? Is there any difference, for example, between evangelicals and others in their degree of belief in the viral evolution, which is manifestly going on? If there isn't, then is the denial of human evolution not a problem because it's compartmentalized or is it symptomatic of some larger denial of science that is really what we should be more concerned about? And I guess my question is, do we need to confront it or can we just leave it be?

Francis Collins:

That's a great question. I think those who are uncomfortable with human evolution mostly will subscribe to what they call micro evolution. And that is to changes that happen in measurable time, usually in various infectious disease organisms that you could sample. Cause it's pretty hard when you look at that data to say, "No, that didn't occur." If you want to say, what is the most dramatic, compelling, scientifically really rich in detail example of micro revolution, it's what's happened with SARS-CoV-2. It is astounding. And spend an hour with somebody like Trevor Bedford, who's a viral genome evolutionist at the Hutch in Seattle and have him walk you through all of the isolates of this virus, since it first appeared in Wuhan and you'll see this crazy branch called Omicron that nobody really knew was there. And then all of a sudden it's everywhere and oh yeah, it's not just one thing. Now it's got BA. 2 and BA.3. It's fascinating.

I would say if I was teaching high school biology right now, I would want to be talking all about this. Cause it is so compelling in terms of how random mutations subjected to selection by survival in this case of the virus and the virus that wants to be as contagious as it possibly can because that's in its favor, but it doesn't really want to kill everybody too quickly because then it's not spreading enough. It's all right there. And I think most evangelicals would probably be okay with that. When it comes to human evolution, that's a flash point. I don't think that's a salvation issue. Unfortunately, some people try to paint it that way. But I do think it's a stumbling block for a lot of young people who, when they see the

evidence for evolution and realize that this is not just some atheist conspiracy, this is something that's about as well established, scientifically as gravity. And it includes human beings as part of that evolutionary story.

And then if the church says, no, you can't believe that that's evil, they're thrown into a terribly tragic circumstance and maybe even a personal crisis. That's where I think it becomes a critical issue and we shouldn't be doing that to young people. But for most people at the present time, I'm not sure the human evolution debate is going to change a lot and I'm not going to expect that that will be a necessary component of turning evangelicals into accepting vaccines, for instance. Cause I think that might be bridge too far to travel, at least right away.

Peter Wehner:

I just to add, and then Deb, you may have something to say about it. It's a great question, Will. I agree with Francis. It's certainly not, from a Christian standpoint, a matter of salvation or a first tier issue. I would say that the evolution debate as a phenomenon does explain something important. Because in my experience, if you have a discussion with people on evolution, it's not a debate about evolution per se or merely that. I think for a lot of people within the evangelical subculture, the issue here is the authority of scripture, which for them is a first order matter. And that's why when you have discussions with people on various issues and there's a particular kind of intensity that is going on and it dawns on you, this is not really about that issue.

This is about some core identity of which that issue is a manifestation. And I think that there is a history within Christianity, which we have to be aware of, which is this notion that it is a complicated issue about the skepticism of faith towards science. But it's this notion that if faith and science are pitted against each other, as Deb was saying earlier, the Bible has to be chosen above science because that's core to their identity. And for those people, these issues are tied into the authority of scripture. And they simply cannot give in and they think their own hermeneutic, their own interpretation, is the same thing as scripture. That is, they think what I'm saying is what the Bible says. And so for me to deny evolution or something is to deny the Bible. And if I were to do that, my faith would come apart. So that just is, as a descriptive phenomenon, is something that I think we have to bear in mind. But Deb, you may have some thoughts on it.

Deborah Haarsma:

Oh, I agree with everything with what you said, Pete, and what Francis said. My experience is that people are not making that sort of cognitive connection between viral evolution and human evolution. I haven't seen that connection really being made. And to the extent it is, maybe they're okay with virus evolution because they think mutations are bad anyway. So they're like, "Well, of course virus, that's bad. It mutates. Not surprised." It's the idea that mutations could accumulate over time and produce novelty and structure in something as elaborate as humans. That they have trouble accepting.

Josh Good:

Maybe I can follow up while we're waiting for a few more questions to roll in. As some percolating chat has been underway here too. A little bit of a more hopeful and less bleak question for you, Dr. Collins. You said in the NIH video that we had the joy of circulating to our friends today that you've had something like 1,200 one on one meetings with people on the Hill over the many years at NIH. And that you've worked for many people in real public leadership roles. And as Pete was just naming, an

exhaustive schedule. And I guess it's a little bit about the sort of exaltation of that discovery and then the pang of not seeing things undertaken as well as you'd hoped in the country with vaccine hesitancy.

What has been the role of music in that? I understand a gazillion people have had dinner with you and then a song to follow. And you've done this through the years in various other places. What has been the role of music in maintaining hopefulness and creativity? And how important really is it as part of even some of the discoveries and research I understand you guys are doing as well? What is music for you as a scientist?

Francis Collins:

Now there is a different question that I can really smile and talk about and not feel quite so much like I'm ringing my hands. I grew up with music. My father was a folk song collector and played the violin and then turned it into playing the fiddle as a bluegrass musician when necessary. I learned to play keyboards and guitar when I was young, because we didn't have a television and this is what you did after dinner was to play music together. And that has always just brought joy to my heart. And especially when you can do it with other people and have a gathering of people who really can step outside of whatever is happening in personal lives, much of which is sometimes pretty stressful, especially under COVID. And just join together in a way that music creates that kind of bond. And it does something amazing to your brain too.

We have a program at NIH called Music in the Mind that is bringing together musicians and neuroscientists to really understand what is it about a musical experience that can touch you so deeply? I mean, all of you listening, have you had some piece of music that made your hair stand on end or you got a chill or something? I have those experiences like, oh boy, I must have just got a big dopamine rush out of that one. And it is something that can really lift your spirits, pull you out of what might be a funk of some sort. So I'm a big fan of that. And maybe I'm also tapping into this. This is another part of spirituality for me. And I think for a lot of other people. What is it about humans that is transcendent above the mere mechanics of our molecular biology?

The people of the philosophers have talked about that a lot. There are three things that they all kind of agree on. Truth is one, we've been talking about that. Goodness is another. Our desire to try to be good and to hope that others around us will be also. But beauty is the third one. Beauty doesn't necessarily make a lot of evolutionary sense and yet it matters. And music is a form of that, obviously not the only one. So to the extent that, particularly in a troubled world, we can try to do everything we can to encourage personal experiences of beauty, we should be doing that. And for me, music is a big part of that.

Josh Good:

Lovely. Thank you. Chris. Chris Raker, you're up if you can. And there may be tech trouble on his end. I was warned about this. So let me just rephrase, unless Chris you're on, is asking, might it help Christian's relationship with science if scientists were more careful in distinguishing between theory and proof? For example, evolutions' a hypothesis, never been scientifically produced, proven in the lab. Evolutionary is a theory and not a scientific proof, whereas vaccinations are a result of scientifically provable tests. So that piece of it.

Francis Collins:

That I'm able to talk about that. This idea of scientific humility is really important.

Deborah Haarsma:

Oh my goodness. I think scientists are sometimes in a hard spot. We see a wealth of evidence. We want to convey that. And people keep saying, "But are you sure? Are you sure?" I've given presentations to a group of seminary students and there's always one who wants to just keep poking and poking until I say, "Okay, I'm not a hundred percent sure that the theory of gravity that we know now will always be the theory of gravity that we'll know for forever." And yet there's also a strong thread of humility that's required in science. We are expected to always adjust our ideas based on data. And we sometimes wish more people in our culture were bound with that same sort of thing. So the question you ask, both about evolution and about vaccines. For evolution, it's a theory. But for scientists, theories can be a hypothesis that doesn't have a lot of support or it can be something to have some incredible amount of support.

And evolution, as Francis already said, that life evolved and is all connected through a common ancestor, has an incredible amount of evidence as strong as our theory of gravity. So has it been proven? Well, there's actually evidence. We can see things continuing to evolve today. So there is that sort of evidence. And I can say that for the age of the universe, you can look directly out into these distant galaxies. You can see how far away they are and see how long the light must have been traveling. So you can directly measure in that case, the great age, the universe. And the question asked about vaccination, that that has established proof and yes it is, and in multiple times over. So we're glad for that.

So we were asking earlier, what do you wish could have been different in the last two years? And some things that I've been reading are about the public communication of conveying the uncertainty better in some way. And we're all a little gun shy of that because people just jump on us. Oh, you changed your mind. That makes it look like you're weak. You're waffling. And scientists must not know anything because they keep changing their minds. And tests were like, "Okay, come on guys. We're trying in the midst of all of this to give the best knowledge possible." And maybe it would help if all of those presentations have been couched with and we have an X percent uncertainty, we're not sure things might change later. Maybe they were and that just never got out there. I don't know. Francis, you might have something to add to all that.

Francis Collins:

No, I think you've said it well. Again, I think humility is appropriate also in talking about the vaccines. Yes. We were quite confident that the results of the phase three trials were very clear, but of course we found out later that there were rare events, in the case of the mRNA vaccines of pericarditis, myocarditis. In the case of the Johnson and Johnson vaccine, rare events of a clotting disorder that was too rare to have popped up in a 30,000 person trial. So there was no reason to know about them then, but they ultimately emerged once we got millions and millions of people getting injected. So yeah, even there, as we said, the vaccines are safe and effective. It would've been appropriate to say based upon a study rigorously done of 30,000 people, that doesn't rule out the possibility there might be really rare side effects that could in fact be significant. And I'm not sure that necessarily we convey that as well as we might have. Certainly though, when it comes to evolution, the study of DNA kind of what Darwin

couldn't have possibly imagined would absolutely nail down his perspective in terms of the relatedness of species. You have this digital record, which is just phenomenally supportive of this.

Let's be clear though. We still have no idea how that first self-replicating organism got started. That is a complete unknown. It may always be an unknown because we can't, unless we get a time machine, go back and see. We have various ideas about how it might have happened and there's some more plausible than others, but I'm not sure we'll ever really know the answer to that. So somebody wants to say, hey, you people, you think you at everything about how life started. No, we don't. Now that first self-replicating system who knows right now, but once it got started, we have a pretty good idea about exactly what happened after that. A really good idea.

Josh Good:

Now just knowing people like Mona Charen and Daniel Lippman and Carl Cannon and others. If you've got more, please weigh in. I know we've got at least one brief remark from another BioLogos colleague before we wrap. And we're totally delighted to wrap early and get onto many other things. If there isn't, if there's more, oh, please have at it. Finally. Got it. Dan Lippman, you're up. Carl Cannon, you're next. Thank you so much.

Daniel Lippman:

Thank you, Dr. Collins and everyone for being on this. I had a quick question about, what do you think are the societal shifts that we've seen last 20 years or so I'm thinking of inequality and tribalism has been talked about that is helping lead this skepticism of institutions and of factual knowledge and what scientists say wear mask, or get the vaccine. How would you assess that? What are some of those trends that you see that are affecting all of this?

Francis Collins:

Thank you. That's a big hairy question. Indeed. I want to hear what Pete Wehner will say, but I do think those societal changes, which many people have written about is sort of the becoming unmoored to traditional institutional homes for people, whether that's the church where people are less connected than before, or their trust in their governments, where there's more and more skepticism. Uveal 11 has written a wonderful book about institutions, how crucial they are and how our loss of trust in them is something that we should take with great seriousness, as far as our future, even though it's fashionable to shoot down institutions because you know, they're all bureaucracies and they're all flawed. We would be sunk without them. And again, I think a lot of this also has played out in the way in which our politics has become so tribal, so that any institution that's currently under the oversight of one party has to be seen as flawed by the other party.

There's that New Yorker cartoon at the two dogs and the bar sharing a martini, and one says to the other, it's not enough for the dog is to win. The cats have to lose. And that seems to be the way our society is going. It's not enough that you actually have achieved something. You've got to put down the other people and say, they're bad. They're wrong. They're not just misguided. They're evil. That trend has infected everything, including the attitudes towards institutions. But Pete, you can say that's much more eloquent where you have written many times and very thoughtful about this set of trends.

Peter Wehner:

No, I don't want to take much time Francis, you said it very well. And I don't want to stand between you and a Carl Cannon question. I do think that there are trends here that have been going on the polarization, the lack of trust, lack of authority, some of these are deeply cultural trends. And then you have, I think the advent of social media and John Height has put an awful lot of weight on how social media has changed a lot. And then there was the political moment in which politicians, and I would say Donald Trump in particular sort of took advantage and amplified these things in a way we hadn't seen. So untangling that is a really complicated and fascinating question. But I think some of the issues that we're talking about can't be answered or understood until we untangle it, but Carl, you're up, man.

Carl Cannon:

Well, that's actually a perfect transition, Pete. And I'd like you to answer my question, Deb and Francis might want to weigh in too, but I, I actually had this question for you. And that is, I think it seems to me we're being a little hard on the clergy here in the science community. In my estimation, those two institutions have performed better than the two institutions I know better, which are the political establishment and the media. Nancy Pelosi said at the beginning of this was, she was asked some question about you're a believing Catholics. Do you believe the scientists? And she said, and she was being kind of glib, but she said, well, I believe God gave us the scientists, which devil appreciate. And I think most Americans right or left, would've gone with that.

But then Nancy Pelosi also did things two years ago, encouraged people to go to Chinatown in San Francisco, right when this thing was hitting, when the science community was saying maybe movement, mass get togethers aren't a good idea. She went to a salon and got her haircut at a time with salons were closed in San Francisco. And you saw a series of these things to play democratic governors and mayors, going against rules that they'd had. And in this tribal society, I think people looked at that, people who would be skeptical anyway. You had in the media to even suggest that we could talk, whether this thing came from a lab leak, let alone even mention that it came from Wuhan suddenly you were a racist revival for even asking questions. And then Joe Biden and Kamala Harris both during their debates, during the campaign were asked, would they would get a virus and they both [inaudible] and one of them said, it was the Trump virus I have to be sure of it.

This put great doubt in the first community before event white evangelicals, that was skeptical of vaccines was the African American community and the Latino community. And after these leading Democrats had said, this, Andrew Cuomo went further and said he would encourage governors not to get the Trump virus. And while all this is going on, you have these unhinged attacks on Tony Fauci from the right, Francis knows about this better than anyone. Ran Paul led them. But Donald Trump joined in, you had all of these misstatements, you had conservatives writing. I was getting submitted all these op-eds, this thing is not going to be any worse than the flu. And my question is here, Pete, this partisanship that you and I have decried for years, it killed people in my view. And let me throw that out there. Maybe I pose it as a question. Maybe I'm being too strong with this, but it seems to me, both political parties behave badly. And Pete and Francis is supposed to say, well, this is the way we conduct discourse now, but it's not the way we've conducted discourse at times of national emergency in the past. We usually put these things aside. We didn't this time, neither did the media, the political establishment, in my view, am I being too hard on us, Pete?

Peter Wehner:

In terms of the media?

Carl Cannon:

And the Democrats and Republicans, but both these political parties who dominate our politics?

Peter Wehner:

Look, no, I don't think so. Maybe on the media, I'll say a word about that. I would say as a general matter, Carl, that there's been a failure across the board. I would also say that there are always failures across the board in any moment in history when you look through. And I was somebody who served in government, you always learn about this. When I was a commentator, my IQ was 80 points higher than when I was in government and when I left government, it went up 80 points as well. It's always easier to comment on events after the fact than it is in real time when you've got a flood of information you're dealing with unknowable's, you're on a timeframe that you haven't chosen, and you've got to make decisions, not exactly, always when you want to, but because other factors intervene and you're trying to speculate on what will happen and make projections of what may happen.

So it's just an inherently difficult process. And I think most people who get involved in government when they leave, they're more sympathetic or should be more sympathetic to people who are in the political class. Plus people say things that are just unfortunate in the heat of the moment or there's a slippage and so forth. We can always find the people who said this or said that the question I would say is a general matter if you're making an assessment of political party or politicians is in the main, when you take everything together, where does it come out? Is a person made some unfortunate comments, or is a person wed to some sort of conspiracy theories and lies is that central to who they are and what they're saying? And I think those distinctions need to be made.

The media is a really interesting question. I would say in some respects, I think the media actually has done pretty well. I would say the mainstream media, not perfectly, but the information that has come out, or if you read the science reporters of the New York times or major newspapers, that been pretty good. I think that it's been the more niche media where the real problem has been. I think that there's polarization for sure, on both sides. I think there is dishonesty on both sides. It's too long of a conversation to go into now. I would say Carl as somebody as you know, who has spent my life in the Republican party. I think right now the main threat, I just want to get my cards on the table is the Republican party and the American right.

I don't even refer to it as conservative. Cause I think in some deep and fundamental ways, it's contra conservative. And I would say at this moment, given the main assaults on truth, I'd say the main pistons in that engine is the American right. That doesn't mean it's exclusive to that. It doesn't mean that Democrats and the progressive movement hasn't made mistakes. John Rauch and I did a piece for the *New York Times* a few weeks ago, where we talked about a pincer movement against liberal democracy. And we started with a pretty tough critique of the American left and progressivism. But I just think from my estimation, from my standpoint, it's the American right. But last thing I'll say, and then Francis and Deb can weigh in on any aspect of this they if they want. I do think that there's been a failure of trust and in some respects and earn failure of trust from a lot of institutions.

And it takes time to rebuild that trust. And maybe the first thing that that people have to do to rebuild trust is to be able to admit mistakes. I think the military actually has been a really good institution in that respect. If you see how low the morale was in the military in the seventies and how systematic they

were on issues of drug use and racism and other things, and they were very intentional about correcting it. But the first thing to say is we've had failures here. We have to acknowledge them and figure out how to fix them. Francis, you want to weigh in on any aspect?

Francis Collins:

You've said it really well. And your observations about our society, about the media and about politics are obviously deeply based upon all lots of observations and thinking. I think Carl's question started out first about whether it been too hard on the clergy. And I think I'll go with him on that. I think the clergy is in a terribly difficult position, many of them are not really in a situation of having had much in the way of scientific training. So they get hit with a question and it's really hard for them to know what the answer is, whether that's okay, are these vaccines really safe or is it a young person saying, I think I have to accept evolution because that's what the science textbooks are so compellingly teaching me. Does that mean I've lost my faith? Clergy are not in a good place. One of the things that I think BioLogos tries to do is to be an outreach to that community as well. And I think a lot of clergy do go, they're looking for the kind of, of science, faith discussions that they don't easily get elsewhere. But yeah, they're in a very difficult frontline position, especially right now in these culture wars, that must be breaking their hearts to see what it's doing to the church and to their own congregations.

Josh Good:

Can we take just a last final comment from Adelle Banks? I think you had one more and then we're going to turn to Kathryn Applegate and dismiss. And of course, there'll be a recording of this for note taking to follow up on some of these insights in the weeks ahead. Adelle?

Adelle Banks:

Thank you. Only because Josh Good brought up music. It made me think of another question for the scientists. And this is a question to that. It's been covered a lot. I've covered it a lot, but I just wonder now where we are in the pandemic, whether there are recommendations that BioLogos has, or the two scientists in particular about what houses of worship should do when they get back together, as far as singing? Whether there should be mass, whether there should be social distancing, whether people should be singing in the pews, whether people should be singing the choir loft or not.

Deborah Haarsma:

Thank you, Adelle. Yes. Thank you for raising that. My own church, summer of 2020, we are digging through every source we can try to find, to get some actual data on this and there was very little data. Because we wanted to be responsible, but I tell you from me singing and for many of us in our congregation, that was just a very difficult thing to not be able to sing together. It's so important spiritually and many other spiritual practices, they are physical. We shake hands. We take communion together. We baptize. If some of the public health stuff had given some advice on that, that would be helpful. We do have freedom of religious expression, but we would've welcomed more data. Francis, was there data we weren't aware of that maybe you knew?

Francis Collins:

No, there were of course the examples that got a lot of attention and probably should have of super spreader events, choir practices, where the entire choir came down with COVID five days after just one member was there and they were all gathered together and singing is clearly a way in which you can distribute a lot of virus. I think as long as we're in a circumstance where the spread of the virus is

vigorous enough that people should be wearing masks indoors, and CDC has their guidance about that in terms of a hundred or more cases for a hundred thousand, then certainly to take them off to sing in a closed space would seem to be a bad idea. Unless of course, you know that everybody in that space has been vaccinated and boosted and tested that day. That's more and more what people are trying to do in terms of making these things possible is to go to the extra length of reducing the likelihood that anybody there is currently infectious.

Even that's not a guarantee because we know there are instances where of people are just on the rising curve of their viral infection and their test was negative, but they actually are still capable of infecting others, but it greatly reduces that. When it comes to a whole congregation of hundreds of people that may not be very practical though. As uncomfortable as it is, I've done this, I suspect some of you had to gather in a together and sing with your mask on. I don't enjoy that, but you can do it. It's a lot better than not singing at all.

Josh Good:

With that great thanks to Dr. Collins to Deb, to Pete and Catherine Applegate, can we go to you? You're building an institution. You need great people, great soldiers. And Kathryn has been working on a curriculum. Please close us out.

Kathryn Applegate:

Sure. Thank you so much, you guys. Great questions and excellent thoughts from everyone. I've been working with the team at BioLogos for the past few years on a curriculum science and faith curriculum for high school biology. And it's really for parents and teachers who want to equip the next generation to be faithful, informed and gracious on the really hard questions that are being raised by science and technology today. And so many of the themes that you all have talked about today are included. It's really fun to think about all the mini connections to this, every single one of the units. There's 15 units studies, they're all available in digital format and we are working on a print version, too, but we'll drop a link to a free download for you guys if you wanted to check it out. But every single one of these is on a different topic.

We are not about shying away from the hard questions. We really want to equip young people to lean into those questions. And so we have material on for parents and teachers to lead discussions about evolution, about genetic engineering, about climate change. There is a lot of material on the nature of science, which we've talked about today is just essential for understanding how we know what we know. And once you understand what a theory is scientifically and how limited science is and the kinds of questions it can answer, it sure frees us up to look for truth in other places, too. And we want to equip Christians to really understand how science works for all of these really complicated and hard questions. We've kind of boiled together all of the lessons learned from communicating on these topics over the past dozen years, since Francis started BioLogos and every single one has a role model.

When Deb talked about the us and them of scientists, I know that's happened to me too. Somebody on the church patio after church said, what? I just don't know any scientists and it was a little bit embarrassing to say, well, I have a PhD in science. I'd love to tell you about, about science. And for them it was just scientists are atheists. I think helping young people see themselves in by seeing these

Christian role models is really exciting. So I'll drop a link there. I'd love to answer any questions you guys have. I'll put my email on there too, but thanks so much everybody for your good questions today.

Josh Good:

Thank you, Kathryn. Take care, everyone. Link's coming around, you see it in the chat and we'll send it as a follow up as well. Have a great day.