

"Emerging Challenges, Harmonies, and Collaborative Alliances in Science and Religion"

Dr. Jeff Schloss

Westmont College

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MICHAEL CROMARTIE: Our speaker, Jeff Schloss, is a Senior Scholar at Biologos besides his other position at Westmont College.

Jeff Schloss holds the T.B. Walker Chair of Natural and Behavioral Sciences at Westmont in beautiful Santa Barbara, California. Jeff has a Ph.D. in Ecology/Evolutionary Biology from Washington University in St. Louis, and he's written several books and edited several books on this topic.

Jeff, we're delighted you could come and be with us, and we look forward to hearing from you. Thank you.

Dr. Jeff Schloss

JEFF SCHLOSS: Well, it's so good to be here. I want to explore with you today some emerging ideas in faith and science that are fascinating both intellectually and socially. I think intellectually, because they represent not just new accommodations on the part of religion, but new proposals in the natural sciences themselves.

And they're fascinating secondly because they represent alliances between social constituencies that have typically been divided, both within religious traditions but also some really interesting collaborations between people of faith and natural scientists who don't share faith, who together explore new ideas. So I want to do two things. I want to discuss the ideas, but I also want to describe the emerging landscape with you, and I'll do that in a couple of ways.

I want to describe the context first of all, and then I want to move on to the current developments.

So just a couple of weeks ago, we had the March for Science. This was a complicated event, and on the one hand you might see this as a response to some of faith-science issues, especially the tensions comprising a subset of populist skepticism about authority or elites. By the way I notice in this particular picture it says "We Love Experts." I'm struck by the fact that it doesn't say we love evidence or we love reason. So there is an authoritarian streak that *some* people perceive in science. I'm going to argue that that's not what's going on with the faith-science issue.

So on the other hand, you could say well, it's something more fundamental. It's an intrinsic conflict between the conclusions and the methodologies of science and religion. This conflict thesis dates back



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to the turn of the century. You've had Ted Davis here, critiquing historical views that faith and science have always been and always will need to be in conflict.

The conflict thesis has been picked up more recently by Jerry Coyne's New York Times bestselling book *Faith Versus Fact*. He makes the same argument, in spite of the fact, by the way, that an avalanche of scholarship in both the history and philosophy of science by many folks who have no horse in this race, who have no religious faith, arguing that it's just not true, that it's much more complicated than that and that in fact the natural sciences seem to have emerged historically out of the Christian and other Abrahamic, monotheistic traditions.

Well notwithstanding that fact, even if the conflict thesis is not true, the *evolution* controversy seems to have been abiding. It's been going on since Darwin, and there's an avalanche of recent books that deny evolutionary theory (powerpoint slide) and journals (powerpoint slide) and organizations (powerpoint slide). You know, to quote Bob Dylan, it looks like for Darwin "a hard rain's going to fall," (slide) and that Darwin has been under it from some religious constituencies since the proposal of his theory.

So what's going on here? I want to describe a couple of elements that are central to what might be called the biblical world view. Sometimes on the one hand these are oversimplified; and on the other hand we think we understand them because we take them for granted.

But there's a metaphysical proposition first. The metaphysical proposition is that the world constitutes a good creation --and both those words are important. The world's good in the sense that it's- a cosmos but not a chaos, to use a Greek phrase. But it's only good. It's not deified. It's not God. It's not degraded either. It's not Maya or Samsara, an illusion from what's truly good.

So the world's good, but it's a creation. That is to say it's contingent and not necessary. It's not eternal. It came into being and it came into being as a result of the action of a morally good agent, God.

But secondly, there's an epistemological dynamic at work here. There's really an interesting epistemology involved in the biblical world view. You've heard this before, but the first part is that the Jewish scriptures have this notion, come to be called the True Books notion, that we come to God both through the book of scripture and the book of nature.

So the 19th Psalm, thousands of years ago, says "The heavens declare the glory of God. The firmament is the work of his hands. There is no speech or language where their voice is not heard." In fact, there seems to be this cross-cultural attribution, that it's not just us. It's the world itself testifies to the creator. But then it goes on to say "the law of the Lord is perfect, enlightening the soul; the testimony of the Lord is sure, making wise the simple" - that we come to know God through the book of scripture as well as the book of nature. I like to think of this epistemology as checks and balances or stereoscopic vision, that there's opportunity for correction involved.

The Old Testament test for a false prophet was actually whether the world confirmed what they said was going to happen. Now an interesting thing is that in some Christian traditions, recently they seem



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to have lost track of that, they look like they're only going on one book, and aren't heeding very much to the testimony of nature.

Francis Bacon, quote-unquote "The Father of the Scientific Revolution," is one of the first people to use this two books' language. He says "Let no man out of a weak conceit of sobriety or ill-applied moderation think or maintain that he can search too far and be too well studied in the book of God's word or the book of God's works." Interestingly, Darwin quoted this on the frontispiece of his Origin.

Now often the epistemological discussions stop there, but there's also something else to the epistemology, and it's the affirmation that there are two modes of *reading* these books. The wisdom literature in the Hebrew Book of Proverbs says "Seek understanding, for her value is above rubies. "On the other hand, it says "don't rely on your own understanding, but trust in the Lord with all your heart."

There seems to be this affirmation of using reason, seeking human understanding, but also somehow having faith or trust in what many of us might think we know beyond the deductions or inferences of reason. Blaise Pascal picks this up when he says "man is a reed, but a thinking reed, and it is by thought that we must distinguish ourselves. Therefore, let us endeavor to think rightly."

On the other hand he says -- I love this phrase, although it's oftentimes wrongly quoted all over the place in singles ads – he says "The heart has reason that reason knows not." So there's this affirmation of both reason and intuition, and I'd like to say that this epistemology is really central to the biblical world view, but it's certainly not unique to that tradition.

So I was talking with Sally last night about some of the recent evolutionary theories that say there's no such thing as love, and Sally said "Well yes there is, because I've experienced it." In fact, this is part of the discussion when it works well and the contest when it doesn't work well between the humanities and the natural sciences.

For example, Jerry Coyne (in the book that I just mentioned) argued strongly that the humanities can't give us any knowledge. He argues that there's no knowledge, there no truth claims in literature or in art or any of the humanities, except insofar as they may have pilfered them from the natural sciences and then put it in poetic language.

So this epistemology turns out to be really important, and most of the discussion, including by the way most of the journalistic discussion, I think, is focused on creation / evolution, without sensitivity to either the epistemological or the metaphysical dimensions.

So here we go. If you put these things together, then there's kind of an ascending scale of engagement or interaction between faith and science.

At one end of the scale there's just the historiographic or exegetical. As I read the *text,* what does it say? This is partly what was at work in disputes about the earth being the center of the solar system or



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the four corners of the flat earth. More recently it's historiographic issues of earth's age, universal flood and extinction.

It's not just religious believers who engage these issues. So Darwin's chief advocate, Thomas Henry Huxley, called "Darwin's bulldog," in a book that he wrote called Science and the Hebrew Tradition, says "The pentateuchical story of the creation is simply a myth. It's utterly irreconcilable with the assured truths of modern science."

One step up. There's what you might call doctrinal or panbiblical notions. Not just what's found in Genesis, but what inferences we might make from an entire reading of scripture, like human uniqueness or "image of God) or The Fall. Again, I want to share with you some claims by my colleagues in the natural sciences that highlight the fact that it's not just nervous or paranoid religious believers, but it's actually advocates of the natural sciences themselves who make claims of fundamental conflict.

I can't quite believe this was published in *Nature* a few years back, the journal that published Watson and Crick's Nobel winning work on DNA. *Nature* lead editorial says "With all deference to the sensibilities of religious people, the idea that man was created in the image of God can surely be laid aside."

That's an interesting statement, by the way. It would be one thing to say that science illuminates the fact that there's nothing unique about human beings, and I want to get to that in a minute. It's another thing to make the explicitly theological claim that we're not made in the image of God. Not all claims are so hostile though. So one of my colleagues, primatologist Frans de Waal, whom I've had a lot of public exchange with. Frans really thinks that there's nothing unique about humans, in part because he wants to argue that primates are much more sophisticated than we think they are.

In particular, one of the basic the rules of animal behavior would seem to be that of rational self interest or genetic self interest. Any animal ought to be more content with something rather than nothing. But Frans has done work with primates that suggests in certain cases they have a spirit of fairness, where they'd rather have nothing than be cheated.

Now I want to show you a little video clip. They work with Capuchin monkeys, where in exchange for a behavior they give them a food reward. They'll eat a cucumber. Cucumbers are perfectly nourishing, but their preferred reward is grapes. They have a sweet tooth, so check this out.

(Video plays. Laughter.)

I've never shown this video clip and not have people laugh, and I think our laugh is in itself really interesting, but especially for those of us who have two and three year kids, we know where this comes from. So nothing unique, not in God's image.

(Laughter.)



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But lastly, the highest scale of interaction might be, I used to call this philosophy a religion. But I think it's not an overstatement to say some findings of evolutionary theory or at least some claimed interpretations of the findings of evolutionary theory say that it challenges the very foundations of theism.

This gets back to the metaphysical claim, that the cosmos is -- the creation is a good creation, and the challenge here is not just we discovered a natural mechanism for the origin of life and life's diversity; it's that the nature of that mechanism is completely discordant with the notion of any good creator god.

Here are the claims. The claims are there is no divine purpose, that the world is not only constituted by the problem of natural evil but that there's no natural beneficence, and that there's no moral realism if you understand evolutionary biology right.

So famous line from Richard Dawkins. "The universe, we observe, has precisely the properties we should expect if there's at bottom, no design, no purpose, no evil, no good, nothing but blind, pitiless indifference." I want you to notice something. Dawkins doesn't mention God here. He's been called a new atheist, but I really think this movement is better characterized as the new nihilism.

God, that's a settled question. But the really radical claims is no design, no purpose, no good, no evil. The philosopher of biology Alex Rosenberg in Biology and Philosophy, an essay called Darwin's Nihilistic Idea, says "Darwinism puts the capstone on denying that there's any meaning or purpose to the universe, its contents or its cosmic history.

In fact, he takes aim at Dan Dennett, one of the new atheists, because he claims Dennett doesn't go far enough. Dennett's a metaphysical naturalist, but Rosenberg argues that Dennett and any evolutionary biologist who understands the theory ought to be a moral nihilist too. No moral realism.

So what are the positions? What are the faith-related responses to these claims. I'm a little hesitant to call these "positions," because there's something deeper at work here. I might almost call them subcultural responses, because it really involves different traditions and different religious subcultures.

And one of them is of course Young Earth Creationism. Young Earth Creationism lines up very firmly on that first issue (the historiographic / exegetical) emphasizing the two books and a particular reading of the two books. The earth six to ten thousand years old, worldwide Noahic flood, historic Adam created directly out of dust, all human languages occurred at a single point at the Tower of Babel. The leading Young Earth creationist right now is Ken Ham, and his organization is "Answers in Genesis" with his creation museum – dinosaurs and humans living together – and most recently his Ark Park.

But it goes back farther than that. This has often been called scientific creationism. Now not all Young Earth creationists are scientific. I'll get to that in a minute, but the birth of scientific creationism was in the mid-part of the 1900's, by a hydrologist named Henry Morris, who wrote The Genesis Flood, and he argued that the whole whole geological column was due to the worldwide Noahic flood.



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The two things about Young Earth Creationism that are so important is an emphasis on the authority of scripture, and the belief that if we give up on this issue, it's a slippery slope and we'll lose scripture all the way. Secondly, that the coherence of the gospel hinges on this. The coherence of the gospel actually hinges is on whether the earth is 10,000 years old. I've had conversations with Young Earth creationists and said well, is it really the authority of the Bible that's at stake? I mean it's the truth of your interpretation of the Bible, but couldn't somebody believe fully in the authority of the Bible, but just have a different interpretation, as by the way Augustine did.

And here's the important point I want to make. Sometimes people view this movement, this subculture as brittle, authoritarian, and in fact the word "fundamentalist" in many people's minds has come to mean an authoritarian personality. The social psychologist Ralph Hood has spent a good part of his life studying fundamentalism, and in fact he interacted for many years with the snake handler folks.

Ralph is convinced that this is wrong. There is no fundamentalist personality type. It's not authoritarian, it's not anti-intellectual. They very often question and wrestle with authority and their own beliefs. But here's how Ralph defines fundamentalism, and I think it's really good. Ralph says that fundamentalism is a "intra-textual epistemology." You can revise your understanding of the text, you can doubt your understanding of the text, but your evidence for revising it has to come from within the text itself, not outside, not the natural sciences.

By the way if you take this definition of fundamentalism, then in principle there could be a Darwinian fundamentalist, who doesn't just believe in evolution but believes that the Darwinian view of evolution is *the* view. And interestingly that's exactly the phrase that Stephen Jay Gould, evolutionary biologist at Harvard, who died a few years back, used to critique Richard Dawkins and others as Darwinian fundamentalists.

If we go back just a bit further and let's call it Young Earth creationism, at the turn of the century we have the Scofield Reference Bible. I'm not even sure whether to call this "Young Earth" or not. They believed that the earth we inhabit is only 10,000 years old, and that every single thing that happened in Genesis, including the six 24 hour days really happened as described. But they believe at the very beginning, Genesis 1:1, after the spirit of God was at work on the face of the waters, there was a gap.

So these folks are sometimes called gap theorists, of millions and millions of years. That's what constitutes the fossil record. So they actually don't try to explain away the fossil record as the result of the flood. They [seek to] accept the modern scientific discoveries of the fossil record, and they just said at some point God started over and what we have now is 10,000 years old.

The Scofield Reference Bible was the largest-selling bible in the world and gap theory was the default orthodoxy for most conservative Christians at the turn of the century. I guess it's Young Earth. It kind of straddles Young Earth and old earth creationism.

Now old earth creationism would say --actually they would accept all the findings of cosmology and geology. But they reject evolutionary theory.



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So the earth is 4.5 billion years, Big Bang Theory, fine tuning arguments... but species were created independently and especially human beings. Probably the most prominent advocates of this right now are Hugh Ross and his group at Reasons to Believe. They have several dozen books out. They're a tremendous footprint in evangelical Christianity right now.

By the way, the focus of their ministry is evangelism, and not intellectual combat. We at Biologos for the last seven years have been having an ongoing conversation with folks at RTB. RTB, were trying to figure out whether we Biologos folks, could we be real Christians? We're trying to figure out come on guys. Do you really believe this stuff, or are you trying to fudge it a little bit. We spent seven years together. We have a book coming out that Jim Stump has edited in just what, a few months from now, two months. I can talk more about that in a Q and A. It's been a wonderful and a really hard process.

But this view too goes back. A lot of people don't know this. William Jennings Bryan, the attorney on behalf of the prosecution in the Scopes trial, was an Old Earther. He had no problem with an old earth or evolution of anything but humans. In a New York Times article a few years before the Scopes trial, Bryan says "The only part of evolution in which any considerable interest is felt is evolution applied to man."

Now why did he say that? Here's one reason. At that time we didn't -- for human evolution, we didn't have much of a hominid fossil record. And over in Germany, Ernst Haeckel, who was kind of the T.H. Huxley analog. He was Darwin's bulldog in Germany, tried to make the case well, we don't have fossils, but we have living fossils. And those living fossils are the different human races.

And he tried to argue is if you went quote-unquote "down the racial hierarchy," from whites to the African races, they became progressively more animal-like. In fact, he believed in the polyphyletic origin of humanity, that we humans had been human -- whites had been human longer [or had evolved more from animal ancestry] than blacks.

These ideas actually didn't catch on comparably in England, but they were imported into the U.S. in some quarters. So I hope I don't seem pedantic here. There's some things that I actually want to read to you as quotes, so that you'll get a feel for what was going on, and not just a sense from my sense of what was going on.

So Madison Grant in 1916 published a book called Passing of a Great Race, in which he described "Mistaken regard for what we believe to be divine laws and a sentimentalized belief in the sanctity of human life tend to prevent both the elimination of defective infants and the sterilization of such adults as themselves are of no value to the community."

[Later on, when Wendell Wilkie criticized this [and other explicitly racist views], he was criticized back on the basis of: how dare you criticize the disparity of human races, because that's an analog of Darwin's theory of evolution.] The posited connection between racism and evolution was [just] part of what motivated William Jennings Bryan's crusade against evolution, and by the way the law in Tennessee did



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not forbid the teaching of evolution. That's a misunderstanding. It only forbade the teaching of human evolution.

I want to read you two more things. This is from Bryan's closing arguments at the trial, which he was not allowed to give because Darrow himself declined closing arguments. So Bryan couldn't give his, but he did publish this, and I actually think this [particular section] is really beautiful.

Bryan says "Science is a magnificent force, but it's not a teacher of morals. It can also build gigantic intellectual ships but it constructs no moral rudders for the control of storm-tossed human vessels. Some of its unproven hypotheses rob the ship of its compass and thus endanger its cargo. If civilization is to be saved from the wreckage threatened by intelligence, not consecrated by love" -- that's my emphasis -- "it must be saved by the moral code of the meek and lowly Nazarene."

I'll just make one personal comment here. I find, in 1925 I find this critique of intelligence not consecrated by love, especially significant in light of what was emerging in Germany. In fact, Hitler wrote Madison Grant and thanked him for Passing of the Great Race, and referred to it as "his bible." This is especially significant to me since my dad is a Holocaust refugee, and I have held him in my arms as he wept in front of the empty graves of his family members who did not make it out.

A really interesting article was published recently by the anthropologist, Jonathan Marks, not a creationist by any means, in which he linked the emergence of creationism to biological racism. I'll read you one more quote.

Marks says "Unfortunately, there's also a great deal of misunderstanding about creationists and a surprising dearth of contemporary ethnographic information on them. Creationism is not an instantiation of a broad, populist rejection of science as hack culture analysis sometimes have it. Creationism is the rejection of a specific bit of science, a science that today sometimes tethers itself to racism and atheism, and in the past has bound itself to worse things like genocide and the widespread suppression of human rights."

Marks then goes on to say, and here's one of the crucial things I want to emphasize. He goes on to say that this involves a crisis of what he calls morality versus authority. And think of it this way. If there are certain moral principles to which you're committed and it looks like science is opposed to them or overturns them, you have three choices.

You can let go of the moral principle. But assume you're not willing to do that, then you have two choices. You can either reject the science and say I choose my moral principle, and that's what the versions of creationism that we've just described have done.

Or you can reject the authoritative exegesis of the science, and say I'm going to believe the science, but those who are invested with authority for interpreting it, I'm not buying it. I'm going to look for a different version or an interpretation.



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That's what I want to talk with you about in terms of what's happening most recently. Fair enough? Okay. Before we get there one last rejection approach, and that's been called intelligent design ("ID") or intelligent design creationism.

Some people argue about whether to call it creationism, because it doesn't make an explicit reference to the Bible. I think it's a good term because if you take creationism to believe that an account of origins must involve the supernatural intervention of God in natural laws, then the iD is creationism.

This was launched by Phillip Johnson in 1991 with his Darwin on Trial. By the way if you read Phil's personal account of that, he was inspired to do this on sabbatical in England when he read Richard Dawkins The Blind Watchmaker. Not unlike William Jennings Bryan, Johnson was on board with evolutionary theory. But when he encountered the nihilistic interpretation that Dawkins provided, he decided it's got to not be right.

So Phil Johnson and the evolutionary biologist philosopher of science Will Provine, before Provine died, went all over the country debating, and they became friends because they had the same interpretation. Their interpretation was make your choice: nihilism and evolution or God and no evolution.

In Provine's words: "What modern evolutionary biology tells us, it's loud and clear... there are no gods, no purposes, no goal directed forces of any kind...no ultimate foundation for ethics, no ultimate meaning in life and no free will for humans either... Evolution is the greatest engine of atheism ever invented."

My point here is to just say these aren't paranoid attributions of evolutionary theory imposed by Christians. These are straightforward claims of prominent and well-respected, authorized exegetes of evolutionary theory.

The ID movement has been primarily supported by and issued forth from the Center for Science and Culture at the Discovery Institute in Seattle. They had an official document called The Wedge about their aims, which lays out two main aims. The Center "seeks nothing less than the overthrow of materialism and its cultural legacies..." And secondly they affirm "the proposition that human beings are created in the image of God is one of the bedrock principles on which western civilization is built."

Lastly, and in contrast, there are a number of attempts at rapprochement on the part of the faith community, and here terms break down. So don't hang on these terms, but I'll just use one term, evolutionary creationism, for the view that entails complete acceptance of common descent, human beings and all species share a common ancestor. But somehow God, it's still creationist in the sense that somehow God has done something, tweaked the process, maybe caused particular mutations to emerge at propitious times.

Or for example in the case of all three recent popes, the human body evolved evolutionarily, but the human soul was supernaturally instantiated into the human body. And not just that, but into a historic



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individual, Adam and Eve, from whom all living humans currently are descendant. So that was affirmed in the 1950's and more recently in 1996.

Interestingly enough, probably the most prominently cited criticism of intelligent design and other forms of creationism is Ken Miller's Finding Darwin's God. Miller is a Catholic and there's one paragraph in this book, and I'm surprised it hasn't been more kind of viciously attacked, where Miller talks about a hominid emerging that had sufficient biological capacities to receive a soul imparted by God. So that was, appears to be, if not Ken Miller's view, at least one he included in Finding Darwin's God.

Next and last step would be, again you can use different terms here, but theistic evolution, just that: "no, natural processes explain the whole thing. So at this point, and this is the view that was explored by Francis Collins in his Language of God and the Biologos Foundation with which Jim Stump and I are associated explore this, or explore the conversation as well.

You might ask well shoot, what's theistic about it? I mean why not have theistic gravity or theistic ionic dissociation constants. What makes it theistic is that in some measure, there's the thought that the initial conditions, the laws and the structures that underlie evolution are not utterly random, that they are in fact divinely orchestrated so as to avoid the nihilistic contention that we ultimately live in a chaos and not a cosmos.

There are a bunch of foundations now that are really active in this area (slide). I want to describe a couple of the ideas associated with work currently being done. But just before we get to this, I want to close this kind of contextual analysis with three quick questions.

First of all, is there a historical trajectory here? So here's a cartoon from Young Earth Creationism to Old Earth Creationism to Intelligent Design (slide). Kind of a sarcastic cartoon. Dan Dennett and many others take the "religion in retreat in the face of science narrative," that religion is always backing up and accommodating itself to scientific findings.

By the way, it's kind of interesting, and I've had this discussion with Dan. Why when science changes its view in response to new findings do we call it advance, but when religion does it we call it retreat? So there's a little bit of an ad hominem here. But actually I think the creationist progression is not true. There isn't a historical trajectory. Now within -- within some parts of evangelicalism, and there might be.

So Wheaton College in the mid-1950's, and the Billy Graham Ministry, and the formation of an organization called the American Scientific Affiliation, which distinguished itself from the Institute of Creation Research started out affirming Older, not Young Earth creationism.

Then a few years ago, the big deal at the magazine Christianity Today was intelligent design. Michael Behe's book won Book of the Year. And now more recently there's tremendous openness to theistic evolution. But that represents just a subset of evangelicalism. I mean if you look historically, and I'm just



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-- I'm really fascinated and really perplexed by this -- it looked like around the turn of the century and up to the 1950's, most conservative Christians were Old Earthers, including William Jennings Bryan.

Then with Henry Morris there's a shift back the other direction. There seems to be an oscillating pendulum of views here that appear to be driven more by sociological than intellectual factors, and it would be really interesting to see somebody have a hard look at that.

The second question is how about rhetorical posture? This one really interests me. The original -- the Henry Morris Young Earth creationists, they debated all over. They were extraordinarily civil. Never a harsh or a sarcastic word. Recently, Ken Ham's organization sees themselves as "at war." It's not a culture war; it's a worth for orthodoxy within the church.

So they say that Biologos represents "the spirit of the antichrist," promoting heresy. Hugh Ross, the Old Earth evolutionist, "twists the Bible to fit man's fallible opinions." I've taken a few hits myself. So I represent "a shocking state of affairs." Jeff Schloss' approach to scripture blends "with his own evolutionary presuppositions... He takes man's word on origins as infallible, and God's words as fallible."

By the way, there's a really interesting epistemological question here. I mean they're statements about me, but they would say that about any Old Earth creationist. Why would this represent taking God's word as fallible, as opposed to taking their interpretation of God's word as fallible? So that gets back to an intratextual epistemology.

Lastly on rhetorical posture: the Intelligent Design movement is much less a battle for orthodoxy within the church as it is a cultural warfare mentality. And by the way, the titles of their books seem to represent this warfare approach. Zombie Science, Defeating Darwinism, The Darwin Myth, Darwin's House of Cards.

Phil Johnson, the founder of the movement, is famous for having said "My strategy requires driving a wedge between atheistical Darwinists and their dupes in the religious world." So while Ken Ham is prays for heretics (elsewhere Ken Ham has said he's praying for me and Biologos). But ID mocks dupes. In terms of rhetorical strategy, I don't know why there's this difference.

Lastly, you might think what are the roles of biblical literalism or cultural separatism here? And so much of what I read says this is the genesis of these movements. They're literalistic in their interpretation of scripture and they've cut off dialogue with those who don't share their views. I think this is just overly simplistic to the point of being wrong.

So for example, if you look at the Pentecostal traditions, the old order Mennonite and Amish traditions, and historically black churches particularly in the Holiness tradition, they're highly literalistic views of scripture and very culturally insulated, to the point where some of these traditions shun commerce with the outside world. But they have no creationism within them.



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Now they believe the earth is 10,000 years old. They just don't care about fighting that battle. One view could be that they don't emphasize education as much as other traditions. I actually think it has something to do with a combination of emphasis on the experiential, especially in the Pentecostal tradition, and less worried about something like the argument from Design. And there's also an emphasis on the social justice tradition.

I had a pastor — I wasn't brought up in the Christian church as I said — but I had a Pentecostal pastor who said once "People come me and say Pastor Hood, I'm worried about evolution." And he said — "and I tell them 'Get saved and experience the presence of God, and you won't worry about evolution'."

So given an emphasis on the experiential and/or social justice: I'm not that worried about how old the earth is.

Okay. So I want to finish up by describing a couple of current developments, intellectual developments. And I want to start by saying as I describe these, this represents in many respects a change in strategy.

I mentioned to you these options, that if you want to hold on to your moral principles you can throw out the science, or you can question the authoritative interpretation of the science. That's what's at work here, and something deeper is also at work. For much of Christian history, not all but many traditions have emphasized natural theology, the attempt to prove or illuminate the existence or attributes of God from the observations of nature.

What I'm going to describe to you now represents the opposite. The philosopher Al Plantinga describes this as theistic science, and by that he doesn't mean I decided there's a God; don't confuse me with the facts. By that he means, and C.S. Lewis by the way, had similar comments. He maintains: For a variety of reasons, Christians may already be persuaded that there is a God. So we don't need to shift science to prove it. But given that, given that we live in a cosmos and not a chaos, certain hypotheses become plausible that might not be plausible under the premise of nihilism or naturalism, and let's go investigate those. "

And the two I want to mention here are the notion of purpose or progress in evolution, and the notion of altruistic love, which for the past 50 years [many] evolutionary biologists have said seem implausible to the point of being impossible.

I also want to say that you could consider these plausible, like Sally did, for non-religious reasons, and there's been this fabulous collaboration between Christian and non-Christian biologists exploring these very issues. So first of all purpose. Well I've mentioned "capstone on denying any purpose to the universe, its contents or its cosmic history," and a couple of things have come up scientifically to challenge that.

The first thing is the notion of convergence. You might think of playing a bingo game and the same number keeps coming up and you think "whoa, this might not be altogether random." One of the people to propose this recently is the Cambridge paleontologist Simon Conway Morris, whom Steve Gould



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described as the most important paleontologist in the last century, until Simon critiqued Gould's view of contingency and haphazard randomness.

Simon has argued first in this book *Life Solution: Inevitable Humans in a Lonely Universe* that the same kinds of things pop up over and over again. There's constrained possibility space. It's almost – well, in fact it is if you didn't want to take the theistic view – a platonic view of the world, such that things are structured to make almost inevitable certain outcomes.

There's been a lot of other work, collaborations between Christians and non-Christians. Simon recently brought together a bunch of biologists, mathematicians and cosmologists in this book edited by him, *The Deep Structure of Biology*, and there's been just an eruption of collaborative work that's really, really interesting. I don't know where it's going to lead. I would have never predicted this when I was a grad student in evolutionary biology.

But the second notion is directionality. Now if convergence is you're at a bingo game and the same number keeps coming up, directionality is there is a sequence of numbers, two, four, eight, sixteen. That's been unorthodox for the past 50 years, but recent work in evolutionary biology suggests that there indeed is a directional sequence to evolution.

So famous biologist John Maynard Smith has described "major transitions in evolution." I hope I'm not using terms here that you're not familiar with: prokaryotic, simple to eukaryotic, compartmentalized cells, single cells to multi-cellular organisms, asexual to sexual, solitary to eusocial organisms and finally primate to human sociality. Here are two "baby showers" (slide) but humans are -- humans are mediated by symbols.

Now one bottom line point I want to make is that in all these transitions, you have an increase in what's called -- what you might call obligate cooperative interdependence. It's kind of mind-boggling actually. There are organisms or entities that used to be autonomous, and individuals come together, and now they are obligately interdependent on one another.

So far from the notion that evolution is adirectional and it eschews cooperation, it looks like there's an intrinsic directionality that fosters cooperation. It just doesn't stop there. If you look at one aspect within evolution, for example parental care, it looks like we have a trend from thousands and thousands of offspring with little or no parental care (slides), to progressively fewer offspring and more parental care (slides).

Biologists call this the transition from r to K strategy (slides), including, for primates, care well into later life and for humans we have what's actually called the grandparent effect. This is my son Gabe with my dad. This sounds terribly cliché, but I think it's not altogether inaccurate to say there's the progressive evolutionary emergence of the capacity to care, of the capacity to love.

Now that raises the last question. Okay, care. But that's caring for your offspring or maybe caring for those who have returned the favor. How about altruism, altruistic love, giving without expectation or



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return. Here's one of the most famous comments over the last 40 years in biology. From Michael Ghiselin, "Scratch an altruist, watch a hypocrite bleed. No hint of genuine charity ameliorates our vision of society once sentimentalism has been laid aside."

I could give you dozens of quotes from the same era that basically say "If you think people really care when they don't get something out of it, either motivationally or more importantly consequentially, in terms of your genes reproducing themselves, you're deceiving yourselves."

There're two reasons for this. One is the claimed nature and efficacy of natural selection. The *nature* of selection is that it's ultimately selfish. So George Williams says "Natural selection is a process for maximizing selfishness." But selection is not only selfish, it's *efficacious*. Nothing slips past its filter. So Michael Ghiselin says "If the hypothesis of natural selection is both sufficient and true, it's impossible for a genuinely disinterested or altruistic behavior pattern to emerge."

So there we have it, and the second claim --so we got natural selection making it impossible – but how about humans? Could we be an exception? No. The claim is there's no human uniqueness. Frans de Waal says "It's the rare claim of human uniqueness that holds up for more than a decade. We have no basic wants or needs that cannot be also observed in our close relatives."

And one last step in terms of this denial. Culture doesn't help us out. And maybe this is one of the half dozen most famous comments from the sociobiological revolution. E.O. Wilson, the Harvard biologist says "Genes hold culture on a leash... inevitably, values will be constrained in accordance with their effects on the human gene pool... Morality has no other demonstrable function."

So there it is. There are the scientific claims. Mary Midgley, a philosopher who, back when these claims came out, took the Sally perspective, observed that If sociobiology and this version of evolutionary reductionism tell us to take as false, what most human beings know at the core of their being to be true, we've got to question this account."

The problem is we didn't have an adequate alternative account, but recently we've been developing one. So first of all on this first point, the nature and efficacy of selection. A colleague for whom I have immense respect is evolutionary biologist David Sloan Wilson. He's not a Christian by the way; he's an atheist. But over his entire career, he's looked at different levels of selection, including what's called group selection, selection that can work at the group level and that will actually enable peopleto make sacrifices, motivationally and consequentially for one another. There's a wonderful book called *Unto Others: The Evolutionary Psychology of Unselfish Behavior*, and a more recent one called *Does Altruism Exist?*

Actually Wilson, as he was doing this work, became convinced that religion was really an important factor in this. He wrote a book called Darwin's Cathedral. More recently Martin Nowak, who is director of the Harvard Program for Evolutionary Dynamics, has taken a run at the same issues in the natural selection work at higher levels to foster cooperation. He has a technical book called Evolutionary Dynamics, and he co-wrote a paper with E.O. Wilson, the guy I just quoted, the ultrareductionist.



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E.O. Wilson backed up, completely backed up on this and they published it, and this article received more expressions, more write-ins and letters of complaint than any article to any scientific journal in recent history, over 180 complaints. But they're breaking new ground here.

Richard Dawkins criticized Wilson. He says "For Wilson not to acknowledge that he speaks for himself against the great majority of professional colleagues is an act of wanton arrogance. Biologists with non-analytical minds warm to multilevel selection, a bland, unfocused ecumenicalism." By the way, I don't think I've ever seen such a combination of ad hominem and ad populum arguments: everybody believes it and you're stupid for not believing it. I actually would -- I'm not sure if this should be on the record, but biologists with non-analytical minds, I'm reasonably confident that Dawkins himself would not understand the math in this paper.

Martin has written a popular book and he's collaborated on another with Sarah Coakley, a theologian then at Harvard now at Oxford, on this book *Evolution Games and God: The Principle of Cooperation*. So again, I just want to give you a little snapshot of this fascinating collaboration between Christians and non-Christians, scientists and theologians who haven't "folded." It's not accommodation. It's not backing up and saying I'm going to modify my religious beliefs. It's actually the opposite. It's how can these fundamental beliefs inform hypotheses that I think are worthy of investigation?

Okay. So lastly, I said there are these two points, natural selection – the nature and efficacy of selection – and secondly, no human uniqueness. So, man, the question of natural kinds or how much difference in degree in kind constitutes a difference in degree, that's actually a philosophically difficult question.

But just empirically, what virtually everybody acknowledges now is just the scale of human cooperation exceeds that of any other species. "Human cooperation exceeds that of all other species with regard to the scale and range of cooperative activities": with respect to cooperating with non-kin and those who don't return the favor, even people that we don't know, strangers. We don't see that in other species. So Wilson himself says "Man has achieved an extraordinary degree of cooperation... Exactly how he alone has been able to cross the pinnacle is the culminating mystery of all biology."

So what are the theories? The culminating mystery, and there are several fascinating proposals on the table right now. By the way, just last week I was talking with Michael about the privilege of being at a small workshop hosted by the Stanford Neuroscience Institute and the Department of Anthropology on "Culture, Cognition and the Boundaries of Humanity," asking what is it that makes human unique, and there a couple of proposals got a lot of discussion.

These are not mutually exclusive. One proposal is that there is a unique dimension to cognitive capacity of human beings. There have been debates about whether other primates have "theory of mind," the capacity to attribute intentions and mindedness to others. That's debated.

But what a worker named Michael Tomasello and others propose is if there are theories of mind – if I can attribute intentions to you – that's "me-you." But what's unique about human beings is that we have the capacity to do "me-we." That humans have the capacity to develop what's called collective



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intentionality, that I can construe not just what's going on in your mind but I can construe what's going on in our minds.

We had a conversation at lunch about the recent elections, and I don't want to politicize this, but it's the first time in my life that a political event has actually caused me to feel physically ill. When I -- again, this is -- I share this not for political reasons, but my next thought was wow, what an amazing capacity. I am part of a social body and I can make inferences about the collective mentality of our culture, and my next conclusion was "and I feel like our social body is morally ill right now." But Tomasello would say no other species can do that, attributing collective intentionality.

The other view is yeah, that's important but there's something else that human beings do. We develop social norms. In a paper by evolutionary economist Ernst Fehr, he says "Human societies represent a spectacular outlier with respect to all other animal species," because we develop social norms that expand the scale of cooperation.

Now here's the interesting thing [and so some of you may be thinking "duh"], but for the last 150 years many perspectives in the natural sciences have viewed ideas as consequences, consequences of the material processes going on in our brain, consequences of genetic constraints, etc. Remember Wilson says genes hold culture on a leash.

In the last few years there's been a return to no, ideas aren't *just* consequences. Ideas also have consequences, and the nature of those ideas – [and this is something that's fascinating, evolutionary theory doesn't oppose this. It's actually illuminated the fact that] – the nature of human ideas causes us to do things that don't appear to be fully constrained or explainable by natural selection at the genetic level.

For example, no less than Dan Dennett says that humans are disposed to do things that help them reproduce. But humans "also have creeds and the ability to transend our genetic imperatives.". So I'm going to end there. Actually, Michael says I have one minute and I'll take it.

What about these creeds? What about religion? So this would be a talk in and of itself, but within just the last few years there's been a return on the part of both religious practitioners and those with no religious commitments, to what's going on with religion, and kind of a repudiation of this religion as a social pathology or a viral mental pathogen, and a return actually to a kind of Durkheimian view that religion is really important for social cooperatively.

I mentioned David Wilson earlier. So here's an influential piece of work by Rich Sosis, where he just looks at the survival rate of religious and secular communes (slide). More recently, there have been a spate of books and articles, journal articles coming out arguing how religion, particularly those religions that emphasize moralizing deities, have been crucial for the maintenance of the social fabric of cooperation.



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Noranzayan's Big Gods: How Religion Transformed Cooperation; Dom Johnson's God is Watching You. Dom has a dual Ph.D. in Evolutionary Biology and Political Science. He's at Oxford. I mentioned before Rich Sosis, who's at University of Connecticut, and Dom and Rich and I actually spent a leave together at Princeton, at the Center for Theological Inquiry looking at these topics. It almost sounds like the set-up for a joke: "An atheist, a Jew and a Christian were in a rowboat..." But we've had a longstanding and immensely rewarding intellectual and personal exchange.

So I want to end with a plea. A hope that in our journalistic representation of these issues, but also in the commerce itself... a plea for civility and a confidence that "intelligence consecrated by love" is the path forward.

Question and Answer Session

MICHAEL CROMARTIE: Okay. Will Saletan you're up first and then Sally.

WILL SALETAN, *Slate*: Jeff, thank you. Great talk, great topic, many interesting ideas in there. I wanted to ask you about that whole last section about deep structures of biology, and I was going to ask you about Conway Morris, then you started talking about him and everything that flowed from that.

Now someone like me, I eat this stuff up. My question is to you being in the middle of these conversations with this religious people, the scientists, the people with the religion of Ken Ham, the people with the religion of Dawkins, how does this idea, this chocolate and peanut butter idea, which I would call -- mechanistic teleology, go over with them? I think I'm in a room full of fellow, sort of liberal scientist types.

So speaking for that part of us, we would be interested in how the creationists, as your conversations with reasons to believe or other audiences, can they swallow the mechanism in conjunction with the teleology, and when you have conversations with the scientific community can they swallow the teleology that's bound up in the mechanism?

JEFF SCHLOSS: Great question. Different answers to different constituencies. So with respect to the religious constituency, the folks at Reasons to Believe for example are completely fine with this, because they believe in lots of evolution and gosh, if there's a God behind this, then that evolution ought to be structured.

They just don't believe that evolution is sufficient to explain everything. But that doesn't have anything to do with teleology. That's just that there are in principle limits to what this natural teleology can accomplish.

The interesting thing is within the religious constituencies, and by the way Young Earth creationists, same thing. In a sense, Young Earth creationists believe that a lot more evolution has occurred a lot more rapidly than anyone. If you look at the Hawaiian Islands, they would say that the endemic species



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of the Hawaiian Islands all came from original colonizing species from the Ark, and rather than give five million years for these to come about, it's come about in just 6,000 years.

So they believe tremendously in lots of evolution. They'd be fully on board with these naturalistic teleological accounts, but both of them just say it doesn't get the whole thing done.

The religious constituency who's highly opposed to it is the Intelligent Design movement, because they have a tremendous amount invested in teleology, but they want to say that it's not natural and you have to import it from the outside.

Now the scientists, well here's to tell. It's a moving target. The Royal Society just last fall had a major international conference on some of these ideas. Some people are calling it the "Extended Synthesis," where they're saying hey look, Darwin's not false. The idea of random mutation and natural selection is certainly crucial.

But the notion of, well to use a phrase from E.L. Henderson's," The Fitness of the Environment", what natural selection fits to has to be fitted to support the emergence of life and increasingly sophisticated and complex life. So big debates right now, and I'm not even sure it would be fair to say any more that it's a minority/majority debate. We'll just have to see where it ends up.

WILL SALETAN: I just wanted to ask about the Intelligent Design people now, because if you believe in the idea of clockmaker, why do they have such trouble with the idea that -- I mean it almost is Intelligent Design, what you're describing.

JEFF SCHLOSS: I love that question. So the ID folks, there are two traditions of design argument. The first tradition is that there is design evident in the endowments of nature. So you know, Newton says that this wonderful system could only proceed from the counsel and dominion of an intelligent being whom I call the Lord God.

This is what fine tuning arguments are in cosmology, that the initial mass density of the universe is fine tuned to one out of 10 to the 24th, which is by the way equivalent to one star plus or minus. So the ID group is on board with that, but when it comes to –

MICHAEL CROMARTIE: ID means Intelligent Design.

JEFF SCHLOSS: Yeah. ID movement is on board with that, the endowments of nature, but the second tradition emphasizes not the endowments of nature but in a sense the deficiencies of nature, that there are certain things we see that could not have come about by natural law, no matter how intelligently structured those natural laws are.

And for reasons that I don't completely understand, the Intelligent Design movement affirms the first tradition when it comes to physics and cosmology, but it affirms the second tradition when it comes to biology. God must have intervened, tweaked, usurped, supplemented natural law.



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And your point about a natural teleology is a threat to that. Because even though it's teleological, even though you could make an inference about the designer it doesn't -- and this is important - it doesn't require a designer. It's a weaker argument. It says wow, there's design here. It suggests, it's concordant with a designer. It's certainly not nihilism, but it doesn't require one.

The Intelligent Design movement wants to argue that what we observe in the natural world cannot be explained without a designer.

WILL SALETAN: But that's just a defiance of science, isn't it? I mean in other words that no law-like system where we can conduct experiments and discern the laws of how things evolve, can ever be satisfactory. They want exceptions.

JEFF SCHLOSS: That's a common criticism. To be fair to them, so yes. A common criticism is that it is an argument from ignorance. And no scientific explanation is ever complete and there are always unanswered questions. And their response would be no, it's not an argument from ignorance. It's an argument from knowledge, because what we understand about the workings of natural law is not just that they're inadequate to account for the emergence of living systems and life's diversity, but in principle they cannot. They are contradicted by observation.

So that's Behe's argument from irreducible complexity, that in principle law cannot explain it. Now I don't know if you want to get into this. I actually think that's an entirely fair argument, and it turns just out to be wrong but not unfair.

MICHAEL CROMARTIE: Okay, Sally.

SALLY QUINN, *The Washington Post*: Will sort of stole my original question. But I wanted to follow up on that because I have always felt that Intelligent Design was being stolen by the Intelligent Design people, like Republicans have stolen the American flag away from the Democrats, and God away from the Democrats.

In other words, the idea of Intelligent Design sounds intelligent, but their version of it or their interpretation is not intelligent to me anyway.

But one of the words that you didn't use today is faith, and I thought that was interesting. One of my favorite jokes is the atheist son who says to the atheist father, you know, how do we know there's no God, and he says well you just have to take it on faith. I think that it seems to me that faith has entered this equation. Science is here and faith is here.

They seem to be merging in some way, and there seems to be almost an evolution within the idea of evolution, that people are beginning to come together on the idea that there is something for everyone here and that these ideas can merge. I mean I think that one of the most stunning things you said was E.O. Wilson. I didn't realize that he had had this enormous sort of conversion himself. I wasn't aware of that.



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But it just seems to me that when you talk about intelligence consecrated by love is the way forward, you look at somebody like the white hats in Syria and you can't deny altruism when you see people like that. The evidence everywhere is that the great bumper sticker "I don't know and you don't either." It seems to me that everybody should compromise on some level and say look, Richard Dawkins doesn't have the answer clearly because he's wrong. I mean he just doesn't know.

But then science, and science doesn't have all the answers, but neither does faith have all the answers. So what I'm asking you is do you see the convergence here of the two getting together and actually becoming one theory at some point?

JEFF SCHLOSS: I hope not. I yearn for concordance, but I believe that we'll always have to live with some degree of ambiguity.

SALLY QUINN: Is that good?

JEFF SCHLOSS: I think it's good from the perspective of your bumper sticker, "I don't know and neither do you." If things come together ultimately, if somebody believes that things have completely come together, I think that suggests that that person believes we have it all worked out. I'm a little wary of any monolithic system that claims we have it all worked out, and that's why I'm in favor of these epistemological checks and balances.

You used the term "faith." That's a slippery term in and of itself. Richard Dawkins defines faith as belief in the absence of evidence. No, belief in opposition to evidence. I think he's wrong on that, and Kierkegaard does this in *Works of Love*.

So he says there is no behavior that cannot mimic love, down to the last degree, and if we're looking for evidences of love, the evidences will always be found wanting. By the way, I mean he's talking about my own experience here, if you have a nervous person who's always demanding for proof that you love them.

But he goes on to say that we must believe in love. Otherwise, we will never become aware that it exists. But once we do believe in it, everything becomes an evidence. Now we have the problem here of, to use a psychological term, co-dependence. I mean at what point should we be open to the fact that our faith was wrong, and a person really doesn't love us?

William James makes the same comment. He talks about, this actually one of the first examples of what would be called game theory. He says if you're in a group on a train and two bandits show up on the train, they'll rob all your wallets because the bandits believe that they're going to have each other's back and the people on the train don't.

If you think I'm going to stand up against the bandits, and if everybody did there would be no robbers. But nobody has any faith that the other person's going to do it. He goes on to conclude, he says there



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are some things, some facts, where faith in the fact is the precondition for having it become a fact. So I think the interplay between faith and reason, but even faith "in fact" it is really complicated.

MICHAEL CROMARTIE: Okay. Emma Green and E.J. and Catherine. Emma Green, over here.

EMMA GREEN, *The Atlantic*: So not to be a bomb thrower, but as a religion journalist I often wonder the degree to which the conversations that we have are conversations among real groups of stakeholders or big groups of stakeholders, and with the Richard Dawkins question in particular being, sort of like the deplorable for a certain type of viewer. Richard Dawkins is like the ultimate enemy.

I do wonder how much he actually represents in terms of real people's views in the public sphere, and then on the opposite side people who really are sort of dug in on Youth Earth creationism as the one thing that they really, really care about. How many people that actually represents versus the public figures who are sort of set up to talk, like Ken Ham for example.

I would love for you to persuade me. What is the stakeholder in this conversation? How big are these populations? How important is this to big swaths of the population? Why does this matter for the public discourse?

JEFF SCHLOSS: I don't think that's throwing a bomb at all. I think that's turning on a searchlight. I think it's a hugely important question. I'd like to reframe it just a bit though.

I don't know that the ultimate question is how big these populations are. I think the ultimate question is how efficacious is their social lever.

So the American eugenics movement did not represent a huge number of Americans, yet it had profound implications. The same thing and much more untoward with the German eugenics movement. Now where it becomes really interesting is some historians of American eugenics, some recent work, suggests there's a tremendous amount of commerce between these two movements. But we didn't end up where Germany did, and some historians of American eugenics suggest that it was due to the church, religious resistance, and in particular the Catholic Church.

So the question is: what kind of social leverage do these movements have? If you'd asked me that before last November, I would have discounted the leverage of the kind of anti-intellectual right more than I would now. I think I'd have to say now, we don't know.

Although on the other hand Dawkins has exerted tremendous social leverage, and not just Dawkins. If you look at what the *New York Times* best-selling books are in science and religion, Francis' book did pretty well. But Dawkins book, *The God Delusion*, Jerry Coyne's book, *Faith Versus Fact*, Sam Harris' book, those are tremendously widely selling, prominently reviewed in the *New York Times*, Reviews of Books and Scientific American, Psychology Today. So I think these views have tremendous social leverage.

MICHAEL CROMARTIE: E.J., and then Catherine.



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E.J. DIONNE, *The Washington Post*: Thank you for that. I do love intelligence consecrated by love is the way forward. But I found myself sitting here and the Holy Spirit works in strange ways. My desire is to agree with you, and I found myself inspired by the spirit of Christopher Hitchens, and I won't read you all the notes that I wrote as you were speaking.

But what struck me is I want to ask you to what extent are those who want to acknowledge scientific method and also accept God in the scriptures simply backfilling to find rationales that allow them to believe in square, impossible circles between scientific knowledge and their own deep intuitions?

Another way to put it is could both your creationist and materialist or naturalist critics be right in saying that you are trying to hang on to two things. You happen to like science and religious faith, or to put it a third way, is this whole approach seems to take a set of propositions rooted in faith or intuitions that come out of faith, and you transform them into scientific hypotheses.

I apologize for approaching this with I think what is known as a hermeneutic of suspicion, but I found myself feeling that as you were talking, feelings are not thoughts I acknowledge, and so I'd just like you to respond to this hermeneutic of suspicion that I have put forward.

JEFF SCHLOSS: Great, keep it coming, and by the way no apologies. This is why we're here and I personally find this fun, and I think your question is actually extremely complicated. So this notion of backfilling. I don't know why but in preparation for this, I actually went back and re-read Huxley's Science in the Hebrew Tradition.

I was so impressed by his knowledge of the Hebrew bible, and by the way he didn't have animosity. He thought it was a bunch of crap in terms of its claims about the natural world. But he thought it was a tremendous repository of human moral wisdom, and he wanted to see it continue to be taught in public schools in England.

But he had your view. He thought that the Christians, who were trying to accommodate the teachings in particular of Genesis with the findings of natural science were just backfilling and rationalizing.

I have to say I think he's right. So what he was critiquing was the Old Earth creationist position, that was viewing Genesis as history and the sequence is basically right but we've got to expand the time frame.

But the sequence isn't right and, you know, really? A talking serpent and angels with flaming swords defending the Tree of Life? So I think you're right. That's backfilling. But then am I just privileging myself? Am I not backfilling? I'd say two things.

First of all, this is a really fascinating epistemological question, right? So you have Karl Popper saying look, here's what science is about. If it's contradicted by an observation, you throw the theory out. Thomas Kuhn says that's stupid. We don't throw theories out. We just keep them until for some non-rational reason the pendulum of fashion changes for aesthetic or other reasons, and we have a scientific revolution.



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And Imre Lakatos in the middle says well no, there's truth to both sides. We have a series of propositions, of concentric propositions to which we're more or less committed. So he calls the ones we're really committed to core beliefs. Newtonian physics, really committed. If we see, as we did see the orbit of a planet deviating from what we would predict from Newtonian physics, do we throw out Newtonian physics? No, we backfill.

We develop an ad hoc hypothesis and we say how could this be true and the observation be true? Oh, I hypothesized the existence of another planet, Neptune and then we go looking for it. Whoa, we found it. But what if we didn't find it? Then would we throw it out, and Lakatos says well no. We're really committed to Newton's theory. We would hypothesize -- we'd backfill again. We might hypothesize the existence of an interstellar dust cloud that prevented light from reaching us, and we couldn't see Neptune.

Well how many backfills can you do before it just lacks integrity? I don't think the rules are plain. If you ask me, I would say that the Old Earth creationists just have too many backfills. The backfilling becomes too cumbersome when you massage the observations.

I don't want to go on too long, but one last comment. I think there's a difference between backfilling, which is developing ad hoc hypothesis to explain conflict between what you think is the case and what you observe. There's a really important difference between that and saying here's what I believe. On the basis of what I believe, here's how my reservoir of plausible hypotheses is expanded. Now I'm going to test them. Frankly I think that's how science is done. Now Newton didn't. He talked about hypothesis non-fingo. He just thought you make your observations, you construct your explanations. I don't think that. Many of my colleagues don't think that. On the basis of your background beliefs, certain hypotheses are plausible, certain aren't, and I think what the approach I'm representing and advocating is that based on theism — I'm not trying to accommodate my theism to the data — on the basis of my theism I'm developing hypotheses and then I'll test them by the data.

Can I show you one slide as an example of that? Check this out. We have known for a long time that people diagnosed with terminal illness live longer if they participate in a support group. Lots of studies about this, and a worker named Stephanie Brown at University of Michigan asked well, but why? Is it receiving support or is it giving support? Is it actually possible that to give is more blessed than to receive?

Now here's a case where your starting assumptions influence the reservoir of hypotheses. What idiot would think that giving makes you live longer? But she started with that hypothesis, and she actually did. She went and gathered data, controlled for socioeconomic factors, state of the disease and after controlling for these, she found that those who were primarily receiving, she called it the dependent condition, actually had higher mortality than those who weren't involved in any support group. And giving had substantially lower mortality.



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She's gone on to do a series of other papers on how giving reduces stress, reduces morbidity and reduces mortality. Now I don't think she's trying to accommodate her religious beliefs to fit her science. She's not backfilling or backpedaling. She's doing the opposite. She's saying based on what I believe about how the world works, I believe that love is a real thing and that we're probably built to flourish when we love others. I'll go explore it.

Now here's the trick. I mean you can't twist the data to fit your hypotheses. But there's an example of a background belief in forming a hypothesis, testing it empirically. David Wilson has done the same thing for non-religious reasons, right? Now he could be wrong and that could distort his view of the science, but that's why I think we need to do our science in collaboration with those who don't share our background beliefs, so that we get tested and corrected.

MICHAEL CROMARTIE: Catherine, you're up next. Pull the microphone over and turn it on, and then yeah. But before you do start Catherine, E.J., I feel like you have a follow-up.

E.J. DIONNE: You're a shrewd observer of human nature. I guess my backup is there were two parts of your presentation, one is on evolution and sort of where there's an implicit divine intervention in the argument, if I hear you correctly. The other is a whole series of presentations on altruism. Or not a series, but some observations about the role of altruism.

Now couldn't the altruism studies be correct for a variety of reasons, like that slide you just showed us without any divine intervention on the front end? How do these two fit together or maybe I missed something?

JEFF SCHLOSS: Absolutely, absolutely. Oh boy, I'm glad you asked that, because I hope I didn't communicate that. The first part was not intended to be divine intervention. Actually, I wanted to describe a range of Christian, and actually for that matter Islamic and Orthodox Jewish positions that affirm divine intervention. But the last position I mentioned, theistic evolution, doesn't involve divine intervention at all.

Now it does involve, as does every monotheistic tradition, divine creation but not intervention. Intervention would say after the fact, God has meddled in the natural laws, and for divine creation just God has set up the cosmos to run in a particular way, and that actually happens to be what I believe. That doesn't mean that there aren't miracles, but in terms of the ongoing operation of the cosmos and the origin of life and living diversity, it's not an interventionist account.

In response to your question absolutely not. This does not require divine intervention. But here's what it does require. It does require a narrative of evolutionary processes that deviates from what has been called and critiqued by many of my non-religious colleagues as Darwinian fundamentalism, that suggests that first of all, especially salient when it comes to humans, genes either determine or at least constrain virtually all behaviors, and secondly the means by which genes emerge is in competitive self-interest relative to other creatures.



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Both of those could be part of the story, but there's an eruption of – well I'm tempted to say alternative, but at this point it's not even alternative in the sense of being a minority view – there's an eruption of supplemental hypotheses that just say "Yes. And that's not the whole story."

MICHAEL CROMARTIE: Okay, Catherine and then we're going to take a short break.

DR. CATHERINE BREKUS, Harvard Divinity School: Thank you so much for this presentation. You won't be surprised to know that my question is historical, and I want to ask you some more about biblical literalism and the role you think this plays in anti-evolutionary sentiment. So you put a picture of a book on screen by David Livingston called *Dealing with Darwin*, which is a really fascinating book. I would recommend it to people here, that traces five communities of Scotch Presbyterians in different geographical regions, in Edinburgh, also in the United States and Canada, to look at how these different communities of Presbyterians responded to evolution.

Maybe you didn't put it up. I thought I saw it. Okay, sorry. At any rate, if you had put it up, I think his book is really helpful for understanding that there was no sort of kneejerk reaction, that all Protestants did not respond in the same way to evolution.

That said, it does seem to me, and even from what you've said here, that conservative Protestants in particular have found evolutionary theory problematic.

You attribute part of this to the eugenics movement in the early 20th century, which you know clearly is implicated in this. But as you also noted, the Catholic Church was also very concerned about eugenics, but the Catholic Church did not become actively involved in any sort of anti-evolutionary campaign.

So which brings me back then to the question of, you know, isn't this to some degree at least about the way that different Christian communities are reading the Bible and how expansive, how expansively they can read accounts of creation and just to ask one question on top of that.

Could you just say a little bit more about how non-Christian groups, Muslims, Hindus, Jews, have responded to evolutionary theory, whether it's also a problem for them or whether this is a specifically Christian and even more specifically conservative Protestant issue?

JEFF SCHLOSS: On reads of scripture, on literalistic reads of scripture, my view would be that it's necessary but not sufficient. So you don't get these creationist movements, especially the Young Earth creationism, without a commitment to reading Genesis as history and as literal history, not just some historically embedded mythic representation of the cosmos.

But that said, I mention, you know, a number of very conservative traditions that have no creationist movement. I don't think it's all about the literal read. I think some other things are going on, and for sure the eugenics movement and all that wasn't the whole thing, but it was part of it.

And then the Catholic Church, well there certainly hasn't been a passionate Young Earth creationist movement in the Catholic Church, but the 1950s statement of the Pope strongly affirmed the historical



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Adam and Eve as progenitors of the whole human race, and affirmed that while their body may have emerged by natural processes, that's not the whole story.

I don't know what's more creationist than that. It's not Young Earth creationism, but in any meaningful sense it's anti-evolutionism. I mean he discredits common descent as an ultimate explanation, and then he referred though to evolution as a hypothesis, a reasonable hypothesis we ought to investigate. Then in '96, we get beyond that. It's more than a hypothesis and that's the very phrase. "More than a hypothesis," but still an affirmation of Adam and Eve as the single progenitors of all humanity, and that that is -- that's essential to the faith.

So how about Islamic and Jewish traditions and their --

MICHAEL CROMARTIE: Before you go there Jeff, you left out Benjamin Warfield and Hodge at Princeton, who bought into evolution.

JEFF SCHLOSS: I don't know the work of Livingston that you mentioned. The one that's up there is Darwin's *Forgotten Defenders*. So there was an eruption of conservative Christians, conservative I should say Orthodox Christians who were on board with evolution, but they didn't have a literalistic read of Genesis, which gets to your point.

So right now the Jewish and Islamic traditions are -- this is a non-issue in reform and liberal Judaism, and it's very much an issue in Orthodox Judaism, and there's an erupting creationist movement in the Islamic world right now, and something including a number of highly educated and philosophically astute Islamic scholars, who are viewing evolution as not just wrong, but as part of the corrupted and degenerate western meta-narrative. So I don't think that necessarily comes from a literalistic read of the Pentateuch, which is also part of, of course, their corpus of sacred texts.

But it does come from a rejection of materialism and evolutionary nihilism, and they go beyond just generically rejecting that to rejecting evolution itself and I'm really interested to see the way this turns out.

(Whereupon, a short recess was taken.)

Question and Answer Part II

MICHAEL CROMARTIE: Okay, Sarah Bailey is up first.

SARAH PULLIAM BAILEY, *The Washington Post*: Your last comment actually paved the way for what I was going to ask you about next, when you were talking about how the Pope mentioned Adam and Eve, I feel like that's been a huge discussion in seminaries and Christian colleges and universities maybe at Westmont.

I feel like some of the conversation has moved past, do we accept evolution but what does that mean for some of these theological questions. So I guess what I'm wondering is if Christian scientists accept



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evolutionary history as the Pope had said, how do they reconcile that with the Bible's emphasis and a unity of the human race descended from an original pair, and the idea that Adam and Eve fell into sin? And how is that shaping the debates around religion and science right now?

JEFF SCHLOSS: Well as I mentioned, that was key for the last 60 years and the papal and Catholic response to these questions. Even for those who don't take Genesis as literal history, it ends up -- you know, I talked about these three levels, the exegetical level, the doctrinal level and then the foundations of theism level.

I mean that's really crucial to that second level on two counts. The first count is the unity of human nature and the distinctiveness of human beings. And I actually don't think in terms of where evolutionary theory is going now, that needs to be challenging.

So earlier in the last century, we had these debates between polyphyletic and monophyletic views of human origins, and the polyphyletic view would be a challenge -- polyphyletic meaning many family trees. We're actually not all one family -- that would be challenging not only to Christian doctrine and Christian theology, but especially vulnerable to racist abuses of theory.

In fact the polyphyletic view of human origins, was championed in this country by Carleton Coon, who was a really important plank in arguing for both biological racism and the eugenic elimination of the unfit. But there's no reason theoretically and in terms of observations in population genetics, there's little warrant for that idea anymore. And as I mentioned toward the end, even the idea of human uniqueness has a groundswell of theoretical and empirical affirmation.

However a key theological question comes with the notion of The Fall, and so two quick comments on that.

First of all, the Christian notion of salvation involves not just the sense or the hope that we can be forgiven for wrong choices, but the sense of not just that we made wrong choices but we're disposed to make those choices, and that the gospel offers hope of changed disposition. So Paul says we are new creatures in Christ, that we can be saved or transformed or healed from our fundamentally errant disposition.

How on earth could you make sense of that in the context of evolutionary theory? So now this really may be backpedaling. A lot of Christians are really stuck on that; really, really stuck. And on the other hand – this is really interesting – completely independent of theological concerns there are a number of emerging narratives in evolutionary theory that posit a human brokenness or dividedness, and I'll give you a couple of examples.

So one of my colleagues, Chris Boehm, an anthropologist at USC, he's written a couple of really good books on the evolution of morality. Chris is an advocate of group selection, the selection operating at higher levels, and he argues that one of the things that is unique about human beings is that this group



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selection has been very powerful and that in contrast to other primates, at some point coalitions of human males rose up and beat down dominant males.

It took, it was like William James' account of the train that I talked about, it took collective action in order to do that, and that we're unique in that respect. At the very earliest human cultures were very egalitarian. This may have been associated with monogamy, so that human males were competing less for mates. What he argues is that humans are torn by conflicting legacies of individual and group selection.

So there's one evolutionary account of human dividedness or human ambivalence, fundamental in terms of our behavioral and social dispositions. And then Richard Dawkins would be another example actually. Dawkins and Dan Dennett and a number of others suggest this fundamental opposition between -- not fundamental, but the profound opposition between human genetic and human cultural evolution.

So that Dawkins actually believes, you know, he coins this term "memes" for transmissible cultural information." It's very important to him that he be able to apply a Darwinian perspective on memes as particulate units of information that get selected.

But he says of memes may oppose genes, and then at the end of his book, The Selfish Gene, he has this famous passage where he says "We alone can resist the tyranny of selfish replicators. We can then even contemplate ways of pursuing a pure disinterested altruism, something that has no place in nature, something that has never existed before in the history of the world."

So Dawkins is making this extraordinary claim for human uniqueness, and the claim is rooted in this opposition of cultural and biological evolution. So some Christians are saying well, we don't need the historical fall as evidence in Genesis, but if we want to preserve this notion of tornness, of dispositional ambivalence, there's plenty of room for that.

MICHAEL CROMARTIE: Andy Ferguson and then Molly Ball.

ANDREW FERGUSON, *The Weekly Standard*: I guess this is sort of an obvious question but – I've noticed the intensity with which Intelligent Design people go after people they disagree with, and what's always struck me is, and I wonder if this isn't also true with the evolutionary creationism and the theistic evolution positions that you talked about, that the vehemence seems to be so out of proportion to what they're trying to prove.

That is, if they're right, they haven't said anything about a Christian God. They haven't said anything about the creed or anything like that. I mean it's not that it's an unimportant fact if it were true that there was an interference at some point. But it doesn't tell us about Yahweh or Jesus or anything else.

So if the stakes are that low, why is the argument so intense?

JEFF SCHLOSS: That's a really, really great question.



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I actually don't think it's so obvious and I don't think the answer is so obvious either, but I'll start with the observation that from the very birth of ID, of the Intelligent Design movement, it was an explicitly culture war movement. And there are two aspects of not mentioning God.

The first aspect, and I think this is an authentic intellectual perspective, they believe that God is a very, very important part of this culture war, but they don't believe that's the only aspect. In their view, their argument is against, as I said before, their arguing for a cosmos versus a chaos. They're arguing against metaphysical nihilism, and in principle you could have other alternatives.

They say their goal is the complete elimination of materialism and its cultural legacies. I think what they actually mean — what they want to challenge is what philosophers have called eliminative materialism. Not only is matter all there is, but there's no language to describe the universe besides matter.

So we can't talk about forms, we can't talk about moral truths. There are people in the ID movement who aren't theists, but they're not eliminative materialists. They believe that the cosmos has realities, ideational or moral realities that go beyond matter. So that's the first issue.

I think they don't bring God in because actually not all of them are theists, and they're crusading for something that they think is maybe even more fundamental, a moral, ideological teleological structure to the world itself. There is a purpose to the cosmos; there is a purpose to human life.

MICHAEL CROMARTIE: Define teleological.

JEFF SCHLOSS: Purpose-driven, purpose-constrained.

Now the second reason is boy, it's much less honorable, and the reason Phil Johnson even says we intentionally don't bring God into the equation because this is our way of getting God taught in the public schools. So it's a strategic decision. They understand that the original emergence of creationism got stricken down for religious purposes. They don't bring God in. They even say hey look, we're just arguing for designer. It could be anybody. We're not ascribing deity to this designer. William Dembski explicitly says this, arguing for a designer not deity. Then elsewhere in a book published by Intervarsity Press to Christians, he says "But we know that this designer is ultimately the Logos described in the gospel of John."

I regret to say in my reading there's just a straight-out duplicity here. The first rationale is intellectually integrous. The second rationale is just a strategic move to keep God out of the question so we can get it in the public schools.

But why are they so hostile, and that one's an interesting one, and I should point out by the way that not all of them are. So there are personality issues. Jay Richards, who's a philosopher who used to be associated with the Discovery Institute is as gracious a person as I have ever encountered. And on the other hand if -- well, I guess I'm not going to name names.



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But there are a number of people who are, and I've received personal communication from them, that is not just confrontational, argumentative and hostile like Ken Ham is. Ken Ham ends up saying "I'll pray for you." But these are mocking, sarcastic, demeaning communications. It's a rhetorical strategy. I'm not sure where it comes from.

MICHAEL CROMARTIE: I have some ideas, but I'm the moderator.

JEFF SCHLOSS: If you look at -- this would be fun if it ever made it into the press. If you go to the Discovery Institute website, there are individuals who contribute with very different tones. I've worked in a junior high before I went to grad school, and we had a philosophy called good cop, bad cop. It looks like the communication in the Discovery Institute have that philosophy. There are some people who are cordial and gracious, and other people just slap you around.

MICHAEL CROMARTIE: Molly Ball, you're next.

MOLLY BALL, *The Atlantic*: As a political reporter, I've actually always thought it was a rule of thumb that the lower the stakes, the more vicious the discourse. It explains a lot of academia. So I have two questions, one factual, one theoretical.

First of all, you talked about the development of social norms as being evidence of human uniqueness. Is it really the case that animal, no animal does this, that every colony of ants or herd of elephants relates to each other exactly the same, no matter how geographically distinct, and then the second question is as a political reporter I'm interested in the political implications of this argument, and why it's a part of our political debate, why we care what side of this argument politicians come down on.

They're always being asked about it, which unless you're running for school board doesn't make a lot of sense to me, and especially given that the vast majority of both conservatives and liberals in America are Christians, I don't understand why it's become a partisan question. This relates, I guess, to what you were just saying about the culture war and God in public schools.

JEFF SCHLOSS: Okay. So starting with your factual question, which sounds like a factual question but it's more complicated than that. It's a really complicated theoretical question, which I divide into three parts. I promise I won't go long.

But first of all, are we the only species to have collective, what might be called collective intelligence, and for sure not. So there's a worker at Stanford named Deborah Gordon, who's looking at the behavior in social insects, ants in particular and boy, there's some amazing things.

Not just individual communication between ants, but the way this individual communication results in emergence or what seems to be collective responses by ant colonies, and some evidence to suggest that this is actually transmissible.

So that you get different ant colonies with different heritages, having discernibly different collective behaviors..



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The next question then would be are we the only species with culture. Deborah wouldn't call this ant culture by the way, and boy, that's complicated. It depends what you mean by culture, if culture is symbolically mediated and encoded. Lots of people say yes, we're the only ones. So other primates may have conceptual representations of the outside world, but whether they have symbols which are arbitrarily constructed and are attached to those concepts is debated.

I think no. Michael Tomasello, who I mentioned earlier, lots of other primatologists and anthropologists would say no.

But even if you granted culture to some other organisms, is there normative culture? So normative culture would seem to involve the symbolic representation of ideas that have --well, I'm going to use the same word, normative force, where I think I should do something, not because I'm going to get beat up or punished because I don't do it. Or not prudential force: I think I should do it because it's a good idea if I want to attain a particular goal. But no, I should do it because I should do it, and I think human beings are the only creatures that have normative cultural values, and I'm by no means alone on that.

So this is kind of an interesting debate between the developmental psychologist Jerome Kagan at Harvard and Frans de Waal. So de Waal says, you know, nothing's unique about humans. Kagan, who has spent his career, he's a developmental psychologist looking at moral development.

He says how about guilt? Let's think about what guilt is, which is -- you know, there's all sorts of neurotic guilty feelings. But guilt involves at the very least this: the ability to recall a past action, and this is an interesting one, the ability to consider a counter-factual, to consider the possibility that you could have chosen differently, to evaluate the choice you did make in lieu of a moral norm, a normative moral demand, and to regret the choice you made.

And Kagan says to de Waal I challenge you to find me a guilty chimp. Now by the way, just methodologically it's hard to tell. It would be hard to tell if a chimp would be guilty, but a really interesting exchange where de Waal says on this one yeah, you're probably right. I don't think I'll find a guilty chimp. So a long response to your question but collective intelligence, culture, moral norms, I don't think it's an overstatement to say that there's a growing consensus that humans really are unique on that score. And that that distinctive or unique aspect is really important in human sociality.

MICHAEL CROMARTIE: David Rennie.

DAVID RENNIE, *The Economist*: I apologize if this is such an obvious question that it's been answered endlessly in your world. I'm a comparative political journalist, I guess. You know, I've covered politics in Europe, I've covered politics in Asia, I've covered politics here.

Whenever I find something that is unusually intense as a political argument in America, you then start well why? What's special about America, because it is the case I think that, as you've said in context, the vast number of European Christians don't have these same angst-ridden discussions in the same way. It's just not a live political or even social question in the same way in Europe.



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That's not just because Europe is more secular, but even amongst kind of church goers, it's just not as big a deal. So what's different about America, and I have a kind of half-assed thesis to kind of put to you really, which is it bound up with individualism, the exceptional individualism not just in America but also of the American evangelical Protestant experience, that idea of that personal relationship with God.

If you then have a scientific theory that challenges kind of the direct nature of that personal experience of God and the fact that you're made in his image and changes your specialness and your special place in this special story about a creation which involves your recent ancestors and your perception of the Bible, that is unusually threatening and destabilizing.

If you're a Catholic or if you're a European, if you have a crisis of faith the mere cathedral around you, so the magnificence of the whole church, the hymns, the music, the incense, that can kind of carry you quite a long way. But if you have this intensely individualistic personal experience, in which you believe that God speaks to you, which American evangelicals have said to me and which as a European is very surprising.

You know, Europeans do not believe that God speaks to them, and if they do, they may take medicine for that. I mean it's a very unusual thing. Is that part of this? Because I was very struck by a couple of your comments from quoting authors as they have these kind of crises about nihilism.

What it sounded as if as this was bleeding from kind of philosophy and science to sort of the psychological distress of contemplating that that might be how the universe is. They sounded kind of lonely, if that was all there was. That was somehow unbearable. It sounded like beyond the kind of scientific discussion. It was a kind of psychological discussion about what is and is not a bearable idea of the world.

JEFF SCHLOSS: I love that question, and you know, I harken back to this paper by Jonathan Marks, where he laments the ethnographic analyses of creationism.

By the way, there have been a lot of sociological analyses, which are just basically data. What percentage of people believe this and that. But there have not been any really thoughtful ethnographic analyses, in terms of the location of these movements in cultural traditions and subcultural values. So I think it's a great question.

Just a couple of comments. This might not be fair, but one of my other interests is the history of eugenics, and I see similar patterns in eugenics, but they're reversed. So for example the German eugenics movement was extraordinarily passionate and I've read *Mein Kempf* recently, and this location of the eugenics struggle in the context of a struggle for the soul and the history of not just the Aryan future, but the human race.

The eugenics movement in England was entirely different, highly moderated, and America was kind of in between. That doesn't seem to be, have anything to do with individualism. I'm curious why these movements landed in such different places, and I think something similar has happened to the



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creationism movement, except it's reversed in the U.S. I do think that the individualism piece is part of it, in one way and not in the other.

I'm a little bit skeptical that it's part of it in the way you describe, and the reason is this, that the most experientialist aspects of American Protestant evangelicalism are the least interested in creationism. I mentioned to you that it's virtually absent in the Pentecostal movement. The next installation of Pentecostalism is Assemblies of God. There, you didn't need this experience to be saved, but it was the important portal to the full life. Creationism is absent there, its also absent in the neocharismatic movement, and it's most present in traditions of American Protestantism that are the least experience-affirming. So it's extremely present in the Baptist or other traditions that are secessionist, that believe that the supernatural experiences of God's presence and direction ceased with the completion of scriptures. Perhaps the best example would be the ministry of John MacArthur. MacArthur is a fervent Young Earth creationist California pastor who has a national footprint, and believes that if you're not on board with Young Earth, you're a Christian apostate, that you're an enemy of Christianity. At the same time, he sponsored a conference a couple of years ago called "Strange Fire," in which he critiqued the Pentecostal, charismatic and experientialist movement.

MICHAEL CROMARTIE: Strongly.

JEFF SCHLOSS: Vituperatively.

MICHAEL CROMARTIE: Strongly, yes.

JEFF SCHLOSS: There's something about the individual experience which seems actually not very concerned with creationism, and it's the people who deride experience. Lastly, there is an aspect of -- I don't know if it's individualism or populism. I mentioned earlier I don't want to reduce creationism to populism.

But there is this populist derision of both authority and elitism. So you know, the Protestant tradition in particular is rooted in priesthood of every believer. So there's a questioning of ecclesiastical authority. But there's a profound questioning of cultural and scientific authority, and that's -- boy, that's indigenous to fundamentalist, fundamentalist Protestantism, the questioning of cultural authority.

MICHAEL CROMARTIE: We didn't get into the question of why America, as opposed to England, but we can do that over drinks at the reception because we're about to run out of time, and we have one more person up. But I wanted to ask, just quickly parenthetically to Kate, are these debates at all part of the prosperity gospel world? What would they think of what we just -- I mean I've read your book, but I don't think this came up?

DR. KATE BOWLER, Duke University Divinity School: I really liked your closing analysis of who cares and why, and it seems like one. I know Pentecostals will often have someone who cares about the Left Behind series on the circuits.



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But you're right. They're not the public intellectuals, and I think it might have a great deal to do with the legacy of fundamentalism as fundamentalism, the group who felt that they deserved cultural custodianship and wanted to continue to fight in a public sphere in the same way.

Also I think I would take the Church of God and Christ off the isolated list. They're bringing Joel Osteen this year to their annual convention. So they're in the mix again. But I wonder if you're seated in a public arena that is battling over what it means to be truly Christian, truly American in a way that other often, as you said more market oriented, very popular believers are not as invested in?

This is a debate that only certain people care about, and I think they're fundamentalists, fundamental right as intellectually.

MICHAEL CROMARTIE: But the prosperity gospel people don't deal with this question much at all though?

KATE BOWLER: No. They'll have one on the circuit. I'm just kind of thinking, chewing through his who cares and why, and I think these are the bearers of a certain legacy of evangelicalism that I would link to the fundamentalist movement. I just wondered what your reaction might be.

JEFF SCHLOSS: I think that's absolutely right. One thing that fascinates, continues to fascinate me though is why, why the fundamentalist stream itself is divided on this issue? So John MacArthur might call himself evangelical, but I think in terms of the demarcations of fundamentalism, he certainly qualifies, as would Henry Morris and the Institute for Creation Research and certainly Ken Ham.

A side comment. One of the interesting observations is that we're now using the word "evangelical" for all these people. But in the emergence of evangelicals, they distinguish themselves from Billy Graham and Wheaton College but here's the observation. There are lots of self-identified fundamentalists who don't care about this. It's not that they believe the earth is old. They believe that the earth is 10,000 years old and that Adam and Eve were historical people created directly out of dust.

They don't preach it. They preach salvation by the Holy Spirit being born again, and then you've got to speak in tongues. They're not worried about it, and I'm not sure why. In fact, I've been invited to share the pulpit with some of these folks. They disagree with me. They just don't think this is central to the claim of the gospel, and they use the term for themselves fundamentalist.

MICHAEL CROMARTIE: Thank you, Jeff.

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