

# Kenneth R. Miller

## “Evolution and the Battle for America’s Soul”

Episode 12 (transcript of audio) of The Advent of Evolutionary Christianity  
[EvolutionaryChristianity.com](http://EvolutionaryChristianity.com)

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**Michael Dowd (host):** Welcome to Episode 12 of “[The Advent of Evolutionary Christianity: Conversations at the Leading Edge of Faith](http://EvolutionaryChristianity.com).” I’m [Michael Dowd](#), and I’m your host for this series, which can be accessed via [EvolutionaryChristianity.com](http://EvolutionaryChristianity.com), where you too can add your voice to the conversation.

Today, [Ken Miller](#) is our featured guest. [Ken](#) is a professor of Biology at [Brown University](#). He’s a cell biologist, and he chairs the Education Committee for the [American Society for Cell Biology](#). But really what he’s known for is his advocacy nationwide for the teaching of evolution in high school. He serves as an advisor to the life sciences at [The News Hour](#), a daily PBS television program, and he’s even been on [The Colbert Report](#) twice: in [2006](#) and [2008](#).

Here we discuss “Evolution and the Battle for America’s Soul.” Ken is one of the few people in the sciences that have a clear religious commitment along with a passion for teaching the science and teaching it well.

**Host:** Hello Ken Miller, and thanks for joining us in this conversation on Evolutionary Christianity.

**Ken:** Hi Michael. Thanks for having me. I’m happy to be here.

**Host:** Well, Ken, I was really looking forward to this conversation with you in large part because whenever the topic of evolution within Christianity comes up, you tend to be the first person that a lot of people think of. You’re out there on the frontlines. It’s known that you’re a committed Christian, that you’re Roman Catholic, and that you are probably the most visible public face defending the teaching of our best scientific understanding of evolution in the public schools—and *not* teaching [creationism](#) or [Intelligent Design](#). And so, I wonder if you could just give our listeners a little background in terms of how you came into an evolutionary understanding. Was it something you grew up with? And then, how you came to this blending of a walk in faith with a deeply science-based understanding of reality.

**Ken:** Well, I'll start it this way. I grew up in a household in New Jersey. When I was a young child, my dad was actually going to college at [Rutgers](#) in New Jersey under the GI Bill, studying engineering. I was kind of a geeky kid. I liked to know how things work. I wanted to take things apart. I built a crystal radio. I had an erector set. I had a chemistry set in the basement. I tried to read my dad's science, math, and engineering college textbooks—and I was fascinated by them.

It was also I wouldn't say an intensely religious home, but it was pretty religious. My dad had actually studied to be a priest for two and a half years in Indiana where he grew up, before he decided, as he once told me, that he liked the girls too much so that just wasn't gonna work. World War II intervened and at the end of the war he got married, had kids, and that put college off for quite awhile. But basically, I simply grew up with a curiosity about nature and a love of science. What hooked me on biology was a ninth grade biology course taught by a wonderful teacher at Rowlett High School. From that moment on, I just knew I wanted to be a biologist.

Now the interesting thing growing up and going through religious education in the Catholic Church is that I was never warned about any conflict between scripture and science. In fact, quite the contrary was the case. We really were given the idea that God wanted us to know as much about His world as possible. In short, learning in general and science in specific was reinforced. And to be perfectly honest, I didn't realize that there were people who had a concern about evolution—until the year I graduated from high school. That year, I spent the summer lifeguarding in a swim club (I actually put this story in my book *Finding Darwin's God*), and as we rotated through the lifeguard stations, one of the stations I had to spend 20 minutes at every hour was the check-in station. Most of the time you check members' IDs and stuff. Most of the time there's nothing to do there, so I'd pick out a book and read it. There was one girl in particular that I really wanted to impress with how intellectual I was. So I made a little project of reading pretty heavy books. I read [The Story of Philosophy](#) by [Will Durant](#); I read [Paradise Lost](#) by [John Milton](#). Everybody was impressed when they saw those book covers. I also read the [Origin of Species](#) by [Charles Darwin](#). When I read the *Origin of Species*, I have to confess, I found it rather obvious and rather boring. But people would walk past the check-in station and they'd see that title and they warned me about how dangerous that book was. This was the first time I began to realize that there are people who are actually bothered by this scientific theory. As I went on in college (and especially in graduate school), I came across such people more and more.

**Host:** I remember reading that story of yours, but it's great to hear you say it.

Ken, what would you say to someone, a young person, who basically has the kind of response, "Oh no, this is dangerous!" How would you speak to them? What advice would you give at this point?

**Ken:** I'll talk specifically about Christians. I think *the first duty of any Christian is to the truth*. So the first question that any person should have about evolution is not, "Does it contradict

what my preacher told me on Sunday?” or “Does it contradict my understanding of the Book of Genesis?” or something along those lines. The first question that any person should have of evolution is really pretty simple, and that is: Is it true? That is the question that really ought to matter to Christians. A hundred and fifty years of scientific research—with all the detailed examination of the theory and also spirited attempts to show that evolution was wrong—a hundred and fifty years of that have brought out lines of evolutionary theory that are on a firmer footing than anyone could have imagined, even [Charles Darwin](#) himself. We begin with that.

So, what does evolution tell us about our world? Well, I think what it tells us is pretty simple and that is that we live in a world that is just bursting with extravagant evolutionary possibilities for life. As Charles Darwin put it at the end of the *Origin of Species*, “Endless forms most beautiful and most wonderful have been and are being evolved.” Now from a Christian point of view, what I think that tells us is the fruitfulness of Creation—that is, the evolutionary process is the means by which the Creator produced a world that would be populated with these endless forms most beautiful and most wonderful, ourselves included. And I really think that’s the way in which the evolutionary story backed up by science can be seen as inspirational in the Christian perspective specifically, but also in [the Abrahamic perspective](#) in general, as well.

**Host:** Wow! Could you say a little bit more about that in terms of an evolutionary understanding? It’s [our modern-day creation story](#). It’s not just biology. It’s a story of physical evolution, biological evolution, and cultural evolution as one common creation story, humanity’s common creation myth—using the term ‘myth’ not in the sense of an untrue story, but as a narrative that helps us see our place in the whole and helps us feel connected to reality, or to God. How do you see that enhancing or enriching those of us in the Christian tradition?

**Ken:** Well, I’m glad you phrased it in a way in which you said, “helps us see our place.” And the reason for that is what the evolutionary narrative tells us: we humans are not something strange and disconnected and set apart from nature. Rather, it tells us that we are actually part of the fabric of life that covers this planet. And if you imagine the billions of years that have preceded us, and if you think about them, what you see is a scenario that unfolds in a grand and spectacular way and gives rise to the animals, the plants, the microbes that we see around us and to our own species, as well. So what evolution tells us is that we are not separate and set apart from the rest of Creation. We are part and parcel of it.

I find it to be a grand vision to think that we are united with every other living thing by this process. And to me, that’s the kind of grand vision that speaks of a Creator who could really think big and do things in a big way—as opposed to, I would say, the creationist or the Intelligent Design vision of that Creator, where he’s a micro-manager, where he has to spend his time attending to every little detail. I think that makes God kind of a tinkerer at his workbench, rather than a grand creator and a grand planner. That’s one of the reasons why I think the evolutionary vision glorifies God, makes him bigger—rather than the creationist vision, which makes him much, much smaller.

**Host:** I'm wondering if you could say a little bit more about how this evolutionary understanding—in the way that you understand it and the way that you promote it—is different from [Intelligent Design](#)? Because there's some confusion on this issue among some people.

**Ken:** Well, it's true. I've actually often been accused of being an Intelligent Design advocate. And the reason people say that about me is that, like any person of faith (like any person who believes in a God of any sort), I really do think that there is a kind of logic, if you will, a kind of intelligent design, to the universe itself. I think if you believe in a Creator, you believe in that almost as a default position. And I'm very happy to say, yes, that is exactly what I believe.

But there is the difference between someone like me, who fully and totally and completely accepts the evidence for evolution and is very much an advocate of cutting-edge science, and someone who advocates Intelligent Design. I can put it very simply: The Intelligent Design advocate believes that the principles of chemistry and physics, the laws of nature, are not sufficient to bring about life on Earth as we know it. I, on the other hand, believe that they are. That's the big difference, and I think it's the most fundamental difference.

When I'm asked sometimes by people, "How do you, as a person of faith, differ from an atheistic evolutionist?" my answer always is very simple. For myself and the atheist: we adhere to the same principles of evidence. We do experimental science in exactly the same way. But I, after doing all that, ask a deeper question that I think, unfortunately, my atheist friends don't always even bother to ask, and that is: Why does this work? Why is it that human intellect is able to unravel the mysteries of the universe around us? Why is it that the world is out there? The universe out there follows a kind of logic—a logic that we can gradually put together and understand through science. If you simply shrug your shoulders and say, "No reason; that's the way it is," I think that displays a lack of curiosity. And for me, the answer to that question of "Why the universe is intelligible?" is very simple. And that is because there is an intelligence behind it—and that's the intelligence of the Creator.

**Host:** Got it. Ken, the title of our conversation is the subtitle of your most recent book, [Only a Theory: Evolution and the Battle for America's Soul](#). Could you say a little bit about the title, *Only a Theory*, and the subtitle, *Evolution and the Battle for America's Soul*? What do you mean by that?

**Ken:** Well, I opened the book with a vignette, a little sketch of something that happened in a trial in Federal Court in Atlanta, Georgia in 2004. And what happened in that trial—I won't go into the details—was that a school district in Georgia had taken all their biology textbooks that mentioned evolution and put a warning sticker on the front of the books, saying that evolution is only a theory, not a fact, and students should be skeptical about it, and so forth. A group of parents in that district saw that as an attempt to promote a specific, particular religious point of view. That's something the First Amendment protects all of us Americans against, and so they sued the school district. And they had asked me—the parents did, several months earlier while

I was on a speaking tour and I spoke at Georgia State University—if this came to trial, would I be willing to come down to testify for them? I said, sure, I'd be happy to do that, and so I did.

I testified on the first day of that trial. And as I walked down from the stand and through the court after several hours of testimony, a supporter of those warning stickers was sitting in the aisle of the courtroom. I walked right past her and she looked me in the eye, gave me a big, beautiful, expansive smile, and said, "It's only a theory, and we're gonna win." And that stuck with me. Well, they didn't win that case, but that's what one hears so often about evolution—that its only a theory.

Now the subtitle of that book, *The Battle for America's Soul*, is intentionally ambiguous. I like titles that can be read in two ways—and the reason for that is I want people on both sides of an issue to pick up my book and take a look at it. The "soul" that I was speaking of in that book was not the spiritual soul that the theologian or a preacher is concerned about. What I said as part of my preface to that book is that I think America—I think this country—has a scientific soul. And what I mean by that is the United States has been uniquely hospitable to science. It's not just because we have a lot of money and we can build big labs and pay researchers to come here. People in science flock to the U.S. from all over the world, and it's extraordinary to see that scientists come here from Europe, they come here from Asia, they come here from other places in the world and they make their careers here, in part, because the open and skeptical aspects of the American character are a natural for science.

Americans by and large don't care what family you came from. They don't care what social class you grew up in. They want to know if you can *do* stuff. This is a practical country, and there's no better aspect of being practical and serving the utility than actually being a scientist. So this is a country that has always embraced science and has never thought twice about whether or not the scientific work has had other implications in another area. What I worry about in the present environment is that America could lose its scientific soul. And what I mean by that is actually pretty simple, and I can describe it very briefly. Given the hostility that we see today towards the teaching of evolution in the schools—which I think is more than just hostility to the teaching of evolution; I think it is hostility to scientific rationality in general—if we raise up a whole generation of kids who have been taught to be hostile and suspicious of science, who have been told that to go into science means turning your back on your faith and on the other values with which you were raised, then we will become a second-rate scientific nation. We will give up world leadership in the scientific enterprise. And I think, quite honestly, that nothing could be worse for the United States than to have that happen. That's why I say that in our current social struggles about the teaching of science in the schools, America's scientific soul is at stake.

**Host:** Yes. I couldn't agree more. I appreciate the way that you just framed that because "soul" language is often thought about in religious terms and sometimes even in trivial terms. And yet, to apply it to a nation—to apply it to a collective—in the way that you just have: I think that points to something that's vital at this time.

In terms of my own framing of what science is, I try to use language that helps people see what the worldwide scientific enterprise is about in a different way, because many religious people think about it as merely *secular*. When they think about God or God's revelation or communication from the Divine or God's Word, they, in large part, are thinking about ancient books. There's nothing wrong with that, but if we don't see that what is coming through the global scientific enterprise is *also* divine revelation—the way I speak about it in my own book, *Thank God for Evolution*, is that “[facts are God's native tongue](#)”; that [God is speaking through evidence](#). God is speaking to humanity as a whole. Even when I use the word God, I'm not meaning a big daddy in the sky who blesses some and smites others. I'm using that word to point to what is fundamentally, undeniably *real*. And that [Reality/God](#) is communicating to humanity as a whole through scientific evidence, through cross-cultural evidence, and through historical evidence.

If we don't recognize that—if we fail to see that what's coming through the entire scientific community is really humanity's collective intelligence, meaning that we are collectively more intelligent today than we were 50 years ago or 500 years ago or 5,000 years ago and that [such intelligence] can legitimately be seen as divine revelation, divine communication—then, I think we're going to be stuck in this sort of dichotomy: that all religious things are understood in a mythic way locked into old books and that everything that's coming through science, all the facts and the evidence, well that's just secular—that's just science in a “its only a theory” way. And we're going to fail to see that there's a way of bridging this.

I don't know if it's wishful thinking or not, but I think that we are in the early stages of a transformation: a new “Reformation.” Or maybe it's even bigger than that, where the way we think of divine communication isn't just through the tradition and through authority and through the hierarchy. It isn't merely through ancient documents, holy books. But it's also through evidence. I think we're in the early stages of [an evidential reformation](#), where we begin to appreciate evidence as divine communication. In doing so, we'll recognize that what we're getting through a whole mountain of evidence is a way of understanding *what's real* and *what's important* that we can align our lives with so we can move forward into a just, healthy, sustainably life-giving future, while cherishing our differences, not being threatened by those differences. And I think that's part of what an evidential understanding of reality brings.

**Ken:** Michael, I would put it this way: The [Jesuits](#) have a saying that, “*One should see God in all things.*” And to me the “all things” include science. I think that's a very straightforward way of boiling down everything that you just said.

Now, the other thing that I wanted to mention was that many people who are critical of the efforts that you have made to reach out to communities of faith in the name of science, and specifically in terms of evolution and the position that I have taken (as well as people like [Ian Barbour](#) or [John Haught](#)), they say that we are “accommodationists”—that we are framing science in a way to make it nonthreatening for Christians. And by framing science or by accommodating the issues, we're weakening science. They say we're watering it down; we're twisting it.

I don't think anything could be further from the truth. I think that the proper attitude for a person of faith to take is to recognize that faith and reason are both gifts from God. Science, in effect, is the ultimate goal of reason—in other words, achieving a scientific understanding of nature. I think a person of faith who embraces science fully is actually not only doing justice to the great scientific tradition, which after all was started by people of faith, but is also being more honest and more open to the religious tradition than many people I've met. Because to reject one of those gifts from God—faith and reason—is not to fully appreciate the heritage that we've been given. And that's why I resist the charge of being an accommodationist—and I'm sure you do, too, simply because I don't believe in watering down science or twisting it to make it compatible with religion. I think science is inherently compatible with religious faith—and the sooner that people on both sides of the faith versus secular divide understand that, the easier it will be to resolve these cultural issues in our society.

**Host:** Amen! I actually sort of flip it around. I just recently had an exchange with both [Jerry Coyne](#) and [PZ Myers](#).

It's interesting. One of the things I recognize and resonate with is that you often take heat both from the New Atheists on the one side and the Young Earth creationists on the other—and I've been in that position plenty of times myself.

**Ken:** It keeps life interesting, doesn't it?

**Host:** It really does. But the point that I make is that in a very real sense, I'm an "accommodationist" of a different sort. To my mind, everything in the universe is evolving, changing, transforming through time. And those organisms or institutions that try not to evolve—that try to only stay with what worked in the past—either become irrelevant or go extinct. And so to my mind, *every religion must accommodate to science*. It must accommodate to [what God's been revealing through evidence](#)—or it will ultimately or potentially contribute to the demise of human civilization and the despoiling of the Earth.

**Ken:** And I would put exactly that sentiment this way— a religious faith that requires you to reject the findings of scientific reason is not a faith worth having.

**Host:** I love it. Say that again.

**Ken:** *A religious faith that would require you to reject the findings of science and scientific reason is simply not a faith worth having.*

**Host:** Preach it brother! I'm with you completely.

So Ken, speaking a little more personally, I'm wondering if you could share a story—either your own experience or a story from working with students, helping students to make this bridge or to fully embrace science in a religiously nourishing way, in a soul-satisfying way. Do

you have a story that you could share about someone who's made that shift, and then the difference it made in their life?

**Ken:** When I first came out of the closet as a Christian in 1999, when I published [Finding Darwin's God](#), I began to get a lot of emails from people. Some of it was negative, of course. Some of it was positive. In fact, nearly all of it was positive—just a smattering of negative comments. But there were a couple of recurring themes, and the most prevalent recurring theme was one that made me feel that writing this book had been the right thing to do. One of these emails started out by saying, "I've read your book, and thank you very much for making me understand that I do not have to be stupid to be a Christian."

What I discovered was that so many Christians were experiencing crises of faith not because of skepticism about God or even problems with their religious traditions, but rather because they felt as though their faith required them to reject scientific ideas like evolution, like the Big Bang and so forth. And they realized intellectually this was the foolish thing to do. When they saw somebody write a book that basically said, "No. Scientific studies and the scientific conceptions of our universe are very much in line with the Abrahamic tradition," all of a sudden they realized that that was unnecessary—and it either restored or it strengthened their faith. So I was very, very happy to do that.

One story that I actually do tell all the time is that a few years ago—and this is before I wrote this book, so before I came out of the closet—I had finished lecturing in the spring semester. I teach what is usually the largest single class at my university, which is the freshmen-level course in introductory biology.

**Host:** This is at Brown?

**Ken:** At [Brown University](#) in Providence, Rhode Island: that's correct. Brown is an Ivy League school. It's got great students. I'm the bit of a ham, so I exalt in getting on stage in an auditorium and teaching a large course. In some years I have as many as 400 to 450 students in that class.

**Host:** What's the title of the course?

**Ken:** The title of the course is called "[The Foundations of Living Systems](#)," which sounded a whole lot better than just Intro Bio.

**Host:** Yeah. Right. I love it!

**Ken:** So, the class meets Monday, Wednesday, and Friday at eleven. And one day, I had finished up about ten of noon, and I answered the questions of students after class. They always come up to me; they always have questions. And I remember that it was Ash Wednesday. So I picked up my laptop and other things, packed them up, and I walked right

across the main green, because the chapel was right there on our campus. And I went and crowded in with other students and faculty to Ash Wednesday services. As I was there, I looked across the chapel and I saw a girl who was one of many in my class. That wasn't surprising. But she looked at me like she had seen death itself. And as we filed out after services, I saw her again and I went up to her and I said, "You seem startled to see me here." She said, "You shouldn't be here." I just had nothing to say, and she said, "What were you doing there?" "Same thing you were." And she said, "But you *can't*—and in class tomorrow or next day, I will bring a book to explain to you why no person can possibly lecture about evolution with the enthusiasm that you do and also be a Christian."

What she gave me was a small book published by [Ken Ham](#) called [The Lie: Evolution](#). On the cover of this book—I'll never forget the picture—was a picture of a serpent, and in the mouth of the serpent was an apple, and the apple was labeled "evolution." Evolution is the ultimate lie in the mouth of the serpent in the Garden of Eden! And throughout that semester, I met with that young lady several times to try to show her that evolution is the *biological* story of our origins—it's not the *spiritual* story. That's the first point. And then the second point, because she was a Catholic, was to open her up to the entire Catholic tradition, which has embraced the evolution story ever since [an encyclical written by Pope Pius XII in 1947](#).

I'm always surprised how many people within the Church are not aware of the fact that the Church itself has made its peace with evolution for many years. And in the year that I was speaking to her about this, [John Paul II wrote an extraordinary letter supporting the theory of evolution](#), extolling the weight of the scientific evidence behind it, which he addressed to the [Pontifical Academy of Sciences](#). So in many respects, I found it easier to talk to this student and others who were Catholics simply because I can say, "Look. I don't always agree with the institutional church, but on this particular issue, I really do have the institutional church behind me." For many of my Catholic brothers and sisters that is persuasive. It certainly doesn't work with people in the Protestant tradition. For many of them they say, "Oh, the Catholics are behind evolution; there's an even bigger reason to reject it!" *[laughter]*

**Host:** One of the motivating factors for me in bringing together such a wide diversity of thought leaders and evolution-celebrating ministers in this conversation series is in part to show the world and America and the media that, contrary to the way that it often gets reported—which is, there are only two meals on the menu, or there's only two games in town—the idea that you're either a Young Earth creationist who rejects science or you're a New Atheist who rejects religion, that in fact there's *millions in the middle* (and who knows, it may even be the majority in the middle) who find a way of integrating the two. Even though we've got Catholics and Protestants and Emerging Church and Process Theology people—we've got just a radical diversity of Christians that are part of this series—and yet we all agree on some really fundamental things.

We actually share a lot of the same values. We may interpret scripture differently. We interpret our tradition differently. We think about God differently. We interpret the core aspect of our faith differently. And yet I think it can be confidently said that we all have an *evidential*

*understanding of deep time*—that is, we all have an evolutionary take on reality that we get through the evidential sciences. And we all have a *global heart* and a global commitment—that is, we’re not merely committed just to our own soul salvation or to our own religious group or even to our own nation-state. But we’re all committed to a healthy future for Planet Earth and for the human species and for the larger body of life. As Ian Barbour shared, there is really another point in common, too—which is we all recognize the importance, the necessity, of *interpreting*. We all recognize that there’s no one interpretive frame that’s going to work for everybody. So it’s our responsibility to interpret things in a meaningful way.

Does that language work for you? Or is there a way of thinking about what we share that you think of differently?

**Ken:** Let me provide you with a specific example that supports the general case that you just made. In 2005 I was involved in a landmark court case, a lawsuit called [Kitzmiller vs Dover](#). This was very highly publicized and was even the subject of a remarkable, two-hour program on the science series *Nova*. The program was called “[Judgment Day](#),” and it actually won the Peabody Award for Broadcast Journalism (on YouTube, [here](#)). And the situation was this: The local school board in the town of Dover, Pennsylvania decided that they wanted to instruct their biology teachers in the local high school to prepare a curriculum on Intelligent Design. The teachers (very much to their credit) at the risk of losing their jobs, refused. They said this stuff is not science. You are not going to get us to teach it.

The school board then wrote their own little four-paragraph lesson on Intelligent Design. The board asked the teachers, “Would you at least read this to the kids?” Once again, the teachers refused. So the school board sent the assistant superintendent and the superintendent into the biology classrooms to read this lesson to the students, while the teachers physically stood outside in the hallway. They also bought two classroom sets of a textbook on Intelligent Design.

Well, eleven parents in that community recognized this as an attempt to promote a particular religious point of view, and they filed a First Amendment lawsuit against the school board. That case went to trial in September 2005. I had the honor, although I’m never sure that’s the right word, of being the lead witness for those eleven parents in this trial. And there are a couple reasons for that. One is that I’ve been outspoken in defending the teaching of evolution in our schools and arguing against creationism. The other reason is that I’m co-author with a wonderful guy named [Joseph Levine](#) of the most widely used high school biology textbook in the United States. Teachers simply know it as [Biology by Miller and Levine](#). That’s the book that the teachers wanted to purchase for their students in Dover, and that’s what kicked off the controversy. So, I was an appropriate person to kick this trial off.

I spent two days on the stand, and it was an extraordinary experience. The trial itself went on for nearly seven weeks. It was covered in the media literally all over the world. Since the trial, four books have actually been written on this trial. It’s a monumental event. And the reason I bring this up is because I followed the news coverage very closely on those days when I was not in the courtroom—and I can’t tell you how many times I read a news report or

heard something on the radio or saw it on TV and the reporter would start off by saying something like, “It’s God versus science in a Pennsylvania courtroom.” Over and over again. Now the reason that was inappropriate was simply, look at the people involved in the case! It turns out that, of the eleven plaintiffs, eight of them were Christians. Several of them were Sunday school teachers, and one of them even runs a summer Bible School. These were the people who were allegedly against God!

Among the six expert witnesses, not only was I one of them but another expert witness was [John Haught](#), a professor of theology at Georgetown University, who is of course part of your series. The legal team—there were three attorneys who worked with us on this case—one was an atheist, one was a Catholic, and one was a Jew. We also had people in the community backing us. We had local preachers on our side of the case backing us, and we had a team of people who worked together to bring about the successful resolution of this case. We won this case. Among this team, you’ve got everybody. You’ve got atheists, agnostics, Jews, Protestants, Catholics. Everything you can possibly imagine. And what united us was a common devotion to scientific reason and to effective science education in the schools. That was the value around which this team coalesced. And what we were able to say, basically, is that what unites us is a belief that the universe ultimately is intelligible and that we human beings have been given the gift of intellect in order to enable us to figure things out. And to turn our back on that gift or to refuse to follow the evidence where it leads us is an abdication of our responsibility as human beings. And that is true whether you’re a person of faith or not.

We found very quickly among the legal team and among the people working together to make this case and to bring it successfully through the courts: we never had dissensions, disagreements, or arguments due to faith, because we had coalesced around the value of scientific reason. I think, ultimately, that’s the message. That is what we share. And the Christian tradition gives us an even greater reason to share that devotion to reason as a gift from God.

**Host:** Amen! As you were speaking, you mentioned that one of them was a Sunday school teacher. I want to ask you this question. How do you see our Christian tradition evolving in the 21<sup>st</sup> century?

**Ken:** I think, first of all, that the Christian tradition is not going to survive long term with this hostility to science. I think that’s not only a recipe for rejection by people in an increasingly scientific age, but also it’s a 180-degree reversal from Christianity’s historic support of science and the scientific enterprise. Western science, science as we know it, developed in western Europe—in Christian western Europe—in the 14<sup>th</sup>, 15<sup>th</sup>, and 16<sup>th</sup> centuries. It did so in part because the people who practiced the scientific enterprise thought that they were exploring the world to the greater glory of God. Ultimately for faith to be successful, it has to re-embrace that tradition.

I remember when I was working on my first book, one of my friends at Brown—he’s actually a Jewish Rabbi, [Alan Flam](#)—pointed out to me that [Saint Augustine](#), the great Christian

writer and leader of the 4<sup>th</sup> and 5<sup>th</sup> centuries, had written a book addressing this. It was not one of his big books that I already knew about (like, *City of God* and *Confessions*), but one I was unaware of called, [On the Literal Meaning of Genesis](#). In that book, St. Augustine addressed in a passage, which I've quoted several times in my writings, the issue of how Christians should understand scripture. He basically said that you shouldn't understand scripture in a way that enables you or requires you to make certain statements about what he called "the position of stars and planets, the kinds of animals and plants," and so forth. Because if you use scripture to make statements about these things, which nonbelievers can examine for themselves and might then turn out to be wrong, you will bring discredit on the real message of scripture, which is the message of Salvation. And he actually said that we Christians have to take every means to prevent reckless and incompetent interpreters of scripture from bringing discredit upon faith itself. Now that's an extraordinary thing to say. Not thinking of course about evolution when he wrote that book in 411 AD, but what he was making was the point that reason has to be a friend of faith.

All too often the faith community, and certain elements of it in the present age, have forgotten the things that Augustine—and for that matter Aquinas—argued about the acquisition of scientific knowledge and how important that actually is. So I think ultimately for the Christian faith to survive and prosper in a scientific age, it must take science to itself. A failure to do that, I think, will ultimately doom faith communities to becoming smaller and smaller and becoming more and more marginalized. Certainly, I don't want to see that happen.

**Host:** I agree. What you're saying reminds me of the main coaching that I got, the main support that I got, at Evangel College for embracing an evolutionary understanding of reality. It came out of a book written by [Arthur Holmes](#), called [All Truth is God's Truth](#). The claim that Art Holmes was making, and really that was a core part of the philosophy of [Evangel College](#) and many Evangelical and religious colleges and universities, is that to make science and evidence a central part of your faith is to recognize that there is a commitment to the truth. And that if there is a supposed conflict—if there's an imagined conflict between, say, the written scriptures and what God is revealing, what reality is revealing through the entire scientific enterprise—then it is usually a problem of our interpretation of one or the other. So the question then becomes: Am I *interpreting* these written texts in a way that lends itself to my thinking that there's a conflict? There may, in fact, not be an actual conflict, because I am interpreting a poetic passage or a mythic passage in a literal way that actually does an injustice to my religious tradition.

Going back to what we were talking about a few minutes ago, one of the things that I envision happening within the Christian context is I'd love to see Sunday school teachers and religious educators also go to what's coming through the [Discovery Channel](#) and [Nova](#) that children are learning on TV. If we don't help children see and interpret these understandings of the nature of reality—supernova explosions and black holes and dinosaurs and all the cool stuff that kids are going get in science—if we're not helping them interpret that stuff in a way that's soul nourishing and inspiring religiously, then they're going to have this *wall* in their brain

between all the religious stuff over here and all the science stuff over here. That doesn't need to be. We can help them see that *this* is what (using religious language) God is revealing *today*. This can actually enhance our faith and stretch our faith and nourish our faith. So, I'd love to see religious educators do that.

**Ken:** I agree. I think the most dangerous aspect of establishing that wall is not just that it harms science and science education but that it harms religion as well.

**Host:** Yes.

**Ken:** By the time students get to university, if they've been brought up in an environment where people tried to erect such a wall, and then they suddenly discover when they take a few science courses just how grand and how imposing the universe is, they may come to grips with some of the cosmological theories which right now are being put forward by astronomers and physicists. Then they're going to look at the religious tradition as sort of a pale substitute for that. Those people who put these two ideas in opposition don't see that ultimately it is religious faith that's going to lose. And that was actually Augustine's insight—that if science and scientific reason and faith come to loggerheads, it's faith that's going to lose. Therefore, your faith should not put itself in opposition to scientific reason.

**Host:** Exactly. Many people confuse faith with beliefs. They use the word *faith* and what they're really meaning is *beliefs*. In some ways, beliefs are an antithesis of faith, or at least they can be. Beliefs can be an attachment of the mind to something being in a particular way and interpreted in a particular way.

I see faith as more of a open-hearted, open-handed trust in reality—trust in time, in life the way it is—and trust in my own feelings, my own feelings when I see something that's unjust or something that's clearly not healthy for the body of life or healthy for other humans. There are those feelings in me to correct that. So trusting that God is at work in ways that we won't even see if we have a trivial notion of what the word *God* is even pointing to. One of my favorite quotes from [St. Thomas Aquinas](#), some 750 years ago, he said: "*A mistake about creation will necessarily result in a mistake about God.*" Now if that's true, I think what it means (among other things) is the more we learn about the nature of creation, the nature of the universe, we better also be updating what we mean when we even the use the word *God*. This is a more glorious, more magnificent understanding of the divine than thinking of God merely as a cosmic tinkerer or as a supernatural being who occasionally intervenes and who issues the ultimate terrorist message: "[Believe this or I will torture you forever.](#)" I think that's a trivial understanding of God. It's no wonder that the New Atheists are riding bestseller lists and that young people are leaving the Church by the millions, if we interpret all of the core aspects of our faith tradition in an unnatural way and in ways that have no connection to the real world that we all live in and breathe in and participate in.

**Ken:** A few years ago I had the privilege—and it was a lot of fun—to be on [The Colbert Report](#) at Comedy Central. I’ve actually been on it twice now ([here](#) and [here](#)), and it’s great fun. The first time I was on, in his persona he argued, “You’ve got to pick one! You’ve got to pick science or you’ve got to pick religion.” And the way I answered him was to say,

No. That’s a false choice. You don’t have to do that. And here’s the problem that I have with creationists and with Intelligent Design people and that is they in effect (from my point of view) have *too small a view of God*. In their view he’s a tinkerer. He has to design this and then he has to design that, and he has to sit up on his cosmic computer and type out the As and Ts and Gs of the genetic code. And not only that! Apparently, he’s not very good at it, because almost everything he designs has gone extinct. So he designs this and oops! it goes extinct. The museums of the world are filled with fossils of His mistakes.

I have a different view, and this is the way I put it to [Stephen Colbert](#): “God is this guy who is so clever that he created the universe and set a process in motion that gave rise to you and me and every living thing on this planet.” And, as I told Stephen, “maybe even [Bill O’Reilly](#).” He seemed to enjoy that. But again, no matter how you look at it, it is a grander vision than a narrow vision advocated by either ID people or the creationists.

**Host:** I completely agree. I think the only other thing that I’d like to see in terms of preachers and priests and bishops and ministers—those who are given the task and called to actually communicate the Gospel, to communicate the essential message of our tradition—I long for the day when preachers have the Bible in one hand and *Science News* in the other, which is a magazine of wonderful, short encapsulations of the best understanding of reality, and it comes out once a week. I’d like to have them occasionally preach and speak from the pulpit based on how this understanding can lead us into a more intimate relationship to God. It can call us into lives of more effective compassion and generosity and care and consideration and integrity. So that’s my personal vision: that ministers not only preach from the Bible but they also preach from *Science News*.

**Ken:** Indeed. [Charles Darwin](#), in the frontice of the *Origin of Species* put several quotations, and one of those is that “*One cannot be too learned in either the book of God’s Word or the book of God’s Works.*” I think in the contemporary context, [Science News](#) is about as close as you come to the book of God’s Works.

**Host:** Yes! [Karl Giberson](#) made the same point in an interview that I had with him a few days ago.

Well, Ken, this has been great. Could you share with our listeners a little bit more about your own books and any current projects that you’re working on that are particularly exciting for you, and how they can learn more about you and your work.

**Ken:** Well, I'm actually a cell biologist. I work on biological membrane structure and function. I used to serve as an editor of the [Journal of Cell Biology](#) and [The Journal of Cell Science](#). So an awful lot of what I've written is actually simply in the scientific literature, and its pretty specialized stuff. As I mentioned, I am the coauthor with Joe Levine of a whole series of high school biology books. They're simply called [Biology](#) by Miller and Levine, and they are literally used all over the country. So if any of your listeners have a son or a daughter who's in high school, they may very well actually already know of us.

I've written two books for general audiences. One is called, [Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution](#). I've most recently written a book called [Only a Theory: Evolution and the Battle for America's Soul](#). I continue to work on my textbook and to teach and do research at Brown University in Providence, Rhode Island. And at the moment I'm working on a new, third book for popular audiences. This one doesn't have a title yet, but it's a book about human evolution. I hope to have that finished sometime towards the end of next year. My editor is leaning on me very hard to do that. In the meantime, I also travel extensively. I speak at college campuses all over the country and appear occasionally on TV, because I am the life science advisor to the science unit of [The NewsHour](#), which is a daily public affairs program that appears on PBS. I also, in the spring and summer, umpire high school, college, and even professional fast pitch softball.

**Host:** Really!

**Ken:** Every now and then, you know, when I'm in a debate with creationists, someone will ask me, "How do you remain so cool in the midst of all that criticism?" My answer is, "Do you have any idea what people say to an umpire on the ball field?!" I find that sports officiating for me is just a wonderful outlet that helps the rest of the world to dissolve and gets me out there on the field, play a few games and puts everything in perspective.

**Host:** Amen! That's great brother!

**Ken:** Any of your listeners who'd like to find a little more about me, you can simply google my name, Ken Miller and Brown University, and that will bring out a number of webpages ([here](#) and [here](#)) that I have on my work, on my books, and on evolution. And if you want to go a little bit further, you could even go to [my Wikipedia page](#) because—again I don't know if it is an honor or a dishonor—but there's a fairly extensive Wikipedia page that other people have put together about me that has links to my books and a lot of my talks and that also details at some length my involvement in the *Kitzmiller vs Dover* Trial, which I mentioned earlier.

**Host:** That's great! I've actually got your Wikipedia page up on my computer right now. It's Kenneth R. Miller. So I'd recommend that to folks.

**Ken:** Oh yes, that's right. I should mention that I'm either blessed or cursed with a very common first and last name. There is [another Kenneth Miller](#), at Rutgers University, who is a geologist. He's an atmospheric and ocean scientist. We often get each other's hate mail. The Ken Miller at Rutgers has been outspoken about global warming. I've been outspoken about evolution. At one point *that* Ken Miller wondered why he was getting so much hate mail about evolution, and we realized that people were simply confusing us.

**Host:** Well, thank you, Ken Miller, for your ideas, for your perspective, and for sharing your experience with us today here on the leading edge of faith.

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