Kenneth R. Miller "Evolution and the Battle for America's Soul"

Episode 12 of The Advent of Evolutionary Christianity

EvolutionaryChristianity.com



Kenneth R. Miller is professor of biology at Brown University and co-author of some of the foremost textbooks used by high school biology teachers. A Roman Catholic, he is a leading voice in advocating for the teaching of evolution in public schools. His publications include two books for general audiences on overcoming the conflict between religion and evolutionary biology: *Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution* and *Only a Theory: Evolution and the Battle for America's Soul.*

HIGHLIGHTS

Ken Miller was **lead witness** for the plaintiffs (pro teaching of evolution) in the **2005 court case** in Dover, Pennyslvania, challenging school board imposition of "**Intelligent Design**" into biology curricula, so this interview is outstanding for its overview of **how the science-v-religion conflict troubles public schools**. Because Miller is a superb public speaker and has crafted succinct, powerful ways of making his points, even those who have little interest in the public school issue will discover **practical and inspiring perspectives on faith and reason**, compellingly articulated. The take-home point: **rational thought and scientific evidence need not be hostile to religious faith**.

SUGGESTED AUDIENCES

This interview is highly recommended for all audiences (from evangelical to the theologically liberal) because it is unsurpassed in the scope and power of its simple-yet-profound arguments of how Christian faith and mainstream science can be integrated. Even though its focus is America's ongoing troubles with religious objections to the teaching of evolution in public schools, Miller's reconciling arguments apply equally to anyone of any age and outlook who struggles with faith and reason. Because Miller chastises churches for failing to integrate science with religion for their youth, this interview is a wake-up call for church leaders, religious educators, and seminarians.

BLOG COMMENT

Ellen S. says:

Ken Miller's testimony is particularly urgent, which I really appreciate. Thank you, Michael and Ken. Rational thinking is *not* hostile to faith. This is a great discussion.

KEYWORD TOPICS

Roman Catholicism, biological evolution, Charles Darwin, truth (as first duty of every Christian), Genesis, "endless forms most beautiful", the fruitfulness of Creation, Intelligent Design (arguments against), creationism, God as Creator, teaching evolution (conflicts in public schools), theory (in science), Dover trial (on Intelligent Design in public schools), "America's scientific soul", "accommodationists", faith and reason (as gifts from God), Ian Barbour, John Haught, Ken Ham, Ash Wednesday, Pope Pius XII (1947 encyclical embracing evolution), Pope John Paul II (support of evolution), science education, history of science, St. Augustine, salvation, Aquinas, Arthur Holmes, New Atheists, *The Colbert Report, Science News*, Charles Darwin, Karl Giberson

BIOGRAPHY

Kenneth R. Miller is professor of biology at Brown University. He earned his Ph.D. in 1974 at the University of Colorado and spent six years teaching at Harvard University before returning to Brown. He is a cell biologist and chairs the education committee of the American Society for Cell Biology. He serves as an advisor on life sciences to the *NewsHour*, a daily PBS television program on news and public affairs.

Miller is coauthor, with Joseph S. Levine, of four distinct high school and college biology textbooks used by millions of students nationwide. He has received five major teaching awards, and in 2005 was given the Presidential Citation of the American Institute for Biological Sciences for distinguished service in the field of biology. In 2006 he received the Public Service Award from the American Society for Cell Biology, and in 2007 was given the Science Educator Award from the Exploratorium Museum in San Francisco.

One of Miller's principal interests is the public understanding of evolution. He has written a number of articles defending the scientific integrity of evolution, answering challenges such as "Intelligent Design," and he has debated a number of anti-evolutionists over the years. His book, Finding Darwin's God: A Scientist's Search for Common Ground Between God and Evolution, addresses the scientific status of evolutionary theory and its relationship to religious views of nature. He also wrote Only a Theory: Evolution and the Battle for America's Soul, which documents his role as lead witness for the plaintiff in the much-publicized trial opposing the teaching of Intelligent Design in Dover, Pennsylvania, in 2005. His faith is Roman Catholicism. His evolution homepage: http://www.millerandlevine.com/km/evol/index.html

SUPPLEMENTARY VIDEO

YouTube has many videos of Ken Miller. Here is a powerful 4-minute video on why evolution is true: http://www.youtube.com/watch?v=Gs1zeWWIm5M

"Bible Wasn't Always Interpreted Literally" (2 min): http://www.youtube.com/watch?v=tefklqzVtpA

SUPPLEMENTARY WEBPAGE

Listener comments to this audio can be found, and new ones posted, at the following url: http://evolutionarychristianity.com/blog/general/ken-miller-defending-evolution-in-public-schools/

QUESTIONS FOR REFLECTION AND DISCUSSION

1. **Learning that evolution is a "dangerous" topic.** Ken Miller recalls a precise instance when he first learned that evolution was a "dangerous" topic. Here is his story:

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, 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 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.** 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 *On 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.

Question 1: When and how **did you first learn that evolution was a "dangerous" topic**? If you never really encountered that viewpoint early enough in life and in a personal enough way to have it be memorable, then what circumstances in your life and education contributed to general acceptance of the scientific understanding that the universe is old and that life evolved?

2. "The first duty of any Christian is to the truth." The host, Michael Dowd, asks, "What would you say to someone, a young person, who responds to evolution with, "Oh no, this is dangerous!" Ken Miller says,

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.

Question 2A: What is your response to Ken Miller's assertion that "the first duty of any Christian is to the truth", and then how he connects that with acceptance of evolution?

Question 2B: Ken Miller is not only a biologist but he is co-author of leading high school and college biology textbooks in America. So if anyone feels confident to defend the "truth" of biological evolution, surely he does. But what about you? If you were conversing with someone who vehemently disagreed with evolution, **would you feel competent to defend why you do, in fact, accept it?** Either way, how would you handle the situation?

NOTE: The Host, Michael Dowd, simply tells people, "Google 'Best Evolution Resources'." His webpage with that title will appear near the top (here and here). He created this resource (with links to all the most compelling and most inspiring websites and books) specifically as an easy-to-remember, easy-to-access tool for anyone to use when talking with someone who does not accept (and even celebrate) big history—physical, biological, and cultural evolution.

3. "The fruitfulness of Creation." Ken Miller offers in this dialogue some of the key points he makes in helping fellow Christians join him in feeling that evolution is not, in fact, dangerous for Christian faith. He explains,

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.

Question 3: To the extent that the Bible (seen as metaphorical or as literal truth) is important to you, does Ken Miller's approach of offering a **bridge** between the Abrahamic religions and evolutionary science work for you? Or do you see things differently? Please elaborate.

4. "The evolutionary vision glorifies God, makes him bigger." Ken Miller continues his explanation of how evolutionary science inspires him in religious ways. He says,

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.

Question 4A: With this argument, Ken Miller goes **beyond merely reconciling** evolutionary science with his Christian faith. He insists that it actually **makes God grander**. Is this an important point for you to hear (and have you heard it before)? Do you agree or disagree?

Question 4B: What aspect of evolutionary science do you look to as more than merely reconciling with your worldview (be it religious or secular)? That is, **what is it about the story of evolution and the long journey of life on Earth that genuinely inspires you?**

5. A Creator God but not "Intelligent Design." Ken Miller distinguishes himself from the Intelligent Design movement in this way:

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.

Question 5A: Ken Miller was, of course, **a lead witness** for the evolution side in the famous "Intelligent Design" trial that took place in Dover, Pennsylvania, in 2005. So he has a very clear and succinct position on where, as a person of faith, he sees "design" and where as a biologist he does not. **Do you find his statement on this helpful?** How so, or why not?

Question 5B: Did you ever, or do you now, find the assertions of the "Intelligent Design" movement attractive — scientifically or religiously? Overall, is or was "Intelligent Design" an important issue for you?

Question 5C: Quite a few of the guest speakers in this series voice a strong and succinct argument against the movement known as "Intelligent Design." Indeed, none of the 38 guests

interviewed in this "Evolutionary Christianity" series are advocates of the Intelligent Design movement. What arguments (pro or con) "Intelligent Design" do you find most compelling? Or is this topic a non-issue for you?

6. Distinguishing Miller's view from "atheistic evolutionism." Ken Miller is such a public figure in the battles over the teaching of evolution in public schools that he is attacked by some secular people as being too religious and by some religious people as not being religious enough. Here he says,

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.

Question 6A: Hearing Ken Miller's criticism of secular (that is, "**atheistic**") people, what comes up for you? Do you tend to agree with him, or not? Or is this kind of philosophical questioning not of much interest to you?

Question 6B: Ken Miller advocates strongly for a "Creator" God in this universe. But what of a "personal" God? That is, whether you are religious or secular or somewhere in between, when you think of or hear the word "God" is there usually a personal aspect to God? For you, is it more relevant to have a felt presence of God personally than to hear arguments pro or con God as Creator?

Question 6C: How do <u>you</u> understand or experience God? And what, for you, is the word "God" pointing to?

7. "Only a theory." Ken Miller tells a story about serving as a witness in a trial in Georgia in which parents sued a school district for placing a warning sticker on the front of high school biology books saying of evolution that, "It's only a theory." He explains,

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 it's only a theory.

Question 7: The vernacular understanding and use of the word 'theory' tends to paint it more like someone's **opinion** rather than something that has a strong factual basis. But in science, a "theory" (such as the theory of evolution by natural selection, or the theory of gravity) has far more weight. **Have you ever been confused by hearing a critic say that evolution is "only a theory"** and therefore that it is closer to a conjecture than a fact? Or perhaps do you still think that way today? Overall, where (if at all) are you still confused with the idea that if evolution is a 'theory,' then how can anybody be certain of its truth?

8. **Will America lose its "scientific soul"?** Ken Miller paints a portrait of America as "uniquely hospitable to science." He says, "I think this country has a scientific soul." He explains,

People in science flock to the U.S. from all over the world... 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 than actually being a scientist.**

Miller then continues with why he is fearful that the United States may lose its "scientific soul":

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.

Question 8A: Prior to encountering this statement by Ken Miller, had you thought of the prominence of **scientific research** in America as being an important part of **American national identity**? Do you find this a compelling argument for defending the teaching of evolution in America's public schools?

Question 8B: Overall, to what extent are you **grateful for the "scientific soul"** that bears fruit in America—and throughout the world? That is, do you tend to focus on the **problematic applications** of scientific discoveries (perhaps nuclear weapons or environmental toxins) or are you more usually present to its **practical gifts** (medical diagnostics and treatments, satellite communications, jet planes, structural engineering for earthquake safety, weather forecasting, solar power)? What about the wonders that science reveals about the natural world: Hubble

Space photos? dinosaur fossils? why the ocean has tides? why there are earthquakes? lightning? that all creatures are our kin? (Note: Explore these questions in whatever ways most interest you.)

9. **Dowd: "facts are God's native tongue." Michael Dowd** asserts in this conversation that "facts are God's native tongue." He says,

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 is communicating to humanity as a whole through **scientific evidence**, through **cross-cultural evidence**, through **historical evidence**.

Question 9A: What is your response to Dowd's assertion that "facts are God's native tongue" and his claim that evidence should be considered as modern-day scripture?

Question 9B: Overall, do you think Dowd's approach is a useful way for him, personally, to try to **help Christians move beyond a conflict view** of science and religion?—and regardless of whether you yourself would espouse that position. Overall, do you subscribe to what Dowd sometimes calls **an ecosystems approach** to helping religion shed its literalistic interpretations of scripture and creeds? That is, rather than one "right" position, **a number of voices need to speak to different audiences in different ways?** (Please elaborate.)

10. **"Faith and reason as gifts from God."** In this conversation, Ken Miller offers some of his major points, in clear and succinct language, for helping religious people accept (even embrace) "a scientific understanding of nature." He says,

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.

Question 10A: Do you find Ken Miller's way of bringing faith and reason together, as "gifts from God," attractive? In what ways yes, or no?

Question 10B: Do you think the message that "faith and reason are both gifts from God" might **soften the resistance of religious people** who are suspicious or scornful of the evolutionary sciences? What are some other good arguments for embracing both?

11. "A faith not worth having." Michael Dowd was so impressed by one of Ken Miller's well-honed statements that he asked him to repeat it. The statement is this: "A religious faith that would require you to reject the findings of science and scientific reason is simply not a faith worth having."

Question 11A: What do you think about that statement?

Ken Miller then talks about reader responses to his books. He recalls,

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.

Question 11: Has this particular version of "crisis of faith," as identified by Ken Miller, ever applied to you or to someone you are close to? And to what extent might it be helpful if this form of faith crisis were acknowledged more openly in religious contexts and institutions?

12. **STORY:** "You shouldn't be here." Perhaps the most powerful story Ken Miller shares in this dialogue is the story about a student who was shocked to see him in the campus chapel for Ash Wednesday services. The story goes,

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."

Question 12: Do you **remember that story** from your first listening or reading of this episode? What, if anything, has stayed with you about the story? Was it the point he was making? Or was it more the way he told the story with rich detail?

13. Vatican acceptance of evolution. Ken Miller, a Roman Catholic, talks about how the highest office in the Catholic Church has issued statements accepting an evolutionary understanding of Earth history. He freely shares this fact of history with any of his students who are struggling with reconciling science and faith, and who are Catholic.

Question 13: Did you already know, or were you surprised to learn, that **two popes wrote position statements in the 20th century** that made it Vatican policy for Roman Catholic leaders and teachers to convey acceptance of evolution? What is your response to this?

14. **Kitzmiller v. Dover.** Ken Miller was **lead witness** in a 2005 trial in Dover, Pennsylvania that drew national attention. He recalls **the religious diversity on the pro-evolution team** (the plaintiffs in this case) and how he and they all coalesced around one particular **shared value**. He explains,

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**.

Question 14A: Hearing his **story of the trial** and how the religious and secular proponents of evolution worked harmoniously together, do you find this story inspiring, or is there something troubling about it, given your worldview or faith stance? Please elaborate.

15. Christianity's tradition of supporting leading-edge science. Ken Miller reminds the listeners that, rather than Christianity needing to change to support science, it simply needs to get back to its historical support for leading-edge science. He says,

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 14th, 15th, and 16th 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.

Question 15: Does Ken Miller's point about the religious faith of early scientists give you **hope** for eventual resolution of the religion-science conflict? Why or why not?

16. Religious education harms children when it fails to integrate science. Ken Miller talks about the harm to religion caused by churches that ignore science in their religious education of children and youth, rather than directly integrating it with faith. He says,

By the time students get to university, if they've been brought up in an environment where people tried to erect a wall [between science and religion] 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.

Question 16: What is your experience or understanding of church education programs for children? Do you sense that churches still fail to integrate their teachings with the "grandeur" of nature that children acquire by way **of Internet sites and television programs such as NOVA and National Geographic**? Do you agree with Ken Miller that churches are setting up youth for confusion or outright loss of faith if and when they discover how grand and amazing the world and the cosmos really are? Why or why not?

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