

## Where Did We Come From?

Lottie L. Joiner

---

---

For a year, Martha Wise listened to presentations, visited constituents' homes, took phone call after long phone call, and spent hours answering e-mail. She was often up until the wee hours of the morning, trying to understand the latest issue dividing her state: the teaching of "intelligent design," one of the alternative theories of the origin of species.

"I'm not a scientist. I don't know much about science," says Wise, a member of the Ohio State Board of Education. "There's nothing the intelligent design people showed me that the science people couldn't say, 'That's not evidence,' or 'That's not a fact.' I can't refute them because I don't know that much about it. I can't believe either side."

The question of which side you believe is central to the controversy surrounding the teaching of evolution, one of public education's longest-running battles. The debate is often less about the science of describing the origins of life and more about a community's moral and ethical belief systems. More often than not, religious values and science collide, leaving a community torn and a school district unprepared to sort out the remains.

Ohio is the latest evolution battleground, following on the heels of state-level debates in Alabama, Louisiana, Oklahoma, and South Carolina and local controversies in Georgia and Pennsylvania over the past several years. Ohio's state board debated for nearly a year before adopting a new set of science standards in December 2002.

The standards require that the state's 1.8 million public school students learn Charles Darwin's theory of evolution as well as be allowed to discuss how "scientists continue to

investigate and critically analyze all aspects of evolutionary theory." The statement made Ohio the first state to require districts to let criticisms of evolution be examined in classrooms. However, a disclaimer insists that the board did not support "the teaching or testing of intelligent design," a theory that the complex features of life are the result of intelligent planning and activity.

For many, it was a compromise that satisfied both sides. Some felt that it was not enough. Others believed that the Ohio board had caved to the pressure of Darwin's critics.

"Science education has not convinced a lot of Americans that Darwin was right," says Charles Haynes, senior scholar at the Freedom Forum's first amendment Center, based at Vanderbilt University in Nashville, Tenn. "Many religious Americans have long felt that evolution or the theory of evolution challenges many of their deeply held beliefs."

Wise falls somewhere in the middle. "I believe in creationism, but I can also believe in the science process," she says. "I do not separate the two. That's where some people have the problem. They separate the two and only believe in one."

### THE EVOLUTION OF A DEBATE

Central to the long-running controversy, Haynes says, is the fact that people are deeply concerned about the implications of what is taught in science. "What are the implications for understanding humans, for understanding morality, for understanding our place in the universe? Americans see public schools as a place where we define who we are as a people, what we believe as a nation. And it

therefore often becomes a battleground where different world views clash.”

The first battle was fought in 1925, when famed attorney Clarence Darrow defended biology teacher John T. Scopes in what became known as the Scopes Monkey Trial. Scopes, a high school biology teacher in Dayton, Tenn., was convicted of violating the state’s Butler act, which barred the teacher of “any theory that denies the story of the Divine Creation of man as taught in the Bible.” The Butler Act was upheld in the Scopes trial and was not repealed until 1967.

The U.S. Supreme Court has ruled twice on the issue since then. In 1968, the Supreme Court invalidated state laws when it struck down an Arkansas statute that banned the teaching of evolution. And in 1987, the court ruled that a Louisiana law requiring that evolution and creationism be given equal time in the classroom was unconstitutional because it violated the First Amendment’s Establishment Clause.

As the intelligent design argument raged in Ohio last summer, the Supreme Court declined to hear the case of Minnesota science teacher Rodney LeVake, who was reassigned by Independent School District No. 656 after he questioned the principles of evolution in his class. LeVake sued the district, claiming that the reassignment violated his constitutional rights to free speech and religion. He lost in the lower courts.

After the Supreme Court refused to hear his case, LeVake told reporters that he did not want to teach creationism or make references to God in his classes, but he wanted to tell students what he sees as “flaws” in evolutionary theory. According to court documents, LeVake wanted to offer students “an honest look at the difficulties and inconsistencies of the theory without turning my class into a religious one.”

The Supreme Court did have precedent for LeVake’s lawsuit. In the 1987 Louisiana case, *Edwards v. Aguillard*, the justice ruled that “teaching a variety of scientific theories about the origins of mankind to school-children might be validly done with the clear secular intent of enhancing the effectiveness of science instruction.” Haynes says this language provides an open door for evolution critics, including those who want to see the teaching of intelligent design.

“Intelligent design is really a whole new chapter in the debate about what alternative scientific theories may be allowed in the public school classroom,” he says. “This is a new effort to open up the science curriculum to alternatives from a different direction.”

Bruce Chapman, founder and president of the Discovery Institute, a Seattle-based think tank, believes alternative theories of the origin of species should be taught. He specifically cites intelligent design, which he describes as “a theory that holds that certain features of the universe and living systems can best be explained as the result of in-

telligent cause, not an undirected process such as natural selection.

“Overwhelmingly, our primary objective is for students to be allowed to learn the scientific evidence against Darwin’s theory as well as for it,” says Chapman. “Darwin’s theory is flawed; that’s the issue. It has nothing to do with religion. It has everything to do with science.”

## THE CLASH OVER THEORIES

The problem with trying to use the Supreme Court language as an argument, evolution advocates say, is that there are not proven scientific alternatives to evolution.

“Teachers are legally allowed to teach scientific—not religious—alternatives to evolution, but there are none,” says Eugenie Scott, executive director of the National Center for Science Education in Oakland, Calif.

“If scientific alternatives to evolution are developed and take their place in scientific explanation, then of course, it would be appropriate for each of them,” Scott says, “but neither creation science nor [intelligent design] has made the grade.”

Intelligent design is not a scientific model because it doesn’t answer questions about the natural world, Scott says. “Intelligent design presents itself as science education, but it really is a form of progressive creationism—a religious idea. It should not be taught in public schools.”

Gerald Skoog, former president of the National Science Teacher Association and dean of the College of Education at Texas Tech University in Lubbock, Texas, agrees.

“Intelligent design simply represents a revolutionary step to neutralize the teaching of evolution,” says Skoog. “It’s creationism stripped of religious overtones. Instead of saying that God is the creator, it’s a designer. They claim evidence, but the evidence does not stand up to peer review.”

Michael Behe, a biochemistry professor at Pennsylvania’s Lehigh University and as senior fellow at the Discovery Institute, insists that intelligent design and creationism are different.

“First of all, intelligent design does not refer to any sacred text, any religious writings, any saying or prophets. It starts simply with the data that biology has presented to us, not religious sources, but from evidence of biology,” says Behe. “Intelligent design is a completely scientific hypothesis. Creationism starts from sacred scripture and writing.”

Behe, author of Darwin’s *Black Box: The Biochemical Challenge to Evolution*, says scientific evidence supports intelligent design, despite what pro-evolution advocates believe.

“The scientific evidence that I point to in my writing appears in many biology textbooks and scientific journals,” Behe says. “I haven’t gotten my own private pieces of data. I use things in the scientific community. They object to the

fact that I don't share the Darwinian interpretation of the data. But the data I use fits more readily with the theory of intelligent design than with Darwinism."

Only one fundamental difference exists between evolution and intelligent design, Behe says. While Darwin's theory says life resulted from natural selection, intelligent design is centered around the belief that a "designer" is behind it all. And even Behe admits that discussing who the "designer" is might not be appropriate in a science class.

"We may need to decided (that) on a basis other than a scientific basis—like historical records such as the Bible or philosophical considerations," says Behe. "You could even base it on a personal encounter with a space alien. But most people will conclude that it's God."

"Intelligent design is not a scientific theory," says Barry Lynn, director of the Americans United for Separation of Church and State, a Washington, D.C.-based watchdog group. "It's not about science. It's about theology. The religious right is acting as if evolution is one of dozens of ideas that might be true... Their purpose is not to clarify matters of science. It's to confuse religion with science."

## CAUGHT IN THE MIDDLE

It's this very debate that has state and local school boards in a bind. Most board members are responsible for sorting out a scientific discussion of which they have little understanding. The issues are so complex that boards are caught in the middle without "the tools or knowledge to sort out the truth of the matter," Haynes says.

"There are very few people who have enough knowledge of science to make a reasoned judgment as to whether what the intelligent design people are advancing is good science," he says. "When a school board looks at this, often they're listening to really a political debate on both sides where people are trying to convince them that this is good science and that the other is bogus."

Wise says she listened intently to both sides during the Ohio debate but admits that it was difficult at times to understand certain specific elements. In the end, she says she made a faith-based decision. "These are science standards and intelligent design, in my interpretation, is not scientific," she says. "Science standards should identify the science process. Intelligent design is based on a belief system, not a science process, in my estimation."

It took 11 months for Ohio's state board to agree on new science standards, a period in which board members received more than 40,000 e-mails, phone calls, and letters about the evolution issue. More than 20,000 letters were sent to the governor's office. And about 1,500 people attended a 2-hour debate between evolution and intelligent design experts.

"No other state had dealt with this as openly as we had," says Deborah Owens-Fink, who serves on the state board with Wise. "Initially, there was a huge backlash because people were upset that the education community wanted only one viewpoint. I was totally opposed to censoring scientific evidence that calls into question Darwinian orthodoxy."

The state board's biggest challenge, Owens-Fink says, was integrating the different points of view into the final decision. The key was taking an evenhanded approach.

"A scientist who opposed my decision said he respected the way we dealt with this," says Owens-Fink. "He said, 'No one can dispute the fact that you deal with this in a very professional, fair manner.'"

"It sounds so fair to teach both sides," says Scott of the National Center for Science Education. "The idea of fairness is just so powerful in American society. The intelligent design people have gotten further on the fairness issue than on science."

Behe, the researcher and author, believes students should be allowed to learn that challenges to evolution exist. "There are many open questions about how life got here and how life developed over the years," he says. "There are many different ideas about how that happened. But students don't even learn that people are skeptical of Darwinian theory or even learn there are alternative theories to it. Too many biology textbooks give the strong impression that all of the big questions are solved and that's imply misleading the students."

But, Scott asks rhetorically, is it fair to teach kids an idea that scientists have rejected "just because the intelligent design proponents have good public relations and are in the op-ed pages and not the scientific journals?"

"Even if scientists have said that intelligent design is not science, they say teach it anyway because it makes us feel good," says Scott. "That's pretty irresponsible curriculum development."

## TEACHING THE CONTROVERSY

Ohio's decision to allow teachers to discuss alternative theories about the origin of species in the classroom raises another prickly question: How will teachers introduce new ideas without getting into religious or philosophical discussions that belong outside a science class?

"The only thing that really matters is what happens in the classroom," says Owens-Fink. "It has to change in the classroom in terms of how evolution is presented to let students know that scientists are still investigating and challenging Darwin's theory. That's indeed the real issue."

But Lawrence Lerner, professor emeritus at California State University—Long Beach, says there's no point in teaching children false history of what he calls "pseudo science."

“Scientists don’t think evolution is controversial,” says Lerner, author of the Thomas B. Fordham foundation’s report *Good Science, Bad Science: Teaching Evolution in the States*, which gives letter grades to state science standards. “The controversy exists in political and religious groups. It does harm to both science and religion.”

Haynes, however, believes that board wanting to “teach the controversy” must first prepare teachers by providing accurate information and resources to help them understand the science.

“I’m all for exposing students to different viewpoints and students understanding why there’s a controversy to the origins, but only if we properly prepare teachers to teach about these issues in ways that aren’t prejudiced or subjective,” says Haynes. “Teach the controversy” means nothing without follow-through. It could be a recipe for disaster.”

## AT THE LOCAL LEVEL

The evolution controversy can erupt at the local level as well as in state standards. What should you do if the issue is raised in your community?

First, consult your school attorney and your curriculum department to determine what’s legal and what’s good

science. Scott says school boards must think about what’s best for their students, and that is to “teach them the scientific consensus.”

That’s why standards developed at the state level are so important, says Skoog, the Texas Tech dean.

“If evolution is on the standards and the teacher doesn’t teach it, the teacher puts the students at risk,” Skoog says. “For me it’s a breach of the public officials’ integrity. It’s my job to prepare students.”

Lerner, the Cal State professor, notes that local school boards are “constantly assaulted” with issues that have political consequences. Ultimately, though, students are the ones most often put at a disadvantage.

“You have to think whether this is a politically correct thing to do or are you going to do the right, moral thing,” says Lerner.

Will there ever come a time when there’s a meeting of the minds in the evolution debate?

“The challenge is how can we improve science education in a way that helps people get beyond the cartoon version of both sides and become educated about what science is, what works, and what the prevailing views are and yes, what the criticism are,” Haynes says.

For Ohio board member Martha Wise, the evolution decision ended a painful, tumultuous year. “It’s divided a lot of things,” says Wise. “It certainly has divided the board.”