

ESSAY | Judith Shulevitz

# When Cosmologies Collide

*If Darwinism is such a powerful explanation, why won't creationism go away? Perhaps some of the fault lies with evolutionists themselves.*

IN the merely controversial part of his decision last month banning "intelligent design" from biology classes in Dover, Pa., Judge John E. Jones III ruled that intelligent design, a theory that attributes the complexity of life to supernatural causes, amounts to religion, not science. In the part that really drove some of the theory's supporters crazy, he pronounced it "utterly false" to think that evolution is incompatible with faith in God. An editorialist on the Web site of the Discovery Institute, a research group that promotes intelligent design, declared that the judge had no right to tell him what to believe. "This is like a judge assuring us that it is 'utterly false' that Judaism is inconsistent with eating pork," he wrote.

The judge was echoing a position taken by scientific expert witnesses, who had testified that science is a method, not a creed — a way of finding things out about the natural world, not a refutation of anything beyond that world. On the enduring mysteries of divinity and transcendence, science remains officially ag-

ty may have conducted a cold-eyed scrutiny of their own assumptions, but it's equally possible that they haven't. "Scientists sometimes deceive themselves into thinking that philosophical ideas are only, at best, decorations or parasitic commentaries on the hard objective triumphs of science," the philosopher Daniel Dennett has written. "But there is no such thing as philosophy-free science; there is only science whose philosophical baggage is taken on board without examination."

Could something as trivial as scientists' lack of self-awareness help explain why, nearly 150 years after Darwin, creationism in its various forms has become the most popular critique of science? Well, consider how scientists tend to respond to the attack on evolution. Rather than trying to understand creationism as a culturally meaningful phenomenon — as, say, a peculiarly American objection to the way elites talk about evolution — they generally approach it as a set of ludicrous claims easily dismantled by science.

Eugenie C. Scott's **EVOLUTION VS. CREATIONISM** (University of California, \$19.95) represents this strategy at its best, and least inflammatory. Scott, a physical anthropologist, runs the National Center for Science Education, which defends the teaching of evolution in high schools. (She advised the parents fighting the Dover school board.) Scott could be said to be the one really doing God's work as she patiently rebuts people who make most other scientists spit gaskets like short-circuiting robots. Her book is both a straightforward history of the debate and an anthology of essays written by partisans on each side. Its main virtue is to explain the scientific method, which many invoke but few describe vividly. Scott also manages to lay out the astronomical, chemical, geological and biological bases of evolutionary theory in unusually plain English.

Anyone who wants to defend evolution at his next church picnic should arm himself with this book. What's flood geology? It's the creationist thesis that a vast canopy of hot vapor once surrounded the earth, cooled down in the time of Noah, and turned into a flood; an atmospheric scientist explains why that's impossible. Why don't evolutionary biologists worry about the Cambrian Explosion, when invertebrates showed up on earth as if out of nowhere? Because paleontologists don't need to see a fossil of every species that ever existed to infer the links between species, for one thing. Scott also walks us through the legal history of American creationism — the court rulings that forced anti-evolutionists to adapt to their increasingly secular environment by adopting scientific jargon.

In treating science as no more than what scientists say it is, however, Scott does not help us grasp why creationism has continued to thrive. For that you'd need **THE EVOLUTION-CREATION STRUGGLE** (Harvard University, \$25.95), by the philosopher of science Michael Ruse. Ruse is "an ardent Darwinian" who has testified against the inclusion of creationism in

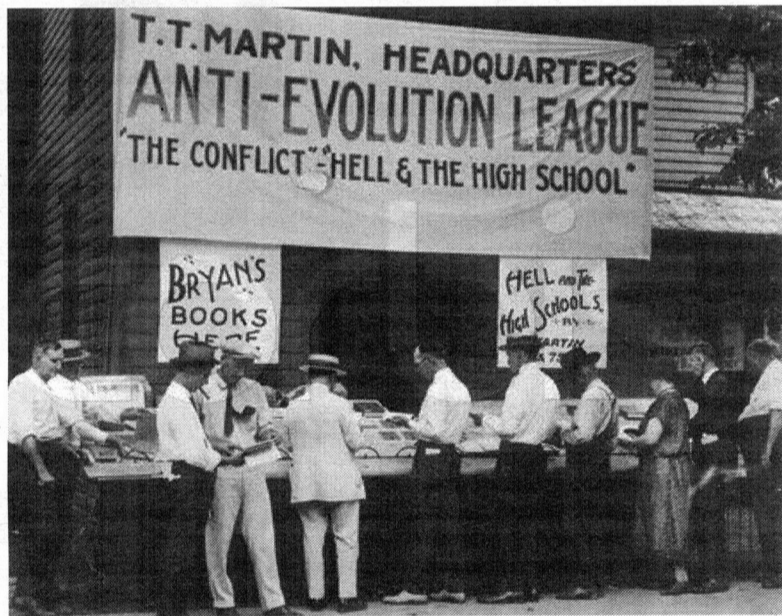
public school science curriculums. Nonetheless, he says here, we must be careful about how we use the word "evolution," because it actually conveys two meanings, the science of evolution and something he calls "evolutionism." Evolutionism is the part of evolutionary thought that reaches beyond testable science. Evolutionism addresses questions of origins, the meaning of life, morality, the future and our role in it. In other words, it does all the work of a religion, but from a secular perspective. What gets billed as a war between hard science and mushy theology should rather be understood, says Ruse, as "a clash between two rival metaphysical world pictures."

Ruse sweeps readers through three millennia of evolutionism and proto-evolutionism, starting with the Old Testament, which introduced the idea of historical change into a world where time had been changeless. He passes through Plato, Aristotle, Aquinas and the Reformation before stopping for a long visit with Charles Darwin. Darwin believed in a Designer until he discovered natural selection, the continual culling of less fit forms of life that drives evolution forward. Even then, he didn't reject God altogether. He became a deist, arguing that a God who operates through impersonal laws has more grandeur than one who constantly meddles. But evidence of divine indifference (and, some say, the death of his 10-year-old daughter) eventually drove him to agnosticism.

And there matters are often said to have stood ever since. "Social discourse on the cosmic origins of human beings has been stuck in a rut since the publication of . . . 'On the Origin of Species,'" writes the paleontologist Niles Eldredge in his foreword to Scott's book. The enlightened half of American society grasps Darwin's point and is not troubled by it; the other half intransigently refuses to.

But the debate has not stood still, and Darwinism has not always been synonymous with enlightenment. As Ruse points out, Darwinism didn't mean then what it means today, because science looked nothing like it does now. It was a hobby for amateurs, with few standards and no sense of its own limitations. Darwin, uninterested in promoting evolution, left the job to his more charismatic friend Thomas Henry Huxley. A doctor and morphologist, Huxley professionalized the new biology, using it to train medical students who till then had spent more time on Plato than anatomy. He also gave public lectures that retold the story of creation as a tale about the blind workings of nature's laws. His epic had a cosmic sweep to it, and no room for God.

To Darwin's dismay, it didn't have room for the fine details of evolutionary processes either. What Huxley wanted to talk about was the march of progress — how evolution drives species upward, culminating in the development of man. Darwin had realized that if he were to turn his theories into a credible science, he'd have to avoid ascribing a higher merit to those who won out in the battle for life. But Huxley's evolutionism overshadowed Darwin's less judgment-laden science for at least



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John T. Scopes in 1925, the year of his trial for teaching evolution in Dayton, Tenn. Above, a book sale in Dayton during the trial.

nostic. But people rarely hew to official doctrine. That science and religion belong to separate realms (they're "non-overlapping magisteria," as Stephen Jay Gould grandly put it) is a good line to stick to if you're going to argue that the creationists play unfair, but it's wishful to think that scientists always live by it.

Perhaps it's unreasonable to expect that they would. Given what it takes to train for a career in science, you have to ask why a person would persist if naturalism didn't strike him as the best way of explaining the world. It's no accident that you find a far greater proportion of nonbelievers among American scientists — upward of 60 percent — than among Americans in general. Those who deny that they discount nonmaterialist accounts of reali-

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half a century. Herbert Spencer, the dominant pop philosopher of the latter half of the 19th century, coined the phrase “survival of the fittest,” and promoted Social Darwinism, a laissez-faire evolutionism that put English-speaking Europeans at the top of the heap. Eugenics became respectable. Ruse notes that the high school biology textbook defended in the 1925 Scopes Monkey trial included, along with a brief mention of evolution, a call for improving human stock through selective breeding.

Fundamentalists, already horrified by evolution’s challenge to the creation story, concluded that it also led to dangerous schemes for reshaping humankind. They turned away from science and returned to the Bible for information about how the world was made. Their Bible also told them how it would end — with Christ fending off the Antichrist — and they wanted to find themselves on the right side of that battle.

The most surprising twist in Ruse’s drama is the starring role he grants to the apocalyptic eschatology known as millennialism, which comes in two basic variants. Millennialists in general hold that before the Last Judgment, Christian martyrs will rise from the dead to rule for a thousand years of peace. Premillennialists argue that Jesus will personally usher in that millennium. Postmillennialists reply that Christ will come after the millennium, which they interpret as the heaven on earth that good people fashion through good works. Over the centuries, some premillennialists evolved into American fundamentalists. Some postmillennialists evolved into social reformers. An only partly secularized postmillennialist optimism fueled many American do-good causes, such as abolitionism. Ruse adds evolutionism to the list.

Ruse’s assertion that evolutionism amounts to a latter-day postmillennialism feels more like a clever metaphor than a genuine link between ideas. Calling those who preach redemption through evolution “post-millennialists,” however, is a good way of showing them how they look to America’s many premillennialists. Spencerian pronouncements have certainly become less acceptable, but the notion that evolution equals progress still runs through many evolutionary theorists’ works and public statements, giving them, at times, a curiously spiritual feel.

Some say that human intelligence results from natural selection’s preference for complex systems, which is not that different from saying that humans have ascended to the top of the chain of being. Some say that only by attending to the lessons of evolution and preserving biodiversity will we spare the planet an ecological catastrophe, a point that seems indisputable but nonetheless turns evolution into an urgent moral imperative. Others offer an evolutionary account of human nature that is all too often construed by the popular press as exhorting us to give in to urges that served us better on the Pleistocene savanna than in the modern world.

In other words, evolutionism — the conviction that evolution explains life’s meaning and tells us how to deal with the future — remains as powerful a cultural force as ever. But what should we do about it? Ruse calls for “a more informed and self-aware approach to the issues,” a suggestion that’s commendable but won’t do much to tone down those people convinced that evolution has large social and theological (or anti-theological) implications. Besides, those people may well be right. I’d suggest something else: Teach evolution in biology class and evolutionism in religion class, along with creationism, deism and all the other cosmologies that float unexamined through our lives. Religion class is just the place for a fight about religion. □

# The Conformist

*A law professor draws on his life to challenge society’s invidious peer pressure.*

## COVERING

*The Hidden Assault on Our Civil Rights.*

By Kenji Yoshino.

282 pp. Random House. \$24.95.

By ANN ALTHOUSE

“DON’T think so hard,” Kenji Yoshino’s mother once said to him in Japanese. “Life is not that simple.” But Yoshino has spent his life thinking very hard, as if the problems of sexual orientation and racial identity that have troubled him so much really were amenable to answers. Yoshino set aside his early interest in poetry to go to law school, and from law school to the legal academy, where it’s conventional to wring legal solutions from whatever problems have claimed the scholar’s attention. But “Covering: The Hidden Assault on Our Civil Rights” is, in large part, a personal story.

Yoshino tells that story with a light touch, beginning with his struggles to understand himself through poetry. He remembers his best teacher at Harvard, a “whippet-thin chain smoker” with “waist-length auburn hair and eyebrows sharp as circumflex accents,” who calls him “Radiating Naïveté.” At a time when he is spending his Saturday nights in his “cement-block dorm room . . . agonizing not over women, or men, but line breaks,” she pushes him with questions like “have you entered the realm of the erotic yet?” Later, as a brooding Rhodes Scholar, given to long soaks in the bathtub, he visits the Moonlight World display at the London Zoo and identifies with a loris lurking in the darkness.

He chooses law school as the way out of this poetic funk. Having come out as gay, he feels too vulnerable as a poet and imagines that law will protect him. At Yale Law School, he seeks out the courses on sexual orientation and becomes so inspired that he sleeps with his arm around the casebook. Nevertheless, when he returns to Yale as a professor and deputy dean, he still feels the need to play down his sexual orientation. He avoids “gay examples” when teaching constitutional law. He attends law school functions without bringing the man he is dating. And he takes it to heart when a colleague remarks that he should be a “homosexual professional” and not a “professional homosexual.”

Despite coming out to his friends, his parents and his colleagues, Yoshino still feels afflicted by the pressure to act as though being gay does not have much effect on his life. That is, he is required to “cover.” The term covering comes from Erving Goffman’s “Stigma.” Goffman distinguished covering from passing: rather than trying to render a characteristic invisible, a person might manage or mute it. Franklin D. Roosevelt was Goffman’s example: everyone knew he needed a wheelchair, but he would still have himself seated behind a table before a meeting.

Yoshino describes the many ways he has felt called upon to cover his gay identity. He gets the message that he ought to modify his physical appearance, to steer away from

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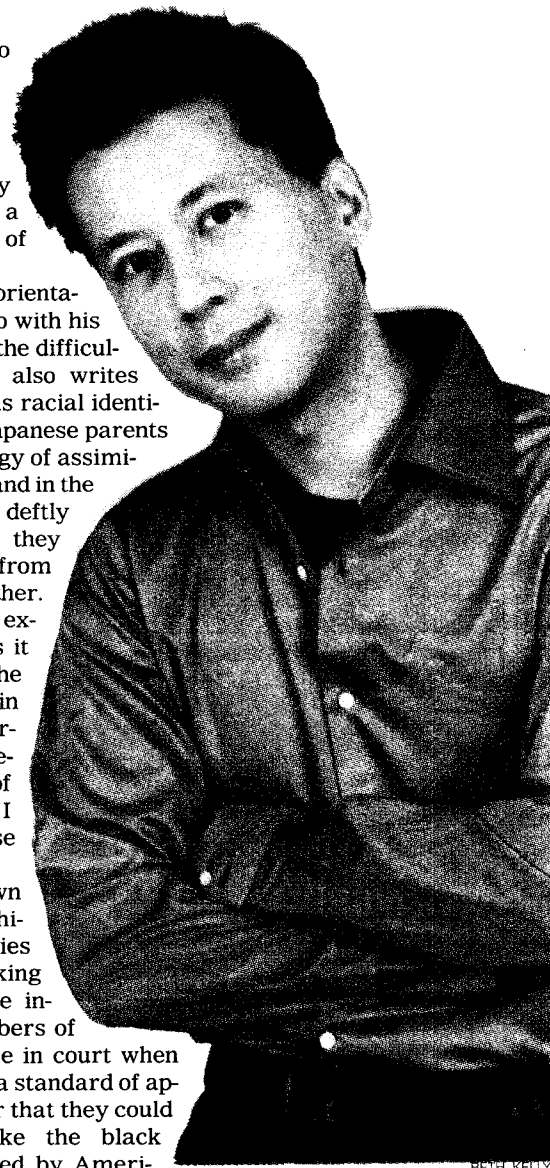
gay culture and to minimize his relationships and his activism. His mother accepts that he’s gay but wonders why he needs to be such a *jandaaku* — a Joan of Arc.

Though sexual orientation provides Yoshino with his primary example of the difficulties of covering, he also writes perceptively about his racial identity. He is the son of Japanese parents who adopted a strategy of assimilation, both in Japan and in the United States. They deftly switch personas as they move back and forth from one place to the other. Trying to follow their example, Yoshino finds it easy to conform in the United States, but in Japan he is overwhelmed by the behavioral component of Japanese identity: “I . . . flunked Japanese race.”

Beyond his own life experiences, Yoshino recounts stories from legal cases, taking special note of those instances where members of protected groups lose in court when they decline to meet a standard of appearance or behavior that they could comply with — like the black woman who was fired by American Airlines for wearing her hair in cornrows. Why do we push human beings into a standardized mold, he asks, when we ought to value diversity and self-expression? Yoshino offers his personal search for authenticity as an encouragement for everyone to think deeply about the ways in which all of us have covered our true selves. And he presents his story and weaves in the legal cases in such an engaging way that we really do feel newly inspired.

If this is an “assault on our civil rights,” as the subtitle has it, we might expect to hear how the courts can save us, but readers who get their hopes up will be disappointed, even as readers (like me) who dread an overambitious litigation agenda are disarmed. To his credit, Yoshino recognizes that the problems he has described lie mostly in the realm of personal relationships and, more important, the individual’s own inhibitions. What could the legal solution to covering be? The fact is, his mother was right: life is not that simple.

Yoshino is bold enough not to engage in the covering demands made of the law professor. Though he speaks vaguely of shifting the legal discourse from equality to liberty, he holds out little hope for new remedies. Lawsuits result when people “have no better way of talking to each other.” The real work of civil rights takes place outside of the law, he tells us, in individual conversations about the reasons for demanding assimilation to some imagined standard of behavior, and the burdens felt by those who are asked to cover their authentic selves. □



BETH KELLY

**Yoshino took it seriously when a colleague told him he should be a homosexual professional and not a professional homosexual.**