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At Some Colleges, Classes Questioning Evolution Take Hold

'Intelligent Design' Doctrine Leaves Room for Creator; In Iowa, Science on Defense

A Professor Turns Heckler

By DANIEL GOLDEN Staff Reporter of THE WALL STREET JOURNAL November 14, 2005; Page A1

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AMES, Iowa -- With a magician's flourish, Thomas Ingebritsen pulled six mousetraps from a shopping bag and handed them out to students in his "God and Science" seminar. At his instruction, they removed one component -- either the spring, hammer or holding bar -- from each mousetrap. They then tested the traps, which all failed to snap.

"Is the mousetrap irreducibly complex?" the Iowa State University molecular biologist asked the class.



Thomas Ingebritsen

Thomas Ingebritsen

"Yes, definitely," said Jason Mueller, a junior biochemistry major wearing a cross around his neck.

That's the answer Mr. Ingebritsen was looking for. He was using the mousetrap to support the antievolution doctrine known as intelligent design. Like a mousetrap, the associate professor suggested, living cells are "irreducibly complex" -- they can't fulfill their functions without all of their parts. Hence, they could not have evolved bit by bit through natural selection but must have been devised by a creator.

"This is the closest to a science class on campus where anybody's going to talk about intelligent design," the fatherly looking associate professor told his class. "At least for now."

Overshadowed by attacks on evolution in high-school science curricula, intelligent design is gaining a precarious and hotly contested foothold in American higher education. Intelligent-design courses have cropped up at the state universities of Minnesota, Georgia and New Mexico, as well as Iowa State, and at private institutions such as Wake Forest and Carnegie Mellon. Most of the courses, like Mr. Ingebritsen's, are small seminars that don't count for science credit. Many colleges have also hosted lectures by advocates of the doctrine.

The spread of these courses reflects the growing influence of evangelical Christianity in academia, as in other aspects of American culture. Last week, the Kansas state board of education adopted new science guidelines that question evolution.

Intelligent design does not demand a literal reading of the Bible. Unlike traditional creationists, most adherents agree with the prevailing scientific view that the earth is billions of years old. And they allow that the designer is not necessarily the Christian God.

Still, professors with evangelical beliefs, including some eminent scientists, have initiated most of the courses and lectures, often with start-up funding from the John Templeton Foundation. Established by famous stockpicker Sir John Templeton, the foundation promotes exploring the boundary of theology and science. It fostered the movement's growth with grants of \$10,000 and up for guest speakers, library materials, research and conferences.

Intelligent design's beachhead on campus has provoked a backlash. Universities have discouraged teaching of intelligent design in science classes and canceled lectures on the topic. Last month, University of Idaho President Tim White flatly declared that teaching of "views that differ from evolution" in science courses is "inappropriate."

Citing what they describe as overwhelming evidence for evolution, mainstream scientists say no one has the right to teach wrong science, or religion in the guise of science. "My interest is in making sure that intelligent design and creationism do not make the kind of inroads at the university level that they're making at the K-12 level," says Leslie McFadden, chair of earth and planetary sciences at the University of New Mexico, who led a successful fight there to re-classify a course on intelligent design from science to humanities. "You can't teach whatever you damn well please. If you're a geologist, and you decide that the earth's core is made of green cheese, you can't teach that."

At Iowa State, where Mr. Ingebritsen teaches, more than 120 faculty signed a petition this year condemning "all attempts to represent intelligent design as a scientific endeavor." In response, 47 Christian faculty and staff members, including Mr. Ingebritsen, signed a statement calling on the university to protect their freedom to discuss intelligent design.

At stake in this dispute are the minds of the next generation of scientists and science teachers. Some are arriving at college with conflicting accounts of mankind's origins at home, in church and at school. Many of Iowa State's 21,000-plus undergraduates come from fundamentalist backgrounds and belong to Christian student groups on campus.

According to an informal survey by James Colbert, an associate professor who teaches introductory biology at Iowa State, one-third of ISU freshmen planning to major in biology agree with the statement that "God created human beings pretty much in their present form at one time within the last 10,000 years." Although it's widely assumed that college-bound students learn about evolution in high school, Mr. Colbert says that isn't always the case.

"I've had frequent conversations with freshmen who told me that their high-school biology teachers skipped the evolution chapter," he says. "I would say that high-school teachers in many cases feel intimidated about teaching evolution. They're concerned they're going to be criticized by parents, students and school boards."

Avoiding Confrontations

Warren Dolphin, who also teaches introductory biology at Iowa State, says he's begun describing evolution to his class as a hypothesis rather than as a fact to avoid confrontations with creationist students. "I don't want to get into a nonproductive debate," he says. "What I'm saying is so contrary to what they're hearing in their small town, their school, their church that I won't convert them in 40 lectures by a pointy-headed professor. The most I can do is get them to question their beliefs."

In a 1999 fund-raising proposal, the Discovery Institute -- an intelligent design think tank in Seattle -- outlined what it called a "wedge strategy" to replace the "stifling dominance of the materialist worldview" with "a science consonant with Christian and theistic conviction." Its five-year objectives included making intelligent design "an accepted alternative in the sciences" and the "dominant perspective" at two universities which weren't identified.

While these goals weren't met, some intelligent-design advocates associated with the Discovery Institute, found a receptive ear at the Pennsylvania-based Templeton Foundation. Between 1994 and 2002, the foundation funded nearly 800 courses, including several on intelligent design. It has also supported research by William Dembski, who headed an intelligent-design center at Baylor University, and Guillermo Gonzalez, co-author of a 2004 book, "The Privileged Planet." The book claimed to discern a designer from the earth's position in the cosmos. Mr. Gonzalez, an assistant professor of astronomy at Iowa State, received \$58,000 from the foundation over three years.

Foundation staff members now say that intelligent design hasn't yielded as much research as they'd

hoped. Mr. Templeton, who chairs the foundation and will turn 93 later this month, believes "the creation-evolution argument is a waste of time," says Paul Wason, the foundation's director of science and religion programs. Mr. Wason adds that Mr. Templeton is more interested in applying the scientific method to exploring spiritual questions such as the nature of forgiveness. Nevertheless, staff members remain reluctant to dismiss intelligent design entirely, in part because the doctrine's popularity could help achieve the foundation's goal of persuading evangelical Christians to pursue scientific careers. The foundation also complains that academia is too quick to censor the doctrine.

Templeton-funded proponents of intelligent design include Christopher Macosko, a professor of chemical engineering at University of Minnesota. Mr. Macosko, a member of the National Academy of Engineering, became a born-again Christian as an assistant professor after a falling-out with a business partner. For eight years, he's taught a freshman seminar: "Life: By Chance or By Design?" According to Mr. Macosko, "All the students who finish my course say, 'Gee, I didn't realize how shaky evolution is.'"

Another recipient of Templeton funding, Harold Delaney, a professor of psychology at the University of New Mexico, taught an honors seminar in 2003 and 2004 on "Origins: Science, Faith and Philosophy." Co-taught by Michael Kent, a scientist at Sandia National Laboratories, the course included readings on both sides as well as a guest lecture by David Keller, another intelligent-design advocate on the New Mexico faculty.

The university initially approved the course as qualifying students for science credit, as had been the custom with many interdisciplinary courses. Then the earth sciences chairman, Mr. McFadden, heard about the course. In an email to the chairman of biology, he described Mr. Delaney and Mr. Kent each as a "known creationist." The course, Mr. McFadden wrote, was "clearly 'designed' to show that 'intelligent design' is legitimate science.' " He added that he was "absolutely opposed" to classifying "Origins" as a science course.

The biology chairman and other faculty members agreed, and Reed Dasenbrock, then dean of arts and sciences, re-categorized "Origins" as a humanities course.

Mr. Delaney complained in a letter to the director of the honors program that the reclassification was "a violation of my academic freedom." But Mr. Dasenbrock, now interim provost, says the principle of academic freedom was not at stake in the decision. "People didn't buy it as science," he said.

The controversy didn't end there. Once the course started, a retired neuroscientist, Gerald Weiss, sat in on several classes, passing out evolution literature and heckling the teachers. Intelligent design is "deception," Mr. Weiss said. "They had the students in the palm of their hands. I wasn't welcome at all, and I finally gave it up."

Despite the humanities classification, Mr. Delaney says, other faculty continued to object to "Origins" and regard it as an embarrassment. He doesn't plan to offer the course again.

Some well-respected scientists have fostered the spread of intelligent design. Henry F. Schaefer, director of the Center for Computational Quantum Chemistry at the University of Georgia, has written or coauthored 1,082 scientific papers and is one of the world's most widely cited chemists by other

researchers.

Mr. Schaefer teaches a freshman seminar at Georgia entitled: "Science and Christianity: Conflict or Coherence?" He has spoken on religion and science at many American universities, and gave the "John M. Templeton Lecture" -- funded by the foundation -- at Case Western Reserve in 1992, Montana State in 1999, and Princeton and Carnegie Mellon in 2004. "Those who favor the standard evolutionary model are in a state of panic," he says. "Intelligent design truly terrorizes them."

This past April, the school of science at Duquesne University, a Catholic university in Pittsburgh, abruptly canceled its sponsorship of a lecture by Mr. Schaefer in its distinguished scientist series. According to David Seybert, dean of the Bayer School of Natural and Environmental Sciences, Mr. Schaefer was invited at the suggestion of a faculty member belonging to a Christian fellowship group on campus. The invitation was withdrawn after several biology professors complained that Mr. Schaefer planned to speak in favor of intelligent design. The school wanted to avoid "legitimizing intelligent design from a scientific perspective," Mr. Seybert said. Faculty members were also concerned that top students might not apply to Duquesne if they thought it endorsed intelligent design. Mr. Schaefer gave his lecture -- entitled "The Big Bang, Stephen Hawking, and God" -- to a packed hall at Duquesne under the auspices of a Christian group instead.

High Tensions

Tensions are running high at Iowa State, with Mr. Ingebritsen playing a key role. Joining the Iowa State faculty in 1986, he specialized in studying how cells communicate, but ended his research about 10 years ago and took up developing online biology courses. Shortly before that career change, he had converted from agnosticism to evangelical Christianity. As he explored whether -- and how -- modern science could be compatible with his religious beliefs, intelligent design intrigued him.

He taught "God and Science" for three years starting in 2000 without incident. But when he again proposed the seminar in 2003, members of the honors curriculum committee sought outside opinions from colleagues in biology and philosophy of science. They reported that the course relied on a textbook by a Christian publisher and slighted evolution. "I have serious worries about whether a course almost exclusively focused on the defense of Christian views is appropriate at a secular, state institution," wrote Michael Bishop, then philosophy chairman. The committee rejected the course by a 5-4 vote.

After protesting to a higher-level administrator to no avail, Mr. Ingebritsen revised the syllabus, added a mainstream textbook, and resumed teaching the course in 2004.

On the Spot

On a brisk Thursday in October, following the mousetrap gambit, Mr. Ingebritsen displayed diagrams on an overhead projector of "irreducibly complex" structures such as bacterial flagellum, the motor that helps bacteria move about. The flagellum, he said, constitutes strong evidence for intelligent design.

One student, Mary West, disputed this conclusion. "These systems could have arisen through natural selection," the senior said, citing the pro-evolution textbook.

"That doesn't explain this system," Mr. Ingebritsen answered. "You're a scientist. How did the flagellum evolve? Do you have a compelling argument for how it came into being?"

Ms. West looked down, avoiding his eye. "Nope," she muttered. The textbook, "Finding Darwin's God," by Kenneth Miller, a biology professor at Brown University, asserts that a flagellum isn't irreducibly complex because it can function to some degree even without all of its parts. This suggests to evolutionists that the flagellum could have developed over time, adding parts that made it work better.

During a class break, Ms. West says that Mr. Ingebritsen often puts her on the spot. "He knows I'm not religious," she says. "In the beginning, we talked about our religious philosophy. Everyone else in the class is some sort of a Christian. I'm not." The course helps her understand "the arguments on the other side," she adds, but she would like to see Mr. Ingebritsen co-teach it with a proponent of evolution.

Ms. West and other honors students will have a chance to hear the opposing viewpoint next semester. Counter-programming against Mr. Ingebritsen, three faculty members are preparing a seminar titled: "The Nature of Science: Why the Overwhelming Consensus of Science is that Intelligent Design is not Good Science."

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