

Of Biochemistry and Belief by William Bole

Pope John Paul II's recent statement that evolution is more than just a theory caused a flurry of headlines across the international media. One startled newspaper in Italy declared: "The Pope Says We May Descend from Apes." But the papal message came as no surprise to one Catholic scientist, who first learned about the origins of the species at St. Margaret Mary's grade school in Harrisburg, Pa. "I don't remember exactly what was said about life, other than it came from God, and that He could use whatever means He wished to produce life, and that the leading scientific explanation for how He did it was Darwin's theory of evolution," said Michael Behe, a professor of biochemistry at Lehigh University in Bethlehem, Pa. "I never gave evolution a second thought, and certainly saw no conflict with Church teaching," said Behe, who attends St. Therese of the Child Jesus Parish near Bethlehem with his wife, Celeste, and their six children. (They're expecting number seven.) A cantor who is also active in the parish's Holy Name Society, Behe still sees no conflict between faith and evolution, but is nonetheless giving Darwinism more than just a second thought. He is making waves with a newbook and a fresh attack on the notion that mere accidents of nature can explain how human beings evolved. This strikes at the heart of Darwin's theory. Pointing to Cod Pope John Paul, in his Oct. 23 speech to the Pontifical Academy of Sciences, affirmed the teaching of Pope Pius XII, whose 1950 encyclical <Humani Generis> ("The Human Race") left the door open to the idea of a gradual process of human evolution. While noting this, newspaper articles gave the impression that in Pope John Paul's remarks, religion was finally bowing to the truth of science. The New York Times, for example, cautiously compared the Pope's statement with his earlier admission that the Church made a grievous error when it persecuted Galileo for arguing that the Earth revolved around the sun. The article further described the Catholic view of Darwinism as historically "an emblem of conflict between reason and dogma, faith and science." Yet in speaking out-fittingly on The Times' opinion page-Behe asserted that religion has made ample room for science over the past century. The question today, he argued, is whether science will be as generous in acknowledging the role of religion in coming to grips with the physical universe. In an interview with Our Sunday Visitor, he elaborated by pointing to advances in physics that cast the universe. In an interview with Our Sunday Visitor, he elaborated by pointing to advances in physics that cast the universe as "precariously balanced to produce life. If any of a number of fundamental physical constants, like the speed of light or the charge on the electron, had been different by a tiny bit, the universe could not have produced life." He said this fine-tuning of nature reveals the hand of an intelligent force -"but no scientific agency has issued a statement saying that God's design is more than just a theory," as the Pope has done for evolution. For Behe, the matter has become more interesting with modern investigations into the cell, the basis of life. It is on this ground, his own field of molecular biology, that Behe is waging his assault on Darwinism. He has mounted evidence from several decades of research demonstrating an unfathomable complexity of cellular systems, and presented the findings in his new book "Darwin's Black Box: The Biochemical Challenge to Evolution" (Free Press, \$25). In Darwin's day, scientists knew little about the design of the cell, but they have today unlocked this "black box." Behe contends that the information contained in the cell smashes to bits Darwin's theory that life has evolved more or less by chance-a result of random mutations paired with natural selection, or the so-called survival of the fittest. "What we see [in the cell] is this incredible complexity that no one ever imagined. It is the complexity itself that calls for a conclusion of design" by an intelligent agent, said Behe. He added that Darwin's mechanism of random chance

cannot account for the complexity of life, especially the intricate machinery of the cell. Behe does not think science can say who or what the "intelligent agent" is that has intentionally arranged the cell in this way. But the grand theological implications of these microscopic units would be enough to make him an outcast in certain scientific circles. "Heretical is a word that is frequently applied to my idea. It's an odd word to hear in science, which is supposed to be open to any idea that accords with the data," he said. "Many people thought that science was somehow supposed to take us away from dependence on a Creator. I suppose it is distressing for them to think that modern science actually points strongly toward Him." The stakes at this crossing of religion and science are more than academic. Ever since the Scopes "monkey trial" of 1925, Darwinism has proved one of the more politically explosive of scientific theories. The teaching of evolution has detonated controversies in public schools, with "creationists" aligned against Darwin's disciples. Behe distinguishes himself from creationists, who believe God made man and the universe in one fell swoop, as well as from Darwinists. "I am not a creationist, but that doesn't stop others from labeling me one in order to gain a rhetorical advantage. I define a creationist as a person who thinks that life had to have been created by a direct supernatural act," he said. While keeping open the possibility of direct creation, Behe emphasizes that the basic material of life "could actually have been built into the universe from the beginning." This would rule out a direct supernatural act, though "the ultimate cause of life would be attributable to God." In his recent address, Pope John Paul spoke of "theories of evolution," not singularly of Darwinism. Behe said the Pope was getting across the point that evolution can mean different things to different people. For example, it could simply mean that all human beings descended from a common ancestor-to which the Church poses no objection in principle. But this leaves unanswered the question of how humans, as well as plants and animals, changed over time. "Darwin's claim to fame is that he proposed a simple, naturalistic mechanism that might cause such change-natural selection acting on random variation. So if an animal is born that is stronger or somehow better fit than its siblings, it will tend to survive and pass on its genes to its descendants," Behe said. "You can look at Darwin's theory and say the laws of nature, including natural selection, are the work of the Creator. Or you can say that if nature can do the job, there is no room for a Creator, which is simple atheism," he said, adding, that the Pope spoke plurally of "theories" because of the different philosophies as well as mechanisms that someone can attach to evolution. In Behe's view, it is not theology but rather science that has tossed a wrench into Darwin's mechanism. He said no Darwinist has managed to explain how the bacterial flagellum or blood-clotting cascade-or any other complex, interacting cellular system-could have resulted from a gradual process of random variation. When considering/he intricate mechanisms needed to sustain even the simplest of cells, "I am quite certain that the cell was produced by intelligent design." What might all this say about Pope John Paul's observation that, in order for evolution to square with Christian faith, the human ancestor must at some point have taken an "ontological leap;" that is, a sudden leap to a higher level of being-with the moral and spiritual powers that make him a person in God's image? Like the Pope, Behe doubts that science can shed light on this moment of spiritual transition, which he sees as a theological matter. Generally speaking, though, he thinks modern science does lend support to people who are willing to take the leap of faith: "It is only with considerable effort that a person can cling to materialistic views of the universe." O Bole is a senior correspondent for Our Sunday Visitor. For more information on Ron DiCianni's "In the Beginning," call 1-800-944- 8000 THE FREEDOM OF A CATHOLIC SCIENTIST In the battles over the origins of the human species Michael Behe has found that being a Catholic can offer distinct advantages. He submits that

Catholics may have "the most freedom to follow the research wherever it may lead." By contrast, Behe pointed to atheists at one end of the evolution divide and biblical literalists at the other. "People who are materialists or atheists simply have to come up with some unintelligent [natural] process for every thing they see in the world," he explained "So even if they look at the most fantastically complex biological system, they're constrained by their philosophy to say that it was produced by ultimately random forces." On the other hand, "people like biblical literalists are constrained by their own views to shoehorn everything they see into a 10,000-year-old earth," Behe said, referring to the fundamentalist account of creation. Somewhere in the middle are Catholics "With Catholicism, you start with the knowledge that God made the universe and made light, but you don't know how He did it," Behe said "He might have done it in a puff of smoke, or He might have done it entirely through natural laws. "And so the job for a Catholic scientist is to get out there and look and just try to evaluate the evidence on its own terms You're really free to come to whatever conclusions your observations lead". -William Bole This article was taken from the December 1, 1996 issue of Our Sunday Visitor. To subscribe write Our Sunday Visitor, Inc, 200 Noll Plaza, Huntington, In 46750. Our Sunday Visitor is published weekly at a subscription rate of \$36.00 per year. Copyright (c) 1996 EWTN Online Services. -

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