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## 'Intelligent Design Creationism and Its Critics': Supernatural Selection

By JIM HOLT

In the last decade or so, creationism has grown sophisticated. Oh, the old-fashioned creationists are still around, especially in the Bible Belt. They're the ones who believe that the earth is only a few thousand years old, that God created it and all its inhabitants in six days and that fossils are a product of Noah's flood. In the early 1990's, however, a new breed of creationists appeared. These "neo-creos," as they have been called, are no Dogpatch hayseeds. They have Ph.D.'s and occupy positions at some of the better universities. The case they make against Darwinism does not rest on the authority of Scripture; rather, it proceeds from premises that are scientific and philosophical, invoking esoteric ideas in molecular biology, information theory and the logic of hypothesis testing.

When the neo-creos go public -- as they did recently in a hearing before the Ohio Board of Education, which they were petitioning for equal time in the classroom with Darwinism -- they do not stake any obviously foolish claims. They concede that the earth is billions of years old, and that some evolution may have taken place once the basic biochemical structures were brought into being. What they deny is that the standard Darwinian theory, or any other "naturalistic" theory that confines itself to mindless, mechanical causes operating gradually over time, suffices to explain the whole of life. The biological world, they contend, is rife with evidence of intelligent design -- evidence that points with near certainty to the intervention of an Intelligent Designer.

"Intelligent Design Creationism and Its Critics" is a great fat collection of essays, some three dozen in all, that examine this thesis from every imaginable angle. Its editor, the philosopher Robert T. Pennock, has himself written a book opposing the neo-creos ("Tower of Babel," 1999), and he admits that his selection here is stacked against them by about two to one. Yet most of the major proponents of intelligent design are represented: Phillip E. Johnson, a law professor at the University of California, Berkeley, and the father of the movement; the biochemist Michael J. Behe; the mathematician William A. Dembski; and the philosopher of logic Alvin Plantinga. They are given the chance not only to present their reasoning but also to defend it against their more prominent Darwinian critics, including the biologists Stephen Jay Gould and Richard Dawkins and the philosophers of science Philip Kitcher and Michael Ruse. The debate ranges freely over genetics, theology, the history of science and the theory of knowledge. The rhetoric is spirited, if sometimes barely civil, and the to-and-fro of ideas can be impressive.

Before we get to the scientific arguments of the neo-creos, a word should be said about their motivation. Just what do they have against Darwinism? Unlike the old-fashioned creationists, they are not especially worried about evolution conflicting with a literal reading of Genesis. Then why can't they join with the mainstream religions, which have made their peace with Darwinism? In 1996, for example, Pope John Paul II said that the theory of evolution had been "proved true" and asserted its consistency with Roman Catholic doctrine. Stephen Jay Gould, though agnostic himself, salutes the wisdom of this papal pronouncement, arguing that science and religion are "nonoverlapping magisteria." But the neo-creos aren't buying this. They think that belief in Darwinism and belief in God are fundamentally incompatible. Here, ironically, they are in agreement with their more radical Darwinian opponents. Both extremes concur that evolution is, in the words of Phillip Johnson, "a purposeless and undirected process that produced mankind accidentally" and, as such, must be at odds with the idea of a purposeful Creator.

The neo-creos are right to think that evolution is not religiously neutral. If nothing else, it undercuts what

has traditionally been the most powerful argument for God's existence, the "argument from design." No longer is the God hypothesis required to explain the intricate complexity of the living world. Christian intellectuals who accept Darwinism insist that evolution still leaves ample scope for a Creator-God, one who got the universe rolling in just the right way so that, by sheer chemistry and physics, beings like us would inevitably appear without further supernatural meddling. Ernan McMullin, a philosopher of science at Notre Dame who also happens to be a Catholic priest, argues that the resources of God's original creation "were sufficient for the generation of the successive orders of complexity that make up our world." (Another contributor wonders whether the creationist idea of divine action hasn't been "unduly affected by the 'special effects' industry.") But this deistic notion of God holds little appeal for the neo-creos. They remain vexed that, as Richard Dawkins pointedly observes, "Darwin made it possible to be an intellectually fulfilled atheist."

To regain the advantage for religion, the neo-creos have devised a two-part strategy. First, they try to establish their intelligent-design theory as the only alternative to Darwinism for explaining life. (The content of intelligent design is deliberately left vague: it can mean either creation by the designing agent or purposefully "guided" evolution.) Then they proceed negatively, deploying various arguments to show that Darwinian mechanisms could not possibly do the trick. The logic of this strategy is impeccable: Either Darwinism or intelligent design. Not Darwinism. Therefore, intelligent design. Armed with that conclusion, they hope to pry scientifically minded people away from a purely secular worldview.

At the moment, there is no serious scientific rival to Darwinism. Indeed, if the explanation for the origin and complexity of life must be sought in physical mechanisms, then an evolutionary theory of some sort would seem to be inevitable. But why, the neo-creos ask, should other sorts of explanations -- those positing intelligent causes, supernatural interventions -- be ruled out by fiat? To do so betrays a commitment to "metaphysical naturalism," the doctrine that nature is a system of material causes and effects sealed off from outside influences; and that, they say, is a matter of faith, not proof. But the Darwinians have a devastating retort to the charge of metaphysical naturalism: nothing succeeds like success. As Michael Ruse points out, modern science's refusal to cry miracle when faced with explanatory difficulties has yielded "fantastic dividends." Letting divine causes fill in wherever naturalistic ones are hard to find is not only bad theology -- it leaves you worshiping a "God of the gaps" -- but it is also a science-stopper.

Besides, the evidence for Darwinism looks awfully strong. Yes, there are internal disagreements over the mechanisms and tempo of evolution. But the core thesis that all living things have a common ancestry, long supported by the pattern of structural similarities among them and by the fossil record, has received stunning new confirmation from molecular genetics. Johnson does his lawyerly best to cast doubt on the evidence for common ancestry. However, the more tough-minded of the neo-creos are willing to accept the historical claim that organisms evolved from one another. They even acknowledge a role for the standard Darwinian mechanism (natural selection operating on random variation) in the process. To make good on the second part of their strategy, the Not Darwinism part, they instead try to show that for deeper reasons Darwinism is bound to fall short of telling the whole story. They have three main arguments, all of which seem clever at first blush.

Michael Behe attacks Darwinism at the molecular level, recapitulating the case he made in his 1996 book, "Darwin's Black Box." If you peer inside a cell, Behe says, you see wonderfully intricate little machines, made out of proteins, that carry on the functions necessary for life. They are so precisely engineered that they exhibit what he calls "irreducible complexity": alter or remove a single part and the whole thing would grind to a halt. How could such cellular machinery have evolved in piecemeal fashion through a series of adaptations, as Darwinism holds?

Alvin Plantinga makes a philosophical assault on Darwinism, claiming that it is self-undermining. Suppose the Darwinian theory of evolution were true. Then, Plantinga submits, our mental machinery, having developed from that of lower animals, would be highly unreliable when it came to generating true theories. (As it happens, Darwin himself once confessed to the same "horrid doubt" about his theory in a letter: "Would anyone trust in the convictions of a monkey's mind?") In other words, if our belief in Darwinism were true, then none of our theoretical beliefs would be reliable -- including our belief in Darwinism.

Theism, by contrast, escapes this difficulty: if we are made in the image of God, the ultimate knower, then divine providence can be counted on to have supplied us with reliable cognitive faculties.

William Dembski bases his anti-Darwinian argument on what he calls "the law of conservation of information." Our DNA contains a wealth of complex information, he observes. How did it get there? Natural causes can't be responsible. For natural causes comprise only chance and necessity; and, he purports to show, neither chance nor necessity, nor any combination of the two, can create information. Therefore, the origin of genetic information "is best sought in intelligent causes."

SEEING how the Darwinians go about rebutting these arguments makes for high intellectual entertainment. To counter Behe's irreducible complexity argument, they give a fascinating account of how proteins that originally evolved for one function can be co-opted by the cell for another; through such "exaptation," complicated cellular machinery can be built up in a gradual Darwinian way. How about Plantinga's argument that Darwinism is self-undermining? That is met by a subtle exploration of issues in the theory of knowledge -- in particular, the evolutionary relationship between true belief and successful action. As for Dembski's "information theory" argument, this turns out to be the old and discredited claim that "Darwinism can't explain complexity" dressed up in fancy -- but misleading -- mathematical language.

Despite the ingenuity of the neo-creos, the Not Darwinism part of their strategy is pretty clearly a failure. And they have another problem, which might be labeled Not intelligent design. If nature were fashioned by a hands-on Divine Artificer, it ought to exhibit a certain elegance and efficiency. Then what of all the imperfections

we see in the biological world? Why are organisms burdened with maladaptive features like the webbed feet of the frigate bird, which does not need them for paddling? Why is our genome littered with nonfunctional junk DNA? Why have 99.99 percent of the species that have ever existed gone extinct -- including the poor dinosaurs, created only to be wiped out by an errant asteroid? As Gould remarks, "Odd arrangements and funny solutions are the proof of evolution -- paths that a sensible God would never tread but that a natural process, constrained by history, follows perforce."

If the proponents of intelligent design had carried their case, it would have amounted to a slam-dunk for theism. With Darwin, you remain free to believe or disbelieve in God, just as you like. But have the neo-creos at least made it possible to be an intellectually fulfilled creationist? On the evidence of this volume, not quite.

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