Debating Darwin: The ‘intelligent design’ movement

by Edward B. Davis in the July 15, 1998 issue

“The time has come,” the lawyer said,
“To talk of many things,
Of Gods, and gaps, and miracles,
Of lots of missing links,
And why we can’t be Darwinists,
And whether matter thinks.”
--with apologies to Lewis Carroll

In 1874, 15 years after Charles Darwin published *On the Origin of Species*, the great Princeton theologian Charles Hodge replied with his own book, *What Is Darwinism*? Darwin had proposed that natural selection, a blind, purposeless process operating through random variations, had produced the myriad forms of life that inhabit our planet. Hodge contended that this denial of design in nature “is virtually the denial of God.” Hodge noted that although Darwin might personally believe in a creator who had in the distant past “called matter and a living germ into existence,” Darwinism implied that God had “then abandoned the universe to itself to be controlled by chance and necessity, without any purpose on his part as to the result, or any intervention or guidance.” Such a God was “virtually consigned, so far as we are concerned, to nonexistence.” Thus Darwinism was “virtually atheistical.”

The authors of the three books reviewed here understand Darwinism as Hodge did, and like Hodge they believe that a God who is not involved in creation and with human beings in obvious, highly visible, scientifically detectable ways is no God at all. They seek to marshal evidence for the truth of Christian theism, based partly on the perceived deficiencies of Darwinian evolution. Although certain elements of their position may warrant further consideration, it is neither very convincing nor particularly original.

In the century and a quarter since Hodge leveled his pen at the offending theory, many Christians have come to terms with evolution. They have done this in different ways, however. Some evolutionists who maintain belief in God, especially those who are theologically moderate or conservative such as Richard Buhe and Howard Van Till, regard science and theology as separate (though ultimately complementary) modes of knowledge. In this view, science deals with mechanism and material reality ("how"), while theology deals with meaning and spiritual reality ("why"), which are in another domain or on another level. This approach is best summed up in the famous phrase that Galileo borrowed from Cardinal Baronio: "The Bible tells how to go to heaven, not how the heavens go."

Other thinkers, including liberal Protestants such as Ian Barbour and Arthur Peacocke, employ more integrative models. They decry the intellectual schizophrenia and theological insulation of the separation model, proclaiming instead the need for a genuine conversation between theology and modern science that shapes both enterprises. But much of this conversation is dominated by one side: many leading advocates of integration are process theologians or panentheists (believing that God includes the world as a part of God's being) who call for doctrinal reformulation in light of modern scientific knowledge but do not intend to ask scientists to reformulate their theories in light of theology.

Indeed, none of these Christian evolutionists proposes what might be called a Christian *science*, one in which Christian beliefs influence the actual content of scientific theories so that the rules of science might be different for Christians than for non-Christians. Instead they represent various Christian *views of science* in which the rules of science are assumed to be the same for all scientists in a particular discipline, without regard to their religious beliefs, and with differences arising only at the level of personal worldview.

In other words, adherents of all of these views accept methodological naturalism, which claims that scientific explanations of phenomena always ought to involve natural causes--which are usually understood as mechanistic causes operating without any intelligence or purpose apparent *within the phenomena themselves*. Whether or not any intelligence or purpose has been imposed upon natural processes from the outside is a separate question that science alone is not competent to answer, although scientific knowledge may have some influence on the kinds of answers one might offer. Science is seen as religiously neutral; evidence for or against theism has to be found elsewhere.

The books under review reject the notion that methodological naturalism is religiously neutral. They also reject the idea that evolution is compatible with theism. All three books offer a highly sophisticated form of antievolutionism known as intelligent design theory (ID).

The essence of ID and the motivation behind it are clearly explained by Phillip Johnson. Theistic evolution, he argues, is a “much-too-easy solution” that “rests on a misunderstanding of what contemporary scientists mean by the word evolution.” Like Cornell biologist William Provine and Cambridge biologist Richard Dawkins, Johnson defines evolution as “an unguided and mindless process” that admits no possibility of being a divine work. It implies that “our existence is therefore a fluke rather than a planned outcome.”

To prevent students from being indoctrinated with this type of irreligion, Johnson offers them a primer on thinking critically about evolution and a brief account of ID. The latter is essentially the opposite of the strong biological reductionism associated with Dawkins, according to which (in Johnson’s accurate description) “everything, including our minds, can be ‘reduced’ to its material base.” For Johnson, matter is preceded both ontologically and chronologically by intelligence, in the form of the information necessary to organize it into living things, and this is “an entirely different kind of stuff from the physical medium [e.g., DNA] in which it may temporarily be recorded.”

A principal goal of the ID movement is to convince scientists that information cannot and does not spring from matter, which they understand as brute and inert. This is essentially the same dualistic conception of matter that was shared by 17th-century founders of mechanistic science such as René Descartes, Robert Boyle and Isaac Newton. Although the mind-matter distinction remains philosophically problematic, and although some types of dualism may be possible to defend, most contemporary scientists (including most Christian scientists) no longer hold to this type of dualism, even if they retain the mechanistic science with which it was once linked. The same is true of many contemporary theologians, especially those committed to panentheism or process theology. They generally hold a more active view of matter and its capabilities, believing either that matter itself can think or that cognition arises out of it in some naturalistic manner yet to be determined. An important flaw in the program of the ID adherents is that they don’t really confront the fact that the philosophical landscape has changed, and they fail to engage those Christian thinkers who recognize this.

Johnson bases his case substantially on Michael Behe's notion of "*irreducible* complexity"--the idea that because certain parts of living organisms are so complex, and are composed of many separate parts that cannot function properly on their own, we cannot account for them (in reductionistic fashion) as merely the products of blind selection. Rather, we are forced to invoke a deus ex machina who assembled the parts supernaturally according to a preconceived design. Johnson uses this strong form of the teleological argument to challenge both materialism and naturalism. He calls his strategy "the wedge" and sees himself opening up a crack in scientific materialism.

Behe attempts to widen that crack. A biochemist at Lehigh University, he is not a creationist in the sense in which that word is most often used. For example, he believes that the earth is billions of years old, something self-styled scientific creationists deny, and he thinks that natural selection can account for much of life's diversity, which an old-earth creationist like Johnson probably does not accept (if so, he is awfully quiet about it). What natural selection cannot explain, in Behe's opinion, is how the original building blocks of living things were formed.

Darwin's Black Box, a detailed study of certain biochemical machines in humans and other organisms, is aimed at realizing one of Darwin's worst nightmares. Darwin worried that the origin of complex organs such as the eye would be difficult to explain in terms of the gradual, stepwise evolutionary process outlined by his theory. The best he could do was to speculate that the complex eye might have developed from simple light-sensitive cells that could give a competitive advantage to an organism that possessed them. But the molecular biology of vision, as Behe notes, was a "black box" to Darwin. Darwin and his contemporaries took the simplicity of cells for granted, treating them as black boxes that needed no further explanation.

Now that we know how complex even the simplest cells are, Behe argues, we can no longer ignore the question of how they originated, nor can we deny the lack of progress in answering that question within a Darwinian paradigm. Behe examined every issue of the *Journal of Molecular Evolution* (a top journal in the field) since it began in 1971. He could not find even one article that "has ever proposed a detailed model by which a complex biochemical system might have been produced in a gradual, step-by-step Darwinian fashion." This lack of an explanation, Behe says, is "a very strong indication that Darwinism is an inadequate framework for understanding the origin of complex biochemical systems."

Reviewers in scientific journals are generally highly critical of Behe. But some of the critics, including biochemist James Shapiro of the University of Chicago, think that Behe has pinpointed a real problem in evolutionary theory, a problem that invites novel approaches--though not the invocation of an intelligent designer, which would mean giving up hope of a scientific (or naturalistic) solution.

Notre Dame philosopher of science Ernan McMullin argues perceptively that Behe's proposed solution is itself just another "black box," for his appeal to ID slams the door on further inquiry at the level of secondary causes, denying in principle our ability to learn how irreducibly complex structures were assembled. Van Till takes this point further, arguing that we must distinguish between the claim that the world is a product of creative intelligence (a belief he shares with the ID camp) and the additional claim, implicit in the ID position, that certain products of that intelligence could not have been assembled naturalistically.

Behe realizes that it will be difficult for most scientists to give ID fair consideration, mainly for philosophical rather than purely scientific reasons. The scientific community, he notes, is committed to methodological naturalism, which rules out a priori any appeal to design. Furthermore, "many important and well-respected scientists just don't want there to be anything beyond nature." It's true that many scientists regard methodological naturalism as intimately linked to the worldview of philosophical materialism. A challenge to one is a challenge to the other. But there is no necessary connection between the two positions. Many scientists (including most Christian scientists) accept methodological naturalism without extrapolating from it to philosophical materialism.

Since the ID proponents reject the middle-ground position of a theist who practices methodological naturalism, their challenge will probably produce more heat than light. This likelihood is increased by the highly apologetic thrust of certain essays in *The Creation Hypothesis*, edited by Biola University philosopher J. P. Moreland. Consider, for example, the title of the essay by Canadian astrophysicist Hugh Ross, head of Reasons to Believe, a Pasadena-based ministry specializing in apologetics: "Astronomical Evidences for a Personal, Transcendent God." Or consider Moreland's own essay, "Theistic Science and Methodological Naturalism," which presents the two as competing alternatives. The latter distinction is drawn even more starkly by Johnson, who refers elsewhere to methodological naturalism as "methodological atheism" and to those Christian scientists who defend it as "mushy accommodationists."

As Moreland defines it, theistic science claims that God “has through direct, primary agent causation and indirect, secondary causation created and designed the world for a purpose and has directly intervened in the course of its development at various times,” including “history prior to the arrival of human beings.” Primary causes are “God’s unusual way of operating; they involve his direct, discontinuous, miraculous actions,” whereas “secondary causes are God’s normal way of operating.” Either way, Moreland stresses, “God is constantly active in the world, but his activity takes on different forms.”

In spite of this clear affirmation that God is never absent or inactive in the creation (and similar statements by others), the ID program is widely viewed as being committed to a “God-of-the-gaps” theology. In such a theology (as Dietrich Bonhoeffer noted with objections) God is invoked only when natural explanations fail.

It is not accurate to say that Behe and Johnson’s God is merely a God of the gaps, if by that we mean a God who has nothing else to do but occasionally fine-tune the clocklike workings of the universe. Nevertheless, their argument does rely on a God-of-the-gaps strategy. That is, they argue from the existence of gaps in our knowledge of nature to the existence of gaps in the actual processes of nature, and on the basis of these gaps they infer that there is an agent outside of nature. What makes this a sophisticated God-of-the-gaps theory, and distinguishes their project from garden variety creationism, is that they justify their appeal to divine causation by pointing not simply to the absence of plausible naturalistic explanations but to the presence of an irreducible complexity which suggests to them that no naturalistic explanation for the phenomenon in question can be found.

Pointing out the inadequacies of any received theory, including Darwinian theory, is important work. But to my mind, the most important part of the ID program is not what it denies but what it affirms, namely, that some real causes might not be purely mechanistic, and that this line of inquiry might prove productive. Some interesting and fruitful science has been done by scientists who hold such a view. Newton, for example, offered no mechanical explanation for gravitation (prompting Leibniz to call it a “perpetual miracle”). Kepler based his hypothesis about the orbital radii of the planets on the assumption that God, in laying out the solar system, used the five Platonic solids as “archetypal causes.”

For ID to fit into this category of fruitful science, however, its advocates will have to spell out much more closely what an account of the origin of biological diversity based on ID would look like and show how this perspective would further scientific inquiry rather than hinder it. I remain skeptical that this will happen, but the movement is still in its infancy, and it has some very bright people associated with it. They may prove me wrong.

Thus far ID is only a highly sophisticated form of special creationism, usually accompanied by strong apologetic overtones that tend to keep the debate at the ideological level. All too frequently science becomes a weapon in culture wars, denying in practice the clean theoretical distinction between science and religion that is otherwise widely proclaimed. Provine has said that “evolution is the greatest engine of atheism ever invented.” Johnson would agree, though of course he thinks the engine is faulty while Provine thinks it’s true. Johnson’s audience would be much smaller if scientists like Provine and Dawkins did not make it so easy for him to equate evolution and methodological naturalism with atheism, but in fact that pair does speak for a good number of scientists and other academics. Because their approach flies in the face of the beliefs of many religious Americans, antievolutionism is not likely to go away any time soon, whether or not Johnson and his associates convince many scientists to adopt their program.

We could move a long way toward correcting the excesses of both the Johnsons and the Provines if public education were more genuinely pluralistic. As long as public education essentially ignores the religious values of many families and pretends to remain neutral toward religion while actually promoting secularism, many religious people will feel disenfranchised. Johnson is at his best when he decries what he elsewhere calls “scientific fundamentalism,” the tendency of scientific materialists to monopolize the conversation about science in public schools.

Johnson effectively analyzes the film version of *Inherit the Wind*, the play that depicts the Scopes trial as the triumph of academic freedom over an ignorant, intolerant fundamentalism. Henry Drummond, whose character is loosely based on Clarence Darrow, warns Matthew Harrison Brady, the character drawn from William Jennings Bryan, not to deny others freedom of thought, and asks him to consider that there could come a time when a law would be passed “that only Darwin should be taught in the schools!” This, Johnson tells us, is exactly what happened:

The real story of the Scopes trial is that the stereotype it promoted helped the Darwinists capture the power of the law, and they have since used the law to prevent other people from thinking independently. By labeling any fundamental dissent from Darwinism as "religion," they are able to ban criticism of the official evolution story from public education far more effectively than the teaching of evolution was banned from Tennessee schools in the 1920s.

Johnson wants Americans to think more critically about evolution and about tough religious questions related to it; so do I. In my opinion, the teaching of evolution should be coupled with serious discussions both of its perceived religious implications and of the various ways religious thinkers have responded to it. Public schools seem unable to undertake such highly inclusive, controversial conversations, given the prevailing interpretation of the antiestablishment clause of the First Amendment. An accomplished legal theorist, Johnson might better direct his efforts toward persuading his colleagues to reconsider their interpretation of the Constitution rather than toward criticizing the basic tenets of what remains scientifically a well-supported theory of the origin of biological diversity.