

In the current showdown between materialists and theists, it's easy to forget that science itself is a creation of Western Christian thought.

BY DAN PETERSON

HEN HE PUBLISHED "Dover Beach" in 1867, Matthew Arnold could only view with despair the receding tide of religious belief among the British educated classes. Darwin's *Origin of Species* (1859) had accelerated the melancholy,

long, withdrawing roar of the Sea of Faith, by permitting a new "creation story" in which God's design was displaced by blind natural forces as the source of all life. By the mid-20th century, the neo-Darwinian account of the origin of life had been enshrined in some circles as inerrant orthodoxy.

But tides do turn. Recently, a flood of scientific support for the idea that life might have been designed after all has made a different "Dover" emblem-

atic of the dispute over life's origins. In Dover, Pennsylvania, the school board directed last year that a four-paragraph statement be read to students, which refers to the concept of "intelligent design," or "ID." The Dover statement observes that Darwin's theory is only a theory, not fact; notes that intelligent design is an explanation that differs from Darwin's view; mentions an alternative reference book for students who might be interested in understanding what intelligent design involves; and encourages students to keep an open mind.

The Dover school board, by the way, did not cut back the teaching of Darwinian evolution in its schools. Nor did it mandate that intelligent design be taught alongside Darwinism. But because the board suggested that the Darwinian theory might not be an unchallengeable fact exempt from all discussion, a lawsuit underwritten by the ACLU was filed against the school district. The trial, which has gained national attention, is underway as this is written. Apparently, there are some people who are very much against students hearing all the evidence with an open mind, and who will resort to the coercive power of the state to prevent that.

What's the big deal about intelligent design? Why the need to file lawsuits to prevent students from even hearing that it exists?

Whatever the courts may decide, the intelligent design cat is already out of the bag. President Bush and Senate Majority Leader Bill Frist have endorsed acquainting students with ID. The *New York Times*

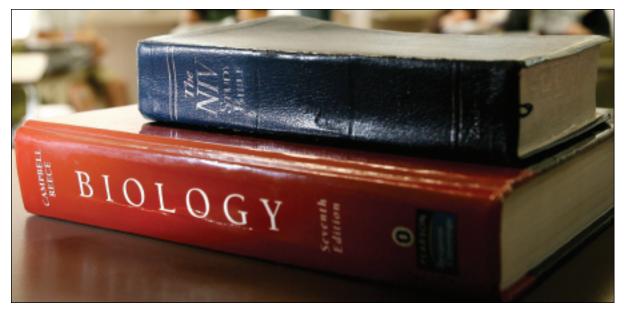
The Sea of Faith Was once, too, at the full, and round earth's shore Lay like the folds of a bright girdle furl'd. But now I only hear Its melancholy, long, withdrawing roar, Retreating, to the breath Of the night-wind, down the vast edges drear And naked shingles of the world. From "Dover Beach" By Matthew Arnold and *Washington Post* inveigh against it. Faculty disputes have broken out on university campuses over intelligent design, and student clubs are springing up to support it. Major journals of opinion are running long articles on ID, and op-ed columnists are weighing in. Books, conferences, and public debates proliferate. A Google search for web pages that include both the phrase "intelligent design" and the word "evolution" turns up 2,450,000 hits. In perhaps the ultimate sign of a breakout, on a recent episode of *The West Wing* presidential candidate Matt Santos answers a question about intelligent design by replying: "I believe in God, and I'd like to think He's intelligent."

O WHAT, EXACTLY, IS CAUSING ALL THE RUCKUS? In the past decade or two, a group of scientists, biologists, mathematicians, philosophers, and other thinkers have marshaled powerful critiques of Darwinian theory on scientific and mathematical grounds. Although they generally don't dispute that evolution of some sort has occurred, they vigorously contest the neo-Darwinian claim that life could arise by an undirected, purely material process of chance variation and natural selection.

Instead, examining the evidence and applying mathematical and other techniques to detect design, they argue that the best scientific inference is that the complexity of life results from design by an intelligence. Despite the efforts of ID opponents to label them as "creationists," their arguments are not based on religious premises or Scriptural authority, and ID does not attempt to determine the identity of the designer. The inference that life is the product of an intelligent cause rather than unintelligent material forces may certainly have religious implications. But the arguments advanced by intelligent design theorists rely on neutral principles and facts drawn from mathematics, information theory, biochemistry, physics, astrophysics, and other disciplines. (For a summary of some of ID's principal scientific arguments, see my article in the June 2005 issue of *The American Spectator*.)

Why should this upset anyone? If you ask ID's critics the reason for their opposition, they will tell you. Says the Dover teachers' union president, Sandy Bowser, "Intelligent design is not science." According to a caption in a Washington Post front page article, intelligent design is "not science." ID opponent and professor of physics and astronomy Lawrence Krauss goes on to explain that ID shouldn't be part of a curriculum because it's "not science." In a Wired magazine article that disparages ID, microbiologist Carl Woese contributes the point that intelligent design "is not science." Robert Pennock, a professor of philosophy who has been an active critic of intelligent design, elaborates that ID doesn't "fall within the purview of science." The lawyer suing the Dover school board contends that ID is "not science at all." The American Federation of Teachers adds helpfully that "intelligent design does not belong in the science classroom because it is not science." The National Science Teachers Association sheds a further bit of light, offering the view that "intelligent design is not science."

OK, I think we're seeing a pattern now. It may be



safe to venture that, according to its detractors, intelligent design is "not science." So why bring in the federal courts? Why not simply expose the logical and scientific fallacies of ID—which must be glaring indeed—and let it collapse of its own weaknesses?

For one thing, that is exactly what the Darwinists have been unable to do. The arguments put forth by the ID theorists—hammering home the fundamental, longstanding, unresolved flaws in Darwinism, and demonstrating affirmatively that life exhibits evidence of design have not been refuted. Counterarguments fly as fast in this debate as the arguments, and neither side can claim victory. It is precisely because intelligent design relies exclusively on scientific methods, evidence, and reasoning that the Darwinist establishment is going bonkers.

But there is another reason that goes even deeper. Let us suppose for a moment that the scientific evidence, evaluated in a truly impartial manner, would strongly point to design by a creator rather than to undirected natural forces as the source of life. Let us suppose, just for the sake of argument, that this evidence was really quite manifest and clear. What then? Would all the scientists, philosophers, political advocacy groups, teachers' unions, journalists, and others who were previously committed to Darwinism follow that evidence exactly where it leads? Would they shrug and say, "Oh, OK. We were wrong," and admit that the design thesis is the best explanation?

Or would a large body of opinion, scientific and otherwise, insist that anything that points to a creator, *regardless of the evidence*, is automatically "not science"? A designer who actually works in the world is a concept that some cannot admit even to be a possibility. It is ruled out in advance on philosophical grounds. Although there are nuances and intermediate positions, ID has stirred up a conflict between two competing worldviews: materialism and theism.

But doesn't science admit only materialistic or naturalistic explanations? In the ordinary course, yes, science seeks to explain observed phenomena by reference to natural physical laws. But the creation of the universe (where did the laws come from?) and the origin of life (how did complexity that is vanishingly improbable come about?) are rather special questions, and the answers may be special as well. Materialism and theism answer them in very different ways.

Many of the most outspoken defenders of Darwinism are quite candid about their commitment to materialism as a worldview. Materialism (or naturalism) is, of course, the view that only matter and material processes exist. The physical universe is all there is. There is no mind behind it, no creator, no purpose, and no possibility of a personal God who intervenes in the world. The universe is apparently governed by

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physical laws, but materialism does not offer a reason why the behavior of matter and energy should be lawful. Life on Earth is just a product of the necessary unfolding of undirected material processes; of "purposeless, meaningless matter in motion," in the words of philosopher and ID opponent Daniel Dennett.

Richard DAWKINS, ZOOLOGIST and holder of an endowed chair at Oxford, has been the leading popular exponent of the atheistic, materialistic, reductionist version of Darwinism (Dawkins, by the way, does not object to any of those labels). Dawkins originated, or at least popularized, the "selfish gene" theory. This theory conceives of life as a purely chemical process driven by the replicating properties of DNA. Dawkins states: "It is easy to think of DNA as the information by which a body makes another body like itself. It would be more correct to see a body as the vehicle used by DNA to make more DNA like itself."

Natural selection, the mechanism by which some DNA continues to replicate itself and other DNA does not, is "the explanation for the existence and apparently purposeful form of all life," Dawkins contends. It is purely a "blind, unconscious, automatic process." It "has no purpose in mind.... It does not plan for the future. It has no vision, no foresight, no sight at all."

"What are all living things *really* for?" Dawkins replies to his own question: "The answer is DNA. It is a profound and precise answer and the argument for it is watertight...." "Flowers and elephants are 'for' the same thing as everything else in the living kingdoms, for spreading Duplicate Me programs written in the DNA language." Dawkins argues that all cellular forms of life, including human beings, are specialized robots, of a kind that can duplicate themselves without external machinery for doing the duplicating.

Under this view, our senses and minds are not designed to perceive objective truth, but are simply evolutionary products that have turned out to be useful for survival. As Dawkins puts it, "We are jumpedup apes, and our brains were only designed to understand the mundane details of how to survive in the stone-age African savannah."

Another confirmed Darwinist and outspoken opponent of intelligent design, historian of biology William Provine, frankly states the conclusions to be drawn from Darwinian materialism: "There is no ultimate foundation for ethics, no ultimate meaning in life, and no free will."

Judeo-Christian theism, on the other hand, not only admits but affirms that God is the creator of the universe and life. In its physical workings, the universe obeys laws ordained by God, although that is not seen as inconsistent with God's active participation in it. G.K. Chesterton compared the two views a century ago:

The materialist philosophy (whether true or not) is certainly much more limiting than any religion.... The Christian is quite free to believe that there is a considerable amount of settled order and inevitable development in the universe. But the materialist is not allowed to admit into his spotless machine the slightest speck of spiritualism or miracle.

According to the theistic worldview, we can have genuine knowledge of scientific truth and other kinds of truth because God has endowed us with senses and reason that are designed by Him to understand the created order in which He has placed us. Since God created the universe and life, it would also not be surprising for science and reason to uncover evidence of His design in nature.

Contrary to the materialist conclusions enunciated by Provine, the traditional Judeo-Christian worldview maintains that there is indeed an ultimate foundation for ethics. God's creation has an inherent moral order; there is objective right and wrong; and these can be known by us through revelation and reason. Far from life being a blind unfolding of material processes, life has purpose and meaning in God's plan. We are not chemical machines or robots. Human beings have free will, and are accountable moral agents.

The materialistic and theistic worldviews are thus opposed on virtually every important issue. Intelligent design addresses only one of these issues: whether or not the universe and life are designed. It does not attempt to prove (say) that the designer has all of the attributes of the Christian God. Because it is a scientific theory, it does not attempt to establish a foundation for morals, the nature of knowledge, or the purpose of life. Although ID is consistent with the view of the three great monotheistic religions that the universe and life are created by God, it cannot, by itself, prove any of them to be true comprehensively.

On the other hand, intelligent design is flatly inconsistent with philosophical materialism. Indeed, by demonstrating the profound, unsolved problems of Darwinism, and supporting the design inference in its stead, ID has the potential to deal a crushing blow to materialism. Without Darwinism, a materialist worldview has no creation story, no way of even purporting to explain how life came about. Materialism without Darwinism is an unbelievable worldview.

Furthermore, from a materialist perspective, which holds as a matter of faith that God does not exist, any effort to show that life is designed will necessarily be an exercise in falsehood. If one defines the universe as consisting only of material forces, there is no intelligent designer and hence there can be no intelligent design. Materialism thus rules ID out of bounds, and holds it to be false, *by definition*.

That is what leads to the emphatic claims that intelligent design is "not science." ID transgresses the central tenet of materialism. But are materialism and science the same thing? Must all science be based on a view that matter and energy are "all there is," and that there cannot possibly be an ordering intelligence behind the creation of life, the design of physical laws, and the place of human beings in the cosmos? Will a theistic worldview stop science in its tracks, as some materialists claim, because scientists who accept design will throw up their hands, and refer all explanations to "the will of God"?

No, no, and no. The attempt to equate science with materialism is a quite recent development, coming chiefly to the fore in the 20th century. Contrary to widespread propaganda, science is not something that arose after the dark, obscurantist forces of religion were defeated by an "enlightened" nontheistic worldview. The facts of history show otherwise. N HIS RECENT BOOK For the Glory of God, Rodney Stark argues "not only that there is no inherent conflict between religion and science, but that *Christian theology was essential for the rise of science.*" (His italics.) While researching this thesis, Stark found to his surprise that "some of my central

arguments have already become the conventional wisdom among historians of science." He is nevertheless "painfully aware" that most of the arguments about the close connection between Christian belief and the rise of science are "unknown outside narrow scholarly circles," and that many people believe that it could not possibly be true.

Sometimes the most obvious facts are the easiest to overlook. Here is one that ought to be stunningly obvious: science as an organized, sustained enterprise arose only once in the history of Earth. Where was that? Although other civilizations have contributed

technical achievements or isolated innovations, the invention of science as a cumulative, rigorous, systematic, and ongoing investigation into the laws of nature occurred only in Europe; that is, in the civilization then known as Christendom. Science arose and flourished in a civilization that, at the time, was profoundly and nearly exclusively Christian in its mental outlook.

There are deep reasons for that, and they are inherent in the Judeo-Christian view of the world which, principally in its Christian manifestation, formed the European mind. As Stark observes, the Christian view depicted God as "a rational, responsive, dependable, and omnipotent being and the universe as his personal creation, thus having a rational, lawful, stable structure, awaiting human comprehension." That was not true of belief systems elsewhere. A view that the universe is uncreated, has been around forever, and is just "what happens to be" does not suggest that it has fundamental principles that are rational and discoverable. Other belief systems have considered the natural world to be an insoluble mystery, conceived of it as a realm in which multiple, arbitrary gods are at work, or thought of it in animistic terms. None of these views will, or did, give rise to a deep faith that there is a lawful order imparted by a divine creator that can and should be discovered.

Recent scholarship in the history of science reveals that this commitment to rational, empirical investigation of God's creation is not simply a product of the "scientific revolution" of the 16th and 17th centuries, but has profound roots going back at least to the High Middle Ages. The development of the university system in medieval times was, of course, almost entirely a product of the Church. Serious students of the period know that this was neither a time of stagnation, nor of repression of inquiry in favor of

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> dogma. Rather, it was a time of great intellectual ferment and discovery, and the universities fostered rational, empirical, systematic inquiry.

> A newly published work by Thomas Woods (*How the Catholic Church Built Western Civilization*) is replete with far more examples of the contributions of medieval scholars than can be mentioned here. But as Woods recounts, one need only look at some of the leading figures in the universities in the 1200s to see that they were already well along in the development of principles of empirical scientific inquiry. Roger Bacon, a Franciscan who taught at Oxford, wrote in *Opus Maius*:

Without experiment, nothing can be adequately known. An argument proves theoretically, but does not give the certitude necessary to remove all doubt; nor will the mind repose in the clear view of truth, unless it finds it by way of experiment.

Albertus Magnus—prodigious scholar, naturalist, teacher of Thomas Aquinas, and member of the Dominican order—affirmed in his *De Mineralibus* that the purpose of science is "not simply to accept the statements of others, that is, what is narrated by people, but to investigate the causes that are at work in nature for themselves." Another 13th-century figure, Robert Grosseteste, who was chancellor of Oxford and Bishop of Lincoln, has been identified as "the first man ever to write down a complete set of steps for performing a scientific experiment," according to Woods. HEN THE DISCOVERIES of science exploded in number and importance in the 1500s and 1600s, the connection with Christian belief was again profound. Many of the trailblazing scientists of that period when science came into full bloom were devout Christian believers, and declared that their work was inspired by a desire to explore

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God's creation and discover its glories. Perhaps the greatest scientist in history, Sir Isaac Newton, was a fervent Christian who wrote over a million words on theological subjects. Other giants of science and mathematics were similarly devout: Boyle, Descartes, Kepler, Leibniz, Pascal. To avoid relying on what might be isolated examples, Stark analyzed the religious views of the 52 leading scientists from the time of Copernicus until the end of the 17th century. Using a methodology that probably downplayed religious belief, he found that 32 were "devout"; 18 were at least "conventional" in their religious belief; and only two were "skeptics." More than a quarter were themselves ecclesiastics: "priests, ministers, monks, canons, and the like."

Down through the 19th century, many of the leading figures in science were thoroughgoing Christians. A partial list includes Babbage, Dalton, Faraday, Herschel, Joule, Lyell, Maxwell, Mendel, and Thompson (Lord Kelvin). A survey of the most eminent British scientists near the end of the 19th century found that nearly all were members of the established church or affiliated with some other church.

In short, scientists who were committed Christians include men often considered to be fathers of the fields of astronomy, atomic theory, calculus, chemistry, computers, electricity, genetics, geology, mathematics, and physics. In the late 1990s, a survey found that about 40 percent of American scientists believe in a personal God and an afterlife—a percentage that is basically unchanged since the early 20th century. A listing of eminent 20th-century scientists who were religious believers would be far too voluminous to include here—so let's not bring coals to Newcastle, but simply note that the list would be large indeed, including Nobel Prize winners. Far from being inimical to science, then, the Judeo-Christian worldview is the only belief system that actually produced it. Scientists who (in Boyle's words) viewed nature as "the immutable workmanship of the omniscient Architect" were the pathfinders who originated the scientific enterprise. The assertion that intelligent design is automatically "not

science" because it may support the concept of a creator is a statement of materialist philosophy, not of any intrinsic requirement of science itself.

The redefinition of science in materialist terms—never wholly successful, but probably now the predominant view—required the confluence of several intellectual currents. The attack on religious belief in general, and Christianity in particular, has been underway for more than two centuries. As an organized intellectual movement it first became manifest with the 18th-century French *philosophes*, and was given further impetus in Great Britain during that century by the skepticism of Hume.

Further doubt appeared to be cast on the truth of Christian doctrine by the historically and textually based "higher criticism" of the Bible, beginning in the late 18th century and gaining great attention in the first half of the 19th century. By disputing the time, authorship, inspiration, and accuracy of the Old and New Testaments, these mostly German scholars, such as Eichhorn, De Wette, Semler, Paulus, and David Friedrich Strauss, undermined traditions and interpretations of Scripture that had hitherto often been accepted rather uncritically.

But it was the AWE-INSPIRING SUCCESS of science itself, nurtured for centuries in a Christian belief system, that caused many to turn to it as the comprehensive source of explanation. With the mighty technology spawned by science in his hands, man could exalt himself, it seemed, and dispense with God. Although Darwin was by no means the sole cause of the apotheosis of materialist science, his theories gave it crucial support. It is perhaps not altogether a coincidence that the year 1882, in which Darwin died, found Nietzsche proclaiming that "God is dead... and we have killed him."

The capture of science (in considerable measure) by materialist philosophy was aided by the hasty retreat of many theists. There are those who duck any conflict by declaring that science and religion occupy non-overlapping domains or, to use a current catchphrase, separate "magisteria." One hears this dichotomy expressed in apothegms such as, "Science asks how; religion asks why." In this view, science is the domain of hard facts and objective truth. Religion is the realm of subjective belief and faith. Science is publicly verifiable, and is the only kind of truth that can be allowed in the public square. Religion is private, unverifiable, and cannot be permitted to intrude into public affairs, including education. The two magisteria do not conflict, because they never come into contact with each other. To achieve this peace, all the theists have to do is interpret away many of the central beliefs of the Judeo-Christian tradition.

This retreat makes some theists happy, because they can avoid a fight that they feel ill-equipped to win, and can retire to a cozy warren of warm, fuzzy irrelevancy. It also makes materialists happy, because the field has been ceded to them. As ID advocate Phillip Johnson remarks acerbically:

Politically astute scientific naturalists feel no hostility toward those religious leaders who implicitly accept the key naturalistic doctrine that supernatural powers do not actually affect the course of nature. In fact, many scientific leaders disapprove of aggressive atheists like Richard Dawkins, who seem to be asking for trouble by picking fights with religious people who only want to surrender with dignity.

But the ID theorists do not go gentle into that good night. That's what's different about intelligent design. ID says that the best evidence we have shows that life is the product of a real intelligent agent, actually working in space and time, and that the designer's hand can be detected, scientifically and mathematically, by what we know about the kinds of things that are produced only by intelligence. It is making scientific claims about the real world. Because it relies on objective fact and scientific reasoning, ID seeks admission to the public square. Rather than retreating to the gaseous realm of the subjective, it challenges the materialist conception of science on its own turf. It thus threatens materialism generally, with all that that entails for morality, law, cultureand even for what it means to be human.

HOSE WHO NOW OCCUPY the public square will fight to keep possession of it. The advocates of Darwinian materialism believe that they are in possession of The Truth, and are perfectly willing to invoke the power of the state to suppress competing views, as the Dover suit shows.

Richard Dawkins, again, exemplifies the mindset. Long before the Dover suit, he argued that libel laws (much more formidable in England than here) should protect "objective truth," and should punish "lies that may not damage particular people but damage truth itself." He would extend legal sanctions to "all deliberate falsifications, misrepresentations, of scientific truth." Why should an individual have to be damaged, he wonders, before we "prosecute a book which wantonly publishes lies about the universe"?

Just what might constitute "lies about the universe?" Dawkins makes no secret of his "contempt for the dangerous collective delusion of religion." In a recent article co-authored with an American professor, Dawkins asserts that intelligent design is "not a scientific argument at all"—sound familiar?— "but a religious one." Allowing students even to be made aware that there is a controversy between ID and Darwinism "conveys the false, and highly pernicious, idea that there really are two sides." If just a mention of ID were to be allowed into the classroom, he predicts ominously, "that would be the end of science education in America."

I doubt it. Science has always prided itself on following the evidence wherever it leads. If intelligent design's arguments are false, they will, over time, be refuted decisively. But what if the evidence truly supports design? Should that evidence be ignored, defined as "not science," and suppressed through the court system, simply because a materialist worldview cannot accept even the possibility of a designer? In the words of design theorist Stephen Meyer, science "should not be looking for only the best naturalistic explanation, but the best explanation, period."

For many centuries, the best explanation of the origin of life and the lawfulness of the universe was thought to be design, which was not considered inconsistent with science at all. Matthew Arnold, nevertheless, presciently foresaw the direction the tides would flow in the 19th century, and well into the 20th. But of the three theories that seemed so potent during that period—Marxism, Freudianism, Darwinism—two have already been washed away by history. Will Darwin's theory be next? If so, the materialist worldview is at stake, and the materialists know it.

And that's why intelligent design is such a big deal. $\mathbb N$

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