

A REVIEW ARTICLE

Darwin's Black Box

Reviewed by
Brian Jones*

Darwin's Black Box by Michael J. Behe. New York: Touchstone, 1996, 307 pp., \$13.00.

In recent years, one of the most strident debates in American public policy is whether or not evolution should be taught exclusively in government funded schools. Some school boards have attempted to require the teaching of creationism alongside of evolution; others have simply tried to require a disclaimer that mentions other theories of origin besides evolution. United States courts have consistently held that the religious nature of creationism excludes it from mention in government supported schools. Some have argued, however, that these decisions do not mandate an “evolution-only” curriculum. In fact, in a recent story about the Supreme Court’s refusal to hear a case on one such issue, *USA Today* noted that “the panel did not rule out the possibility that a school board could require some type of disclaimer stating that evolution was not the only accepted explanation of the origin of life.”¹

Perceived loopholes such as these have spawned a new movement in the explanation of origins, called the Intelligent Design movement. This movement is an attempt to open science and the secular world up to “all possible explanations [of origins]—including design by an intelligent agent.”² The Intelligent Design movement is beginning to gain recognition among Christians as a potentially viable alternative to evolution as taught in public schools, as demonstrated in a recent group of articles in *Christianity Today* published under the heading,

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¹<http://usatoday.com/news/court/nsco1315.htm>.

²Tom Woodward, “Meeting Darwin's Wager,” *Christianity Today*, 28 April, 1997, p. 16.

"The Origins Debate."³ The Intelligent Design movement was begun by attorney Phillip Johnson.⁴ Johnson has written several books attempting to point out the philosophical agenda behind Darwinism and to demonstrate that Darwinists have been less than honest in their approach and argumentation.⁵ Although Johnson may be the father of the Intelligent Design movement, he is by no means its only advocate. Biochemist Michael Behe, mathematician William Dembski,⁶ and others have joined the Intelligent Design approach. An important book in the Intelligent Design movement is *Darwin's Black Box* by Michael Behe.

Darwin's Black Box demonstrates two important truths. First, Behe shows the fallacy of Darwinian evolution. Second, Behe also implicitly proves another truth: the inherent deficiency of natural theology. But having shown clearly that Darwin's theory is scientifically impossible, Behe does not conclude that our Lord and Savior Jesus Christ created the earth in six literal days. Instead, he steadfastly clings to an evolutionary model and an old earth. Furthermore, he does not argue that the failure of Darwinism proves the existence of God or even a god. Instead, he concludes that the evidence he presents argues for "intelligent design." Whether that designer is God or someone else is an open question.

SUMMARY

Darwin's Black Box is a challenge to Darwinian theories of evolution. Although Behe is an evolutionist and sees no problem with old-earth theories, he is unsatisfied that Darwinism (which explains the origin of all things from common ancestry through natural selection working on variation) can explain the complexity of life at the molecular level.⁷ He concludes that Darwinism is "incomplete."⁸ Since

³Nancy Percy, "We're Not in Kansas Anymore," *Christianity Today*, 22 May, 2000, pp. 41–49; Karl Giberson and Donald Yerxa, "Inherit the Monkey Trial," *Christianity Today*, 22 May, 2000, pp. 50–51; John Wilson, "Your Darwin is Too Large," *Christianity Today*, 22 May, 2000, pp. 52–56.

⁴Lynn Vincent, "Science vs. Science," *World*, 26 February 2000, pp. 27–28.

⁵Ibid.

⁶Ibid., p. 29; See also William A. Dembski, "Intelligent Design as a Theory of Information," *Perspectives on Science and Christian Faith* 49 (September 1997): 180–90.

⁷*Darwin's Black Box*, p. 5.

⁸Michael J. Behe, "Darwin Under the Microscope," *New York Times*, 29 October 1996, par. 3 [<http://archives.nytimes.com/archives>].

Darwinism is incapable of explaining the complexity of the molecule (among other problems), Behe proposes that science be allowed to postulate an "intelligent designer" in certain cases.

The central thesis of *Darwin's Black Box* is that molecular processes and structures are "irreducibly complex" and therefore could not have developed through natural processes. As a result, they evidence "intelligent design" and therefore argue strongly for a designer. Furthermore, Darwinists have utterly failed to explain these irreducibly complex systems. "Irreducible complexity" (a concept apparently developed by Behe himself) is "a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning."⁹ An example of an irreducibly complex item (cited throughout the book) is a mousetrap. It is irreducibly complex because a removal of any part renders the entire contraption useless. Therefore, it could not have "evolved" into its present state by continuous improvement. No one can catch a few mice with a wooden platform, then add a spring and catch a few more, then add a metal hammer and catch a few more and so on until the modern mousetrap "evolves." Behe takes this same idea and shows how biochemical systems could not have evolved because, like the mousetrap, the parts are useless unless all the parts are present. This is what Behe means by "irreducible complexity." The bombardier beetle and the eye (both chapter 2), the cilium and flagellum (chapter 3), blood clotting (chapter 4), RNA (chapter 5), the immune system (chapter 6), and AMP—a key component in DNA—(chapter 7) are all developed as examples to refute, through irreducible complexity, the idea of Darwinian evolution.

Having demonstrated the irreducible complexity of biochemical systems, Behe turns in section 3 (chapters 8–11) to consider how irreducible complexity argues for intelligent design. Although Behe does not directly define "intelligent design," he defines design alone as "the purposeful arrangement of parts."¹⁰ By modifying the word design with the word "intelligent," Behe appears to be commending a personal active being who ordered the parts in the purposeful arrangement they evidence. Thus, the idea of an intelligent designer is an inference drawn from the reality of irreducibly complex systems. Since they could not have developed naturally, someone must have developed them intentionally. He concludes that the best

⁹Behe, *Darwin's Black Box*, p. 39.

¹⁰*Ibid.*, p. 193.

explanation for the development of life is that biological systems were designed. He writes,

To a person who does not feel obliged to restrict his search to unintelligent causes, the straightforward conclusion is that many biochemical systems were designed. They were designed not by the laws of nature, not by chance and necessity; rather, they were *planned*.¹¹

As was previously noted, design means “the purposeful arrangement of parts”¹²; however, Behe admits that this definition allows almost anything to evidence design.¹³ This is no problem for a recent creationist, but for Behe (not to mention more thoroughgoing evolutionists), this is still too broad. Therefore, he attempts to propose a more refined methodology for detecting design.

For discrete physical systems—if there is not a gradual route to their production—design is evident when a number of separate, interacting components are ordered in such a way as to accomplish a function beyond the individual components. The greater the specificity of the interacting components required to produce the function, the greater is our confidence in the conclusion of design.¹⁴

Thus, according to Behe, Darwinian evolution should be considered first. If there is no evidence that a system “evolved” by continuous random mutation, we should look to see if removing one part of the system would render it useless (like a mousetrap without a spring). If so, it was designed, and the more interdependent the system, the more confident we can be that it was designed.

But what does intelligent design communicate about the designer? On this point Behe argues that “inferences to design do not require that we have a candidate for the role of designer.”¹⁵ In fact, he even allows for a naturalistic explanation of the designer. For instance, he cites the theory of Francis Crick, a very important scientist who discovered the double helix structure of DNA. Crick has theorized that “life on earth may have begun when aliens from another planet sent a rocket ship containing spores to earth.... He judges the undirected origin of life to be a virtually insurmountable obstacle, but he wants a naturalistic explanation.”¹⁶ Behe concludes that “the separateness of

¹¹Ibid., emphasis original.

¹²Ibid.

¹³Ibid., p. 194.

¹⁴Ibid.

¹⁵Ibid., p. 196.

¹⁶Ibid., p. 248.

the spheres of science versus philosophy and religion is as it should be.”¹⁷ Thus, his purpose is to open the door for supernatural explanations in science, not to bring science under the lordship of Christ.

THE AUTHOR

Michael Behe is eminently qualified to address the subject of molecular biology. He is Professor of Biochemistry at Lehigh University (back cover). Even Richard Dawkins, a leading atheist and popularizer of Darwinism, is forced to acknowledge Behe's credentials as a credible scientist.¹⁸ As previously noted, Behe is unwilling to repudiate evolution and even Darwinism in certain instances.¹⁹ Although scientific in his outlook and evolutionary in his approach to science, Behe is also Catholic by upbringing²⁰ and choice.²¹ Long ago he reconciled his Catholicism with evolution and concluded that one could hold both to be true (a position Pope John Paul II recently espoused publicly).²² Therefore, Behe's belief in God as understood through his Catholic theology serves as an informing context for the conclusions he draws from science. Stated another way, he became a theist before he became a scientist and therefore his belief in God was not compelled by the evidence for intelligent design. Richard Dawkins implicitly alleges bias when he notes that Behe is a senior fellow at the Center for the Renewal of Science and Culture, which is an organization designed to combat the cultural decay caused by naturalism.²³ Dawkins notes further that Behe speaks at many religious conferences.²⁴ Therefore, it is not unfair to allege a predisposition toward a supernatural explanation; however, to prove that Behe's presuppositions biased his work requires impeachment of his credentials and/or his written work. This is true because Behe maintains that “the conclusion of intelligent design flows

¹⁷Ibid., p. 250.

¹⁸Richard Dawkins, “Behe's Empty Box” [<http://www.world-of-dawkins.com/box/behe.htm>].

¹⁹Behe, *Darwin's Black Box*, p. 15.

²⁰Behe, “Darwin Under the Microscope,” par. 2.

²¹Behe, *Darwin's Black Box*, p. 239.

²²Behe, “Darwin Under the Microscope,” par. 1.

²³Dawkins, “Behe's Empty Box.”

²⁴Ibid.

naturally from the data itself—not from sacred books or sectarian beliefs.”²⁵ Although Dawkins has tried to refute Behe’s work, the examples Dawkins uses for his attempt at refutation are irrelevant.²⁶

THE INTELLIGENT DESIGN MOVEMENT

Intelligent design is a middling position of sorts between naturalism and supernaturalism. It allows one to postulate the intervention of a designer when naturalistic explanations seem to fail; furthermore, since the designer remains anonymous, the position can be considered scientific rather than religious. This allows the one postulating intelligent design to argue for whatever designer he or she chooses.

Intelligent Design is very controversial. Naturalistic scientists do not like it because it

appeals to an argument from ignorance: If we don’t know how it happened, then God, alias Intelligent Designer did it. But this is no argument. If the origin of life is explained in the future, then Behe’s case is destroyed. Worse, Behe’s God is lazy since he only does things that science can’t explain.²⁷

Educators and their attorneys have warned that this movement “attempts to strip creationism of its religious connotations by recycling it under the name ‘intelligent design’ and positing that humans are the product of purposeful design. (But saying nothing about the ‘designer.’)”²⁸ They warn that this is a more sophisticated attempt by the “Religious Right” to reintroduce creationism into the public schools through a legal loophole. In 1987 the Supreme Court ruled a Louisiana law requiring equal time for creationism in public schools was unconstitutional; however, the high court “said public schools could lawfully teach ‘a variety of scientific theories about the origins of mankind’ if they were non-religious in nature.”²⁹ *Darwin’s Black Box* is a book feared to be able to exploit this loophole.

²⁵Behe, *Darwin’s Black Box*, p. 139.

²⁶See note 31 below.

²⁷Michael Richards, review of *Darwin’s Black Box*, by Michael J. Behe, in *Science and Christian Belief*⁹ (October 1997): 191.

²⁸Rob Boston, “Of Pandas and the Constitution,” *Church and State*, April 1995, p. 8.

²⁹*Ibid.*

EVALUATION

Style

Judged by its style, *Darwin's Black Box* is an amazing accomplishment. Technical writing of all kinds depends on the use of technical jargon and an assumption of prior knowledge in order to make the examples intelligible to the uninformed reader. For instance, a certain amount of knowledge of the Hebrew language is needed to understand a Hebrew grammar textbook. The same is true in scientific writing. Scientific explanations are needed in order to make a convincing case to scientists. Therefore, it would seem nearly impossible to write a book technical enough to satisfy the mind of the scientist and accessible enough to convince those untrained in science. Behe, amazingly, has been able to do both. By using simple but powerful analogies to everyday life (like the mousetrap), Behe is able to explain the minute complexity of biochemistry to the uninitiated while at the same time providing enough information to demonstrate that these examples pass the test of scientific technicality. Furthermore, for those uninterested in or unable to understand the technical sections, the editors have marked these sections off with little black boxes. This helpful addition allows the reader to skim or skip those sections when appropriate.

Argumentation

Since I am not a scientist, it is impossible for me to critique or even fully understand Behe's examples. However, since scientists have taken his work seriously³⁰ and have not been able to discredit his examples,³¹ it appears that the scientific information as explained in this book is correct. While I cannot attest to the details of the scientific ex-

³⁰One example is the debate printed in *Perspectives on Science and Christian Faith* between two biochemists—Braxton M. Alfred and Alice Fulton. Although both would claim to be Christians, Fulton is unshaken in her Darwinism, although she cannot refute from biochemistry any of the examples offered by Behe. See Braxton M. Alfred and Alice Fulton, "Contrasting Views on Behe," *Perspectives on Science and Christian Faith* 49 (June 1997): 119–22.

³¹Especially telling on this score is the reaction of Richard Dawkins. His web site [www.world-of-dawkins.com] contains a link to another site that purports to give three Darwinian explanations of irreducible complexity. Two of the three involve hypothetical situations and the other involves a "non-biochemical example" (see par. 8: "Example: The Bolas Spider"). Thus all three are invalid based on Behe's criteria because either they are hypothetical (and therefore "fact free science") or not biochemical and therefore irrelevant to Behe's argument. See [http://www.cs.colorado.edu/~lindsay/creation/evolve_irreducible.html].

planations, the rest of the book is clearly well argued. The argumentation is tight and logical. It builds inductively from the problems that Darwinism has generally to the enormous problems Darwinism has with modern biochemistry.

Despite the new emphasis for Intelligent Design, very few people find Behe's work wholly satisfying. Scientists have criticized him for a "god-of-the-gaps"³² hypothesis and for undermining the modern basis for science. Atheistic and theistic scientists alike have voiced this criticism, although some theistic scientists have welcomed Behe's approach.³³ Furthermore, special interest groups for nationalized government schools (i.e., the public school system) have warned that the Intelligent Design movement is just a sophisticated covert attempt by recent creationists to reintroduce God into the government schools. Finally, recent creationists have found *Darwin's Black Box* lacking in that it does not propose any method for identifying an intelligent designer.³⁴ They also object to Behe's acceptance of an old earth hypothesis, common ancestry of all living things, and acceptance of the Big Bang theory.

It is expected that Christians who advocate a traditional evidential approach to apologetics will enthusiastically welcome *Darwin's Black Box*.³⁵ Because Behe has not used his work to argue for any form of theism, his work fits in well with the evidential approach which attempts to prove the existence of a god (theism in general) based on physical evidence. Two forms of this argument are the teleological argument and the cosmological argument, both of which would benefit from Behe's work.³⁶ The problem with this traditional approach is that it can only establish a high degree of probability. Furthermore,

³²This term is used in many articles. It refers to a position where "God is invoked only when natural explanations fail" (Edward B. Davis, "Debating Darwin: The Intelligent Design Movement," *Christian Century*, 15–22 July 1998, p. 680).

³³John Wiester, "Paradigm Shifts in Geology and Biology," *Perspectives on Science and Christian Faith* 50 (December 1998): 276–78.

³⁴Robert T. Mitchell, review of *Darwin's Black Box*, by Michael J. Behe, in *Creation Ex Nihilo* 19 (March–May 1997): 30.

³⁵For instance, Hank Hannegraff, President of the Christian Research Institute and an avowed evidentialist, has welcomed *Darwin's Black Box* as "very strategic" ("The Bible Answer Man Broadcast," March 22, 2000, archived at <http://www.equip.org>).

³⁶See, for example, chapter 7, "The Cosmological and Teleological Arguments," in R. C. Sproul, John Gerstner, and Arthur Lindsley, *Classical Apologetics* (Grand Rapids: Academic Books, 1984), pp. 109–36. Sproul, Gerstner, and Lindsley do not use intelligent design per se, but I am arguing that the Intelligent Design movement fits perfectly with their evidential approach, especially with regard to these two arguments.

the sinful nature of people tends to distort any evidence from the physical world so as to deny the existence of the one true and living God. Thus, an unbeliever may find Behe convincing, but conclude with Francis Crick that an alien from another world was the designer.

At Detroit Baptist Theological Seminary, two of our institutional distinctives are recent creationism and presuppositional apologetics. Recent creationism is the position that "God recently created the heavens and earth and all that is in them in six, consecutive, literal twenty-four hour days."³⁷ This position is derived from a careful exegesis of Scripture (primarily Genesis 1 and 2) and conforms to historic confessions of faith such as The Westminster Confession of Faith (1646) and the Second London Baptist Confession of 1689.³⁸ Since many (though not all) fundamental Baptist colleges and seminaries are committed to recent creationism, most readers of this review will be familiar with and sympathetic to this DBTS distinction.

Some readers, however, may not be familiar with presuppositional apologetics, but even a cursory discussion of it is beyond the scope of this review. All that can be said at this point is that presuppositionalism holds that both believers and unbelievers have certain basic beliefs (presuppositions) that inform and condition their thinking. Presuppositionalism asserts that the defense of the faith must surface and engage these presuppositions in order to defend the faith in a biblical way.³⁹

One common misunderstanding about presuppositionalism is that there is no place for evidence or argumentation in presuppositional apologetics. Those who follow this misunderstanding hold that presuppositional apologetics simply tells the unbeliever he or she is wrong and calls on him or her to repent. This is incorrect. Presuppositionalism does not deny the usefulness of evidences nor does it demand avoiding arguments with unbelief. What presuppositionalism argues against is the use of evidence apart from the truth of

³⁷Robert V. McCabe, "Biblical Creationism" (Class Notes, Detroit Baptist Theological Seminary, Spring 2000), p. 15. An excellent introduction to recent creationism is Donald E. Chittick, *The Controversy: Roots of the Creation-Evolution Conflict* (N.p.: Creation Compass, 1984).

³⁸McCabe, "Biblical Creationism," p. 15. Also, article 6 of the DBTS statement of faith reads: "We believe in the original direct creation of the universe, a voluntary act of God whereby for his own glory and according to His eternal counsel, in six successive days of twenty-four hours each, He gave existence to all things in distinction from Himself. We oppose all forms of the evolutionary hypothesis of origins, whether theistic or atheistic" [<http://www.dbts.edu/article6.html>].

³⁹The best introduction to this method of defending the faith is Greg Bahnsen, *Always Ready: Directions for Defending the Faith* (Texarkana, AR: Covenant Media Foundation, 1996).

Scripture and Christian presuppositions.⁴⁰ That is, the believer must not allow the unbeliever to interpret evidences according to his unbelieving presuppositions. Although Behe does not argue for the existence of the God of the Bible, that does not mean his work is useless to those who wish to defend the faith. As a recent creationist committed to presuppositional apologetics, I can recommend *Darwin's Black Box* as a potentially powerful agent for disequilibrium. That is, if one is convinced that Darwinian evolution is a proven fact, Behe's work can be used to show the fallacious nature of a materialistic worldview. What one cannot do is prove the existence of God using Behe. This book fits into a presuppositional approach in that it may be able to move the debate from Darwinism to the philosophical worldview behind it, namely a chance universe. If the believer is able to show the unbelieving Darwinist that his worldview cannot account for reality in the realm of science (or logic, morality, human freedom, or human dignity) but that the Christian-theistic worldview can account for such reality, then the believer can silence objections of unbelief and demonstrate biblically to the unbeliever the truth of the gospel and his need to repent.

A word of caution should be noted in my recommendation. Inasmuch as Behe partially demonstrates the folly of unbelief, his work is helpful. However, his work also suffers from the folly of fallen thinking in that it still preserves the unbiblical notion of human autonomy. In Behe's world, one is free to choose for himself or herself which designer designed the mechanisms of life. Thus one is still serving the creature rather than the Creator and is therefore in disobedience to God and at odds with reality. This is why the Intelligent Design movement will fail even if it succeeds. Even if the idea of design is accepted as scientific and allowed in public government run schools, our society will still feel the continued wrath of God in increasing immorality (Rom 1:18–32) because we have failed as a society to give him the glory he rightfully deserves. Any proposed "intelligent designer" that is not the God and Father of our Lord Jesus Christ is still an idol.

⁴⁰For more on this, see Thom Notaro, *Van Til and the Use of Evidence* (Phillipsburg, NJ: Presbyterian and Reformed, 1980). The "Van Til" alluded to in the title refers to Cornelius Van Til, who was the father of presuppositionalism.