

# *A Symposium on a Work in Progress: Michael Ruse's Darwin and Design*

A SUMMARY OF MICHAEL RUSE'S *DARWIN AND DESIGN*

by William S. Stone Jr.

*Abstract.* Michael Ruse's *Darwin and Design: Science, Philosophy, Religion* explains the history and philosophical arguments of the design metaphor of evolution. It recounts the historical uses of the metaphor from Plato to twentieth-century American science. Ruse explores the criticisms of the design metaphor and ultimately concludes that it is a beneficial term. The chief contribution of *Darwin and Design* is that it offers a clear understanding and comparison of the argument *from* design and the argument *to* design.

*Keywords:* Charles Darwin; evolution; evolutionary design; intelligent design; natural theology; William Paley; teleological argument.

---

Michael Ruse has contributed many books to the discussion of evolution. As a philosopher and historian, he recently added *Taking Darwin Seriously* (1998), *Can a Darwinian Be a Christian?* (2001), *The Evolution Wars—A Guide to the Debate* (2000), *Monad to Man: The Concept of Progress in Evolutionary Biology* (1996), and *Mystery of Mysteries—Is Evolution a Social Construction?* (1999). These last two books constitute the first two installments of a three-part series being published by Harvard University Press, and the forthcoming *Darwin and Design: Science, Philosophy, Religion* continues where *Mystery of Mysteries* ended. In *Mystery of Mysteries*, Ruse illustrated two hundred years of science wars by looking at the social and cultural

William S. Stone Jr. is speech and philosophy instructor at Northeast Mississippi Community College in Booneville. His mailing address is 310 Windham Drive, Booneville, MS 38829; e-mail [bstone@necc.cc.ms.us](mailto:bstone@necc.cc.ms.us). This paper was originally presented at a book symposium at the forty-eighth annual conference of the Institute on Religion in an Age of Science, Star Island, N.H., 28 July–3 August 2001.

[*Zygon*, vol. 37, no. 2 (June 2002).]

© 2002 by the Joint Publication Board of *Zygon*. ISSN 0591-2385

influences on Charles Darwin, Erasmus Darwin, Julian Huxley, Geoffrey Parker, Richard Dawkins, Stephen Jay Gould, Richard Lewontin, and Edward Wilson. In *Darwin and Design*, however, the work in progress that we are presently discussing, he focuses on the design metaphor of evolution.

The first half of *Darwin and Design* develops the history of the nuances of the design metaphor. Ruse quickly revisits many of the same historical figures in *Mystery of Mysteries*, but in addition to looking at the social influences, he explains a forward-looking kind of understanding known technically as “teleological understanding.” That is, things are often created to fulfill an “end.” Ruse explores the paradox that Darwin expelled design (as in William Paley’s cosmological argument) from biology, and yet it is still needed as a critical concept.

In chapter 1, Ruse begins with Plato and takes the reader on a two thousand-year ride to David Hume, in which Hume seemingly dismantled causal thinking. Chapter 2 categorizes Immanuel Kant as uncomfortable with final-cause talk, because it seemed to imply design and therefore was not acceptable in science. However, Ruse argues that scientists cannot do biology without final causes. Final causes are part of the perceptual filter through which researchers study the world. In chapters 3 and 4, he looks at the prehistory of the concept of evolution and theological worldviews prior to Darwin, and he explains the history of the death of the idea of argument from design. In chapters 5 and 6, Ruse reacquaints the reader with the life of Charles Darwin and tells how his life experience shaped his designlike perceptions of evolution. Darwin’s ideas did not spring out of nothing but came from his relatively comfortable position in life, his religious beliefs, his family (grandfather and father), his education, his mentors, and his voyage on the *Beagle*. Chapter 7 traces the acceptance and social construction of the concept of evolution by Thomas Henry Huxley and Asa Gray, as representatives of non-Christian and Christian scientists who appropriated evolutionary theory. Chapter 8 shows how evolution did not develop into a specialized functioning discipline of science, as Darwin had dreamed, until about one hundred years after *The Origin of Species* (1859). Chapter 9 outlines how American scientists contributed to evolutionary theory.

In the second half of the book, chapters 10 through 16 deal with the philosophical arguments of the design metaphor. As in *Mystery of Mysteries*, Ruse explicates the role of metaphor and the values of evolutionary thought. And as with *Mystery of Mysteries* and *Can a Darwinian Be a Christian?* he brings philosophical training and historical perspectives to the strengths and weaknesses of both sides of the science wars.

Chapter 10 looks at Stephen J. Gould’s and Richard Lewontin’s arguments against adaptation and concludes that they are wanting. He states, “Adaptation is a real phenomenon. It is no accident that fish have fins, that seals and whales have flippers and flukes, that penguins have paddles

and that even sea snakes have become laterally flattened. The problem of locomotion in an aquatic environment is a real problem that has been solved by many totally unrelated evolutionary lines in much the same way.”

In chapter 11, Ruse looks at optimality models and debates about the “level of selection” problem. In the optimality model, the researcher works backwards, arguing that selection has brought about perfect adaptation—it has “optimized” the situation. There have been arguments over whether the model operates at the level of the individual or the level of the group. Ruse says the optimality model does not force one to accept a particular perspective on the nature of selection. He goes on to examine the debate from the individualistic perspective, as represented by Richard Dawkins’s *The Selfish Gene* (1976) and its critics. Ruse concludes this chapter by saying that adaptation and the argument for design provide the background assumption for a thriving paradigm, and that the optimality model is a powerful and effective tool within this paradigm.

In chapter 12 Ruse turns his attention to how philosophers have struggled with evolution. Early on, many thinkers were dissatisfied with undiluted Darwinism, because it allowed a purely naturalistic approach. Theorists such as Henri Bergson pined for something more than a mechanistic view of life. Ruse explains how the major legacy of logical empiricism was its insistence that it is a mistake to view science as value-free. Science was often supposed to be objective, because values are subjective, and science could possess no values. Ruse argues that, on the contrary, teleological systems are value-impregnated systems. Moreover, there is something distinctive about biological understanding—the teleological understanding of evolutionary biology, which proceeds as if the design of organisms should be understood in terms of their survival and reproduction. Darwinian evolution does not have design built in as a premise, but design emerges as evolution does its work, and some organisms are naturally selected for while others are selected against.

In chapter 13, the reader finds that the metaphor of design is at the heart of biology. The question then becomes, “Are we being unduly anthropomorphic?” Ruse concludes that the metaphor of design is inherent in evolutionary biology. He argues from the history of biology, from the word of evolutionists themselves, and from examples of their work. Some, like Gould and Lewontin, object to the use of the terms *adaptation* and *design* because they come from pre-Darwinian British natural theology. Ruse concludes that biologists are committed to explaining the complexities of life and thus happily incorporates Paley’s design metaphor.

Chapter 14 looks at natural theology and its critics such as Karl Barth. Natural theology imposed deism upon theology, Barth argued, and a correct faith must begin with a groundwork of knowledge of God. After Darwin, however, the argument from design played a less significant role

in Christian theology. Evolutionary thought encouraged a serious rethinking about the place of reason and definitive empirical or logical proof.

Chapter 15 refutes those who cling to intelligent design and detractors of Darwinism, such as biochemist Michael Behe, author of *Darwin's Black Box* (1996). Then he turns to the other side of the coin and looks at some potent arguments against design, from Richard Dawkins's *The Blind Watchmaker* (1986), and describes how the science-religion community has retreated from Dawkins's polemics. Ruse asks the rhetorically explosive questions, "Do we need the God hypothesis at all? Is it not far simpler to go with natural selection and nothing more?" Ruse explains that the theist's answer to Dawkins is not an answer of logic or proof. The theist can and does rejoice in nature and feels awed by the wonderful processes that God uses to produce us and the world around us. Logically, Ruse explains, the God hypothesis may be redundant, even though emotionally and religiously it has never been stronger. The end result is that Ruse redeems the respectability of design in science and rescues its place in philosophy.

For historical reasons, many instructors of Introduction to Philosophy courses offer Paley's popular cosmological argument, which sees apparent design in the earth and concludes that there must be a master designer. Evolutionary biologists use the theory of evolution to explain design in the earth. I recommend Ruse's forthcoming book because it offers a clear understanding and comparison of the argument *from* design (as in Paley's natural theology) and the argument *to* design (as in Darwinian evolution). Ruse brings historical light and philosophical analysis to the design metaphor, which is at the heart of many science-and-religion discussions. Ruse correctly shows that there is a strong emotional and intellectual resonance in the design metaphor. His book can be profitably used to explain the argument to design.

#### REFERENCES

- Behe, Michael. 1996. *Darwin's Black Box*. New York: Free Press.
- Dawkins, Richard. 1976. *The Selfish Gene*. New York: Oxford Univ. Press.
- . 1986. *The Blind Watchmaker*. New York: Norton.
- Ruse, Michael. 1996. *Monad to Man: The Concept of Progress in Evolutionary Biology*. Cambridge: Harvard Univ. Press.
- . 1998. *Taking Darwin Seriously*. Amherst, N.Y.: Prometheus Books.
- . 1999. *Mystery of Mysteries: Is Evolution a Social Construction?* Cambridge: Harvard Univ. Press.
- . 2000. *The Evolution Wars—A Guide to the Debate*. Santa Barbara, Calif.: ABC-CLIO.
- . 2001. *Can a Darwinian Be a Christian? The Relationship between Science and Religion*. Cambridge: Cambridge Univ. Press.
- . In press. *Darwin and Design: Science, Philosophy, Religion*. Cambridge: Harvard Univ. Press.