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JOHN BELLAMY FOSTER, BRETT CLARK, AND RICHARD YORK, *Critique of Intelligent Design. Materialism versus Creationism. From Antiquity to the Present*, New York: Monthly Review Press, 2008, 240 pp., \$15.95.

William Paley (1743-1805) was an English clergyman intensely committed to the abolition of the slave trade and had become by the 1780s a much sought public lecturer against slavery. He was also an influential writer of works on Christian philosophy, ethics, and theology. *The Principles of Moral and Political Philosophy* (1785) and *A View of the Evidence of Christianity* (1794) earned him prestige and well-endowed ecclesiastical benefices, which allowed him a comfortable life. Illness forced him in 1800 to give up his public speaking career, which provided ample time to study science, particularly biology, and write *Natural Theology; or, Evidences of the Existence and Attributes of the Deity* (1802), the book by which he would become best known to posterity and which would greatly influence Darwin. With *Natural Theology*, Paley sought to update John Ray's *Wisdom of God Manifested in the Works of the Creation* (1691), taking advantage of one century of additional scientific knowledge.

William Paley's *Natural Theology* is a sustained "argument from design" claiming that the living world provides compelling evidence of being designed by an omniscient and omnipotent Creator. The argument has two parts: first, that organisms give evidence of being designed; second, that only an omnipotent God could account for the perfection, multitude, and diversity of designs. Paley's keystone claim is that, "There cannot be design without a designer; contrivance, without a contriver; order, without choice; . . . means suitable to an end, and executing their office in accomplishing that end, without the end ever having been contemplated." Paley elaborates the argument-from-design with greater cogency and more extensive knowledge of biological detail than it has ever been done by any other author, before or since.

A few years after the publication of Paley's *Natural Theology*, the eighth Earl of Bridgewater endowed the publication of treatises that would set forth "the Power, Wisdom and Goodness of God as manifested in the Creation." Eight treatises were

published during 1833–1840, several of which artfully incorporate the best science of the time and had considerable influence on the public and among scientists. William Buckland, professor of geology at Oxford University, notes in *Geology and Mineralogy* (1836) the world distribution of coal and mineral ores and proceeds to point out that they had been deposited in a remote part, yet obviously with the forethought of serving the larger human populations that would come about much later. Another geologist, Hugh Miller in *The Testimony of the Rocks* (1858), would argue that it is not only the perfection of design but also the beauty of natural structures found in rock formations and in mountains and rivers that manifests the intervention of the Creator.

One of the Bridgewater Treatises, *The Hand, Its Mechanisms and Vital Endowments as Evincing Design*, was written by Sir Charles Bell, a distinguished anatomist and surgeon, famous for his neurological discoveries, who became professor of surgery in 1836 at the University of Edinburgh. Bell follows Paley's manner of argument, examining in considerable detail the wondrously useful design of the human hand, but also the perfection of design of the forelimb used for different purposes in different animals, serving in each case the particular needs and habits of its owner: the human's arm for handling objects, the dog's leg for running, and the bird's wing for flying.

Charles Darwin is deservedly given credit for the theory of evolution. In the *Origin of Species*, he laid out the evidence demonstrating the evolution of organisms. However, Darwin accomplished something much more important for intellectual history than demonstrating evolution. Darwin's *Origin of Species* is, first and foremost, a sustained argument to solve the problem of how to account scientifically for the design of organisms. Darwin seeks to explain the design of organisms, their complexity, diversity, and marvelous contrivances as the result of natural processes. Darwin brings about the evidence for evolution because evolution is a necessary consequence of his theory of design.

The strength of the argument from design to demonstrate the role of the Creator had been forcefully set forth by Paley, the Bridgewater treatises, and by other philosophers and theologians. Wherever there is function or design, we look for its author. It was Darwin's greatest accomplishment to show that the complex organization and functionality of living beings can be explained as the result of a natural process – natural selection – without any need to resort to a Creator or other external agent. The origin and adaptations of organisms in their profusion and wondrous variations were thus brought into the realm of science. Supernatural explanations of the adaptations and diversity of organisms had, thus, received a death blow and were replaced by scientific explanations: the theory of evolution, population genetics, ecology, and other biological disciplines.

Nevertheless, in the 1990s several U.S. authors, notably biochemist Michael Behe (1996), theorist William Dembski (1995), and law professor Phillip Johnson (2000), among others, revived the argument from design. Often, however, these authors sought to hide their real agenda, and, thus, avoid explicit reference to God, so that the “theory” of intelligent design could be taught in the U.S. public schools, as an alternative to the theory of evolution, without incurring conflict with the U.S. Constitution, which forbids the endorsement of any religious beliefs in public institutions. In *Critique of Intelligent Design*, J.B. Foster, B. Clark, and R. York expose (pp. 184-186) the duplicity of these authors, for example by quoting from Dembski's 1999 book, *Intelligent Design: The Bridge between Science and Theology*. Dembski writes: “Intelligent design presupposes neither a creator nor miracles . . . It detects intelligence without speculating about the nature of the intelligence.” This claim is, however, inconsistent with Dembski's claims in other places in the book, e.g., “any view of the sciences that leaves Christ out of the

picture must be seen as fundamentally deficient,” or “Christ is indispensable to any scientific theory, even if its practitioners don’t have a clue about him.” Dembski is also quoted from other writings where he asserts, for example, that “Intelligent design is just the Logos theology of John’s Gospel restated in the idiom of information theory.” As Foster *et al.* conclude, “intelligent design has the same objectives . . . as the British natural theology of the seventeenth to the nineteenth centuries. Indeed, nowhere in Paley is the connection between nature and scripture made so evident” (p. 186).

After a Pennsylvania trial that lasted several weeks, federal judge John E. Jones III had similarly concluded in a 130-page-long decision: “The overwhelming evidence at trial established that ID [intelligent design] is a religious view, a mere re-labeling of creationism, and not a scientific theory . . . ID is not supported by any peer-reviewed research, data, or publications.”

There have been in recent years a number of books where the modern version of intelligent design is exposed for what it is, an effort to demonstrate the existence of God based on the adaptive design of organisms, an effort that lacks any scientific cogency. (See, for example, my books, *Darwin and Intelligent Design*, Fortress Press, 2006, and *Darwin’s Gift to Science and Religion*, Joseph Henry Press, 2007.) But *Critique* is much more than a critique of modern intelligent design. Their intent is, as they state in the Preface, “providing a brief account of the 2,500-year materialist *critique of intelligent design* (creationism) out of which the modern scientific world view emerged” (p. 7, their italics). Further, “the conflict between religion and science, which the intelligent design movement brought to the fore, is, we will contend, insurmountable within the present society” (p. 7). The authors see their book as a contribution to humanist efforts “to create through social means a broader materialism-humanism” (p. 8).

The authors argue that the roots of science, in the modern sense of the world, are not found in the revolution that took place in the western world in the sixteenth and seventeenth centuries, through the work of Copernicus, Galileo, Newton and others, which gradually ushered in a conception of the universe as matter in motion governed by natural laws, that is, a commitment to the postulate that the universe obeys immanent laws that account for natural phenomena. With this revolution, the workings of the universe were brought into the realm of science: explanation through natural laws. All physical phenomena could be accounted for as long as the causes were adequately known. Rather, according to Foster and his co-authors “the key defining feature of the emerging scientific worldview has always been a commitment in some sense to materialism . . . This commitment stems from the intellectual foundation laid by the Greek atomists Democritus and Epicurus over two millennia ago” (p. 19). The authors add: “It is the fundamental incompatibility of thoroughgoing materialism with a teleological or religious worldview . . . that has driven the conflict between science and religion from antiquity to the present” (p. 19).

Foster *et al.* assert at times that they have no truck with a crude philosophical materialism, “the crude proposition that all natural processes are attributable directly to matter . . . [rather] we shall use the term materialism here in its classic sense, in which it is indistinguishable from naturalism” (p. 21). It is not clear, however, in which sense these authors’ materialism differs from the “crude proposition that all processes are directly attributable to matter,” since their materialism seems all encompassing, leaving nothing out of it in the world of reality.

Indeed, the authors’ true colors are – unwittingly, I assume – displayed in their critique of Stephen Jay Gould’s elaborate proposition that science and religion have their independent domains (“magisteria”) and, therefore, should not be in conflict. As Foster *et al.* explain, Gould enshrined this claim in his NOMA (Non-

Overlapping Magisteria) principle. Gould, a self-proclaimed agnostic, famously distinguished between the “morality of morals” (questions about what morals we *ought* to have), which he asserted to be a matter for the humanities and religion, from the “anthropology of morals” (questions about what moral systems we *do* have), which he relegated to the magisterium of science. “Gould is certainly correct,” they write, “that the anthropology of morals cannot lead to the morality of morals . . . there is no logical way to go from the *is* to the *ought*” (p. 24).

But is there anything left for the morality of morals? Is there any rational discourse that would help humans to discover the principles of morality, any system of morals that might be said to be objectively justified? Not so, according to these authors: “it is doubtful whether there is a foundationalist *ought* . . . that can tell us what moral values *should* be. Therefore, it is left to humans to construct their own morals” (p. 24). They add: “The ‘morality of morals,’ insofar as this involves transcendent moral principles, is from a thoroughgoing materialistic standpoint stripped of historical meaning . . . Questions about what morals we ought to have cannot be answered in a factual manner, which leaves all factual questions about morality in the domain of science” (pp. 24-25). In other words these authors are claiming that the “morality of morals” is an empty construct, “there is not any there there” as Gertrude Stein is famously credited to have said about the city of Oakland. There are no rational grounds, they imply, for deciding whether or not murder, rape, torture, and slavery should be considered ethically reprobate.

The lion’s share of *Critique* is an exposition of philosophical materialism, a tradition notably initiated by the Classic Greek philosophers Democritus (c. 460-356 BCE) and Epicurus (341-270 BCE) and poetically formulated by the Roman Lucretius (c. 99-55 BCE). Chapter 3, “Epicurus’s Swerve” is followed by a chapter dedicated to “Enlightenment Materialism and Natural Theology,” where scholars listed in the materialistic tradition include Giordano Bruno, Galileo, Francis Bacon and Thomas Hobbes. David Hume “steadfastly refused to embrace religion, taking comfort instead in Epicurus’s materialist views” (p. 81). “Nowhere was intelligent design held up to more ridicule in the eighteenth century than in Voltaire’s *Candide*” (p. 81). The ensuing chapters are dedicated to “Marx’s Critique of Heaven and Critique of Earth,” which places Karl Marx squarely, as expected, in the materialistic tradition, starting with his doctoral dissertation on Epicurus; and to Charles Darwin and his “materialist theory of evolution.” In Chapter 7 (“Freud and the Illusions of Religion”) Sigmund Freud is introduced as “heir to the critique of religion emanating from the materialist tradition” (p. 131). Chapter 8 (“In Defense of Natural Science”) and Chapter 9 (“Replaying the Tape of Life”) bring in such evolutionary concepts as “functional shifts” and “exaptation,” but are mostly summary critiques of Behe’s claims of “irreducible complexity,” Dembski’s “design inference,” and other scientifically and philosophically unsubstantial constructs of other proponents of intelligent design. The final Chapter 10 (“The End of the Wedge”) returns to William Dembski with a vengeance, pointing out his *ad hoc* inconsistencies and absurdities as he deals with different issues at hand or objections: Organisms have been designed by God, but “the design theorist is not committed to every biological structure being designed”; the Designer can produce “suboptimal design”; there is no valid reason to assume “a God who is omnipotent and benevolent in the face of evil”; only theology can “discern God’s hand in creation”; and the statement quoted above, that “Intelligent design is just the Logos theology of John’s Gospel restated in the idiom of information theory” (yet Dembski asserts elsewhere that intelligent design “is a scientific theory”!) and that intelligent design “detects intelligence without speculating about the nature of the intelligence” (is the Logos of John’s Gospel not a speculation about the nature of the intelligence?) and much more (pp. 183-188).

Historians of science will be interested in *Critique*’s overarching claim that science

emerged from the western materialistic tradition that runs from Democritus and Epicurus through Hobbes, Marx, and Freud. It is interesting to contrast *Critique's* view of the long-standing materialist tradition of modern science with other claims, particularly the equally extreme one that asserts (see, e.g., J.T.O. Kirk, *Science and Certainty*, CSIRO Publishing Collingwood, Australia, 2007, p. 219) that "The brand of monotheism that universally prevailed in Europe, that proclaimed that the universe had been created by a single just and rational being, may have been crucial" to the dramatic development of modern science, which started in earnest only in the nineteenth century, yet has dramatically exploded our knowledge of the natural world.

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