

SCIENCE AND SCIENTISM IN HUSTON SMITH'S *WHY RELIGION MATTERS*

by Ian G. Barbour

Abstract. Huston Smith is justifiably critical of scientism, the belief that science is the only reliable path to truth. He holds that scientism and the materialism that accompanies it have led to a widespread denial of the transcendence expressed in traditional religious world-views. He argues that evolutionary theory should be seen as a product of scientism rather than of scientific evidence, citing authors who claim that the fossil record does not support the idea of continuous descent with modification from earlier life forms. I suggest that he has underestimated the cumulative weight of evidence from many independent fields of science supporting neo-Darwinism. I argue that methodological (but not philosophical) naturalism is a basic assumption of scientific inquiry. Proponents of intelligent design assume a fixed plan or blueprint, which is compatible with Smith's understanding of God's timeless vision. By contrast, almost all biologists and many theologians today envisage a dynamic and open-ended process rather than the realization of the unchanging forms in a preexisting plan.

Keywords: Darwinism; evolution; intelligent design; mysticism; scientism; Huston Smith.

Scholars in religious studies and many people in the wider reading public have been deeply indebted to Huston Smith for the breadth and depth of his understanding of the major religions of the world. In his books and films he has shared his firsthand experience of the practices of worship and daily life in a wide variety of cultures. He has given particular attention to meditation and the mystic's experience of unity with the Absolute, to which

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he was initially introduced in the Vedanta heritage of Hinduism but which he subsequently found within all the classical religious traditions.

I first came to know and appreciate him thirty-five years ago in a group that met over several years for weekends of discussion of science and religion. I edited some of the papers from that group and was delighted to include his essay on Taoism titled "Tao Now: An Ecological Testament" in *Earth Might Be Fair* (Barbour 1972). His continuing interest in science is evident in many chapters of his new book, *Why Religion Matters* (Smith 2000). His central thesis is that an unlimited confidence in the methods of science has encouraged a philosophy of materialism and widespread denial of the transcendence expressed in all traditional worldviews.

I am in complete agreement with Smith's insistence that we must distinguish science itself from scientism. He defines scientism as the claim "first, that the scientific method is, if not the *only* reliable method of getting at the truth, then at least the *most* reliable method, and second, that the things science deals with—material entities—are the most fundamental things that exist" (Smith 2000, 60). He rightly insists that materialism is a philosophical belief and not a scientific conclusion. If science is selective, its account of reality may not be complete. Smith is also aware of the limitations of religion: "Religionists should keep their hands off science as long as it is genuine science and not larded with philosophical opinions to which everyone has rights" (p. 201). But in the case of evolution, he and I disagree on where the line should be drawn between scientism and science.

We agree that it is scientism when Richard Dawkins says that the presence of chance in evolution shows that this is a purposeless universe, or when John Avis and William Provine write, "our modern understanding of evolution implies that ultimate meaning in life is nonexistent" (quoted in Smith 2000, 37). These are clearly philosophical interpretations of science, not theories defended in scientific journals. But Smith believes that evolutionary theory itself is supported more by atheistic philosophical assumptions than by scientific evidence. He quotes approvingly and at length from David Walsh (1999), including this statement: "Even today it is virtually impossible for conscientious biologists to admit that the evidence for evolution is extraordinarily thin. We simply have little tangible proof that one species evolves into another. . . . We have neither experience nor evidence of intermediate forms" (Smith 2000, 180). Smith summarizes a recent book by Jonathan Wells (2000), who holds Ph.D. degrees in both theology and biology: "The fossil record shows that the major groups of animals appeared together fully formed, with no evidence of common ancestry—a pattern exactly opposite to Darwin's prediction" (Smith 2000, 181).

Smith holds that such views have been ignored by existing centers, such as the Center for Theology and the Natural Sciences (CTNS) in Berkeley and the Zygon Center for Religion and Science (ZCRS) in Chicago. He

says that “when religion enters the picture, scientists close ranks in supporting Darwinism, with CTNS and *Zygon* right in there with them. To my knowledge, no one critical of the theory has been published in *Zygon* or included in a major CTNS function” (p. 77). This is not quite accurate; Smith himself has spoken at several CTNS workshops, and speakers at a recent CTNS conference included Duane Gish from the Institute for Creation Research and Stephen Meyer from the Discovery Institute. Smith proposes the establishment of the Equal Opportunity Center for Science and Religion with two departments. The first department would act as “a watchdog on scientism.” The second would sponsor monthly debates between two people “on issues where scientific and religious understandings appear to conflict, the obvious ones at present being Darwinism and intelligent design. . . . The full spectrum of positions in question would be allowed a hearing, even short-term creationism on the evolution front” (p. 204).

The criticisms of neo-Darwinism that Smith cites have not been ignored by the scientific community, as he claims, but have been answered in great detail. For example, one would expect few fossils of intermediate forms if the transitions were relatively rapid. But there is widespread agreement among paleontologists that some fossils do represent intermediate forms—such as those between whales and other mammals, or *Archaeopteryx*, which seems to fall between reptiles and birds, although it is probably not an ancestor of present-day birds. To be sure, the explosion of diverse forms of life early in the Cambrian period was rapid on a geological time scale, but it still covered thousands of generations. Such relatively rapid changes would be consistent with Stephen Jay Gould’s theory of punctuated equilibrium, which challenges Darwinian gradualism but accepts the broad framework of Darwinism (Miller 1999).

Contrary to the statement that there is no evidence of common ancestry, extensive evidence has been found by very diverse methods, including bioregional, anatomical, and biochemical studies of living species. For example, the enzyme cytochrome-C in human beings today consists of a sequence of 104 amino acids. In the comparable sequence in rhesus monkeys, only one of these amino acids is different. Horses differ from human beings in 12 and fish in 22, indicating increasingly distant kinship. Of course, no scientific theory can be proved with certainty, especially if it deals with the distant past. The strength of evolutionary theory lies in its scope in coherently integrating data from a wide range of phenomena in many fields of science and in suggesting testable hypotheses for further research (Ruse 1999).

Science studies the relationship between events in the natural world. Scientists have to assume *methodological naturalism*; that is, they seek explanations in terms of natural causes, although they do not have to assume *philosophical naturalism*, the claim that nothing exists beyond the scope of

science (Van Till 1991). Smith himself insists on the limitations of science, especially the need to use controlled experiments. But how can we conduct controlled experiments involving God? In the case of evolution, we cannot actually control past events, but we can experimentally test various components of evolutionary theory. The authors cited by Smith do not offer testable hypotheses for scientific research. Their project consists of criticizing aspects of evolutionary theory, not in improving existing theory or proposing a fruitful alternative that might guide research. In fact, by invoking supernatural intervention they discourage the search for natural causes.

While virtually the entire scientific community agrees on descent with modification from earlier ancestors, there are debates within the scientific community about *the mechanisms* of evolutionary change. In addition to considering mutations and natural selection, some authors talk about developmental pathways that constrain the range of possible viable forms. These pathways could be viewed by the theist as a form of built-in design, but they do not represent divine intervention at discrete points in an otherwise continuous process. Other biologists suggest that new directions in evolutionary history were initiated not by random mutations subsequently selected for their adaptive benefits but rather by the initiatives of organisms that were subsequently supported by mutations that conferred a selective advantage (the so-called Baldwin effect). Environments select organisms, but organisms also select environments. All of these proposals represent expansions and modifications of neo-Darwinism rather than its outright rejection (Depew and Weber 1995).

Smith says that we cannot get more from less or life from dead matter. I would reply that this occurs in the growth of every embryo. Organisms are organized in a hierarchy of levels that are just as real and causally effective as their component atoms ("dead matter"). The whole is more than the sum of its parts because it incorporates additional information and because the interactions of its parts are nonlinear. Events at higher levels constrain events at lower levels without violating lower-level laws, thereby effecting a top-down influence. Even in the inanimate world, theories of complexity and self-organization deal with whole systems whose behavior cannot be predicted from the behavior of their parts (Barbour 1997, 182–84, 230–35).

Smith supports "intelligent design," but we should note that the term is used in diverse ways by recent authors. Some scientists, such as Paul Davies (1999), say that design is built into the basic laws that made evolution possible. For these scientists there is no conflict between design and a modified neo-Darwinism. Others hold that design was introduced by divine intervention at specific points in past history. The biochemist Michael Behe (1998) describes the complexity of biochemical systems, which he says must have arisen all at once because they could not have arisen by

stages (though his scientific critics dispute this claim). Smith seems to assume intermittent divine intervention. For example, he suggests that at the first session of a high school class on evolution a teacher should hand out a statement that science has discovered some of the mechanisms by which life has emerged but that “there is so much that we still do not know that plenty of room remains for you to fill in the gaps with your own philosophical or religious convictions” (p. 165). In my view, philosophy and religion put science into a wider context rather than fill gaps in the scientific account. The God of the gaps has steadily retreated in the history of modern science.

Proponents of intelligent design usually assume a fixed plan or blueprint that is imposed on the world rather than an interaction between God and a dynamic and evolving world. A fixed plan would be consistent with Smith’s understanding of the eternity of the Absolute. Human freedom is ultimately unreal if past, present, and future are indistinguishable in God’s timeless vision. All design arguments are also challenged by the presence of imperfect design, evil, and suffering in the world. Huston minimizes this problem by asserting that evil is ultimately unreal. He says that the world is perfect within the divine totality of which it is a part. I would defend an alternative metaphysics in which temporality, interdependence, and creativity are central.

Philosophical proponents of intelligent design, such as William Dembski (1999) and Stephen Meyer (1994), write in the tradition of *natural theology*, in which science is used as evidence of the existence of a designer. My own approach is not natural theology but *a theology of nature*, in which one asks how nature as understood by science is related to the divine as understood from the religious experience of a historical community. I believe we should be open to the reformulation of traditional doctrines in the light of science, but always in the context of the worshipping community. Smith’s own understanding of religious experience seems to me more compatible with such an approach than with the rationalistic arguments of the natural theology tradition.

In my new book, *When Science Meets Religion* (Barbour 2000), the successive chapters dealing with different sciences are all organized according to my typology of four alternative ways of relating science and religion: Conflict, Independence, Dialogue and Integration. Smith perpetuates the *Conflict* model, which is commonly presented by the media. On one side, the media feature the atheistic scientists who believe in evolution but not God. Opposing them are the biblical literalists who believe in God but not evolution. Smith is not a biblical literalist, and we are all indebted to him for his writings on myth, ritual, and religious experience in religious life. However, he supports the assertion of both atheistic scientists and biblical literalists that a person cannot with integrity believe in both God and evolution. He devotes two pages to defending the Kansas Board of

Education from what he feels was unfair coverage by the press in 1999, but he does not make a single criticism of the Board's ruling (pp. 110–11).

My second model of science and religion is *Independence*, the thesis that the two fields cannot conflict because they ask different questions and deal with separate domains. This view was at one time supported by neo-orthodoxy and existentialism and then by analytic philosophy, which insisted that scientific and religious language serve totally different functions in human life. Another version of Independence was presented recently in Gould's *Rocks of Ages* (1999), which argues that science deals with facts whereas religion deals with values, so the two cannot conflict. Smith discusses Gould's position and justifiably rejects it because it reduces religion to ethics (Smith 2000, 70). But in some of his earlier writings he supports another version of Independence, the belief that science deals with secondary causes that connect events in the world whereas religion asserts that on a very different level God is the primary cause and transcendent source of all that is (Griffin and Smith 1989). I suggest that if one accepts the distinction of primary and secondary causes one does not need to look for gaps in the scientific account of secondary causes. The scientific account is complete on its own level. I would also note that Richard Jones, in *Science and Mysticism* (1986), endorses the Independence thesis because the methods and goals of meditation are radically different from the methods and goals of science. One might have expected Smith's insistence on the primacy of religious experience rather than doctrinal propositions to lead him to disengage religion from the conflicts with science that have been prominent in the past.

The third model of science and religion I call *Dialogue*, and there are some fine examples of it in Smith's book. He draws interesting parallels between the holism of the mystical vision and the holism and nonlocality of quantum physics, especially David Bohm's quantum theory. Smith devotes a whole chapter to light in relativity theory and the universality of light as a metaphor in religious life. He seems to go beyond metaphor in suggesting that if one traveled at the speed of light, time would stop and one would participate in eternity. Light, he says, is the instrument through which Spirit creates the universe (p. 140). I am wondering why he sees more possibility of constructive dialogue with physics than with evolutionary biology. I suspect that it is partly because evolution is more threatening to both human dignity and a preexisting divine design. In addition, scientism may be more common in a new science than in an older one. Newtonian physics was impressive in its explanatory power in the eighteenth century, and it was easy to think that it could explain everything; only later did relativity and quantum theory show the limitations of Newton's theories. Molecular biology has recently shown its impressive explanatory power, and it is tempting to think it can explain everything.

Perhaps we are only beginning to see the value of a more holistic viewpoint in biology as well as physics.

My fourth category is the *Integration* of science and religion. I have explored Integration within the framework of process philosophy, as John Haught has done in his recent book, *God After Darwin* (2000). Smith is critical of process thought. He emphasizes eternity over temporality and divine transcendence over immanence. He accepts ultimate mystery and paradox, whereas I seek intelligibility and coherence, although I acknowledge that they are unachievable goals. Another version of Integration is given by Arthur Peacocke, who says that evolution is God's way of creating. He defends continuing creation as an open-ended history in which chance and human freedom have led to novel and unpredictable events. He holds that God is at work not by occasionally intervening supernaturally but by empowering and acting through the creatures of the world. Like Smith, Peacocke speaks of God as a top-down cause within a hierarchy of levels, but he holds that these levels are integrally related to each other (Peacocke 1993).

In short, I think that Huston Smith has given support to the Conflict thesis because he underestimates the weight of scientific evidence favoring neo-Darwinian theory, which he dismisses as the product of scientism. I would not expect him to favor the Integration thesis because of his sense of mystery and paradox and his emphasis on the limitations of rational systems of thought. But I believe that his interest in mysticism would be compatible with the Independence position. And I am particularly hopeful that he will explore the path of Dialogue with the community of biological scientists, as he has done with physical scientists.

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