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Science as an Apologetic Tool for Biblical Literalists

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Advocates of legislation mandating "balanced treatment" for "creation-science" bristle at the suggestion that they are attempting to introduce religion into the public schools. They argue that "creation-science" can be presented solely in terms of "scientific" evidence and "inferences" from that evidence. Opponents of the legislation retort, of course, that "creation-science" is not science.

When "balanced-treatment" advocates say creation-science can be presented without religious concepts, they mean that it is possible to eliminate the Biblical references and religious allusions now pervading their texts and to present only the empirical claims of creationists. These advocates say they can separate the physical from the metaphysical or, as a latter-day William Jennings Bryan might say, the rock from the Rock of Ages. These segregated "facts" they call "science."

Despite the admissions of several prominent creation-scientists that creation-science is not a scientific theory,¹ and the recent judicial determination to the same effect in *McLean v. Arkansas Board of Education*,² the question continues to trouble a few non-creationist philosophers of science.³ They argue that no sharp demarcation exists between what is scientific and what is not scientific, that the dividing line has continued to change throughout the history of science, and that there is no clear consensus among philosophers today on a definition of science. They also argue that, at least under some definitions, creation-science may qualify as scientific, although

its testable conclusions have repeatedly been shown to be false and it has no secular educational value in the modern science class.

The encouragement "balanced-treatment" advocates obtain from any suggestion that creation-science can be considered "scientific" and the consternation the suggestion causes to opponents of the legislation are greatly disproportionate to the number of philosophers openly expressing concern. The dissenters are accused of giving aid and comfort to the enemies of modern science (albeit unintentionally). The dissenters, in turn, accuse philosophers who insist that creation-science is not science of misrepresenting what science is and how it works because of an overzealous resolve that Creationism must be discredited at any cost.⁴

Partisans on both sides of the "balanced treatment" controversy take the philosophical debate so seriously because many of them mistakenly believe that its outcome is dispositive of the legal claim that the legislation is unconstitutional under the Establishment Clause of the First Amendment. They reason that creation-science must be either "religion" or "science" because it cannot be both and that "religion" is proscribed by the Establishment Clause but "science" is not.

Such a simplistic, definitional approach to the Establishment Clause, however, is not an adequate response to this sophisticated attempt to circumvent the prohibition against government sponsorship or promotion of religious doctrine, and will not be adequate to meet similar attempts likely to occur in the future. The questions necessary to determine what science is do not automatically identify the considerations relevant in judging whether the educational process has been manipulated for extra-scientific and reli-

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gious ends—which is the critical inquiry under the Establishment Clause. To fall within the proscription of the First Amendment, creation-science need not be found to *be* a religion, only to *advance* religion in such a direct way as to implicate First Amendment values. The determinative Constitutional question is not into which philosophical classification creation-science fits but whether the function (i.e., the purpose and effect) of teaching creation-science in the public schools is to promote belief in sectarian doctrine and thereby render the schools partisan to particular religions.

A functional analysis of creation-science under the Establishment Clause focuses on whether the empirical claims of creation-science have been developed through the ordinary standards of scientific discourse or whether they are specially prepared as a polemical device for channeling school children toward certain religious conclusions. Included in this analysis is consideration of the following questions:

1. Do unarticulated religious criteria govern the selection, organization, or interpretation of the data?
2. Is the body of information intended to encourage acceptance of religious ideas?
3. Does the body of information have substantial support in secular scholarship?

Application of a functional analysis to creation-science reveals that it was developed and is disseminated to promote a belief that the book of Genesis, literally interpreted, is a scientifically and historically accurate statement of events and hence to engender a Biblical-literalist world-view. Such an analysis also shows that, as an integral theory, creation-science has no significant support in secular scholarship. Consequently, even if these empirical claims are assumed to fall within some abstract definition of science, it is clearly a science that is in the employ of religion, an apologetic tool constructed to encourage religious conversion.

Question 1: Religious Restrictions on the Evaluation of Data

The creationists' fundamental premise is that God has revealed Himself to human beings through the Bible, the "Word of God."⁵ This revelation is absolutely authoritative for all aspects of human life. It is not allegorical, or symbolic, or be-

yond human comprehension, but is direct and straightforward, particularly in Genesis 1–3, the story of God's creation of the world.

Several conclusions flow from this premise. Because the ultimate religious reality is in the God spoken of in the Bible and this God has given a clear account of how the world was created, human responsibility is to believe this account whether it contradicts science or history or any other human discipline. However, the creationists recognize that any appearance of conflict between science and religion in a society that values science as much as ours could be a serious threat to religious faith. To eliminate this conflict, creation-science seeks to "realign" empirical data within a framework of Biblical revelation. Creation-science, therefore, is an exercise in selecting, organizing, and, most importantly, interpreting facts observable in nature in such a way as to make them consistent with a literalistic reading of Genesis. The theoretical construct used to analyze information is perhaps most clearly articulated in Christian Heritage College's statement of educational philosophy. The Institute for Creation Research (ICR), the leading creation-science research and publishing center, was founded as part of the College and until recently was formally affiliated with it. Many of ICR's professional staff are adjunct professors at the College, including Henry Morris, the "father of creation-science," and Duane Gish, its most prominent spokesperson. The College asserts that placing the "real facts of science and history" in a "consistently creationist and Biblical framework" is "a highly effective mechanism for evaluating 'would-be' truths":

That is, in addition to the accepted secular criteria for testing such 'would-be' truths (e.g., . . . scientific method, . . . human empirical experience), there is the infallible framework of truth revealed in Scripture by the Creator of all truth. Acceptance and application of this creationist philosophy and the basic Biblical criteria will thus optimize the search for truth and the correction of error. . . . [T]he ultimacy of truth as resident in the Godhead (John 14: 6; 15: 26) and in His Word (John 17: 17) does provide a necessary and sufficient criterion for testing and evaluating all alleged 'truths' proposed through human research and reason. . . . [E]volutionary philosophy . . . should be thoroughly analyzed in terms of its supposed evidences and implications, even though the Biblical criteria require its rejection as possible truth.⁶

This means of evaluating science is illustrated repeatedly throughout the creation-science literature. For example, Henry Morris observed in a letter to the *Creation Research Society Quarterly*, "While, as scientists, creationists must study as objectively as possible the actual data of geology, as Bible-believing Christians, we must also insist that these be correlated within the framework of Biblical revelation. This restriction requires rejection of the traditional uniformitarian approach [of geology]. . . ."⁷ In *Scientific Creationism*, Morris shows us this process of correlation:

The great Flood of Genesis 6–9 is of critical importance to the true understanding of earth history. It has been seen that sound Biblical exegesis will not permit placing the geological ages either before or during the six days of creation. Neither can the six days of creation be interpreted as non-historical or allegorical. The only other alternative is to reject the standard system of geological ages altogether.

This is of course a drastic suggestion—orthodox geologists indeed reject it out of hand. However, there is no other alternative. If the Bible is the Word of God—and it is—and if Jesus Christ is the infallible and omniscient Creator—and He is—then it must be firmly believed that the world and all things in it were created in six natural days and that the long geological ages of evolutionary history never really took place at all.⁸

Creationists begin with the "facts" divinely revealed in the Bible and select, describe, and interpret data from geology, paleontology, and other disciplines in such a way as to make them appear consistent with Biblical revelation. In an attempt to disguise the religious restrictions on the scope of their scientific inquiry and thus, they hope, to make their texts suitable for use in public schools, creation-scientists eliminate from the public school editions any explicit mention of a Biblical framework for the interpretation of data. The paragraph quoted above, for example, was removed from the Public School Edition of Henry Morris' *Scientific Creationism*. As shown in Table 1, similar editing was done on Duane Gish's *Evolution! The Fossils Say No!*. Contrary to the expectation of creationist editors, removing explicit religious references from creationist texts does not make them constitutionally more acceptable, only less honest.

Question 2: The Sectarian Objectives of Creation-Science

The literal truth of the Bible is important to creation-scientists not simply because it tells about God creating the world, but because of its message of salvation about "the Lord Jesus Christ." To the creationists, "Jesus Christ" is, in fact, the actual Creator. Creation and salvation are integral parts of the same theme: 1) initial perfect creation; 2) human sinfulness (Adam's Fall) resulting in 3) God's Curse upon the world, leading to death and decay (which is identified with the Second Law of Thermodynamics); 4) God's judgment upon the sinful world evidenced in the Flood (hence the importance of proving the Flood); and, finally, 5) God's redemption of sinful humanity through the death and resurrection of "His Son," "The Lord Jesus Christ."

The centrality of the salvation message in creationist belief leads to a radical sectarianism. They interpret the world around them in light of this salvation story and thus take an extreme, dualistic view of themselves and the outside world, centered around belief in creation or evolution. Belief in creation (and, by extension, salvation in Jesus) is identified with the only proper religious position. In contrast, evolution and belief in evolution are linked with all "anti-God and anti-Christian" belief systems. Given this interpretive framework, the creation-scientists' purpose is to save people from the pernicious effects of evolutionary thought.

Such a view assumes that its religious position is the only valid religious option. Certain creationists state outright that the first book of Genesis is unique, as is the God of the Bible, and go so far as to label all other religions "evolutionary" or perverted forms of Biblical revelation. This inability to come to terms with religious pluralism is behind the effort to teach Biblical creation as science in the public schools. Children from a variety of religious traditions, each with its own idea of origins must, the creationists believe, learn about "creation," along with its concomitant ideas about materialism, piety, and the "God of the Bible." The creationists' value judgement about the superiority of Christian monotheism and the Genesis creation account is turned into an "alternative" to evolutionary theory, which is identified with every evil in human society.

Creationists are driven by an evangelical and

General Edition^a

The proponents of this [catastrophist-recent creation] model for interpreting geologic history believe that *the correct interpretation of Genesis* requires acceptance of a creation spanning six 24-hour days. Furthermore, the *genealogies listed in Genesis and elsewhere in the Bible*, it is believed, would restrict the time of creation to somewhere between six thousand and about ten thousand years ago. [italics added]

Public School Edition^b

The proponents of this [catastrophist-recent creation] model for interpreting geological history believe that creation spanned six 24-hour days. Furthermore, it is believed creation occurred thousands rather than billions of years ago.

General Edition^c

After many years of intense study of the problem of origins *from both a Biblical and a scientific viewpoint*, I am convinced that the facts of science declare special creation to be the only logical explanation of origins. *'In the beginning God created' . . . is still the most up-to-date statement that can be made about our origins!* [some italics added]

Public School Edition^d

After many years of intense study of the problem of origins *from a scientific viewpoint*, I am convinced that the facts of science declare special creation to be the only logical explanation of origins. [italics added]

TABLE 1

Illustrative parallel quotations from the General Edition (© 1979; 3rd edition, 3rd printing 1981); and the Public School Edition (© 1978) of *Evolution? The Fossils Say No!* (San Diego, CA: Creation-Life Publishers).

^apage 60. ^bpage 57. ^cpages 186–187. ^dpage 174.

soteriological purpose: they want people to come to salvation in Jesus and must safeguard the literal accuracy of Genesis lest people doubt the story of salvation as well. If the integrity of any of the Bible is threatened, they believe, then the entire Christian message is threatened. That central concern is evident in the creation-scientists' literature and demonstrates the explicitly religious purpose of their attempt to prove Genesis "scientifically."

The missionary goals of creation-scientists and their legislative advocates are, as a result of the Arkansas litigation, now well-documented. The model "creation-science" legislation is prepared and disseminated by Paul Ellwanger, founder and head of Citizens for Fairness in Education and a

strong Biblical literalist. In private correspondence subpoenaed for use in the Arkansas trial, Ellwanger stated his conviction that teaching evolution in the public schools is the equivalent of using tax dollars against God, but assured his followers that the legislation will "help expose and neutralize such gross errors as Humanism, for without evolution it and all God-less belief systems would simply crumble."⁹ The Institute for Creation Research insists that research, writing, and teaching in scientific creationism "is the most effective way in which recognition of God as a sovereign Creator and Savior can be restored" among young people.¹⁰ Luther Sunderland, a clever tactician of the movement, in a confidential memorandum describing how to introduce cre-

ation-science into schools by avoiding discussion of religion in school-board presentations, told creationist activists that "presenting the scientific evidences on origins is one of the most effective ways to convince people there is a God, and it can be done without even mentioning the subject."¹¹ Even Wendell Bird, the creationist lawyer leading the defense of the legislation, explained in a moment of candor why creationists should request instruction in "scientific creationism":

Christians are commanded to be lights for a crooked and perverse nation, and are to stand against the devil with the armor of God (Philippians 2:15; Ephesians 6:11). Christians have a responsibility to ensure light and to oppose evil in the public school system, because our country is shaped powerfully by public school curricula and our tax dollars finance public education.¹²

Question 3: Support Within Secular Scholarship

The fact that course content may be consistent with, or even reinforce, religious beliefs is not sufficient to render its presentation unconstitutional if an independent secular justification exists for its presence in the curriculum. The task of a court is to distinguish between real and pre-textual "secular" justifications, and in doing so it must assess the quality of the contribution to non-sectarian education that the "science" offers.

The court should make this assessment by determining the theory's standing within the scientific community as a whole, not by conducting its own inquiry into the theory's merits, a judgment the court may be poorly equipped to make. The court can gauge a theory's standing through examination of the treatment accorded it in recognized journals and by established professional societies and, most importantly, by the extent to which the theory has found its way into the classroom as part of the ordinary process of curriculum development.

The process governing curriculum development is normally in the hands of professional educators, who apply non-religious standards in determining the educational value of proposed course content. These educators look to the scientific community for its assessments of various theories. When this process is left free to operate without political interference, the curriculum

accurately mirrors the standing of theories within secular scholarship. Enactment of a state statute or school board resolution in order to place a theory into the curriculum may strongly indicate that the theory lacks substantial support within the scientific community and that an independent secular justification for teaching the theory does not exist.

Examination of the standing of creation-science in the relevant disciplines provides convincing evidence that it has no substantial support within secular scholarship. Creation-scientists, for example, operate largely outside the scientific community. They publish their claims in books and captive journals disseminated by creationist and other religious publishing houses. With few exceptions, they have not brought their empirical claims to the scientific community for review and criticism in standard journals subject to peer review. When the legislation forced the scientific community to recognize and evaluate the creationists' claims, most major scientific professional societies adopted resolutions rejecting creation-science. And nowhere has creation-science been added to public school curricula because of the sheer force of its ideas. Its inclusion in science classes has always been the result of irregular political intervention in the curriculum development process.



Formal education plays a significant role in shaping a person's world-view. In consequence, the courts have been vigilant in assuring that tax-supported education takes place in a religiously neutral environment, and thus efforts to give public schools a sectarian cast are forced to become increasingly sophisticated. Central to most recent efforts has been a decreased emphasis on overt religious references, a description of doctrine as philosophical or scientific, and a careful articulation of an overriding secular objective that purportedly motivates the statute or practice. This tendency is reinforced by a sociological phenomenon, the growing influence of science in our society. The American public respects science greatly, even if it does not always understand exactly what science is or how it operates. Any

claim that an idea is "scientific" appears to enhance its persuasive power and its public appeal.

"Creation-science" is neither the first nor the last "science" to seek admission to the public schools as a way of encouraging a particular religious perspective. Attempts to screen religiously-inspired advocacy out of tax-supported instruction by developing and applying a legal definition of science are, it seems to me, doomed to failure, at least in the long term. The most serious indictment of a definitional approach is not that philosophers or the courts cannot agree on a definition of science but that any definition will be an insufficiently sensitive caliper for distinguishing propaganda from serious scholarship. No body of information put together solely to persuade students of the superiority of particular religious values, even if it omits explicit religious references and bases its arguments on science, can be taught in the public schools without doing violence to the principles of religious neutrality. A science-based apologetic is nevertheless an apologetic and a functional analysis is more likely to identify that fact.



NOTES

1. See Duane Gish, "Letter to the Editor," 2 *Discover* 6 (July 1981). See also the deposition testimony of Harold G. Coffin, Ariel Roth, Cecil Gerald Van Dyke, and Hilton Fay Hinderliter, quoted in Plaintiffs' Pre-Trial Brief in *McLean v. Arkansas*. [Readers interested in obtaining copies of the plaintiffs' briefs may write the Production Editor, *Science, Technology, & Human Values*, for information on photocopying costs.]
2. *McLean v. Arkansas Board of Education*, 529 F.Supp. 1255 (E.D. Ark. 1982).
3. See, for example, Larry Laudan, "Science at the Bar: Causes for Concern" (*Science, Technology, & Human Values*, Fall 1982, forthcoming).
4. Laudan, *op. cit.*
5. The description of the religious writings of creation-scientists contained in this article is based on the research and analysis of Linda C. McLain, a paraprofessional legal assistant with Skadden, Arps, Slate, Meagher & Flom.
6. 1981-1982 *General Catalogue*, Christian Heritage College, p. 10.
7. Henry Morris, "Letter to the Editor," 11 *Creation Research Society Quarterly* (December 1974): p. 173.
8. Henry Morris, *Scientific Creationism* (San Diego, CA: Creation-Life Publishers, 1974) (General Edition, 9th Printing, September 1981), pp. 250-251.
9. Private correspondence of Paul Ellwanger, subpoenaed by plaintiffs for use in *McLean v. Arkansas*, Exhibit 6 to Ellwanger deposition, at p. 2.
10. Henry Morris, Letter to new subscribers of *Acts and Facts* (undated) (on file with author).
11. Luther Sunderland, "Introducing Two-Model Teaching of Origins in Public Schools—An Approach That Works," (unpublished, October 1980) (Exhibit 18 to Ellwanger deposition in *McLean v. Arkansas*, p. 8).
12. Wendell Bird, "Evolution in Public Schools and Creation in Students' Homes: What Creationists Can Do," *Impact* Article 70, (April 1979); reprinted in *The Decade of Creation* (San Diego, CA: Creation-Life Publishers, 1981), p. 126 (edited by Henry Morris and Donald Rohrer).