

# IS "CREATION" A RELIGIOUS CONCEPT?

JOHN ZINGARELLI\*

## I. LEADING CASES REGARDING CREATION SCIENCE

In 1982 the United States District Court for the Eastern District of Arkansas issued its decision in *McLean v. Arkansas Board of Education*.<sup>1</sup> Judge William R. Overton's opinion in the highly publicized case gave the opponents of creation science a stunning victory. The Balanced Treatment Act, passed by the Arkansas legislature, required teachers in the Arkansas public schools to present the scientific evidence for creation -- if they also taught the theory of evolution. The court held that the statute violated the First Amendment prohibition against establishment of religion because it was a veiled attempt to introduce the Biblical version of creation into the public school curriculum.

*McLean* contains many arguments for declaring the statute unconstitutional, ranging from technical legal requirements to sweeping philosophical statements. Defects in the image of science portrayed in the decision have already been subjected to withering philosophical criticism, even from those unsympathetic to the creationist cause.<sup>2</sup> This article will focus on the court's contention that creation is by nature religious. In this regard, Judge Overton stated, "The idea of sudden creation from nothing, or *creatio ex nihilo*,

---

\* Attorney at Law, Decatur, Alabama.

1. 529 F. Supp. 1255 (E.D. Ark. 1982).

2. See, e.g., BUT IS IT SCIENCE? (Michael Ruse ed., 1988). The articles contained in the section titled *The Philosophical Aftermath* which are written by Larry Laudan and Philip L. Quinn effectively express the opinion that, in *McLean*, bad science was defeated by bad philosophy. *Id.* at 355-399. See also PHILLIP E. JOHNSON, DARWIN ON TRIAL (1991). Though Johnson is a lawyer rather than a philosopher, his analysis of the linguistic equivocations which confused the issues for the court are as valuable as his analysis of the legal setting.

is an inherently religious concept.”<sup>3</sup> At first, it is difficult to see what is wrong with such a statement. Creation is after all an inherent part of Christianity, and Christianity is a religion. The United States Supreme Court adopted Judge Overton’s line of reasoning in *Edwards v. Aguillard*.<sup>4</sup> There the Court invalidated a Louisiana statute which was similar to the Arkansas Balanced Treatment Act. The argument that creation is essentially a religious concept was retained, and the majority did not consider that it might function in any other manner. Justice Brennan’s opinion applied the test from *Lemon v. Kurtzman*<sup>5</sup> and focused on the motivation behind the Louisiana statute. The purpose of the Louisiana legislature in enacting its Balanced Treatment Act, he stated, “was clearly to advance the religious viewpoint that a supernatural being created humankind.”<sup>6</sup> Thus, the opinion started from the assumption that creation by a supernatural being is a religious concept, and drew the conclusion that the motive for advancing a religious concept must be religious.<sup>7</sup> In a concurring opinion, Justice

---

3. *McLean*, 529 F. Supp. at 1266. This article analyzes the notion of creation as a concept on the level at which it appears in the cases. The philosophical implications of the use made of the term “concept” have been left unexplored by the courts.

4. 482 U.S. 578 (1987).

5. 403 U.S. 602 (1971). *Lemon* requires that, in order to comport with the First Amendment Establishment Clause, a statute must be enacted (1) with a secular purpose; (2) which neither advances nor inhibits religion; and (3) which does not result in excessive entanglement of government with religion. *See id.* at 612-613.

6. *Edwards*, 482 U.S. at 591. The Court stated, “[c]reation ‘*ex nihilo*’ means creation from nothing and has been found to be an ‘inherently religious concept.’” *Id.* at 603 n.2.

7. The court never considered that the motive for advancing a creationist perspective might be regard for the truth. It is not the purpose of this article to argue that the Biblical account of creation is true. However, it is my purpose to argue that regard for truth should be a factor in the discussion. St. Augustine’s statement regarding the scriptures would have been the norm for Christians prior to this century. With regard to the manner of interpreting Genesis, he said, “I do not blame those who may be able to draw out of everything there a spiritual meaning, only saving, first of all, the historical truth.” AUGUSTINE, *THE CITY OF GOD*, Book XVII, Chap. 3 (Robert Maynard Hutchins ed. & Marcus Dods trans., 1971). From the court’s perspective, religious belief is a matter of subjective opinion. The Biblical account of creation is simply one religious “viewpoint” among others. Religion is presupposed to deal with *doxa*, or unfounded opinion, rather than with facts which articulate a particular area of experience. Thus, the court did not feel compelled to address the issues which would arise in the event that the Biblical account was accurate.

Powell, quoting from the New Jersey District Court case, *Malnak v. Yogi*,<sup>8</sup> stated that "concepts concerning [God or] a supreme being of some sort are manifestly religious. . . . These concepts do not shed their *religiosity* merely because they are presented as a philosophy or as a science."<sup>9</sup> Thus, both opinions worked from the "manifestly religious" nature of creation.

The nature of the "manifestation" was left unspecified. It was presumably obvious to a person with the intelligence to recognize it. Yet the religious nature of the concept of a supreme being was not completely manifest for the *Malnak* court. The quotation as used above eliminated a qualifying phrase. The actual *Malnak* decision stated, "[t]hese concepts concerning God or a supreme being of some sort are manifestly religious *when they appear as tenets of Christianity or Buddhism or Hinduism*. These concepts do not shed that religiosity merely because they are presented as a philosophy or as a science."<sup>10</sup>

The *Malnak* court made a two-step argument. First, concepts concerning God are religious when they appear in a religious context. Second, such concepts retain that character when they are used in different contexts. Though unsound,<sup>11</sup> this was an argument. Both of the concurring justices and Judge Overton<sup>12</sup> eliminated this argument altogether by leaving out the qualifying phrase emphasized above, and simply affirmed that the concept of God is manifestly religious. Running the two propositions together makes the position appear as a self-evident truth. If the matter is self-evident, then those who do not see its truth are either blind or disingenuous.

---

8. 440 F. Supp. 1284 (D. N.J. 1977), *aff'd per curiam*, 592 F. 2d 197 (3rd Cir. 1979).

9. *McLean*, 529 F. Supp. at 1265 n.20 (emphasis added) (quoting *Malnak v. Yogi*, 440 F. Supp. 1284 (D. N.J. 1977), *aff'd per curiam*, 592 F. 2d 197 (3rd Cir. 1979)).

10. *Malnak*, 440 F. Supp. at 1322 (emphasis added).

11. The form of this argument is:  $P \supset Q. \sim P. \therefore Q$ . If  $P$  (concept of God appears in religion), then  $Q$  (concept of God religious),  $\text{Not } P$  (concept of God appears in context other than a religion). Therefore,  $Q$  (concept of God is not *not* religious, i.e., does not shed its religiosity). By this logic, it would be necessary to conclude that since the concept of the return of the Jews to Jerusalem is used in the religious context of Biblical prophecy, the return of the Jews to Jerusalem following the Six Day War is manifestly a religious concept.

12. *McLean*, 529 F. Supp. at 1265 n.20.

Once firmly established as an axiom, the inherently religious nature of creation *ex nihilo* taints all of the concepts and arguments of creation science with “religiosity.” Creation science makes two signature claims which are at variance with normal science.<sup>13</sup> It asserts that the earth is inconceivably young by modern standards, its age being measured in the thousands of years rather than in the billions. In addition, it explains the complex structure of the earth’s surface by reference to the Noachian deluge rather than by accretion of deposits over vast ages. Since these concepts are subordinate to the religious concept of creation, Judge Overton, in the *McLean* decision, declared that the derivative creationist arguments are likewise religious concepts, saying, “‘relatively recent inception’ has no scientific meaning. It can only be given meaning by reference to creationist writings which place the age [of the Earth] at between 6,000 and 20,000 years because of the genealogy of the Old Testament.”<sup>14</sup> The other pillar of creation science falls with the young earth concept. Judge Overton stated, “The creationist writers concede that *any* kind of Genesis flood depends upon supernatural intervention. A worldwide flood as an explanation of the world’s geology is not the product of natural law, nor can its occurrence be explained by natural law.”<sup>15</sup>

Why any flood, whether recorded in Genesis or not, depends on supernatural intervention requires explanation. Larry Laudan, a philosopher of science who criticized the reasoning in the *McLean* decision, stated, “Quite how Judge Overton knows that a worldwide flood cannot be explained by the laws of science is left opaque. . . . For centuries scientists have recognized a difference between establishing the existence of a phenomenon and explaining that phenomenon in a

---

13. THOMAS KUHN, *THE STRUCTURE OF SCIENTIFIC REVOLUTIONS* (2d ed. 1970). Use of the term “normal” refers to the prevailing paradigm in a particular scientific community which supplies the foundation for its further practice. See *id.* at 10. The term implies no superiority on the part of the prevailing paradigm, for on Kuhn’s account, the function of a scientific revolution is to supplant the normal paradigm with one that is considered superior. Aside from its accuracy, usage of this term allows me to avoid styling non-creationist scientists as “evolutionists,” a term which has not come into widespread use or acceptance.

14. *McLean*, 529 F. Supp. at 1268.

15. *Id.*

lawlike way."<sup>16</sup> Curiously, the creationists were said by Judge Overton to have conceded the point.

The court's characterization of a young earth and a global flood, as well as the admissions of the creation scientists, are not as baseless as they initially appear. Behind them lie the Biblical assertions that the earth came into being at the command of God and the Flood was the product of God's direct intervention for the punishment of an evil humanity. These supernatural causes are clearly not natural causes; therefore the courts and creationists alike have concluded that their effects are not natural effects. Presumably, asking for the natural cause of the Flood is like asking for the natural cause of the calming of the sea when Christ said, "Peace, be still."<sup>17</sup> The whole point of the story appears to be that there is no natural cause. Recognizing that such events have supernatural causes, the creationists felt compelled to insist on supernatural intervention. The creationists resist any attempt to "demythologize" the scriptures. They are not willing to abandon the notion of divine action in the world, and the courts are not willing to classify divine action as anything other than a religious concept. It is then plain to the courts that if science properly studies nature and natural causes, such supernatural effects as sudden creation from nothing and a worldwide flood are by definition excluded from the subject matter. Given such a unified perspective, Judge Overton inquired:

How is the teacher to respond to questions about a creation suddenly and out of nothing? How will a teacher explain the occurrence of a worldwide flood? How will a teacher explain the concept of a relatively recent age of the earth? The answer is obvious because the only source of this information is ultimately contained in the Book of Genesis.<sup>18</sup>

---

16. Larry Laudan, *Science at Bar: Causes for Concern*, in *BUT IS IT SCIENCE?* 353-354 (Michael Ruse ed., 1988).

17. *Mark* 4:39 (King James).

18. *McLean*, 529 F. Supp. at 1272.

The creationist response to such questions attempted to distinguish scientific creationism from religious creationism. First, the similarities between Genesis and the findings of creation science do not make the latter conclusively religious. Second, the reference to creation is not necessarily religious, because it deals only with a Creator who has power to create. Third, teaching about a creator does not require any sort of religious commitment.<sup>19</sup>

These arguments might well have been developed into a cogent response, and this paper will urge a related analysis. However, they were not persuasive to the court for two reasons. First, the court observed that they do not get around the problem of supernatural causes and effects. Second, and more importantly, the reason that the three initial arguments failed was that the creationists appear to have abandoned them in favor of another line of defense. The creationists argued that if it is granted that creation is an inherently religious concept, it should equally be granted that evolution is an inherently religious concept.<sup>20</sup> This argument is something of a favorite trump-card of many creationists who point out that if science concerns the observable, then evolution does not pass the test because it has not been observed.<sup>21</sup> Even the first three arguments wander into this territory by assuming that the problem before the court is to correctly characterize creation science as something which is not inherently religious.

Though the argument that evolution is religion has plausibility, and carries a great deal of weight in evangelical circles, its effect on the court was the opposite of that intended. Unfortunately for the

---

19. *Id.* at 1265.

20. Judge Overton stated, “[T]he creationists have difficulty maintaining among their ranks consistency in the claim that creationism is a science. The author of Act 590, Ellwanger, said that neither evolution nor creationism was science. He thinks both are religion.” The court then quoted Duane Gish, one of the leaders in the creationist movement, as saying, “Creationists have repeatedly stated that neither creation nor evolution is a scientific theory (and each is equally religious).” *Id.* at 1268.

21. The court quoted Duane Gish’s statement: “We do not know how God created, [or] what processes He used, for God used processes which are not now operating anywhere in the natural universe. This is why we refer to divine creation as Special Creation. We cannot discover by scientific investigation anything about the creative processes used by God.” *Id.* at 1267 n.25.

creationists, the court took them at their word regarding the religious nature of supernatural creation, but ignored the assertions that evolution was likewise a religious concept. The latter argument was completely unconvincing to Judge Overton. Courts and scientists consider that nearly every university in the country teaches evolution as a purely secular concept and that evolutionary research is carried on by innumerable investigators of all shades of the religious spectrum.<sup>22</sup> Evolution is considered to be one of the foundational beliefs of modern science.<sup>23</sup> Arguing that evolution is an inherently religious concept contradicts the consensus of the scientific community, and is akin to arguing that the Pythagorean theorem is an inherently religious concept. Such a notion is inconceivable to most modern people.

## II. PUZZLES ASSOCIATED WITH CHARACTERIZATION OF CONCEPTS

The religious nature of creation was "manifest" to the courts, but it is easy to imagine situations where the nature of the concept would be anything but manifest. The discovery of the remains of the Hittite empire is an object lesson in this regard. Prior to the nineteenth century the only mention of the Hittites was in the Bible, and their

---

22. "Dr. Francisco Ayala, a geneticist of considerable renown and a former Catholic priest who has the equivalent of a Ph.D. in theology, pointed out that many working scientists who subscribed [sic] to the theory of evolution are devoutly religious." *Id.* at 1266 n.23.

23. See, e.g., DANIEL C. DENNETT, *DARWIN'S DANGEROUS IDEA: EVOLUTION AND THE MEANINGS OF LIFE* (1995).

The fundamental core of contemporary Darwinism, the theory of DNA-based reproduction and evolution, is now beyond dispute among scientists. It demonstrates its power every day, contributing crucially to the explanation of planet-sized facts of geology and meteorology, through middle-sized facts of ecology and agronomy, down to the latest microscopic facts of genetic engineering. It unifies all of biology and the history of our planet into a single grand story.

*Id.* at 20. In the face of such monumental certainty is raised only the occasional challenge. Wittgenstein, for example, said, "Very intelligent and well-educated people believe in the story of creation in the Bible, while others hold it as proven false, and the grounds of the latter are well known to the former." LUDWIG WITTGENSTEIN, *ON CERTAINTY* §336 at 43e (G.E.M. Anscombe & G.H. von Wright eds., Denis Paul & G.E.M. Anscombe trans. 1972).

existence was viewed with critical suspicion.<sup>24</sup> In *Genesis* 23:10 they are called the “sons of Heth.” Heth, was said to be the great-grandson of Noah,<sup>25</sup> and so was directly linked to the Biblical history of the Flood. As every student of ancient history knows, the discovery of the remains of Hittite civilization at the turn of the twentieth century was a major archeological surprise, and its discovery was the direct result of a literal interpretation of Biblical texts, as the following account makes clear:

The discovery of the “land of the Hatti” is one of the archeological romances of the old world. Beginning in Palestine and Syria (guided by Old Testament references) the quest led the investigators northward into Asia Minor. There, in 1907, they discovered the Hittite capital at Boghaz-keui, in the north.<sup>26</sup>

The Hittites constructed one of the great empires of the ancient world. In political power they rivaled Egypt,<sup>27</sup> and they are credited with the discovery of practical methods for making iron implements.<sup>28</sup> In the present day, ignorance of the existence of the Hittites and of their contributions to civilization would constitute an inexcusable gap in the knowledge of any historian of the ancient near east.

*McLean* stands for the proposition that if the only source of knowledge regarding a matter is the Bible and if the matter is not explicable by natural law, then it is a religious concept, and instructing public school students regarding such a concept violates the doctrine of separation of church and state. Thus, clearly *McLean* would not have allowed critical evaluation of the historical existence of the Hittites in the public schools prior to 1907. The concept of a lost tribe which descended from Noah would have been as manifestly religious as the Flood itself. At most the Hittites might be mentioned as a

---

24. MERRILL F. UNGER, *ARCHAEOLOGY AND THE OLD TESTAMENT* 92 (1954).

25. *Genesis* 10:15 (King James).

26. LEONARD COTTRELL, *THE ANVIL OF CIVILIZATION* 110 (1957).

27. *Id.* at 154.

28. *Id.* at 157.



mythological people which appeared in the pre-scientific conceptions of the Biblical writers. However, classroom presentation of facts which would support the historical or scientific accuracy of the Biblical account would simply represent the teaching of a fundamentalist "religious viewpoint." To paraphrase Judge Overton's queries: "How could the teacher respond to questions about the Hittites? How could a teacher explain their ancestry from Noah? The answer is obvious because the only source of this information is ultimately contained in the Bible." Thus, American school children could not have been given information which would have led them to the vanguard of historical and archeological discovery. The Supreme Court, to be sure, attempted to avoid such a result by allowing that such information could be imparted if it were done with clear secular intent.<sup>29</sup> It stated that it did not mean to imply that a legislature could never require that critiques of a prevailing scientific theory be taught. However, it is not likely that the concept of the Hittites could have cleared this barrier. They were, after all, the descendants of the great-grandson of Noah. Their existence might have been considered by fundamentalist legislators as probative of the occurrence of a supernatural flood. The Supreme Court could note that secular intentions were disproved by the lack of enthusiasm for instruction regarding other lost peoples.

The existence of incontrovertible evidence of the Genesis Flood is today as undiscovered as the evidence for the Hittite empire was in 1907, and raises the same problems. The discovery of the remains of an Ark on Mt. Ararat would be by any measure an archeological find of the highest importance. Since, however, the concept of such a worldwide flood has been declared to be a religious concept, American school children cannot think of it as a possible object of discovery. A teacher could not use the Biblical story of the Flood to inspire a student to look for the lost Ark the way that Schliemann was inspired to use the equally "mythological" *Iliad* to look for the lost city of Troy. Judge Overton stated that a worldwide flood cannot be explained by natural law. Thus, the implication of the ruling of *McLean* is that, since such evidence would relate to a supernatural

---

29. *Edwards*, 482 U.S. at 593-94.

cause, it would be a supernatural effect, and hence should be excluded from the classroom.

In addition, if the Ark were discovered, it is still not clear that its existence could be reported in the classroom. Clearly, the existence of the Hittite empire is now an acceptable part of public school curricula, and its exclusion from the curriculum on the grounds that Hittites are a religious concept would be unimaginable. But the Hittite civilization was discovered prior to the *McLean* decision, and was never recognized as a religious concept. Had this identification been made, matters should have been different. Just as the initial observation of a quantum particle will fix its otherwise indeterminate location, the Hittite ruins were observed by archeologists and were located as secular objects. Had their existence been considered by the courts prior to 1907, their location would, as shown above, have been fixed in the religious sphere. With regard to the Ark, the courts have been more diligent than in the case of the Hittites. It has now been held that the Ark and the Noachian deluge are religious concepts, and no mechanism has been given for turning them into secular concepts. Thus, not only must information be withheld from the public school curricula which might lead to the discovery of the Ark, but, should it now be discovered, its existence could not possibly figure into a secular account of history.

In order to avoid such a result, one might argue that Judge Overton's ruling was predicated on the Bible being the *only* source of information regarding a flood.<sup>30</sup> The discovery of the Ark would be an additional source, and hence could come into the classroom. However, this reasoning will not work because the entire thrust of the creationist movement is to get just such additional sources into the classrooms. To open the school doors to the Ark would be to validate any other evidence adduced by creation scientists from non-Biblical sources. The Supreme Court's attempt to save room for critiques of prevailing scientific theories would be of little use here. It is not likely that the concept of a worldwide flood could ever be rehabilitated as a secular concept to such a degree that a teacher could report on the

---

30. *McLean*, 529 F. Supp. at 1263 n.15.

discovery of an Ark on Mt. Ararat. If such a discovery were made, it is entirely predictable that fundamentalist legislators would wish to have it included in public school instruction -- and that for religious motives.

Other puzzles emerge as one probes further into the concepts of God and of a creator. To say that God is a religious concept seems axiomatic, but the historical use of the term points in a different direction. The concept of a creator does not include within its definition the notion of religious worship, nor indeed does the concept of God. Justice Scalia made this point in his dissenting opinion in *Edwards v. Aguillard*, saying, "[T]o posit a past creator is not to posit the eternal and personal God who is the object of religious veneration. Indeed, it is not even to posit the 'unmoved mover' hypothesized by Aristotle and other notably nonfundamentalist philosophers."<sup>31</sup> The God of Aristotle was not an object of religious veneration. It was formally impossible for the "unmoved mover" to interfere with the affairs of the world or of mankind, for if he interfered, he would not be "unmoved." God was said by Aristotle to move the world as its "final cause." This meant that, rather than moving the world by imparting motion to it as one billiard ball imparts motion to another, God was the object of the world's desire and moved the world in the same way that a prize moves an athlete.<sup>32</sup>

Other nonreligious uses of the concept of God are ready at hand. Spinoza, the so-called "God-intoxicated" philosopher, showed that it is impossible to conceive of more than one existing substance. This being the case, God could not be a substance apart from nature, nor could nature be a substance apart from God. Thus, Spinoza identified God with nature.<sup>33</sup> On the contemporary scene, Stephen Hawking has speculated on the possibility that prior to the Big Bang physical law

---

31. *Edwards*, 482 U.S. at 629-630 (Scalia, J., dissenting).

32. ARISTOTLE, *METAPHYSICS* Book XII (7) (Robert Maynard Hutchins ed., & W.D. Ross trans. 1971).

33. SPINOZA, BENEDICT, *ON THE IMPROVEMENT OF THE UNDERSTANDING, THE ETHICS, CORRESPONDENCE* (R.H.M. Elwes trans., 1955). "Besides God no substance can be granted or conceived." *Id.* at 54. Spinoza, however, meant more by "Nature" than a pile of matter, *id.* at 298, and conceived of it as both active and passive. See also 4 FREDERICK COPLESTON, *A HISTORY OF PHILOSOPHY* 220-223 (1963).

did not exist. Thus, he said God would have had complete freedom to choose the nature of matter.<sup>34</sup> If God is a religious concept, then Spinoza makes nature into a concept which is identical in essence with a manifestly religious concept, i.e., God. Likewise, on Hawking's account, matter is transformed into the supernatural effect of a supernatural cause. Clearly the courts would not want to rule that nature and matter are inherently religious concepts.

The distinction can, and outside of creation-evolution debates is, made between a creator and God. Aristotle made this distinction. God could not possibly have been the creator of the universe because the universe was deemed to be eternal, not created.<sup>35</sup> If God is not necessarily a creator, it also appears that a creator is not necessarily God. Robert Nozick illustrated this point by suggesting the science fiction scenario where a teenager living in another universe created our universe as a sort of high school science project.<sup>36</sup> Nozick observed that God would have to be, at a minimum, the most perfect and highest being. The teenager would not necessarily be the highest being in his own universe, or even in his class at school. He would not be particularly worthy of our worship, or able to understand human needs and petitions, but he would be indisputably the creator of our universe. Nozick's construct is intelligible and self-consistent. Yet, it succeeds in separating the concept of a creator from the concepts of God and religion. Thus, the concept of a creator is different from the concept of God, though God may, on some accounts, be the creator.

It is apparent that categorizing creation as an "inherently religious concept" fails to account for its ability to function outside of religious contexts and for its ability to function apart from the concept of God. Similar anomalies arise upon consideration of creationist attempts to categorize evolution as inherently religious, and of the attempts of the normal scientific community to defend evolution from such

---

34. STEPHEN W. HAWKING, *A BRIEF HISTORY OF TIME* (1988) ("At the big bang and other singularities, all the laws would have broken down, so God would still have had complete freedom to choose what happened and how the universe began.")

35. ARISTOTLE, *METAPHYSICS*, Book XII, (3) ("Note, next, that neither the matter nor the form comes to be. . . [f]or everything that changes is something and is changed by something and into something.")

36. ROBERT NOZICK, *THE EXAMINED LIFE* 47 (1989).

characterizations by affirming its scientific nature. I noted previously that this was tantamount to an attempt to categorize the Pythagorean theorem as a religious concept. Nothing could seem more secular and devoid of religion than such a mathematical concept, but the appearance is deceptive. Pythagoras was said to have "practiced scientific inquiry beyond all other men."<sup>37</sup> Yet, though his activity was recognized as being scientific, at the same time his name was found linked with purely religious teachers. The Pythagorean school which he founded studied mathematics in a religious context wherein numbers had a mystical significance.<sup>38</sup> The Cosmos was thought to be literally composed of numbers, and by contemplation of mathematical objects, the mind of the adept was attuned to divine order: "Salvation, and perhaps ultimate union with the divine cosmos through the study of the cosmic order, became one of the leading ideas of his school."<sup>39</sup> "Salvation" and "union with the divine" are as much religious concepts in the Pythagorean context as in the Christian context. Even so, the Pythagorean theorem is taught with impunity in the public schools. Why does the teaching of this presumptively religious concept in geometry class not constitute the establishment of a religion? The situation with regard to the Pythagorean theorem is like the situation with regard to creation. Both concepts have established uses in religious contexts, and both have been taught from religious motives.

Differentiating the two is no simple matter. It may be that nobody really believes in the Pythagorean theorem the way creationists believe in a young earth and a global flood. Pythagoras may simply have been wrong in mixing mathematics and religion. We may have discovered that his theorem, after all, is a strictly scientific or a mathematical fact. This being so, mathematics teachers can be presumed to have secular intentions in imparting the principles of mathematics to their students. But such an explanation will not do, for the presumption is refuted in innumerable cases. The idea of reaching higher levels of consciousness through contemplation of mathematical forms is hardly something that

---

37. W.T. JONES, *THE CLASSICAL MIND* 31 (2d ed. 1969).

38. *ENCYCLOPEDIA OF PHILOSOPHY*, s.v. *Pythagoras*.

39. *Philosophical Schools and Doctrines*, in *THE NEW ENCYCLOPEDIA BRITANNICA* 587 (Robert P. Gwinn et al. eds., 1986).

perished with the ancient Greeks. As one historian of philosophy noted, “[T]here are still ‘Pythagoreans’ among scientists, and probably there always will be.”<sup>40</sup> Bertrand Russell, for example, is accounted as one of the great mathematicians and logicians of our age. Yet, he recounted in his autobiographical writings that he had hoped to find religious satisfaction in philosophy and mathematics, and noted wistfully, “I thought of mathematics with reverence, and suffered when Wittgenstein led me to regard it as nothing but tautologies.”<sup>41</sup> If Russell revered mathematics and suffered when it was demythologized, then he was a modern-day Pythagorean. If a person will seek salvation from a triangle, his action is religious no matter what might be said of the triangle’s usefulness to science. That he bows before the shape of a sacred triangle rather than before the shape of the sacred cross does not mean that his intentions can be presumed to be secular.

If the attempt to characterize concepts breaks down when a presumably scientific concept is shown to be capable of religious characterization, it completely collapses when it is seen that concepts with exclusively religious associations may lose that characterization. Ludwig Wittgenstein was willing to push the distinction to its logical conclusion. Taking an example of something that would almost universally be considered as a “religious event,” he said:

Suppose, for instance, we knew people who foresaw the future; made forecasts for years and years ahead; and they described some sort of a Judgment Day. Queerly enough,

---

40. JONES, *supra* note 36, at 34. See also R.G. COLLINGWOOD, *THE IDEA OF NATURE* (1945).

When chemistry correlates the qualitative peculiarities of water with the formula H<sub>2</sub>O, this is a further application of the Pythagorean principle; and the whole of modern physics, with its mathematical theories of light, radiation, atomic structure, and so forth, is a continuation of the same line of thought and a vindication of the Pythagorean point of view.

*Id.* at 53.

41. BERTRAND RUSSELL, *THE BASIC WRITINGS OF BERTRAND RUSSELL* 49 (Robert E. Egner & Lester E. Denonn eds., 1961).

even if there were such a thing, and even if it were more convincing than I have described . . . belief in this happening wouldn't be at all a religious belief.<sup>42</sup>

The religious element does not exist in the event until it is articulated in a religious conceptual framework. A rational person will not deny reality to any experience. If he is an atheist, he must account for the above vision of the Judgment Day as well as a theist. A theist cannot deny the event, but he need not make it a part of his religion. Suppose, for example, that a Hindu was the one who saw this vision of the Last Judgment. His religion does not conceive of any such event. If he accepted the vision as a prophecy of an event that would one day occur, it would be no more a religious belief than his acceptance of a weather forecast predicting rain for the weekend.

The Pythagorean theorem and the Last Judgment show the difficulty in classifying concepts as either "religious" or "scientific." If there were a criterion for deciding what concepts are properly scientific or mathematical, the Pythagorean theorem would clearly measure up. In the same way, any criterion which excluded the use of the Last Judgment from religious discourse would overlook the function of the Last Judgment in Christianity. This shows the necessity for an alternate analysis of how the propositions of religion and science can be distinguished. Any analytical method must account for the experienced reality that concepts can shift from being scientific to being religious, and from being religious to being scientific, without regard to their habitual associations. A complete analysis of the theoretical basis for the shifting use of concepts is beyond the scope of this article, but such an analysis is unnecessary for demonstrating that concepts do in fact shift their uses, and that they cannot be characterized in the manner attempted by the courts.

### III. FUNCTIONAL ANALYSIS OF THE CONCEPT OF CREATION

---

42. LUDWIG WITTGENSTEIN, LECTURES & CONVERSATIONS 56 (Cyril Barrett ed., 1966).

The characterization of a concept cannot take place in abstraction from a context.<sup>43</sup> The Pythagorean theorem shows how the concept will shift from being a factor in a religious discourse to being a factor in a scientific discourse while still maintaining its identity. If it is asserted that contemplation of the Pythagorean theorem will lead the soul to salvation and union with the divine, then the theorem is, in the language of the *McLean* court, an inherently religious concept. It is a factor to be used and understood in a religious context. Conversely, when it is asserted that understanding the theorem is necessary for the understanding of quadratic equations, then it is being used as an inherently mathematical or scientific concept. It is a factor to be used and understood in a scientific context. Since the shift can be made, it is clearly wrong that to say the concept is either *inherently* religious or *inherently* scientific.

Failure to consider this aspect of concepts has been the source of nearly all of the confusion regarding the status of creation science. Creation scientists can make at least three types of statements regarding the same events. For example, with regard to the Flood, religious propositions can be formulated. Thus, it can be said that, "God sent a worldwide flood because of the wickedness of mankind." Such a statement is concerned with the theological reasons for the Flood. It functions within the Christian theology of the Fall and the expectation of deliverance for a remnant of the fallen creatures. Comprehending the concept is conditioned on the ability to understand its function within such a theology. In order to understand why God would destroy the bulk of humanity with a flood, the statement must be evaluated in an accepted theological framework. The tools of the natural sciences avail nothing in this realm.

At another time the creation scientist might assert that, "about 6000 years ago the earth was covered with water." Such a statement is no different in kind from a statement asserting that Mediterranean

---

43. This statement is similar to Gottlob Frege's more expansive "context principle," which states that "it is only in the context of a sentence that a word has a meaning." MICHAEL DUMETT, *FREGE: THE PHILOSOPHY OF LANGUAGE* 6 (1995). This principle was adopted by Ludwig Wittgenstein in both the *TRACTATUS LOGICO-PHILOSOPHICUS* ¶ 3.3 (D.F. Pears & B.F. McGuinness trans., 1961), and the *PHILOSOPHICAL INVESTIGATIONS* §49 (G.E.M. Anscombe trans., 1973).



civilizations used bronze implements 3000 years ago. The meaning of the statement that the earth was flooded 6000 years ago depends for its verification on normal historical methods. If the assertion is made, the historian may say that records of such an event do exist or that they do not exist. Such an affirmation or denial would be relevant within the historical context. However, the historian may not deny his competence to make such a judgment on the grounds that the concept of a worldwide Flood is "inherently religious." If he did so, he would only confess his incompetence as a historian.

Finally, it is possible to make scientific statements regarding a worldwide flood. If the creation scientist asserts that "[t]he earth shows definite signs of having been covered by water in a great cataclysm around 6000 years ago," then it is necessary to look at present conditions to see if such evidence exists. The concept of a Flood shifts its character in order to function in a scientific discourse. The validity of the concept can only be established within the context of scientific testing, theory, and experiment. Scientific testing may verify or falsify the idea of a worldwide flood. If the creation scientist points to sedimentary rocks and fossil fish which are found at the tops of mountains and says that they indicate that flood water was on the mountain tops, the scientist cannot say that the assertion is religious and is only to be verified as a part of a religious discourse. To say this would be tantamount to a declaration that science cannot competently examine presently available evidence of ancient floods. An assertion regarding a past flood may be either supported or not within a given scientific context. A normal scientist might reply that the mountains in question were formed a million years prior to the alleged date of the Flood. The creationist could then reply in kind by challenging the assumptions made in dating the mountains. The outcome and the details of such an argument are irrelevant for the present purpose. What must be understood is that such a conversation is not like the proverbial sound of one hand clapping. The scientist and creationist can meaningfully debate the extent which presently observable evidence supports a recent formation of the earth and its geological features. If one can understand the foregoing argument then its

existence as a discussion within the scientific context cannot be rationally denied.

There is something of a left-handed admission of this point by Philip L. Quinn. Quinn was a critic of the *McLean* decision, but not wanting to appear to endorse creation science as good science, he stated that it is not just bad science, it is "dreadful science." He observed that the creationist perspective has been in "full retreat for nearly two centuries." Despite his low appraisal of creation science, his professional competence compelled him to observe that "progress and degeneration are reversible, at least in principle." Having said as much, he concluded that he saw no signs of a creationist resurgence, and stated that a computer scan of the published work the modern creation scientists produced unimpressive results.<sup>44</sup> Regardless of the impressiveness of the results and the present state of development of creationist theories, unimpressive results are results of a particular character, degeneration is the degeneration of something, and bad science is not religion.

The translation of the concept of the Flood can be followed in the following chart:

RELIGIOUS:

*Worldwide flood* sent/not sent as punishment for sin.

HISTORICAL:

*Worldwide flood* reported/not reported in ancient texts and folk traditions.

---

44. Philip L. Quinn, *Creation, Methodology, and Politics*, in *BUT IS IT SCIENCE?* 395-396 (Michael Ruse ed., 1988). The efficacy of a computer scan of normal scientific literature for determining the impressiveness of the results of creation science is highly dubious given an academic climate of opinion which, because of its naturalistic presuppositions, looks on the creationist hypothesis as a physical absurdity. This is particularly relevant with regard to the scan which Quinn used. It was conducted by Eugenie C. Scott. Scott is the director of the National Center for Science Education located at Berkeley, California, and is a leading critic of creationism. See, e.g., Eugenie C. Scott, *Keep Science Free from Creationism*, *INSIGHT ON THE NEWS*, Feb. 21, 1994, at 29. Information from this source should be treated with as much caution as any information obtained from a partisan source.

## SCIENTIFIC:

*Worldwide flood* indicated/not indicated by present state of the earth's surface.

Considering that statements regarding a worldwide flood can be made indifferently in religious, historical, and scientific contexts, the assertion that such a flood is an inherent part of one context or of the other is clearly false. The concept is like a ball that can be used indiscriminately in playing a number of different games. To say that the concept cannot function where it is found to function, is like saying that the ball used in basketball cannot be used in kickball or soccer. Denial of the use shuts one off from experienced reality with consequences which are explored later in this article.

The same analysis can be made regarding the character of the concept of evolution. Just as the creationists tend to claim that evolution is an inherently religious concept, the spokesmen for the scientific community reply that it is an inherently scientific concept, or even a completely neutral fact. The well-known circumstances of the case show that neither party is accounting for the full range in which the concept of evolution functions. Modern scientists overlook the functioning of evolution in a variety of religious systems ranging from those of liberal Protestants and liberal Catholics to adherents of New Age. One of the best known evolutionary mystics was Pierre Teilhard de Chardin, who speculated, "Is it not conceivable that Mankind . . . may reach a critical level of maturity where, leaving Earth and stars to lapse slowly back into the dwindling mass of primordial energy, it will detach itself from this planet and join the one true, irreversible essence of things, the Omega point?"<sup>45</sup> Such mystical propositions could hardly be considered to be scientific. Normal science cannot verify or falsify the allegation that the collective spirit of humanity will evolve to a point some day where it will somehow detach itself from the degenerating body of the universe. This means that the concept of evolution may be used in non-scientific discourse to the same extent as creation. That being the case, attempts to characterize evolution as

---

45. PIERRE TEILHARD DE CHARDIN, *THE FUTURE OF MAN* 127 (Norman Denny trans., 1964).

either science or as religion are as misguided as the attempts to characterize the concept of creation as religious. The different contexts within which the concept of evolution can function parallel those in which creation functions.

**SCIENTIFIC:**

*Evolution is seen/not seen in differential survival rates in peppered moths.*

**HISTORICAL:**

*Evolution was explained/not explained by Darwin primarily in terms of natural selection.*

**RELIGIOUS:**

*Evolution will/will not shape the future of man by moving humanity toward the point omega where it becomes a single spiritual unit of thought.*

Thus, it cannot be said that the concept of evolution is inherently either scientific or religious. It is subject to the same variety of uses as the concept of creation.

The foregoing analysis leads to the mundane conclusion that a concept, whether of creation or of evolution, is religious when it is used in and verified in a religious context, and it is scientific when it is used in and verified in a scientific context. Simple though it may be, this result supplies the answer to the *McLean* Court's quandary over creationist pedagogy. The court's rhetorical questions regarding how creation might be taught without religious instruction can be easily answered. If a teacher were asked questions regarding a worldwide flood or regarding a young earth, there need be no awkward silences. The form of the answer should depend on the form of the question, whether historical, scientific, or religious.<sup>46</sup> First, it is appropriate to answer historical questions with historical answers. Johnny might ask whether it is true that a number of historical documents and legends

---

46. Such categories are not necessarily fixed or exclusive. History, science, and religion, are simply three areas with recognized disciplines.

agree with the Bible that the earth is much younger than most scientists believe, and that well over a hundred legends from all corners of the world tell of a great flood which nearly extinguished all life. The teacher could reasonably be expected to reply that it is true that such documents and legends exist. She might further explore their credibility within the context of historical criticism. If she said that their accuracy was questioned by leading scholars, and if she explored the questions relating to their authenticity, she would be acting entirely within the bounds of historical discourse. This option was not considered by the *McLean* court, which gave the impression that such documents did not exist, stating, "the only source of this information is ultimately contained in the Book of Genesis."<sup>47</sup> If the teacher denies that such well-known texts exist, as the court did, she will hardly maintain her credibility with the students when they discover the truth.

In a similar way, it is appropriate to answer scientific questions with scientific answers. If Johnny asks whether any scientific evidence exists which indicates that the earth experienced a worldwide flood, the teacher could discuss an entire range of geological and biological phenomena which pertains to such a question. If the teacher made it clear that most scientists believe that the available evidence points away from a young earth and a global flood, she would but state a fact. If, however, she categorically denied that the existence of flood deposits in the mountain tops could under any circumstances support the hypothesis of a global flood, she would be stepping outside the realm of scientific discourse to make a statement regarding her naturalistic philosophy. In order to address such deposits scientifically, it would be necessary to discuss the various methods of dating such deposits and various theories of mountain formation. In this manner, the student could see how such evidence must be related to a broader context of scientific principles. To say that no evidence exists, is to end debate, to prevent inquiry, and to discourage critical scientific thinking.

#### IV. ADVERSE EFFECTS OF CHARACTERIZING CREATION

---

47. *McLean*, 529 F. Supp. at 1272.

## AS INHERENTLY RELIGIOUS

If in the course of such discussions Johnny pressed for a religious answer, he could be told to ask someone who could answer it, or could be requested not to divert the class from the topic at hand. This solution appears condescendingly simple, but its simplicity has baffled those who insist on dividing the world into "religious concepts" and "scientific concepts." Abandoning such elementary verities is done only at great cost. First, the rulings in *McLean* and *Aguillard* have an effect which is the opposite from which is overtly intended, and one type of religion is established over the other. Second, the debates over creation and evolution are not resolved in a rational manner. Finally, scientific investigation is thwarted because entire areas of reality are removed from the scope of scientific analysis.

A. *Establishment of Religion*

The *McLean* court noted that creation *ex nihilo* is a concept peculiar to Western religions which base their concept of origins on the plain language of the first eleven chapters of Genesis.<sup>48</sup> This classification includes not only fundamentalist Christians, but also orthodox Jews and Muslims. It follows that if creation is peculiar to such Western religions, then it is not a characteristic of other religions, whether of liberal Protestants and New Agers in the West, or of the various religions of the East. These non-*ex-nihilo* religions are compatible in varying degrees with the concept of evolution and of an ancient or eternal universe. Liberal Protestants, and even Catholics, have accepted evolution and an ancient earth as established facts and have interpreted the Bible in a manner that purports to show that the authors of the Scriptural references to creation did not intend to imply that creation *ex-nihilo* would be an accurate description in either a scientific or an historical context.<sup>49</sup> Non-fundamentalist Christian

---

48. *Id.* at 1265.

49. See, e.g., 4 NEW CATHOLIC ENCYCLOPEDIA, s.v. *Creation Account* (The Catholic University of America ed., 1967):

literature, in general, is full of assertions that the first chapters of Genesis show that the world was populated over vast ages wherein living organisms continued to increase in complexity. In such writings, God's role as Creator is affirmed, but the instantaneousness of creation *ex nihilo* is gone. Thus, at present the truth of the view of origins taken by such religions depends as heavily on the concept of evolution as Teilhard's evolutionary mysticism. Not only are these views compatible with evolution, they are antithetical to creation *ex nihilo*. The validity of the evolution-compatible, process theologies developed in the wake of Darwinism would be negated by the teaching of a literal interpretation of Genesis.

When the courts allow historical and scientific consideration of the concept of evolution or of an eternal universe which increases in complexity over vast ages, but not of creation *ex nihilo*, they assert that evolutionary religions have a rational, factual, historical, and scientific basis, whereas religions based on the traditional interpretation of the first chapters of Genesis do not. Children of Bible-believing Christians are thereby shown that rational people will embrace the "rational" religions, but they will reject the naive Biblical mythologies of their parents.

Religion based on the literal reading of Genesis *will* remain mythological. To ensure that it so remains, questions regarding the historical authenticity and accuracy of the Bible as touching the topic of creation are suppressed by the declaration that they are "inherently religious." On the other hand, facts which support liberal Christianity, Eastern religions, and the New Age are "inherently scientific" because evolution is a scientific concept.<sup>50</sup> It is the solemn duty of the schools to familiarize students with facts that support the scientific worldview

---

The generality of Catholic exegesis up to modern times favored a strictly literal interpretation [of Genesis]. . . . Attempts to reconcile a literal interpretation with the findings of modern science proved quite unsatisfactory. It gradually became clear that the inspired writer, expressing himself in the accepted literary forms of his day, had no intention of giving a scientific description.

*Id.* at 424.

50. "Mixing religion with science is obnoxious to Darwinists only when it is the wrong religion that is being mixed." See JOHNSON, *supra* note 2, at 128.

on which these religions are based.<sup>51</sup> Thus, liberal Christians and Jews who have read evolution into their interpretation of the Bible are assured that their beliefs have a scientific foundation, or even that they are scientific beliefs. Considering this, it is not surprising that adherents of evolutionary religions joined as plaintiffs in an effort to defeat the Arkansas Balanced Treatment Act.<sup>52</sup> Despite the best efforts of our forefathers at the Constitutional Convention, the state has found a way to establish favored religions and to suppress those which are out of favor.

### B. *Hollow Victories*

In spite of the “victories for science” which *McLean* and *Aguillard* supposedly represent, not everyone on the winning team is celebrating. Larry Laudan, in the previously mentioned critique of *McLean*, summed up the situation saying,

The victory in the Arkansas case was hollow, for it was achieved only at the expense of perpetuating and canonizing a false stereotype of what science is and how it works. If it goes unchallenged by the scientific community, it will raise grave doubts about that community’s intellectual integrity. . . . Fifty years ago, Clarence Darrow asked *a propos* the Scopes

---

51. See, e.g., Isaac Asimov, *The “Threat” of Creationism, in SCIENCE AND CREATIONISM* 182 (Ashley Montagu ed., 1984). “It is only in school that American youngsters in general are ever likely to hear any reasoned exposition of the evolutionary viewpoint. They might find such a viewpoint in books, magazines, newspapers, or even, on occasion, on television. But church and family can easily censor printed matter or television. Only the school is beyond their control.” *Id.* at 190-191.

52. See *McLean*, 529 F. Supp. at 1257.

The individual plaintiffs include the resident Arkansas Bishops of the United Methodist, Episcopal, Roman Catholic and African Methodist Episcopal Churches, the principal official of the Presbyterian Churches in Arkansas, and other United Methodist, Southern Baptist and Presbyterian clergy. . . . the American Jewish Congress, the Union of American Hebrew Congregations, and the American Jewish Committee. . . .

*Id.*



trial, "Isn't it difficult to realize that a trial of this kind is possible in the twentieth century in the United States of America?" We can raise that question anew, with the added irony that, this time, the pro-science forces are defending a philosophy of science which is, in its way, every bit as outmoded as the "science" of the creationists.<sup>53</sup>

On this account, *McLean* did not give a principled decision based on the issues involved. Its result was achieved illegitimately by the perpetuation of a false stereotype of science.

Laudan suggested that the whole debate over the scientific status of creation was a red herring.<sup>54</sup> Instead of attempting to decide whether creation science satisfies some highly controversial definition of "science," scientists should deal with the actual evidence in order to determine whether it provides stronger arguments for evolution or for creation.<sup>55</sup> As it stands, the victory of the pro-science forces cannot be described as any sort of scientific victory, because it was determined by principles outside the sphere of science.

The necessity for direct issue-by-issue confrontations can be understood from the preceding functional analysis that compared a concept to a ball which could be used in a variety of games. The creation scientists may be seen as people who play two different games with the same ball. Religion might be identified with basketball, and science with kickball. When the creationists join the kickball tournament where the scientists have the field, they bring the same ball that they use in basketball for dribbling and making shots. In the scientific game of kickball, there are no baskets or shots, but rather bases and runs. The same ball has a markedly different function in each game, so much so that it is a "basketball" in one game and a "kickball" in the other.

When the pro-science forces complain that creation is a religious concept, they are like players who appeal to the referee for a ruling

---

53. See Laudan, *Science at the Bar: Causes for Concern*, in *BUT IS IT SCIENCE?*, *supra* note 16, at 355.

54. *Id.*

55. *Id.*

that the creationists cannot play kickball because their ball was used in basketball. The creationists reply that they always use the same ball. If they refuse to be fouled out and continue with their kickball game, then it becomes necessary for their opponents to explain that "creation kickball" is not really kickball. Their bases are not real bases and their runs are not real runs. Their game just appears to be kickball. The knowledge of their ball's true nature proves that the creationists are playing a disguised form of basketball. When the creationists run the bases, they are in fact moving down the basketball court; when they cross home plate, they are in fact making a shot at the basketball goal. Instead of attempting to win the kickball game against an upstart team with outmoded equipment, the veterans have gotten the authorities to see the hidden game which becomes "manifest" with the knowledge of the ball's essential nature. The pro-science forces have thus left the field declaring victory, without having gone to the bother of playing a game. This is a hollow victory indeed, because it is not any sort of a kickball victory.

Such a victory does defend kickball from the necessity of adapting to new conditions of play, but only at the price of denying the obvious similarities between "creationist" kickball and "normal" kickball. Since the law perceives an essential nature in the ball which does not appear in the world, its prescriptions relate to a reality that is beyond the appearances and which shows the non-reality of particular experiences. Observed similarities between creationist kickball and normal kickball can be ignored, but they will not go away. Reality will not bend because civil authority wears trick glasses. Still, perception may be deformed for a time to accommodate the notion that creation is a religious concept that cannot shed its religiosity when it wishes to parade itself as science or philosophy. The result is that a teacher cannot explore questions relating to those parts of experience that are excluded from the classroom. She is incapable of answering questions about a worldwide flood and a young Earth, for such events are not part of secular history. She cannot say that evidence supports or fails to support the existence of such alleged facts because they have become "religious facts," and science is not competent to evaluate religious claims. She cannot admit that numerous historical sources

and oral traditions tell of such wonders because all such sources are eliminated from historical and scientific reality by the principle that "the only source of this information is ultimately contained in the book of Genesis."

The legal critique is not drawn from an analysis of the actual functioning of concepts, but from knowledge of a supposed reality beyond the appearances. Thus, appeals to experience as a basis for making decisions are not allowed. The court's attempt to decide arbitrarily decide upon the use of concepts means that certain areas of experience are declared to be non-existent. There can, *de jure*, be no experiences that would lead a scientist to conclude that the world is young or that it was completely deluged with water. Absent such a scientific concept, there is no way to think or talk about such experiences, so they cannot be objects in the truncated discourse created by judicial fiat. Thus, entire areas of experience are effectively decreed out of existence.

Absent an appeal to the nature of things in the application of the law, the question of religiosity must be decided by prevailing opinion. The party which forces its perspective on the public consciousness becomes the rightful winner. Bible-believing Christians should be just as concerned with hollow victories as Dr. Laudan. The Darwinists presently have the advantage and can match every example of evolutionary religion with a dozen examples of evolutionary science. Conversely, they can show that the scientific component of creationism is minuscule compared to the weight of beliefs that has accumulated over the centuries around the idea of creation. But victory in a court of opinion is no way to settle a serious argument regarding the nature of the origin of the earth and of living things. Neither creationists nor Darwinists could be happy with such a situation for long. In 1859 the roles were reversed, with the weight of evidence stacked against Darwin, so that he remarked: "Why, it may be asked, have all the most eminent living naturalists and geologists rejected this view of the mutability of species?"<sup>56</sup> Darwin was not afraid of the odds. He believed that his theory would eventually be accepted, saying, "I look with confidence to the future, to young and

---

56. CHARLES DARWIN, THE ORIGIN OF SPECIES 452 (1979).

rising naturalists, who will be able to view both sides of the question with impartiality.”<sup>57</sup> No Darwinist would contend today that Darwin’s 19th Century opponents should have won the debate by virtue of their numbers and professional reputations. This would mean that evolution had no right to become the dominant factor which it has become in many of the sciences.

### C. *Limiting the Scope of Scientific Inquiry*

Though reality will not change with the winning of an argument,<sup>58</sup> such actions have disordering effects in human experience. When an alleged event of creation is mistaken for a factor in a particular type of discourse, it follows that it becomes exclusively identified with that type of discourse. Thus, it is decided that: *sudden creation = religion* or that *worldwide flood = religion*. The deleterious effect on free and rational inquiry is enormous. If certain concepts are marked out in advance as religious, it is known that they can only be considered and evaluated in the religious context. They can have no historical or scientific relevance. It would be incongruous to interject into historical discussions questions that did not relate to the historical

---

57. *Id.* at 499.

58. As preposterous as it may seem from the common-sense point of view, this matter is presently not beyond debate. A number of post-modern writers have explicitly argued that scientific principles are decided upon by prevailing opinion. See, e.g., RICHARD RORTY, *PHILOSOPHY AND THE MIRROR OF NATURE* (1979). In speaking of the establishment of the heliocentric view of the solar system, Rorty said:

Galileo, so to speak, won the argument, and we all stand on the common ground of the “grid” of relevance and irrelevance which “modern philosophy” developed as a consequence of that victory. But what could show that the Bellarmine-Galileo issue “differs in kind” from the issue between, say Kerensky and Lenin, or that between the Royal Academy (*circa* 1910) and Bloomsbury?

*Id.* at 331. Replying to such questions with the philosophical sophistication that they warrant is no easy task. The lack of adequate answers has led to a situation in which proponents of various scientific and ideological viewpoints can seek to vindicate their beliefs in the courts; the courts feel justified in characterizing non-legal subject matters in the mistaken belief that they are merely arbitrating between competing opinions. In principle, the post-modern courts could have as easily given the laurel to Galileo as they have given it to Darwin.

framework or into a scientific discussion questions that did not pertain to a scientific framework. Because creation is so closely equated with religion, it follows that it cannot be equated with either history or science.

The result of such a characterization is not, as intended, to eliminate religious concepts from science, but to prevent scientific inquiry into any area marked as religious. In this manner, select areas of inquiry are suppressed and denied a role in rational discourse. To illustrate this point, one can imagine a conversation between two scientists who are examining a formation in the Grand Canyon where rocks thought to be old are on top of other rocks which are thought to be young. Such inverted sequences are common, and normal geology must explain how the order of such rocks got mixed up over the course of millions of years. During the course of chipping around the rock formation, one scientist might say, "I think God made the Grand Canyon specifically to inspire in us a sense of wonder." The other might reply, "I do too. But we need to get back to work, and figure out why the sediments in this formation are in an inverted sequence." Reason is preserved, and science is none the worse for the interjection of the inherently religious statements regarding God and the sense of wonder. Neither would think of using the religious observation to analyze the rock formation being examined.

Suppose, however, that the conversation were similar, only this time the creation scientist's rapid formation hypothesis was recognized by them both to be an "inherently religious" concept on the order of God's making the Grand Canyon to instill a sense of wonder in human observers. The first scientist might say, "From the appearances, it looks like these sediments were all deposited rapidly in their present order by an enormous flood. Our assumption, based on fossil identification, that the higher layers are older than the lower layers appears to be mistaken." At that point the other might reply, "I believe you are right, but the prevailing scientific opinion holds that such floods are religious concepts. We need to get back to work on our geological question, and figure out how to understand these sediments in a scientifically acceptable manner." Both would then ignore the evidence that contradicted the accepted theory of the

“geological column.” Both speakers have accepted the characterization of the rapid deposition of strata by a worldwide flood as a “religious concept,” so that they cannot see that they are acting irrationally. They cannot consider the appearance of rapid deposition in the deposits they are examining because the concept of a worldwide flood can never be plugged into a scientific system. Challenging the accepted notions of geology in a manner consistent with Genesis becomes a practical impossibility. They are unable to question whether the sequence is actually inverted, unless they can do so in the service of their scientific concept of an earth that is billions of years old.<sup>59</sup> This, however, does not make them good scientists; it makes them into irrational ideologues. They are forced to ignore evidence which clearly supports rapid deposition in a large-scale flood because such evidence conflicts with their ideas of how the world must be.

It is thought to be inappropriate to mix the theological discussion of creation into a strictly scientific discussion of the age of the earth. The truth is a little more subtle. The two can be mixed up, but in reaction to such activity the connecting operations which bind them to a particular conceptual system will show the incongruity of the mixture just as attempting to make a basketball jump-shot in the middle of a kickball game will not count as anything but a distraction. It is not a foul, as say the failure to touch a base would be. Rather, it is a non-event in the kickball game. The referee cannot respond to the jump-shot by saying, “You’re out!” He can only say, “Play ball!” As seen in the illustration above, the religious interpretation of the events will only connect up with factors in a compatible discourse. Comments

---

59. See JOHNSON, *supra* note 2. Johnson illustrates how this principle has played out in the actual controversy between normal science and creation science. The National Academy of Sciences criticized creation science as being merely destructive of science because it criticizes the evolutionary paradigm without substituting another naturalistic process in its place. Johnson remarked, “[I]t is as if a criminal defendant were not allowed to present an alibi unless he could also show who did commit the crime.” *Id.* at 8. Johnson, nevertheless, recognized that the Academy’s rule against negative argumentation was based on the principle that one paradigm will rule until another can be found to replace it. *Id.* at 120. Thus, creationists are thought to bring science to an impasse because they deny the validity of any naturalistic paradigm. Consequently, destruction of the evolutionary explanation for origins becomes anti-scientific by definition. The result of such logic is that the scientist is not free to accept evidence that contradicts naturalistic presuppositions.

about God making the canyon beautiful to inspire a sense of wonder are not affected by the sequences of the strata, yet the relationship to the canyon is just as original as the relation of the scientific statements. The canyon would not be wonderful if it did not exist. It would inspire a sense of wonder only insofar as we might "wonder" where it went. If the scientific and religious statements are equally yoked to experience, they are to be separated according to the conceptual systems to which they naturally link. As we saw by our fictional scientists' refusal to consider the evidence that the strata they were studying were not inverted, division of the world into "scientific concepts" and "religious concepts" limits scientific investigation. Instead of freeing science from religion, science is forbidden from traveling on any path first explored by religion.

In a similar manner, when the *McLean* court stated that creation was a religious concept that could not constitutionally be taught in the schools, it was directly forbidding inquiry into its historical and scientific aspects. The citizens of the state are no longer free to have curriculum requirements that encourage students to inquire whether the historical and scientific claims of creation are legitimate. Why? Because creation is not scientific, and it can't become scientific because students are forbidden to think about it scientifically by asking whether currently observed processes point to creation. In the same way, it can't become historical because students are not allowed the opportunity to think of it historically by asking whether texts that describe creation may not be accurate. Such judicial decrees have not only ensured that religion based on a literal reading of the Bible is excluded from the schools, but also that the schools undermine such religion in the church. They have further ensured that history and science will maintain an acceptable ideological slant, by removing by decree parts of reality that may be consistent with Biblical literalism. If the creation scientists have made any novel discoveries about the development of the earth, then science must be the poorer for their discoveries will be religious.

## V. CONCLUSION

In *McLean* and *Aguillard*, both sides of the dispute over whether creation can be taught in the public schools accepted the principle that a concept can be characterized apart from its function in a particular context. Thus, the normal scientists have succeeded in tagging creation *ex nihilo* as an inherently religious concept. They have thus convinced the courts that a law that requires the teaching of creation science constitutes the establishment of a religion by the state. The fallacious reasoning implicit in such a characterization has been demonstrated by simply acknowledging that the concept of creation has well-recognized roles outside of religious discourse. The existence of these roles has been effectively suppressed in order to accomplish the desired result of keeping references to any evidence of creation out of educational curricula. This willful attempt at isolating the content of instruction from particular experiences goes so far as to assert that the alleged occurrence of a worldwide flood is an inherently religious concept that could never be understood by scientific analysis. Such a characterization, if consistently applied, would forbid scientific investigation of any evidence which supported the hypothesis of a worldwide flood and, thereby, limit the directions in which human understanding might travel. By so restricting the sphere of permissible scientific investigation, the courts ensure the systematic exclusion of evidence that is consistent with the Biblical account of creation. Beyond that, the court mandates that public schools can only present scientific and historical evidence that is consistent with either non-Biblical religions or those Biblical religions which view Genesis allegorically. In this manner, the state attests that non-creationist religions are inherently rational, whereas religions based on the plain language of Genesis are inherently unscientific and non-historical.

There is no established criterion that can be given to identify a concept as religious or scientific.<sup>60</sup> Establishing such a criterion for science continues to defy the most astute philosophers of science. It is not likely that the courts can demark both science and religion, and then proceed to establish where one moves into the other. Thus, at least some philosophers are distressed by the hollow victories in the

---

60. See Laudan, *The Demise of the Demarcation Problem*, in *BUT IS IT SCIENCE?*, *supra* note 16, at 337-350.



courts. Creationists should be equally concerned with hollow victories. Where either view is established by legislative or judicial fiat, its position depends on the whims of politics rather than upon the profound truths of the nature of things. For now, there is no hope that evangelical Christians can establish evolution as an inherently religious concept. The experience of innumerable scientists weighs against it. It cannot be denied that evolution is a factor in a vast web of scientific theories, and such theories are used and tested in the ordinary course of contemporary scientific activity. If the attempt of normal science to denigrate creation science can be likened to its refusal to recognize the creationist version of kickball, the refusal of creationists to recognize the place of evolution in present-day scientific thought conjures up the image of creationist kickball players who refuse to recognize the existence of regulation kickball. To insist on characterization, or a win off the field of play, is to ensure that evolution is characterized as the only possible scientific account of origins. Conversely, such insistence ensures that creation remains a religious account disconnected from history and science for the foreseeable future. Once the matter is decided for either party by a misguided appeal to the referee, no alchemy can transform the inherently religious concept into one that is inherently scientific. Creationists must begin to press their case by putting the debate on a rational and philosophical basis, for, barring accidents and miracles, the side with the most power will win a power struggle.

Assumption of the philosophical high-ground in the debates would have the further advantage of generating respect for creation science among those who are not ideologically committed to the evolutionary view of origins and who are willing to follow the evidence wherever it leads. It would be beyond the scope of this article to suggest a legislative enactment for protecting Biblical religions from discrimination by the prevailing powers. However, in view of the foregoing analysis, the current state of the law, whereby creation is declared to be a religious concept, is irrational. Still, attempts to remedy the present intolerable situation should be made carefully so as not to replace one irrational principle with another.