
NOTES

RESOLVING THE CONTROVERSY OVER “TEACHING THE CONTROVERSY”: THE CONSTITUTIONALITY OF TEACHING INTELLIGENT DESIGN IN PUBLIC SCHOOLS

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INTRODUCTION

A national debate is occurring once again over whether alternatives to evolution should be taught in public schools. Even President George W. Bush weighed in on the controversy when he commented that he believed that both evolution and the theory of intelligent design—the theory that humans are too complex to be the result of anything but an intelligent designer—“should be taught in schools so people can understand what the debate is about.”¹ A recent study reported that the United States, when compared with thirty-two European countries and Japan, has the second-highest percentage of adults who think it is false to state, “Human beings, as we know them, developed from earlier species of animals.”² In a 2005 survey, sixty-four percent of U.S. respondents said they “were open to the idea of teaching creationism in addition to evolution, while thirty-eight percent favored replacing evolution with creationism.”³ In contrast, at least eighty percent of adults in Iceland, Denmark, Sweden, and France accept the concept of evolution.⁴

The debate has received so much attention that even the Vatican has taken a position. The Vatican’s chief astronomer, Rev. George Coyne, has said “placing intelligent design theory alongside that of evolution in school programs was ‘wrong’ and was akin to mixing apples with oranges.”⁵

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1. Laurie Goodstein, *Teaching of Creationism is Endorsed in New Survey*, N.Y. Times, Aug. 31, 2005, at A9 (internal quotations omitted).

2. Jon D. Miller et al., *Public Acceptance of Evolution*, 313 Sci. 765, 765 (2006).

3. Goodstein, *supra* note 1.

4. Miller et al., *supra* note 2, at 765.

5. Nicole Winfield, *Vatican Official Refutes Intelligent Design: Vatican’s Chief Astronomer Says Intelligent Design Doesn’t Belong in Science Class*, ABC News, Nov. 18, 2005, <http://abcnews.go.com/International/wireStory?id=1327926&page=1> [hereinafter

Coyne has further stated, “Intelligent design isn’t science even though it pretends to be.”⁶ At the time of this writing, Pope Benedict XVI, in recognition of the rising contentiousness of the debate between science and belief, is meeting with his former doctoral students to discuss the topic of evolution.⁷

In addition, since 2001, the state legislatures or boards of education in approximately twenty-five states have considered proposals that would change the way evolution is taught, some of which seek to include discussion of intelligent design and creationism.⁸ In 2005, approximately forty-seven local school boards considered similar proposals.⁹ Of these proposals, the Kansas Board of Education’s modification of its state science curriculum standards in 2005 has received the most attention.¹⁰ On Election Day 2005, the Kansas State Board of Education adopted new standards, by a 6 to 4 vote, that would in essence allow for the affirmative teaching of intelligent design in public schools.¹¹ However, on August 2, 2006, the board members who voted in favor of the revisions were voted out of office, and the new board members promised to restore the standards so that the standards would not permit attacks on evolution.¹²

The debate over teaching intelligent design has also entered the courts. A variety of pending lawsuits allege that decisions to incorporate alternative origins theories or critiques of evolution into public school curricula violate the Establishment Clause of the First Amendment.¹³ To date, only the case of *Kitzmiller v. Dover Area School District* has reached a conclusion.¹⁴ In *Dover*, the court sided with parents who challenged a school board’s decision to include information about intelligent design during the teaching

Vatican Official]. The Vatican clarified an earlier statement by Pope Benedict XVI, who declared the universe an “intelligent project.” *Pope Cites World’s ‘Intelligent Project,’* Foxnews.com, Nov. 13, 2005, <http://www.foxnews.com/story/0,2933,175362,00.html>.

6. *Vatican Official*, *supra* note 5.

7. Ian Fisher, *Professor-Turned-Pope Leads a Seminar on Evolution*, N.Y. Times, Sept. 2, 2006, at A3.

8. Claudia Wallis, *The Evolution Wars: Coast-to-Coast Challenges*, Time, Aug. 15, 2005, at 27, 28-29; see also Kristi L. Bowman, *Seeing Government Purpose Through the Objective Observer’s Eyes: The Evolution-Intelligent Design Debates*, 29 Harv. J.L. & Pub. Pol’y 417, 421 (2006).

9. See Bowman, *supra* note 8; Wallis, *supra* note 8.

10. Jodi Wilgoren, *Kansas Board Approves Challenges to Evolution: New Standards also Redefine Science*, N.Y. Times, Nov. 9, 2005, at A14.

11. *Id.* The debate over how evolution should be taught in Kansas has existed since at least 1999. *Id.* For a review of how the standards were revised and why the revisions would permit the teaching of intelligent design in Kansas schools, see Anthony Kirwin, *Toto, I’ve A Feeling We’re . . . Still in Kansas? The Constitutionality of Intelligent Design and the 2005 Kansas Science Education Standards*, 7 Minn. J. L. Sci. & Tech. 657, 689-98 (2006).

12. Monica Davey & Ralph Blumenthal, *Fight over Evolution Shifts in Kansas School Board Vote*, N.Y. Times, Aug. 3, 2006, at A15.

13. U.S. Const. amend. I. (“Congress shall make no law respecting the establishment of religion. . . .”). For a summary of the lawsuits recently filed, see Tresa Baldas, *‘Big Bang’ of Suits Focus on Evolution: New Fronts Open in Old, Familiar Fight*, Nat’l L.J., Sept. 12, 2005, at 1.

14. *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005).

of evolution in a biology class.¹⁵ The trial generated so much publicity that on Election Day 2005, which was a little over a month before the decision was issued, the entire school board was voted out.¹⁶

Although the events in *Dover* and Kansas might represent potential setbacks for proponents of teaching alternative origins theories in public school science classes, efforts to alter evolution curricula are still underway in other states.¹⁷ While the strategy to introduce intelligent design in *Dover* was found unconstitutional, variations of such proposals will continue to be explored and challenged.

The purpose of this Note is to analyze whether substantively teaching intelligent design in public schools violates the Establishment Clause. Part I of this Note introduces the theory of intelligent design, as well as the various legal principles and jurisprudence relevant to analyzing whether teaching intelligent design in public schools would violate the Establishment Clause. Part II reviews the debate among legal commentators over these issues and discusses the *Dover* decision in detail. Part III attempts to resolve this debate by arguing that teaching intelligent design in public schools as a valid scientific theory of origins would violate the Establishment Clause because the theory of intelligent design is an inherently religious doctrine and is not science. Part III argues that it may be constitutional to describe intelligent design as a religious doctrine in public schools so long as intelligent design is not endorsed as a valid scientific theory and views on its merits are not discussed. However Part III concludes that it would be difficult for teachers to describe intelligent design without provoking a fact-intensive constitutional inquiry. Therefore, this Note recommends that if public school teachers are asked about intelligent design, they should inform students that some people believe in religious understandings of human origins, and students should turn to their families or places of worship to learn about those understandings.

I. THE THEORY OF INTELLIGENT DESIGN AND RELEVANT ESTABLISHMENT CLAUSE JURISPRUDENCE

A. *The Theory of Intelligent Design*

The theory of intelligent design states that life is too complex to have evolved by way of natural selection and that therefore is the result of intelligent causation. The theory is comprised of three tenets:

1. Specified complexity is well-defined and empirically detectable.

15. *Id.* at 766. For a complete discussion of *Dover*, see *infra* Part II.B.1.

16. Laurie Goodstein, *Evolution Slate Outpolls Rivals*, N.Y. Times, Nov. 9, 2005, at A24.

17. Laurie Goodstein, *Schools Nationwide Study Impact of Evolution Ruling*, N.Y. Times, Dec. 22, 2005, at A20.

2. Undirected natural causes are incapable of explaining specified complexity.

3. Intelligent causation best explains specified complexity.¹⁸

In addition, “[d]esign theorists hold these tenets not as religious presuppositions but as conclusions of sound scientific arguments.”¹⁹ The following discussion briefly provides an overview of the three tenets of intelligent design and the argument by design theorists as to why these tenets are not held as “religious presuppositions.”²⁰

1. Design Is Defined and Empirically Detectable

Michael Behe, one of intelligent design’s foremost proponents, defines the term “design” and explains the ability to empirically detect evidence of design as follows:

What is “design?” Design is simply the *purposeful arrangement of parts* The upshot of this conclusion—that anything could have been purposely arranged—is that we cannot know that something has *not* been designed. The scientific problem then becomes, how do we confidently detect design? When is it reasonable to conclude, in the absence of firsthand knowledge or eyewitness accounts, that something has been designed? For discrete physical systems—if there is not a gradual route to their production—design is evident when a number of separate, interacting components are ordered in such a way as to accomplish a function beyond the individual components. The greater the specificity of the interacting components required to produce the function, the greater is our confidence in the conclusion of design.²¹

This is Behe’s concept of “irreducible complexity,” and it provides the framework for detecting design.²² Design theorists purport to be able to empirically detect evidence of design by identifying the function of a biological structure, examining the relationship between the function of the structure’s parts and the structure’s overall function, and determining whether the structure is organized in such a way to demonstrate a sufficient amount of “specified complexity.”²³ A structure demonstrates such complexity if it can be demonstrated that, when one part of the structure is removed, the structure ceases functioning.²⁴ If a biological structure requires all of its parts to function, it cannot have evolved from some prior version that was lacking one of its parts because, according to design theorists, “[n]atural selection can only act on systems that perform functions

18. William A. Dembski, *Intelligent Design: The Bridge Between Science & Theology* 247 (1999).

19. *Id.*

20. *Id.*

21. Michael J. Behe, *Darwin’s Black Box* 193-94 (1998).

22. *Id.* at 203.

23. *Id.* at 193-94.

24. *Id.*

that help organisms survive.”²⁵ Accordingly, the structure is more likely to have been intelligently designed. Formulated this way, design theorists distinguish themselves from so-called “theistic evolutionists who think design can only be seen through ‘the eyes of faith’, [because] design theorists believe that scientific evidence actually points to intelligent design—that intelligent design is . . . ‘empirically detectable.’”²⁶

intelligent design proponents discuss various biological structures and systems as examples of what they claim offer scientific evidence of intelligent design. Some of the most frequently discussed examples include the organization of DNA, the human eye, blood clotting mechanisms, and the motor function of a bacterial flagellum.²⁷ In short, according to design theorists, given the complexity of these examples, none could have evolved by way of natural selection because any prior version of them would have no biological function.²⁸ Unfortunately for design theorists, the scientific establishment has fiercely contested the scientific validity of the design theory generally and its application to these and other examples.²⁹

2. Intelligent Design Rejects Methodological Naturalism

One of the reasons intelligent design proponents claim their theory is rejected by the scientific establishment is that intelligent design cannot be supported by “methodological naturalism.”³⁰ Methodological naturalism is the “view that science must be restricted solely to undirected natural processes.”³¹ William Dembski has outlined why this viewpoint is problematic for intelligent design. He argues that “[s]o long as methodological naturalism sets the ground rules for how the game of science is to be played, intelligent design has no chance of success. . . . Logically the only alternative [to naturalistic evolution] is intelligent design,” and since many do not consider intelligent design to constitute a form of science, the “simple way out of this impasse [is to] *dump methodological naturalism.*”³² Dembski further argues that

[n]aturalism is the disease. Intelligent design is the cure. Intelligent design is a two-pronged approach for eradicating naturalism. On the one hand, intelligent design presents a scientific and philosophical critique of naturalism. . . . The other prong of intelligent design is a positive

25. Michael J. Behe et al., *Science and Evidence for Design in the Universe* 13 (1999).

26. *Id.* at 12.

27. *See, e.g.*, Behe, *supra* note 21, at 74-97; Behe, *supra* note 25, at 13; Dembski, *supra* note 18, at 148, 177-78.

28. *See, e.g.*, Behe, *supra* note 21, at 74-97; Behe, *supra* note 25, at 13; Dembski, *supra* note 18, at 148, 177-78.

29. *See, e.g.*, *Intelligent Design Creationism and Its Critics: Philosophical, Theological, and Scientific Perspectives* (Robert T. Pennock ed., 2001); Niall Shanks, *God, the Devil and Darwin: A Critique of Intelligent Design Theory* (2004); *Why Intelligent Design Fails: A Scientific Critique of the New Creationism* (Matt Young & Taner Edis eds., 2005).

30. Dembski, *supra* note 18, at 119.

31. *Id.*

32. *Id.*

scientific research program. As a positive research program, intelligent design is a scientific discipline that systematically investigates the effects of intelligent causes.³³

Therefore, according to design proponents, because intelligent design, by definition, cannot be explained by undirected or natural causes, and because such causal mechanisms are required by the scientific establishment, intelligent design cannot be deemed to constitute a form of science by the establishment unless science allows for explanation by intelligent and unnatural causes.

3. Intelligent Design Infers the Existence of, but Does Not Identify, an Intelligent Designer

intelligent design requires the existence of an intelligent designer for the theory to hold together. To illustrate this point, Michael Behe has described intelligent design as

an elephant in the roomful of scientists who are trying to explain the development of life. The elephant is labeled “intelligent design.” To a person who does not feel obligated to restrict his search to unintelligent causes, the straightforward conclusion is that many biochemical systems were designed. They were designed not by the laws of nature, not by chance and necessity; rather they were *planned*. The designer knew what the systems would look like when they were completed, then took steps to bring the systems about. Life on earth at its most fundamental level, in its most critical components, is the product of intelligent activity.³⁴

Notwithstanding the requirement of an unnatural and intelligent cause for the existence and development of life, “[i]ntelligent design is modest in what it attributes to the designing intelligence responsible for the specified complexity in nature.”³⁵ To explain why the designer is not identified, Dembski quotes from the intelligent design textbook *Of Pandas and People*: “Science cannot answer this question; it must leave it to religion and philosophy.”³⁶ To elaborate upon this statement, Dembski offers that

[i]ntelligent design as a scientific theory is distinct from a theological doctrine of creation. Creation presupposes a Creator who originates the world and all its materials. Intelligent design attempts only to explain the arrangement of materials within an already given world. Design theorists argue that certain arrangements of matter, especially in biological systems, clearly signal a designing intelligence.³⁷

In other words, design theorists explicitly claim that accepting intelligent design as true does not require religious faith. On the other hand, some

33. *Id.* at 120.

34. Behe, *supra* note 21, at 193.

35. Dembski, *supra* note 18, at 247.

36. *Id.* at 248 (quoting Percival Davis & Dean Kenyon, *Of Pandas and People: The Central Question of Biological Origins* 7 (2d ed. 1993)).

37. *Id.*

scientists and legal commentators have argued that intelligent design is a religious doctrine because it is a sham for teaching creationism.³⁸ Other commentators reject this argument.³⁹ Therefore, the threshold question that must be addressed in determining whether teaching intelligent design in public schools violates the Establishment Clause is whether intelligent design constitutes a religion for constitutional purposes. However, this question is somewhat complicated by the fact that courts have not adopted a universal definition of the term “religion” as it appears in the First Amendment. Therefore, determining whether intelligent design constitutes a religion for constitutional purposes first requires understanding how courts have historically defined the term “religion” as it appears in the First Amendment. Part I.B of this Note reviews that jurisprudence.

B. Definitions of “Religion” as It Appears in the First Amendment

In Establishment Clause cases, if it is contested that a particular doctrine or belief is religious, it becomes particularly important to define religion.⁴⁰ However, the problem in considering whether intelligent design can be construed as a religious doctrine is that, historically, courts have been reluctant to adopt a universal definition of religion to avoid the obvious danger that an arbitrary demarcation as to what constitutes religion could lead to unfair decisions and judicial bias.⁴¹ The following discussion reviews U.S. Supreme Court and federal court decisions that define religion. In Part II, this Note will address the debate over whether intelligent design constitutes a religion for constitutional purposes given this jurisprudence. In Part III, this Note will argue that, because intelligent design posits the existence of a supernatural creator of man, the theory satisfies any of these definitions and therefore is an inherently religious doctrine.

1. Supreme Court Decisions Defining Religion

Over time, the Supreme Court has fluctuated between relatively narrow definitions of religion that conform to the Christian belief in God and relatively broad definitions such as the so-called “parallel position” test.⁴² In the Court’s earliest decision that defined religion, *Davis v. Beason*, the Court upheld an Idaho law that required electors to swear that, among other things, they were not bigamists or polygamists.⁴³ The defendant in the

38. See *infra* notes 214-20 and accompanying text.

39. See *infra* notes 165-83 and accompanying text.

40. See Kent Greenawalt, *Religion as a Concept in Constitutional Law*, 72 Cal. L. Rev. 753, 756 (1984).

41. See Eduardo Peñalver, Note, *The Concept of Religion*, 107 Yale L.J. 791, 793-94 (1997).

42. For a more complete discussion of these trends, see *id.*; Note, *Towards a Constitutional Definition of Religion*, 91 Harv. L. Rev. 1056 (1978) [hereinafter Harvard Note].

43. *Davis v. Beason*, 133 U.S. 333 (1890).

case, Samuel Davis, was a Mormon who was convicted of falsely swearing to the oath.⁴⁴ Davis appealed his conviction partly on the basis that the law prevented Mormons from acting as electors and therefore violated the Establishment Clause.⁴⁵ The Court rejected Davis's argument because bigamy and polygamy were considered crimes "by the laws of all civilized and Christian countries,"⁴⁶ and therefore "[t]o call their advocacy a tenet of religion is to offend the common sense of mankind."⁴⁷ For the Court,

[t]he term "religion" has reference to one's views of his relations to his Creator, and to the obligations they impose of reverence for his being and character, and of obedience to his will. It is often confounded with the *cultus* or form of worship of a particular sect, but is distinguishable from the latter.⁴⁸

Forty-one years later, the Court continued to conceive of religion in a similarly theistic way. In *United States v. Macintosh*, the Court examined a naturalization applicant's refusal to join the military on the basis of his religious beliefs and explained that "[w]e are a Christian people, according to one another the equal right of religious freedom, and acknowledging with reverence the duty of obedience to the will of God," but that "unqualified allegiance to the Nation and submission and obedience to the laws of the land, as well those made for war as those made for peace, are not inconsistent with the will of God."⁴⁹

The Court expanded its concept of religion during the course of the twentieth century, perhaps because there was a large influx of immigrants that resulted not only in an increased number of non-Christians, but also an increased number of religious sects in the United States.⁵⁰ In some respects, the 1961 case of *Torcaso v. Watkins*⁵¹ presented the perfect vehicle for the Court to confront the issue of whether religion requires a theistic definition. In *Torcaso*, at issue was a provision of the Maryland constitution that stated, "[N]o religious test ought ever to be required as a qualification for any office of profit or trust in this State, other than a

44. *Id.* at 334-35.

45. *Id.* at 336-37.

46. *Id.* at 341.

47. *Id.* at 341-42.

48. *Id.* at 342. This conception essentially follows what James Madison termed "the duty which we owe to our creator, and the manner of discharging it." *Malnak v. Yogi*, 592 F.2d 197, 201 (3d Cir. 1979) (Adams, J., concurring) (quoting James Madison, *A Memorial and Remonstrance on the Religious Rights of Man*, in *Cornerstones of Religious Freedom in America* 84 (J. Bleu ed., 1964)). The Court followed this approach because, as Professor Eduardo Peñalver notes, although many diverse sects existed in the United States in the early 19th century, "almost all religious people were Christians and therefore unlikely to object to a definition of religion that excluded nontheistic religions." Peñalver, *supra* note 41, at 796 n.30 (citing J. Gordon Melton, *The Development of American Religion: An Interpretive View*, in *Encyclopedia of American Religions* 1, 14-15 (5th ed. 1996)).

49. *United States v. Macintosh*, 283 U.S. 605, 625 (1931) (citing *Church of the Holy Trinity v. United States*, 143 U.S. 457, 470-71 (1892)).

50. Peñalver, *supra* note 41, at 796; *see also* Harvard Note, *supra* note 42, at 1069.

51. 367 U.S. 488 (1961).

declaration of belief in the existence of God”⁵² Since *Torcaso* was denied a commission of notary public because he refused to swear his belief in God, he challenged the constitutionality of the provision.⁵³ The Court sided with *Torcaso* and struck down the Maryland provision. In doing so, the Court held,

We repeat and again reaffirm that neither a State nor the Federal Government can constitutionally force a person “to profess a belief or disbelief in any religion.” Neither can constitutionally pass laws or impose requirements which aid all religions as against non-believers, and neither can aid those religions based on a belief in the existence of God as against those religions founded on different beliefs.⁵⁴

The Court also noted that included “[a]mong religions in this country which do not teach what would generally be considered a belief in the existence of God are Buddhism, Taoism, Ethical Culture, Secular Humanism and others.”⁵⁵

Shortly after *Torcaso*, the Court in *United States v. Seeger*⁵⁶ considered the concept of religion in a way that “embrace[d] the ever-broadening understanding of the modern religious community.”⁵⁷ Daniel Seeger had been convicted for refusing induction into the United States armed forces.⁵⁸ He challenged the conviction by arguing that he qualified for an exemption under section 6(j) of the Universal Military Training and Service Act, which exempts from training and service persons who are opposed to participating in war because of their religious training or beliefs.⁵⁹ The Act defined “religious training and belief” as “an individual’s belief in relation to a Supreme Being involving duties superior to those arising from any human relation,” not including “essentially political, sociological, or philosophical views, or a merely personal moral code.”⁶⁰ Seeger refused to answer whether or not he believed in a Supreme Being, arguing “that his ‘skepticism or disbelief in the existence of God’ did ‘not necessarily mean lack of faith in anything whatsoever’; that his was a ‘belief in and devotion to goodness and virtue for their own sakes, and a religious faith in a purely ethical creed.’”⁶¹ However, Seeger’s claim for exemption was initially rejected “solely because it was not based upon a ‘belief in a relation to a

52. *Id.* at 489 (internal quotations omitted).

53. *Id.*

54. *Id.* at 495 (footnotes omitted).

55. *Id.* at 495 n.11.

56. 380 U.S. 163 (1965).

57. *Id.* at 180.

58. *Id.* at 164-65.

59. 50 U.S.C. app. § 456(j) (2000).

60. Selective Service Act of 1948, ch. 625, 62 Stat. 604, 612 (1948) (codified as amended at 50 U.S.C. app. § 456(j) (2000)). The name of the Selective Service Act of 1948 was changed to the “Universal Military Training and Service Act” in 1951. *See* Universal Military Training and Service Act, ch. 144, sec. 1, § 1(a), 65 Stat. 75 (1951)

61. *Seeger*, 380 U.S. at 166 (quoting from the record).

Supreme Being' as required by § 6(j) of the Act."⁶² As a result, the Court was forced to interpret whether Seeger's beliefs could be considered religious within the meaning of the statute. The Court concluded that

Congress, in using the expression 'Supreme Being' rather than the designation 'God,' was merely clarifying the meaning of religious training and belief so as to embrace all religions and to exclude essentially political, sociological, or philosophical views. We believe that under this construction, the test of belief 'in a relation to a Supreme Being' is whether a given belief that is sincere and meaningful occupies a place in the life of its possessor parallel to that filled by the orthodox belief in God of one who clearly qualifies for the exemption. Where such beliefs have parallel positions in the lives of their respective holders we cannot say that one is 'in a relation to a Supreme Being' and the other is not.⁶³

This test became known as the "parallel position test."⁶⁴

Finally, in *Edwards v. Aguillard*, the Court defined creation science as a "religious viewpoint" in which "a supernatural being created humankind."⁶⁵ The Court cited statements from the legislative history of the Louisiana Balanced Treatment for Creation-Science and Evolution Science in Public School Instruction Act⁶⁶ to conclude that "the term 'creation science,' as contemplated by the legislature that adopted th[e] Act, embodies the religious belief that a supernatural creator was responsible for the creation of humankind."⁶⁷ Among the statements that appeared in the legislative history were those by Edward Boudreaux, a leading expert on creation science who noted that "creation scientists point to high probability that life was created by an intelligent mind."⁶⁸ Boudreaux also equated "creation science with a theory pointing to conditions of a creator"⁶⁹ and stated that "[c]reation . . . requires the direct involvement of a supernatural intelligence."⁷⁰ In addition, another leading expert, Luther Sunderland, "described creation science as postulating that everything was created by some intelligence or power external to the universe."⁷¹ On the basis of these and other statements, the Court reasoned that creation science constituted a religious doctrine.⁷²

62. *Id.* at 167.

63. *Id.* at 165-66.

64. Although the U.S. Supreme Court's *Seeger* decision is one of statutory interpretation, courts and commentators have endorsed its constitutional reading. *See, e.g.*, *Malnak v. Yogi*, 592 F.2d 197, 204 (3d Cir. 1979) (Adams, J., concurring); Greenawalt, *supra* note 40, at 759-60; Harvard Note, *supra* note 42, at 1064; Peñalver, *supra* note 41, at 797-98, 798 n.48.

65. *Edwards v. Aguillard*, 482 U.S. 578, 591 (1987).

66. La. Rev. Stat. Ann. §§ 17:286.1-17:286.7 (1982), *invalidated by Edwards*, 482 U.S. at 593.

67. *Edwards*, 482 U.S. at 592 (1987).

68. *Id.* at 591 (internal quotations omitted).

69. *Id.* at 591 n.12 (internal quotations omitted).

70. *Id.*

71. *Id.* (internal quotations omitted).

72. *Id.* at 592.

2. Federal Courts of Appeals Decisions Defining Religion

Various federal courts have set forth their own definitions of religion. Of these formulations, the definition articulated by Judge Arlin Adams of the U.S. Court of Appeals for the Third Circuit in *Malnak v. Yogi*⁷³ has been argued to be the most influential.⁷⁴ The court in *Malnak* held that the teaching of a course called “Science of Creative Intelligence Transcendental Meditation” (“SCI/TM”) was religious and that teaching the course in public schools violated the Establishment Clause.⁷⁵ The textbook used in the course taught “that ‘pure creative intelligence’ is the basis of life, and that through the process of Transcendental Meditation students can perceive the full potential of their lives.”⁷⁶ To practice SCI/TM, it was necessary for students to acquire a mantra by attending a “puja,” which involved, among other things, making offerings to the “Guru Dev.”⁷⁷ The puja was conducted outside of school on a Sunday.⁷⁸

The Third Circuit relied upon the district court’s analysis, which was grounded in prior Supreme Court determinations of what constituted religion.⁷⁹ Interestingly, the court rejected the defendants’ contention that the cases cited by the district court⁸⁰ were inapposite because “each of the prior cases was represented or conceded to be religious in nature whereas defendants in the instant action assert that the activities are not religious in nature.”⁸¹ The court responded to the defendants’ argument by saying “[t]he cases, at the very least, reveal the types of activity and belief that have been considered religious under the first amendment.”⁸²

Judge Adams, however, while concurring with the court’s holding, disagreed that the result could be supported by relying on past precedent. He instead proposed that the result should be “largely based upon a newer, more expansive reading of ‘religion’ that has been developed in the last two decades in the context of free exercise and selective service cases.”⁸³ Adams argued that these cases supported defining religion “by analogy.”⁸⁴ In other words, the approach to determining whether a particular set of

73. 592 F.2d 197 (3d Cir. 1979) (Adams, J., concurring).

74. Peñalver, *supra* note 41, at 799.

75. *Malnak*, 592 F.2d at 199 (per curiam).

76. *Id.* at 198.

77. *Id.*

78. *Id.*

79. *Id.* at 199 (citing *Comm. for Pub. Educ. v. Nyquist*, 413 U.S. 756 (1973); *Epperson v. Arkansas*, 393 U.S. 97 (1968); *Abington Sch. Dist. v. Schempp*, 374 U.S. 203 (1963); *Engel v. Vitale*, 370 U.S. 421 (1963); *Torcaso v. Watkins*, 367 U.S. 488 (1961); *Everson v. Bd. of Educ.*, 330 U.S. 1 (1947); *Cantwell v. Connecticut*, 310 U.S. 296 (1940)).

80. *See supra* note 79.

81. *Malnak*, 592 F.2d at 199 (internal quotations omitted).

82. *Id.*

83. *Id.* (Adams, J., concurring). Judge Arlin Adams also recognized that “this is the first appellate court decision . . . that has concluded that a set of ideas constitutes a religion over the objection and protestations of secularity by those espousing those ideas.” *Id.*

84. *Id.* at 207.

ideas constitutes religion “looks to the familiar religions as models in order to ascertain, by comparison, whether the new set of ideas or beliefs is confronting the same concerns, or serving the same purposes, as unquestioned and accepted ‘religions.’”⁸⁵

To accomplish this task, Adams defined “three useful indicia that are basic to our traditional religions and that are themselves related to the values that undergird the first amendment.”⁸⁶ First and most important for Adams is the

nature of the ideas in question [which] means that a court must, at least to a degree, examine the content of the supposed religion, not to determine its truth or falsity, or whether it is schismatic or orthodox, but to determine whether the subject matter it comprehends is consistent with the assertion that it is, or is not, a religion.⁸⁷

Adams elaborated that under this conception, religion should be expected to address “fundamental” or “ultimate” concerns.⁸⁸

Adams’s second indicia holds that a set of religious ideas are comprehensive, and therefore, “[c]ertain isolated answers to ‘ultimate’ questions” are not religious.⁸⁹ According to Adams, it is under this element that evolution does not constitute religion while theology does.⁹⁰ A scientific theory such as evolution may “touch on many ultimate concerns, but it is unlikely to proffer a systematic series of answers to them that might begin to resemble a religion [Evolution is] offensive to some religious groups, but it is not in itself religious.”⁹¹ Adams argued that in contrast, theology and its conception as a type of “ruling science” constitute an example of a religious idea.⁹² Ultimately, Adams concluded that

[t]he teaching of isolated theories that might be thought to address “ultimate” questions is not the teaching of such a “ruling science.” When these theories are combined into a comprehensive belief system, however, the result may well become such a “ruling science” that overflows into other academic disciplines as the guiding idea of the student’s pursuits. It is just such a “ruling science” that the establishment clause guards against.⁹³

Finally, the third element in determining whether a set of ideas is religious is whether “any formal, external, or surface signs . . . may be analogized to

85. *Id.*

86. *Id.* at 207-08.

87. *Id.* at 208.

88. *Id.*

89. *Id.* at 208-09.

90. *Id.* at 209.

91. *Id.* at 209 & n.41.

92. *Id.* at 209.

93. *Id.*

accepted religions.”⁹⁴ However, Adams acknowledged that a religion may exist without such signs.⁹⁵

Ultimately, Adams concluded that SCI/TM constituted a religion because it answered ultimate truths including “the nature of both world and man, the underlying sustaining force of the universe, and the way to unlimited happiness.”⁹⁶ SCI/TM represented a “basis of everything,” and meditation is “presented as a means for contacting this ‘impelling life force.’”⁹⁷ Finally, SCI/TM is “sufficiently comprehensive to avoid the suggestion of an isolated theory unconnected with any particular world view or basic belief system” and included formalities such as the puja ceremony.⁹⁸

While Adams’s test may have proved highly influential, it should be noted that Judge Richard Cardamone of the Second Circuit has quoted from William James in proposing a different test for religion: “the feelings, acts, and experiences of individual men in their solitude, so far as they apprehend themselves to stand in relation to whatever they may consider the divine.”⁹⁹ According to Cardamone, “James used the word ‘divine’ in its broadest sense as denoting any object that is godlike, whether it is or is not a specific deity.”¹⁰⁰

The foregoing review demonstrates that defining religion for constitutional purposes has been a difficult undertaking for courts. Indeed, as will be discussed in Part II, given this difficulty, some commentators have argued that intelligent design does not constitute a religion for constitutional purposes. On the other hand, other commentators have argued that intelligent design is a religion because it professes a belief in a theistic creator. The only court decision on the matter thus far, *Kitzmiller v. Dover Area School District*, sided with the latter set of commentators, finding that the “religious nature of [intelligent design] would be readily apparent to an objective observer.”¹⁰¹ This Note will attempt to resolve this debate in Part III.

94. *Id.* (“Such signs might include formal services, ceremonial functions, the existence of clergy, structure and organization, efforts at propagation, observation of holidays and other similar manifestations associated with the traditional religions.”).

95. *Id.*

96. *Id.* at 213.

97. *Id.*

98. *Id.* at 213-14. Adams ultimately applied his test in writing the majority opinion in *Africa v. Pennsylvania*, 662 F.2d 1025 (3d Cir. 1981), finding that the organization MOVE was not a religion but rather a type of “philosophical naturalism.” *Malnak*, 592 F.2d at 1035 (Adams, J., concurring). Among other factors that distinguished MOVE from a religion was that MOVE does not mention or place emphasis upon “what might be classified as a fundamental concern. MOVE does not claim to be theistic: indeed it recognizes no Supreme Being and refers to no transcendental or all-controlling force.” *Id.* at 1033. The Tenth Circuit has also applied Adams’s test in *United States v. Meyers*, 95 F.3d 1475 (10th Cir. 1996).

99. *United States v. Moon*, 718 F.2d 1210, 1227 (2d Cir. 1983) (quoting William James, *The Varieties of Religious Experience* 31 (1910)).

100. *Id.*

101. *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 718 (M.D. Pa. 2005).

Assuming for the moment that intelligent design constitutes a religion, the question arises as to whether mandating its substantive teaching in public schools violates the Establishment Clause. Of course, intelligent design is not the first theory proposed as an alternative to evolution, and therefore it is instructive to examine how the Supreme Court has analyzed past attempts to teach alternative origins theories in public schools. As the following discussion will demonstrate, the Court's interpretation of the Establishment Clause is not without its own controversy, which further adds to the complexity of the debate surrounding the teaching of intelligent design in public schools.

C. *Jurisprudence Regarding the Teaching of Origins Theories to Public School Students*

The 1925 trial of *Scopes v. State* may have been the first and most famous litigation into the constitutionality of teaching origins theories in public schools.¹⁰² However, the starting point for the Supreme Court's jurisprudence on the topic is *Epperson v. Arkansas*.¹⁰³ In *Epperson*, the Court struck down an Arkansas statute which, adapted from the Tennessee law at issue in the *Scopes* case, banned the teaching of evolution in any state-supported school or university.¹⁰⁴ Just over twenty years later, the Supreme Court held that the Louisiana Balanced Treatment for Creation-Science and Evolution Science in Public School Instruction Act ("Creationism Act" or "Act")¹⁰⁵ violated the Establishment Clause because the Act's primary purpose was to "advance a particular religious belief."¹⁰⁶ The following section reviews each of these opinions and pays particular attention to the reasoning underlying the Court's conclusions that the legislation in both these cases violated the Establishment Clause because the legislation was enacted for impermissible purposes.

1. *Epperson v. Arkansas*

In *Epperson*, the Court struck down a ban on the teaching of evolution in public schools and universities on the ground that the ban was enacted with a religious purpose and therefore it violated the Establishment Clause.¹⁰⁷

102. See *Scopes v. State*, 289 S.W. 363 (1927). At the trial court level, Scopes was convicted and fined one hundred dollars for violating the Tennessee "monkey law" of 1925, because he taught evolution to his public school students. *Id.* The Supreme Court of Tennessee upheld the constitutionality of the statute but reversed Scopes's conviction because the jury, not the judge, should have assessed Scopes's fine and ordered that a nolle prosequi be entered. *Id.* at 367.

103. 393 U.S. 97 (1968).

104. *Id.*

105. La. Rev. Stat. Ann. §§ 17:286.1-17:286.7 (1982), *invalidated by* *Edwards v. Aguillard*, 482 U.S. 578, 593 (1987).

106. *Edwards*, 482 U.S. at 593.

107. *Epperson*, 393 U.S. at 107-09.

Specifically, the Court found that the Arkansas legislature enacted the ban to

prevent its teachers from discussing the theory of evolution because it is contrary to the belief of some that the Book of Genesis must be the exclusive source of doctrine as to the origin of man. No suggestion has been made that Arkansas' law may be justified by considerations of state policy other than the religious views of some of its citizens. It is clear that fundamentalist sectarian conviction was and is the law's reason for existence.¹⁰⁸

To reach this conclusion, the Court followed the test articulated in *Abington School District*: “[W]hat are the purpose and the primary effect of the enactment? If either is the advancement or inhibition of religion then the enactment exceeds the scope of legislative power as circumscribed by the Constitution.”¹⁰⁹ In articulating this test, the Court acknowledged that the

study of religions and of the Bible from a literary and historic viewpoint, presented objectively as part of a secular program of education, need not collide with the First Amendment's prohibition[; however] the State may not adopt programs or practices in its public schools or colleges which “aid or oppose” any religion.¹¹⁰

Moreover, “[t]his prohibition is absolute. It forbids alike the preference of a religious doctrine or the prohibition of theory which is deemed antagonistic to a particular dogma.”¹¹¹

After articulating this test, the Court also made clear that a statute can run afoul of the First Amendment not only if the statute expressly sets forth a religious purpose for its enactment, but even if the statute's stated purpose is a pretext for one that is religious.¹¹² In so doing, the Court compared the text of the Arkansas statute with its antecedent—the Tennessee law at issue in the *Scopes* trial.¹¹³ The Arkansas law that the Court struck down in *Epperson* “ma[de] it unlawful for a teacher in any state-supported school or university to teach the theory or doctrine that mankind ascended or descended from a lower order of animals, or to adopt or use in any such institution a textbook that teaches this theory.”¹¹⁴ In contrast, the Court noted that the Tennessee law “candidly stated its purpose: to make it unlawful to teach any theory that denies the story of the Divine Creation of man as taught in the Bible, and to teach instead that man has descended from a lower order of animals.”¹¹⁵ The Court went on to suggest that

[p]erhaps the sensational publicity attendant upon the *Scopes* trial induced Arkansas to adopt less explicit language. It eliminated Tennessee's

108. *Id.* at 107-08.

109. *Id.* at 107 (quoting *Abington Sch. Dist. v. Schempp*, 374 U.S. 203, 222 (1963)).

110. *Id.* at 106 (quoting *Abington Sch. Dist.*, 374 U.S. at 225).

111. *Id.* at 106-07.

112. *Id.* at 108-09.

113. *Id.* at 109.

114. *Id.* at 98-99.

115. *Id.* at 108-09 (internal quotations omitted).

reference to “the story of the Divine Creation of man” as taught in the Bible, but there is no doubt that the motivation for the law was the same: to suppress the teaching of the theory which, it was thought, “denied” the divine creation of man.¹¹⁶

Thus finding the legislation was indeed a pretext for advancing a religious purpose, the Court held that the legislation violated the Establishment Clause.¹¹⁷

2. *Edwards v. Aguillard*

The next and last time the Supreme Court addressed the issue of teaching alternatives to evolution in public schools was in its *Edwards v. Aguillard* decision in 1987.¹¹⁸ In *Edwards*, the Court held that Louisiana’s Creationism Act,¹¹⁹ which required that the “scientific evidences of both creation and evolution be taught whenever either [was] taught,”¹²⁰ violated the Establishment Clause because the Act’s primary purpose, notwithstanding the Louisiana legislature’s stated secular purpose of protecting academic freedom, was to “advance a particular religious belief.”¹²¹

Before reaching its core analysis of whether the Creationism Act violated the Establishment Clause, the *Edwards* Court devoted a section of its opinion to explaining that the public elementary and secondary school system presents a “special context” for analyzing Establishment Clause issues.¹²² More specifically, the Court stated that it has been

particularly vigilant in monitoring compliance with the Establishment Clause in elementary and secondary schools [because] [f]amilies entrust public schools with the education of their children, but condition their trust on the understanding that the classroom will not purposely be used to advance religious views that may conflict with the private beliefs of the student and his or her family [and] [s]tudents in such institutions are impressionable and their attendance is involuntary.¹²³

Consequently, the Court reasoned, its Establishment Clause analysis would proceed “mindful of the particular concerns that arise in the context of public elementary and secondary schools.”¹²⁴

The Court then applied the test articulated in *Lemon v. Kurtzman*,¹²⁵ which, since its adoption in 1971, had at the time been applied in all

116. *Id.* at 109 (footnote omitted).

117. *Id.*

118. *Edwards v. Aguillard*, 482 U.S. 578 (1987).

119. *See supra* note 105.

120. *Edwards*, 482 U.S. at 598.

121. *Id.* at 593.

122. *Id.* at 583.

123. *Id.* at 583-84 (citations omitted).

124. *Id.* at 585.

125. 403 U.S. 602 (1971).

Establishment Clause cases except one.¹²⁶ The *Lemon* test provides a three-pronged approach to determining whether legislation is valid under the Establishment Clause: “First, the statute must have a secular legislative purpose; second, its principal or primary effect must be one that neither advances nor inhibits religion; finally, the statute must not foster an excessive government entanglement with religion.”¹²⁷ Legislation violates the Establishment Clause if it fails to satisfy any of these prongs.

In *Edwards*, the Creationism Act failed under the purpose prong of the *Lemon* test. The Court found that regardless of the purpose stated by the Louisiana legislature, “the purpose of the Creationism Act was to restructure the science curriculum to conform with a particular religious viewpoint.”¹²⁸ Therefore, the *Edwards* court applied the same reasoning as that of the *Epperson* court by finding that the Louisiana legislature’s stated secular purpose of protecting academic freedom was a pretext for the “preeminently” religious purpose of “advanc[ing] a religious doctrine by requiring either the banishment of the theory of evolution from public school classrooms or the presentation of a religious viewpoint that rejects evolution in its entirety.”¹²⁹

The Court began its analysis by examining the relationship of the Creationism Act’s stated purpose to its actual purpose.¹³⁰ The Court had trouble interpreting the meaning of the Act’s stated purpose of protecting “academic freedom” but concluded that even if it were read to mean “teaching all of the evidence’ with respect to the origin of human beings,” the Court did not see how “outlawing the teaching of evolution or . . . requiring the teaching of creation science” furthered this purpose.¹³¹ Underlying the Court’s conclusion were three fundamental problems with Louisiana’s position: (1) Teachers already enjoyed academic freedom in the classroom, subject to curriculum and legal proscriptions, and therefore legislation was not necessary to grant or enhance this freedom; (2) although the Act’s goal was to present two theories in a balanced and fair way, the Court found that the Act preferred the teaching of creation science over the teaching of evolution; and (3) both the timing and frequency of teaching the two theories were perfectly correlated.¹³²

126. See *Edwards*, 482 U.S. at 583 n.4 (citing *Marsh v. Chambers*, 463 U.S. 783 (1983) (holding that opening a session of the Nebraska legislature with prayer led by a state-paid chaplain did not violate the Establishment Clause)). As the *Edwards* Court noted, the Court in *Marsh* justified its decision based on the historical acceptance of the practice. *Id.* According to the Court in *Edwards*, this “approach is not useful in determining the proper roles of church and state in public schools, since free public education was virtually nonexistent at the time the Constitution was adopted.” *Id.* (citing *Wallace v. Jaffree*, 472 U.S. 38, 80 (1985) (O’Connor, J., concurring)).

127. *Lemon*, 403 U.S. at 612-13 (citations omitted).

128. *Edwards*, 482 U.S. at 593.

129. *Id.* at 596.

130. *Id.* at 586.

131. *Id.*

132. *Id.* at 587-94.

In regard to the first problem, the Court agreed with the Fifth Circuit, which had already found that “no law prohibited Louisiana public school teachers from teaching any scientific theory”¹³³ and that therefore, because the Creationism Act provided teachers with no authority they did not already have, the Act’s “stated purpose is not furthered by it.”¹³⁴

With respect to the second problem, the Court found that a number of provisions of the Act not only provided teachers with resources and support for teaching creation science, but also protected them from discrimination by school boards if they chose to become creation scientists or teach creationism.¹³⁵ In contrast, the Act had no comparable provisions regarding the teaching of evolution.¹³⁶

Finally, the Court found that the Act dictated that creationism only would be taught when evolution was taught, and therefore the Act was not designed to protect academic freedom but, in effect, was designed to restrict it by “discrediting ‘evolution by counterbalancing its teaching at every turn with the teaching of creationism.’”¹³⁷

After rejecting the stated secular purpose of the Creationism Act, the Court proceeded to determine that the Act indeed had a “preeminent religious purpose.”¹³⁸ Relying on the “historic and contemporaneous link between the teachings of certain religious denominations and the teaching of evolution,” which was reviewed in *McLean v. Arkansas Board of Education*, and its holding in *Epperson*, the Court concluded the same “historic and contemporaneous antagonisms” between teaching evolution and certain religious doctrine were present and therefore the “preeminent purpose of the Louisiana Legislature was clearly to advance the religious viewpoint that a supernatural being created humankind.”¹³⁹ The Court supported this conclusion by quoting from various statements in the Act’s legislative history that distinguished creation science from a scientific discipline and demonstrated that creation science constitutes a religious doctrine.¹⁴⁰

The Court did not challenge the claims that creation science was supported by scientific evidence, and, notwithstanding those claims, ruled that the Creationism Act failed because it “embodie[d] a particular religious tenet” and “further[ed] religion in violation of the Establishment Clause.”¹⁴¹

133. *Id.* at 587 (citing *Aguillard v. Edwards*, 765 F.2d 1251, 1257 (5th Cir. 1985)).

134. *Id.* The Court found this situation was analogous to that in *Wallace v. Jaffree*, where the Court rejected the stated secular purpose of providing a one-minute period of silence for meditation in part because this purpose was already served by an existing state law. *Id.* at 587-88 (citing *Wallace v. Jaffree*, 472 U.S. 38, 59 (1985)).

135. *Id.* at 588.

136. *Id.*

137. *Id.* at 589 (quoting *Edwards*, 765 F.2d at 1257).

138. *Edwards*, 482 U.S. at 590.

139. *Id.* at 590-91 (citing *Epperson v. Arkansas*, 393 U.S. 97, 109 (1968); *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255, 1258-64 (E.D. Ark. 1982)).

140. *See supra* notes 65-72 and accompanying text.

141. *Edwards*, 482 U.S. at 593, 594.

Nevertheless, the Court felt obligated to put a disclaimer on its opinion in stating that it did not hold

simply that a legislature could never require that scientific critiques of prevailing scientific theories be taught[;] . . . [rather,] teaching a variety of scientific theories about the origins of humankind to schoolchildren might be validly done with the clear secular intent of enhancing the effectiveness of science instruction.¹⁴²

In fact, Justice Powell's concurring opinion faced the issue more directly:

That the statute is limited to the scientific evidences supporting the theory does not render its purpose secular. In reaching its conclusion that the Act is unconstitutional, the Court of Appeals "[did] not deny that the underpinnings of creationism may be supported by scientific evidence." And there is no need to do so. Whatever the academic merit of particular subjects or theories, the Establishment Clause limits the discretion of state officials to pick and choose among them for the purpose of promoting a particular religious belief.¹⁴³

Putting these conclusions together, *Edwards* suggests that it may be constitutional to teach competing scientific theories of origins with an actual secular intent to foster scientific debate, but calling a theory scientific or citing scientific evidence in support of a theory may not be enough to demonstrate an actual secular purpose. The theory can purport to be scientific, but its mandated teaching in public schools can nonetheless violate the Establishment Clause if the actual purpose of teaching the theory is to advance a religious viewpoint or religion generally.¹⁴⁴

3. Disagreement over *Edwards* and the Meaning of *Lemon*'s Purpose Prong

The application of *Lemon*'s purpose prong in *Edwards* is not without criticism. For example, Justice Antonin Scalia issued a rather scathing dissent that argued the Court owed the legislature more deference in

142. *Id.* at 593-94.

143. *Id.* at 604 (Powell, J., concurring) (citation omitted).

144. Between the *Edwards* decision and the *Dover* decision, there were at least three circuit court decisions and one state court of appeals decision that pertain to the teaching of alternative origins theories in public schools. See *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337 (5th Cir. 1999) (enjoining a school board from requiring that a patently religious disclaimer be read before the teaching of evolution in all elementary and secondary school classes); *Peloza v. Capistrano Unified Sch. Dist.*, 37 F.3d 517 (9th Cir. 1994) (holding that a teacher who challenged a school district requirement to teach "evolutionism" failed to state a claim and that a school district could restrict a teacher from discussing religion with students not only in class, but at other times during the school day); *Webster v. New Lenox Sch. Dist. No. 122*, 917 F.2d 1004 (7th Cir. 1990) (holding that a school board's prohibition of the teaching of an alternative theory of human origins did not violate a teacher's First or Fourteenth Amendment rights); *LeVake v. Indep. Sch. Dist. # 656*, 625 N.W.2d 502 (Minn. Ct. App. 2001) (holding that a school board's decision to reassign a teacher who refused to teach evolution did not violate the teacher's free exercise of religion and that the teacher's right to free speech did not permit him to teach a biology class in a manner that circumvented the curriculum prescribed by the school board).

questioning its motivation behind the Act.¹⁴⁵ Scalia argued that, unless legislation is *wholly* motivated by religious purpose, it cannot be invalid under *Lemon*.¹⁴⁶ Finally, he argued that many secular statutes that serve the public good are indeed motivated in part by religious ideals, that “governmental actions undertaken with the specific intention of improving the position of religion do not advance religion” under *Lemon*, and that, at times, the government may, and at other times must, act to advance religion.¹⁴⁷ Ultimately, Scalia would abandon *Lemon*’s purpose prong.¹⁴⁸

Some commentators have disagreed with the theory underlying *Edwards* but have taken a different view from that in Scalia’s dissenting opinion. For example, some have argued that *Lemon*’s purpose prong should require only a plausible secular purpose, meaning that a statute can be held to be invalid under *Lemon*’s purpose prong if its only plausible purpose is religious.¹⁴⁹ Under this theory, one commentator has argued that the *Edwards* majority was “too skeptical of the proffered secular purpose” and that the “secular plausibility” of the Creationism Act was difficult to determine on its face, so the Court “should have allowed evidence to be taken on the secular plausibility of the statute, rather than allowing the matter to be disposed of by a motion for summary judgment before trial.”¹⁵⁰ In other words, those who believed in creation on the basis of their religion could have accepted the Creationism Act on the basis of their religious values, while others who did not believe in creation could plausibly accept the Act on the basis of the scientific evidence that was purported to support creation science. However, this theory of *Lemon*’s purpose prong apparently failed to convince the Court in *Edwards* because the Court found it unnecessary to factor the purported scientific evidence underlying creation science into its analysis.¹⁵¹

Other commentators argue that the Establishment Clause dictates that the legislative process should be required to pass laws with an “express secular purpose rather than merely a plausible one.”¹⁵² Under this theory, the constitutionality of a particular law turns “on the reasons that are apparent in the political process” for passing the law.¹⁵³ Therefore, a religious reason may underlie a particular law; however “[i]f [it] can be successfully

145. *Edwards*, 482 U.S. at 610-40 (Scalia, J., dissenting).

146. *Id.*

147. *Id.* at 614-16 (internal quotations omitted).

148. *Id.* at 636-40. Judge Michael McConnell also has rejected “the principle of secular rationale.” See Michael W. McConnell, *Five Reasons to Reject the Claim that Religious Arguments Should Be Excluded from Democratic Deliberation*, 1999 Utah L. Rev. 639, 643.

149. See, e.g., Andrew Koppelman, *Secular Purpose*, 88 Va. L. Rev. 87 (2002).

150. *Id.* at 149-50.

151. See *supra* notes 141-43 and accompanying text.

152. See, e.g., Abner S. Greene, *The Political Balance of the Religion Clauses*, 102 Yale L.J. 1611, 1622 (1993); see also Robert Audi, *The Place of Religious Argument in a Free and Democratic Society*, 30 San Diego L. Rev. 677, 701 (1993) (arguing that positions on law and public policy “should always have and be sufficiently motivated by adequate secular reasons”).

153. Greene, *supra* note 152, at 1623.

translated into a secular one—if a nonbeliever sees the secular argument as one made in good faith, and finds the ensuing debate meaningful—then the concern with exclusion from political participation is eliminated.”¹⁵⁴ In this regard, a law that is not facially religious and that is enacted for an expressly secular purpose may violate the Establishment Clause if it is found to be a pretext for a religious purpose.¹⁵⁵

The Supreme Court has arguably applied this theory when finding impermissible purposes in Establishment Clause cases.¹⁵⁶ Most recently, in *McCreary County v. American Civil Liberties Union of Kentucky*, Justice David Souter wrote that “the purpose apparent from government action can have an impact more significant than the result expressly decreed.”¹⁵⁷ In relying on the Court’s prior jurisprudence, Souter reinforced the viewpoint that a legislature will be afforded deference, but the “secular purpose required has to be genuine, not a sham, and not merely secondary to a religious objective.”¹⁵⁸ Finally, Souter also acknowledged that if the

government hides religious motive so well that the “objective observer, acquainted with the text, legislative history, and implementation of the statute,” cannot see it, then without something more the government does not make a divisive announcement that in itself amounts to taking religious sides. A secret motive stirs up no strife and does nothing to make outsiders of nonadherents, and it suffices to wait and see whether such government action turns out to have (as it may even be likely to have) the illegitimate effect of advancing religion.¹⁵⁹

Nonetheless, Justice Scalia dissented in *McCreary County* because he found no support from the Court’s prior cases for a heightened purpose requirement.¹⁶⁰ Scalia found problematic the Court’s concern that the objective observer could be made to feel like an outsider of the political community and therefore disagreed with the Court’s apparent purpose standard.¹⁶¹ According to Scalia, under the Court’s reasoning, “even if a government could show that its actual purpose was not to advance religion, it would presumably violate the Constitution as long as the Court’s objective observer would think otherwise.”¹⁶² While Scalia continued his call to abandon *Lemon*’s purpose prong, he argued that if the prong were to remain, then at the most, it should require the Court only to identify a

154. *Id.*

155. *Id.*

156. *See id.* at 1624-25 (citing *Edwards v. Aguillard*, 482 U.S. 578 (1987); *Wallace v. Jaffree*, 472 U.S. 38 (1985); *Stone v. Graham*, 449 U.S. 39 (1980) (per curiam); *Epperson v. Arkansas*, 393 U.S. 97 (1968)); *see also* *McCreary County v. Am. Civil Liberties Union of Ky.*, 125 S. Ct. 2722 (2005); *Santa Fe Indep. Sch. Dist. v. Doe*, 530 U.S. 290 (2000); *Abington Sch. Dist. v. Schempp*, 374 U.S. 203 (1963).

157. *McCreary*, 125 S. Ct. at 2733.

158. *Id.* at 2735.

159. *Id.* (citing *Santa Fe*, 530 U.S. at 308).

160. *Id.* at 2757-58 (Scalia, J., dissenting).

161. *Id.* at 2757.

162. *Id.*

plausible secular purpose to avoid invalidating a particular law under the Establishment Clause.¹⁶³

In light of this debate over the meaning of *Lemon*'s purpose prong, it is possible that a future court might decide that *Lemon* only requires a court to identify a law's plausible secular purpose. Since proponents of intelligent design argue that the theory is supported by scientific evidence, it can be argued it satisfies the plausible secular purpose of fostering scientific debate about human origins.¹⁶⁴ This debate adds complexity to the overall debate as to whether teaching intelligent design in public schools would violate the Establishment Clause. Part II of this Note reviews the arguments that have been presented by legal commentators on both sides of this debate and reviews the analysis undertaken by the court in *Dover*.

II. THE LEGAL DEBATE OVER WHETHER MANDATING THE SUBSTANTIVE TEACHING OF INTELLIGENT DESIGN IN PUBLIC SCHOOLS VIOLATES THE ESTABLISHMENT CLAUSE

A number of legal commentators have weighed in on the debate as to whether it is unconstitutional to mandate the substantive teaching of intelligent design in public schools. This Part attempts to provide a representative overview of the legal arguments that support or oppose such a mandate. In addition, this Part reviews the court's analysis in *Dover*, the only decision to date on the topic. Part III will critically analyze these arguments on the way toward concluding that it is indeed unconstitutional to substantively teach intelligent design in public schools.

A. *Commentary Arguing that Substantively Teaching Intelligent Design in Public Schools Does Not Violate the Establishment Clause*

Stephen Marshall argues that a statute requiring instruction in intelligent design would survive constitutional analysis because it would satisfy each prong of the *Lemon* test. He argues that so long as the statute provides a "legitimate secular purpose" of advancing the "scientific literacy by teaching all of the evidence and explanatory theories," the statute would satisfy the purpose prong.¹⁶⁵ Marshall also concludes that requiring instruction in intelligent design would not violate the effects prong of the *Lemon* test because intelligent design "presupposes no supernatural being[,] . . . cannot be discredited as unscientific[,] and . . . differs distinctly from creation science."¹⁶⁶ Finally, Marshall contends that requiring the

163. *Id.* at 2758 n.9 (explaining that the Court has been "reluctan[t] to attribute unconstitutional motives to the States, particularly when a plausible secular purpose for the State's program may be discerned from the face of the statute." (quoting *Mueller v. Allen*, 463 U.S. 388, 394-95 (1983))).

164. *See infra* Part II.A.

165. Stephen L. Marshall, Note, *When May a State Require Teaching Alternatives to the Theory of Evolution? Intelligent Design as a Test Case*, 90 Ky. L.J. 743, 768 (2002).

166. *Id.* at 772.

teaching of intelligent design would not result in excessive government entanglement in religion because intelligent design texts are “not replete with religious concepts;” school personnel need not monitor discussions to prohibit religious discussion because intelligent design “makes no claims regarding religious issues;” and, if teachers are asked religious questions that arise from the teaching of intelligent design, they can “explain that such issues are theological in nature, and not scientific.”¹⁶⁷

Jeffrey Addicott argues that intelligent design “cannot be dismissed as yet another back door attempt by creationists to get a sectarian religious idea into the public schools.”¹⁶⁸ Addicott contends that, notwithstanding federal court decisions to the contrary,¹⁶⁹ “evolutionism” may be viewed as a type of religion.¹⁷⁰ In analyzing intelligent design using the *Lemon* test, Addicott, like Marshall, concludes that teaching intelligent design “must be presented in a way that is in keeping with the school’s secular purpose of providing students with critical thinking and excellence in education.”¹⁷¹ Addicott argues that teaching intelligent design would not violate the effects prong if the school is “not perceived as approving or advancing any religious or non-religious viewpoint.”¹⁷² Additionally, if the materials and techniques used by the school to teach intelligent design have no “significant religious purpose and are non-discriminatory and secular in nature,” they would not violate *Lemon*’s entanglement prong.¹⁷³ Finally, Addicott acknowledges that, “[a]t the end of the day, from a jurisprudential standpoint, the crux of any Establishment Clause analysis revolves around the matter of determining whether intelligent design theory is a religious-based idea passed off as a scientific theory or a genuine scientific theory.”¹⁷⁴

Addicott takes the position that intelligent design is not a religious-based idea because intelligent design “passes” the three-part test for religion as it appears in *Alvarado v. San Jose*,¹⁷⁵ but that was originally proposed by Judge Adams in *Malnak*.¹⁷⁶ However, Addicott also argues that the *Malnak*

167. *Id.* at 784-85.

168. Jeffrey F. Addicott, *Storm Clouds on the Horizon of Darwinism: Teaching the Anthropic Principle and Intelligent Design in the Public Schools*, 63 Ohio St. L.J. 1507, 1511 (2002).

169. *See, e.g., supra* note 144.

170. Addicott, *supra* note 168, at 1562-67.

171. *Id.* at 1579.

172. *Id.* at 1580.

173. *Id.*

174. *Id.*

175. *Id.* at 1581 (citing *Alvarado v. San Jose*, 94 F.3d 1223, 1229 (9th Cir. 1996)). In similar analyses, David DeWolf and H. Wayne House previously found that intelligent design does not constitute a religion under this test. *See* David K. DeWolf, *Teaching the Origins Controversy: Science, or Religion, or Speech?*, 2000 Utah L. Rev. 39, 84-85; H. Wayne House, *Darwinism and the Law: Can Non-Naturalistic Scientific Theories Survive Constitutional Challenge?*, 13 Regent U. L. Rev. 355, 438 (2001).

176. *See supra* notes 86-95 and accompanying text; *see also* Addicott, *supra* note 168, at 1581 n.436.

test is “unworkable in the real world” because the line separating church and state is “blurred” and therefore “must be weighed in the totality of the circumstances.”¹⁷⁷

Furthermore, Addicott contends that the Supreme Court is not likely to endorse the argument that the “concept of an unnamed intelligent designer would automatically qualify as a religious belief” and that if one were to use the Court’s discussion of the “supernatural creator” in *Edwards* as support for such a contention, one would be “reading far too much into the language.”¹⁷⁸

Francis Beckwith has written extensively to advocate that teaching intelligent design in public schools is constitutional.¹⁷⁹ Among Beckwith’s arguments is that intelligent design proponents “present a cluster of premises that are not derived from any single religion’s special revelation . . . [and] these premises, if true, seem to support conclusions contrary to materialism,” and, therefore, intelligent design “offers the promise to open up a serious public conversation, without sectarian rancor or animus, on deep questions about who and what we are and the order and nature of things.”¹⁸⁰ Beckwith, like Addicott, Hall, and DeWolf, also contends that intelligent design does not constitute a religion under the three-part test first proposed in *Malnak*, but goes one step further in saying that if intelligent design did qualify as religion under this test, then so would evolution, because Beckwith views intelligent design as a theory that addresses the same questions as evolution “but provides different answers.”¹⁸¹ In other words, Beckwith views intelligent design as “lend[ing] plausibility and support to theism” and evolution as “lend[ing] plausibility and support to some nontheisms.”¹⁸² Beckwith also argues that teaching intelligent design in public schools will pass constitutional muster under *Edwards* because it can be distinguished from Creationism and is not explicitly religious.¹⁸³

Moreover, Beckwith proposes four “possible secular reasons” that would validate the teaching of intelligent design in public schools.¹⁸⁴ Relying on the so-called endorsement test proposed in *Lynch v. Donnelly*,¹⁸⁵ Beckwith argues that “if a particular curriculum gives the impression that a certain

177. Addicott, *supra* note 168, at 1582.

178. *Id.* at 1583-84.

179. See, e.g., Francis J. Beckwith, *Public Education, Religious Establishment, and the Challenge of Intelligent Design*, 17 Notre Dame J.L. Ethics & Pub. Pol’y 461 (2003) [hereinafter Beckwith, *Public Education*]; Francis J. Beckwith, *Science and Religion Twenty Years After McClean v. Arkansas: Evolution, Public Education, and the New Challenge of Intelligent Design*, 26 Harv. J.L. & Pub. Pol’y 455 (2003) [hereinafter Beckwith, *Science and Religion*].

180. Beckwith, *Science and Religion*, *supra* note 179, at 498.

181. Beckwith, *Public Education*, *supra* note 179, at 494-96.

182. *Id.* at 495.

183. *Id.* at 500.

184. *Id.* at 501-14.

185. 465 U.S. 668, 690-91 (1984) (O’Connor, J., concurring).

disputed, irreligious point of view is favored—in this case, evolution and ontological materialism—the state can argue that in order to erase that perception, a statute requiring or permitting the teaching of [intelligent design] is necessary.”¹⁸⁶ The second secular reason proposed by Beckwith is that a statute requiring the teaching of intelligent design

could be justified on the basis of neutrality by arguing that to teach only one theory of origins (evolution)—that presupposes a controversial epistemology (methodological naturalism), entails a controversial metaphysics (ontological materialism), and is antithetical to traditional religious belief—the state is in fact advocating, aiding, fostering, and promoting irreligion, which it is constitutionally forbidden from doing.¹⁸⁷

The third purpose proposed by Beckwith is the importance of “exposing students to reputable scholarship that critiques the methodological naturalism behind evolution and the ontological materialism entailed by it.”¹⁸⁸ Finally, Beckwith’s fourth proposed purpose is that an intelligent design statute “enhances and protects the academic freedom of teachers and students who may suffer marginalization, hostility, and public ridicule because of their support of [intelligent design] and/or doubts about the veracity of the evolutionary paradigm.”¹⁸⁹

B. Jurisprudence and Commentary Arguing that Substantively Teaching Intelligent Design in Public Schools Violates the Establishment Clause

1. Kitzmiller v. Dover Area School District

To date, the only court to rule on the constitutionality of teaching intelligent design in public schools is a Pennsylvania district court.¹⁹⁰ That court, in *Dover*, held that a Dover Area School District policy (the “Policy”), which required the reading of a statement on intelligent design (the “Statement”) to students in the ninth grade biology class at Dover High School and that provided access to intelligent design textbooks in the school’s library, violated the Establishment Clause and therefore the court permanently enjoined the Policy’s implementation.¹⁹¹

186. Beckwith, *Public Education*, *supra* note 179, at 502.

187. *Id.* at 503.

188. *Id.* at 507.

189. *Id.* at 509.

190. *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005).

191. *Id.* at 709, 766. The court also held that the Dover Area School District policy (the “Policy”) violated article 1, section 3 of the Pennsylvania constitution. *Id.* at 709, 764-65 (citing Pa. Const. Art. I, § 3). The Policy was enacted by a school board resolution that stated “[s]tudents will be made aware of gaps/problems in Darwin’s theory and of other theories of evolution including, but not limited to, intelligent design. Note: Origins of Life is not taught.” *Id.* at 708. Pursuant to this resolution, the Dover Area School District required teachers to read the following statement (the “Statement”) to the Dover High School ninth-grade biology class:

The Pennsylvania Academic Standards require students to learn about Darwin’s Theory of Evolution and eventually to take a standardized test of which evolution

In reaching its decision, the court employed both the endorsement and *Lemon* tests.¹⁹² Applying the endorsement test, the court found that to the reasonable observer,¹⁹³ the Policy constituted a government endorsement of religion because the Policy favored a particular religious view, namely that it espoused the creationist doctrine that a supernatural creator was responsible for the origin of man.¹⁹⁴ The court viewed the intelligent design movement as nothing more than the most recent chapter in a long history of religious strategies to replace the teaching of evolution with that of creationism.¹⁹⁵

In finding that intelligent design is a sham for creationism, the court was highly persuaded by a number of factual findings. The court pointed to the similarities between intelligent design and creationism and found that “writings of leading [intelligent design] proponents reveal that the designer postulated by their argument is the God of Christianity.”¹⁹⁶ The court also cited evidence that *Of Pandas and People*, the textbook that was made available to Dover students, defined creation science in early drafts the same way it defined intelligent design in later drafts.¹⁹⁷ The court was also persuaded by evidence that shortly after the publication of the *Edwards* decision, *Pandas* was edited so that cognates of the word creation were replaced with the phrase intelligent design.¹⁹⁸ Finally the court was persuaded by evidence that many intelligent design proponents believe in creationism and that their goal in developing intelligent design, as outlined in the so-called “Wedge Strategy,” is to “replace science as currently practiced with theistic and Christian science.”¹⁹⁹

The court concluded its endorsement test analysis by finding that the Statement that was read to Dover students in biology class impermissibly

is a part. Because Darwin’s Theory is a theory, it continues to be tested as new evidence is discovered. The theory is not a fact. Gaps in the Theory exist for which there is no evidence. A theory is defined as a well-tested explanation that unifies a broad range of observations.

Intelligent Design is an explanation of the origin of life that differs from Darwin’s view. The reference book, *Of Pandas and People*, is available for students who might be interested in gaining an understanding of what Intelligent Design actually involves.

With respect to any theory, students are encouraged to keep an open mind. The school leaves the discussion of the Origins of Life to individual students and their families. As a Standards-driven district, class instruction focuses upon preparing students to achieve proficiency on Standards-based assessments.

Id. at 708-09.

192. *See id.* at 712.

193. The court conducted the endorsement test from the perspectives of both the ninth-grade students to whom the intelligent design statement was directed and the adults who received a school newsletter that contained the statement. *Id.* at 723-35.

194. *See id.* at 716-35.

195. *See id.*

196. *Id.* at 719.

197. *Id.* at 721.

198. *Id.*

199. *Id.* at 719-20 (internal quotations omitted).

endorsed a religious viewpoint.²⁰⁰ In addition, the court found that a newsletter circulated by the Dover Area School District to every household in Dover was also an unconstitutional endorsement of religion.²⁰¹ The newsletter sparked reaction from the community in the form of over two hundred letters to the editor and editorials in two local newspapers.²⁰² On the basis of these responses, the court found that “the entire [Dover] community became intertwined in the controversy [over] the [intelligent design] Policy at issue and that the community collectively perceive[d] the [intelligent design] Policy as favoring a particular religious view.”²⁰³ Accordingly, the court held that the implementation of the intelligent design Policy was “a strong endorsement of a religious view” from both the perspective of “an objective student and an objective adult member of the Dover community.”²⁰⁴

Before moving to its application of the *Lemon* test, the court discussed why it found that intelligent design is not science. Initially, the court noted that intelligent design “arguments may be true” but that it was not taking a position on that proposition.²⁰⁵ The court then proceeded to explain that intelligent design fails as a science because it invokes and permits supernatural causation; the proposition of irreducible complexity utilizes the same dualism that previous courts found illogical and flawed; intelligent design has not generated peer-reviewed studies and has not been subject to empirical testing and research; and every major scientific association that has taken a position on whether intelligent design is science has concluded that it is not science.²⁰⁶

The court concluded its Establishment Clause analysis by applying the *Lemon* test. Applying the purpose prong, the court reviewed the legislative history of the intelligent design Policy, as well as the Board’s public statements with respect to the Policy.²⁰⁷ The court specifically rejected the School District’s argument that the intelligent design Policy was implemented for the secular purpose of improving science education and critical thinking skills because the court found that the legislative history of the School Board’s Policy revealed its religious purpose and because members of the Board who voted for implementing the Policy conceded that they did not understand intelligent design.²⁰⁸

200. *Id.* at 725-29 (finding that the Statement disavowed evolutionary theory and endorsed intelligent design (1) by telling students evolution was being taught because it was required by state academic standards and that it was “just a theory”; (2) by directing students to *Pandas* for an alternative explanation without a similar cautionary note; and (3) by referring students to talk with their families about the origins of life to remind them that they can hold on to beliefs taught by their parents that conflict with evolution).

201. *Id.* at 729-35.

202. *Id.* at 733.

203. *Id.* at 734.

204. *Id.*

205. *Id.* at 735.

206. *Id.* at 735-46.

207. *Id.* at 746-63.

208. *Id.*

The court also found that the intelligent design Policy violated *Lemon*'s effects prong because, if intelligent design was not science, the only real effect it could have was to advance religion.²⁰⁹ In addition, the court found that the intelligent design Statement had the effect of bolstering religious theories of origins while undermining evolution.²¹⁰

2. Commentary Arguing that Substantively Teaching Intelligent Design in Public Schools Violates the Establishment Clause

Jay Wexler was among the first to argue that teaching intelligent design substantively in public schools would violate the Establishment Clause.²¹¹ To support his view, Wexler argues that under either a "content-based" definition of religion or a "functional" definition of religion, intelligent design would constitute a religious doctrine.²¹² Wexler contends that the *Edwards* Court followed a content-based definition of religion by describing the teaching of creation science as advancing the religious belief in a "supernatural being" or "supernatural creator."²¹³ Wexler also argues that intelligent design closely resembles the creation science at issue in *Edwards* because the creator espoused by creation science was also unnamed.²¹⁴ Wexler contends that intelligent design would also satisfy a functional definition of religion, which he argues was articulated by the Supreme Court in *Seeger*, because intelligent design seeks to address "fundamental questions [about] the origins and meaning of life and our role in the universe."²¹⁵ Finally, Wexler argues that intelligent design endorses "a specific strain of conservative Christianity—one characterized by a century-old tradition of attacking evolution."²¹⁶

Many commentators have agreed with Wexler's view that intelligent design is a sham for creationism. For example, Matthew Brauer, Barbara

209. *Id.* at 764.

210. *Id.*

211. See Jay D. Wexler, *Darwin, Design, and Disestablishment: Teaching the Evolution Controversy in Public Schools*, 56 Vand. L. Rev. 751, 831 (2003) [hereinafter Wexler, *Darwin*]; Jay D. Wexler, Note, *Of Pandas, People, and the First Amendment: The Constitutionality of Teaching Intelligent Design in the Public Schools*, 49 Stan. L. Rev. 439 (1997) [hereinafter Wexler, *Pandas*].

212. Wexler, *Pandas*, *supra* note 211, at 459 ("[A] content-based definition might define religion as a belief in a god [and] would include Christianity but would perhaps exclude such Eastern religions as Taoism[, and] [f]unctional definitions define religion not by the content of a belief, but instead in terms of the role the belief plays in a person's life . . .").

213. *Id.* (quoting *Edwards v. Aguillard*, 482 U.S. 578, 591-92 (1987)).

214. *Id.* at 459-60 (citing *Edwards*, 482 U.S. at 591-92).

215. *Id.* at 460-61.

216. *Id.* at 463. According to Wexler, intelligent design "resembles in very important ways the biblical story of creation literally interpreted," makes "the denial of evolution a necessary corollary of a belief in intelligent design," attacks evolution in the same way as creationists, represents a shift in the strategy of the creationist movement analogous to the shift in strategy between *Epperson* and *Edwards*, and is compatible with the long history of Christian thought that "assert[s] the notion that the complexity of nature lends support to a belief in God." *Id.* at 464-65.

Forrest,²¹⁷ and Steven Gey have recently argued intelligent design is nothing less than a sham for creationism and that design theorists have specifically formulated intelligent design as a means for circumventing the holdings of *Epperson* and *Edwards*.²¹⁸ Diana Rosenberg and Douglas Stewart have advanced similar arguments.²¹⁹ In addition, Deborah Ruele has equated intelligent design with creationism because it “extends beyond the scope of a scientific explanation for the origins of the earth [by] incorporat[ing] specific Christian monotheistic themes.”²²⁰

Wendy Hanakahi has argued that teaching intelligent design in public school would violate the *Lemon* test.²²¹ Hanakahi argues that intelligent design constitutes a religion because it posits a creator and is likely a sham for the Christian version of creationism.²²² In addition, she argues that teaching intelligent design would fail the endorsement test.²²³ Finally, she argues that teaching intelligent design in public schools would fail the coercion test because it would require mandatory participation.²²⁴

Theresa Wilson agrees that intelligent design should not be taught in public schools but argues that if intelligent design qualifies as science, under a *Lemon* analysis its teaching would be constitutional.²²⁵ However, Wilson argues that intelligent design does not meet any of the four criteria that she contends are necessary for constituting a scientific theory—whether a theory is logical, empirically testable, sociological in that it resolves “recognized problems, paradoxes, and/or anomalies irresolvable on the

217. Forrest testified as an expert witness for the plaintiffs in *Dover*. See Transcript of Trial, *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d. 707 (M.D. Pa. 2005) (No. 04-CV-2688), available at http://www2.ncseweb.org/kvd/trans/2005_1005_day6_am.pdf. The court in *Dover* was particularly persuaded by her testimony. See *Dover*, 400 F. Supp. 2d at 719-23, 745.

218. See generally Matthew J. Brauer, Barbara Forrest & Steven G. Gey, *Is it Science Yet?: Intelligent Design Creationism and the Constitution*, 83 Wash. U. L.Q. 1 (2005) (detailing the history of the intelligent design movement and arguing it grew out of an effort to circumvent the Supreme Court’s holding in *Edwards*).

219. Diana M. Rosenberg, Note, *Monkey Business and Unnatural Selection: Opening the Schoolhouse Door to Religion by Discrediting the Tenets of Darwinism*, 9 J.L. & Pol’y 611, 614 (2001) (arguing intelligent design is a form of creationism); Douglas E. Stewart, Jr., Note, *Going Back in Time: How the Kansas Board of Education’s Removal of Evolution from the State Curriculum Violates the First Amendment’s Establishment Clause*, 20 Rev. Litig. 549, 556 (2001) (describing intelligent design as a variant of creationism).

220. Deborah A. Ruele, Note, *The New Face of Creationism: The Establishment Clause and the Latest Efforts to Suppress Evolution in the Public Schools*, 54 Vand. L. Rev. 2555, 2561 (2001).

221. Wendy F. Hanakahi, *Evolution-Creationism Debate: Evaluating the Constitutionality of Teaching Intelligent Design in Public School Classrooms*, 25 U. Haw. L. Rev. 9, 31-41 (2002).

222. *Id.*

223. *Id.* at 41-42 (citing *Lynch v. Donnelly*, 465 U.S. 668, 692 (1984) (O’Connor, J., concurring)).

224. *Id.* at 42-45 (citing *Lee v. Weisman*, 505 U.S. 577, 599 (1992)).

225. Theresa Wilson, *Evolution, Creation, and Naturally Selecting Intelligent Design Out of the Public Schools*, 34 U. Tol. L. Rev. 203, 240 (2003) (citing *Agostini v. Felton*, 521 U.S. 203, 234-35 (1997)).

basis of pre-existing scientific theories,” and historical.²²⁶ In short, Wilson argues that intelligent design is logically inconsistent because it fails to identify the intelligent designer, is not empirically testable, is not sociological, and is not historical because, “[a]t best, intelligent design supporters point out alleged weaknesses in evolution theory and try to fill the gaps with a designer” but “fail to articulate any mechanism used by the designer, thus providing no better explanation for the origin of life.”²²⁷ Accordingly, Wilson concludes that “[i]ntelligent design is not simply bad science; it is religion camouflaged as bad science” and “religiously-based bad science” can be “excluded from the public schools on constitutional grounds.”²²⁸

More recently, Anne Marie Lofaso has argued intelligent design does not constitute science because “it is not falsifiable and is not subject to revision by testing; it has no predictive value; and it relies on supernatural rather than natural explanations for the natural world.”²²⁹ Lofaso concludes that since intelligent design is nothing more than a “religious inference for the existence of God,” it would be unconstitutional and bad policy to allow its teaching in public school science class.²³⁰ In addition, Lofaso cautions that proponents of intelligent design are seeking to attack methodological naturalism and that attempts to change the definition of science to accommodate the invocation of supernatural causation would “end progress” and “strangle academic freedom.”²³¹

Some commentators argue that intelligent design violates the Establishment Clause but that a new standard is necessary to appropriately analyze proposed alternative origins theories. For example, Charles Kitcher has offered an “honest purpose and substantial reliability” standard that is somewhat of a hybrid of *Lemon*’s purpose prong and the *Daubert* standard for the admissibility of scientific evidence.²³² Under Kitcher’s proposed standard, even if a proposed curriculum “contains some religious purpose,” it can nevertheless withstand constitutional challenge if it has a “substantial secular purpose” and is “sufficiently scientific under *Daubert* review.”²³³ In applying his proposed standard to, among other examples, the facts of *Dover*, Kitcher finds that the school board “demonstrated an impermissibly religious purpose” and that because intelligent design is “untestable,

226. *Id.* at 234.

227. *Id.* at 235.

228. *Id.* at 240.

229. Anne Marie Lofaso, *Does Changing the Definition of Science Solve the Establishment Clause Problem for Teaching Intelligent Design as Science in Public Schools? Doing an End-Run Around the Constitution*, 4 *Pierce L. Rev.* 219, 266 (2006); see also Kirwin, *supra* note 11, at 698-702 (offering similar arguments for why intelligent design is not science).

230. Lofaso, *supra* note 229, at 268-71.

231. *Id.* at 277.

232. Charles Kitcher, *Lawful Design: A New Standard for Evaluating Establishment Clause Challenges to School Science Curricula*, 39 *Colum. J.L. & Soc. Probs.* 451, 457 (2006) (citing *Daubert v. Merrill Dow Pharm.*, 509 U.S. 579 (1993)).

233. *Id.* at 489.

unsupported in the peer review literature, and rejected by the scientific community, it is insufficiently reliable under *Daubert*.”²³⁴

Similarly, a *Harvard Law Review* “Recent Cases” piece examines the *Dover* decision and argues that the problem was not that the school board acted with religious motives or that the implementation of its Policy lacked a secular purpose or effect; rather the problem was that “the government’s use of religion” led to “strife, alienation, and divisiveness.”²³⁵ This commentary argues that such a standard is superior to the *Lemon* and endorsement tests because deciphering purpose and effect has proved nebulous in prior Establishment Clause cases and divisiveness may have been one of the framers’ primary concerns in drafting the Establishment Clause.²³⁶ Accordingly, the commentary argues that the intelligent design Policy in *Dover* should have been found unconstitutional because the Policy created “intense, genuine ‘discord in the community.’”²³⁷

C. Arguments that Intelligent Design Could Be Taught in Public Schools in Limited Circumstances

Although Wexler has argued that intelligent design is a sham for creationism and that teaching intelligent design as true in a public school science class would be unconstitutional, he has also proposed that the “intelligent design-evolution controversy”²³⁸ could be taught in a social studies setting where the purpose of the class was to “teach about religious views on origins so that students can at least understand the perspective of religious people when they reject scientific theories like evolution that conflict with religious claims.”²³⁹ Such courses, according to Wexler, should not “try to make nonreligious students question their own views but rather should help students understand why religious people think the way they do about origins.”²⁴⁰

Todd Olin agrees with Wexler that social studies teachers could present the content of intelligent design in the context of the debate surrounding alternative origins theories or a survey of religious views without endorsing the merits of the theory.²⁴¹ In addition, Olin argues that science teachers can acknowledge intelligent design as a competing religious theory to evolution so long as they do not present the merits of the theory because

234. *Id.* at 490-91.

235. Recent Cases, *Constitutional Law—Establishment Clause—Middle District of Pennsylvania Holds that the Teaching of Intelligent Design Violates the Establishment Clause—Kitzmiller v. Dover Area School District*, 400 F. Supp. 2d 707 (M.D. Pa. 2005), 119 Harv. L. Rev. 2268, 2270 (2006).

236. *Id.* at 2270-73.

237. *Id.* at 2275 (quoting *Dover*, 400 F. Supp. 2d at 762).

238. Wexler, *Darwin*, *supra* note 211, at 822.

239. *Id.* at 786.

240. *Id.*

241. Todd R. Olin, Note, *Fruit of the Poison Tree: A First Amendment Analysis of the History and Character of Intelligent Design Education*, 90 Minn. L. Rev. 1107, 1145-46 (2006) (citing Wexler, *Darwin*, *supra* note 211, at 787, 793, 848).

describing religious views is permissible while advancing them is not.²⁴² Furthermore, Olin argues that concepts upon which intelligent design is based could be taught in a secular way to public school science students.²⁴³ For example, Olin argues that the concept of irreducible complexity could be presented as a permissible criticism of evolution without running afoul of the Establishment Clause but that irreducible complexity could not be taught as evidence of an intelligent designer.²⁴⁴ According to Olin, “[t]aking this conclusory step espouses a religious view.”²⁴⁵

Kent Greenawalt takes a middle-ground position by arguing that while “[t]eaching intelligent design is religious if that theory is presented as true or as the alternative to dominant evolutionary theory,” it would nevertheless be permissible if students were “informed of uncertainties and possible gaps in dominant evolutionary theory and told that, if any supplements are needed . . . intelligent design is one conceivable alternative.”²⁴⁶

The foregoing demonstrates that regardless of whether there is a scientific controversy over the origins of life, there is certainly a legal controversy over whether mandating the substantive teaching of intelligent design in public school would be constitutional. Part III of this Note attempts to resolve this controversy by briefly explaining why some of these arguments present a good starting point for analyzing the constitutionality of teaching intelligent design, and why others are fundamentally flawed. Building on the strengths of some of these arguments, this Note argues that intelligent design does indeed qualify as a religion for Establishment Clause purposes and discusses why intelligent design cannot be taught as a valid scientific theory in public schools for any secular purpose. Part III contends that although it may be constitutionally permissible to describe intelligent design in public schools without endorsing or disputing its merits, it would be difficult to do so without provoking a fact-intensive constitutional challenge. Therefore, Part III recommends that if public school teachers are asked about intelligent design, they should inform students that some people believe in religious understandings of human origins, and students should turn to their families or places of worship to learn about those understandings.

III. MANDATING THE SUBSTANTIVE TEACHING OF INTELLIGENT DESIGN IN PUBLIC SCHOOLS WOULD VIOLATE THE ESTABLISHMENT CLAUSE

Part III of this Note argues that the teaching of intelligent design in public schools violates the Establishment Clause because the theory of intelligent design is an inherently religious doctrine and not science.

242. *Id.* at 1144-45.

243. *Id.* at 1143-46.

244. *Id.* at 1144.

245. *Id.*

246. Kent Greenawalt, *Establishing Religious Ideas: Evolution, Creationism, and Intelligent Design*, 17 *Notre Dame J.L. Ethics & Pub. Pol’y* 321, 322 (2003) (emphasis omitted).

Accordingly, intelligent design cannot be substantively taught in public schools for any secular purpose. Intelligent design is the theory that life is too complex to have evolved by way of natural selection and therefore must have been intelligently designed. Intelligent design rests on three tenets—that complexity in nature is empirically measurable, that natural processes are incapable of explaining the complexity found in nature, and that intelligent design best explains such complexity.²⁴⁷ By definition, design is not possible without a designer. Although intelligent design does not identify the designer responsible for designing life, the theory nonetheless requires that some form of intelligent designer, cause, or agent exists for the theory to hold water. In other words, under intelligent design, design and designer are inextricably linked. Moreover, not only is the intelligent designer undefined under the theory, it is deemed unnatural and unobserved.²⁴⁸ Therefore, this Note argues that the quintessential prerequisite to accepting that design exists in nature is accepting not only that an intelligent designer exists outside of nature, but also that the designer is responsible for the design observed in nature. While courts have struggled with defining the term religion as it appears in the Establishment Clause,²⁴⁹ the proposition that an unobserved and unnatural intelligent designer exists external to the natural world would satisfy any definition of religion that courts have used. Therefore, intelligent design is an inherently religious doctrine for constitutional purposes.

Having established that intelligent design qualifies as a religious doctrine, this Part demonstrates that intelligent design cannot be taught in a secular way so as to allow its substantive teaching in public schools. Indeed, intelligent design proponents argue that “methodological naturalism” is insufficient for empirically testing the theory and that “non-materialistic” methods are required to teach intelligent design.²⁵⁰ Consequently, one cannot rationally accept the theory of intelligent design as true by way of secular means—intelligent design can only be accepted as true after one believes in the existence of an intelligent designer. Accordingly, Part III argues that mandating the substantive teaching of intelligent design in public schools is unconstitutional.

In addition, Part III demonstrates that intelligent design may represent an attempt at a new paradigm whereby theological considerations can be subjected to empirical testing. Such a paradigm cannot withstand constitutional scrutiny because it will inevitably advance or inhibit religion by subjecting general tenets of religious faith to empirical proof or disproof.

Finally, Part III recommends that if public school teachers are asked about intelligent design, they can avoid running afoul of the constitution by informing students that some people believe in religious understandings of

247. *See supra* note 18 and accompanying text.

248. *See supra* notes 34-37 and accompanying text.

249. *See supra* Part I.B.

250. *See supra* Parts I.A.2, II.A.

human origins, and students should turn to their families or places of worship to learn about those understandings.

A. *Intelligent Design Constitutes Religion Under Any Constitutional Definition of Religion*

The goal of intelligent design is not only to detect design in nature, but also to demonstrate that such evidence of design signals the existence of an unnatural intelligent designer outside of nature. While the intelligent designer is not directly observed, its handiwork is the best explanation for the design we may observe in nature.²⁵¹ Design theorists concede the inherently religious nature of this proposition but argue that the theory is not religious because it does not attempt to identify the designer.²⁵² However, for constitutional purposes, if intelligent design is theistic, regardless of whether or not it espouses a particular sectarian version of theism, it is religious. Therefore, to demonstrate why intelligent design would qualify as a religion, it is necessary to demonstrate that the intelligent designer is a “Creator” of man.

Design theorists expressly distinguish intelligent design from the theological doctrine of creation. As described earlier, design theorists such as Dembski claim,

Intelligent design as a scientific theory is distinct from a theological doctrine of creation. Creation presupposes a Creator who originates the world and all its materials. Intelligent design attempts only to explain the arrangement of materials within an already given world. Design theorists argue that certain arrangements of matter, especially in biological systems, clearly signal a designing intelligence.²⁵³

However, this statement is fundamentally misleading because it suggests that the designer is not a “Creator,” just an arranger of already existing materials. If intelligent design is to hold together, the designer must have “created” human beings. If Dembski is implying that the designer did not create human beings, then intelligent design would fail because according to the theory, life is “irreducibly complex” and could not have naturally arisen from functionless biological precursors.²⁵⁴ Therefore, the only way for Dembski’s statement to comport with design theory is if the intelligent designer discovered a world with functionless biological material that had no chance of forming life as we now know it without intelligent intervention. If this were true, then the intelligent designer “created” life by arranging the material into a living configuration. In contrast, if human beings already existed in Dembski’s “given world,” there would have been nothing left for the designer to design.

251. See *supra* notes 18, 34-37 and accompanying text.

252. See *supra* notes 35-37 and accompanying text.

253. Dembski, *supra* note 18, at 248.

254. See *supra* notes 18, 21-28 and accompanying text.

Therefore, intelligent design posits a theistic conception of man's creation, although it does not necessarily identify any particular religious sect's version of the creator. The Supreme Court's definitions of religion all recognize man's relationship to a supernatural or extra-human creator as religious.²⁵⁵ While the Court's early decisions demonstrated a limited view of religion that only included theistic beliefs,²⁵⁶ its later decisions expanded the definition of religion to include nontheistic beliefs.²⁵⁷ Nonetheless, consistent throughout the Court's decisions is the finding that man's belief in a supernatural creator—whether that creator is God,²⁵⁸ a "Supreme Being,"²⁵⁹ a "supernatural creator," or an "intelligent mind"²⁶⁰—is a religious belief.²⁶¹ In other words, the broadening of the Court's language over time regarding the identity of man's creator demonstrates that it is not necessary to identify the creator as belonging to a particular religious sect.

Moreover, as Justice Powell noted in his concurring opinion in *Edwards*, "[c]oncepts concerning God or a supreme being of some sort are manifestly religious. . . . These concepts do not shed that religiosity merely because they are presented as philosophy or as a science."²⁶² Therefore, design proponents may claim that intelligent design fails to identify the creator on the theory that the task should be left to religion or philosophy;²⁶³ however, intelligent design still can constitute religion for constitutional purposes.

While many commentators agree with this viewpoint, most go further and argue that intelligent design is a sham for the conservative Christian interpretation of creationism.²⁶⁴ However, it is not necessary to demonstrate that intelligent design endorses the views of a particular religious sect. Furthermore, even if proponents of intelligent design are conservative Christians who endorse creationism, that fact alone would not be sufficient to demonstrate that intelligent design is a sham for creationism.²⁶⁵ It is more important for constitutional purposes that

255. See *supra* Part I.B.1.

256. See *supra* notes 43-49 and accompanying text.

257. See *supra* notes 50-72 and accompanying text.

258. See *United States v. Macintosh*, 283 U.S. 605, 625 (1931); *Davis v. Beason*, 133 U.S. 333, 342 (1890).

259. See *United States v. Seeger*, 380 U.S. 163, 165-66 (1965).

260. See *Edwards v. Aguillard*, 482 U.S. 578, 591-92 (1987).

261. This formulation of religion is also consistent with "a reference to an extrahuman source of value," which Abner Greene notes has been "[b]y far the most common criterion mentioned by scholars as definitive of 'religion.'" Greene, *supra* note 152, at 1617 & n.25 (citing numerous scholars supporting this view).

262. *Edwards*, 482 U.S. at 599 (Powell, J., concurring) (quoting *Malnak v. Yogi*, 440 F. Supp. 1284, 1322 (D. N.J. 1977), *aff'd*, 592 F.2d 197 (3d Cir. 1979)).

263. See *supra* notes 35-37 and accompanying text.

264. See *supra* notes 211-20 and accompanying text. The court in *Dover* reached the same conclusion. See *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 718-723 (M.D. Pa. 2005).

265. *But see* Brauer, Forrest & Gey, *supra* note 218, at 74 ("Another significant indication of [Intelligent Design's] creationist identity is support by other creationists, who recognize it as creationism and share its goals.").

intelligent design posits an inherently religious theory, not that its proponents belong to a particular religious sect.

Interestingly, most commentators argue that intelligent design is not a religious-based idea because intelligent design “passes” the three-part test for religion proposed by Judge Adams in *Malnak*.²⁶⁶ However, Judge Adams demonstrated in *Africa v. Pennsylvania* that he considers the recognition of a Supreme Being or reference to a “transcendental or all-controlling force” as religious.²⁶⁷ In contrast, he expressly used evolution as an example of what would not constitute religion under the test.²⁶⁸ If a court were to “look[] to the familiar religions as models in order to ascertain, by comparison, whether the new set of ideas or beliefs is confronting the same concerns, or serving the same purposes, as unquestioned and accepted ‘religions,’”²⁶⁹ the court would likely find that the required belief in the existence of an unnatural intelligent designer of life is analogous to formal religions. The fact that design theorists have to expressly distinguish the theory from the theological doctrine of creation demonstrates that it is reasonable to draw such an analogy.

Furthermore, if SCI/TM qualified as a religion under Adams’s test, then it is reasonable to conclude intelligent design would as well. Intelligent design, like SCI/TM, answers ultimate truths including “the nature both of world and man, the underlying sustaining force of the universe,” could represent a “basis of everything,” and similar to how meditation is “presented as a means for contacting this ‘impelling life force,’”²⁷⁰ detecting design is the means for detecting the presence of the designer. Accordingly, intelligent design would satisfy Adams’s definition of religion.

Having demonstrated that intelligent design constitutes a religion for constitutional purposes, it becomes necessary to determine whether the mandated substantive teaching of intelligent design in public schools violates the Establishment Clause. Part III.B of this Note demonstrates that it does because it is not possible to teach intelligent design substantively in public schools for any secular purpose and Part III.C will demonstrate that substantively teaching intelligent design will inevitably advance or inhibit religion.

266. *Malnak*, 592 F.2d at 208-09 (Adams, J., concurring); see *supra* notes 175-77, 181-82 and accompanying text.

267. *Africa v. Pennsylvania*, 662 F.2d 1025, 1033 (3d Cir. 1981).

268. *Malnak*, 592 F.2d at 209 (Adams, J., concurring); see also *Peloza v. Capistrano Unified Sch. Dist.*, 37 F.3d 517, 521 (9th Cir. 1994) (holding “evolutionism” is not a religion).

269. *Malnak*, 592 F.2d at 207 (Adams, J., concurring).

270. *Id.* at 213.

B. *Intelligent Design Cannot Be Taught Substantively in Public Schools for Any Secular Purpose*

1. Intelligent Design Fails *Lemon*'s Purpose Prong as Applied in *Edwards*

Many commentators contend that because the *Edwards* Court stated that "teaching a variety of scientific theories about the origins of humankind to schoolchildren might be validly done with the clear secular intent of enhancing the effectiveness of science instruction,"²⁷¹ intelligent design may be validly taught in public schools because it arguably constitutes a valid scientific theory.²⁷² This argument misapplies the Court's statement. In making this statement, the Court acknowledged that if a law's actual purpose were to foster scientific debate about competing theories of human origins, the Court would not foreclose teaching critiques of evolution so long as those critiques were scientific and not motivated by a religious purpose.²⁷³

However, under *Edwards*, even if a law's stated secular purpose were to foster scientific debate, if such purpose were a pretext for a religious purpose, it would be unconstitutional. In other words, *Edwards* suggests it may not be possible to teach a religious doctrine that opposes evolution for a genuine secular purpose, a suggestion that has been debated among legal commentators. For example, as discussed earlier, a number of commentators have argued that intelligent design is nothing more than a sham for the conservative Christian interpretation of creationism,²⁷⁴ while others such as Francis Beckwith have attempted to challenge this conclusion by proposing four "possible secular reasons" that would validate the teaching of intelligent design in public schools.²⁷⁵

However, it is likely that each of these secular reasons would fail under *Edwards*. The first of Beckwith's secular reasons, while grounded under the Court's endorsement test, assumes that the sole teaching of evolution constitutes an existing Establishment Clause violation and, accordingly, intelligent design is needed to cure that violation.²⁷⁶ However, as described earlier, *Epperson* and *Edwards* make clear that evolution constitutes no such violation.²⁷⁷ Furthermore, according to at least two federal courts, evolution does not constitute a religion.²⁷⁸

271. *Edwards v. Aguillard*, 482 U.S. 578, 594 (1987).

272. See *supra* notes 165-89 and accompanying text. As noted earlier, the scientific validity of intelligent design is the subject of intense debate. See *supra* note 29. This Note will take issue with the scientific nature of intelligent design *infra* Part III.B.2.

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

274. See *supra* notes 214-20 and accompanying text.

275. See *supra* notes 184-89 and accompanying text.

276. See *supra* notes 185-86 and accompanying text.

277. See *supra* Part I.C.

278. See *Malnak v. Yogi*, 592 F.2d 197, 209 (3d Cir. 1979) (Adams, J., concurring); *Pelozo v. Capistrano Unified Sch. Dist.*, 37 F.3d 517, 521 (9th Cir. 1994).

Beckwith's second secular reason is to neutralize the teaching of evolution because evolution is "antithetical to traditional religious belief."²⁷⁹ However, this is a principle that both the *Edwards* and *Epperson* Courts rejected: "[T]here can be no legitimate state interest in protecting particular religions from scientific views 'distasteful to them' [and] 'the First Amendment does not permit the State to require that teaching and learning must be tailored to the principles or prohibitions of any religious sect or dogma.'"²⁸⁰

With respect to Beckwith's third secular reason of teaching students "reputable scholarship,"²⁸¹ no mandate is necessary to expose students to valid secular scholarship.²⁸² Therefore, like academic freedom, this is a nonstarter. Lastly, notwithstanding the Court's ruling in *Edwards*, Beckwith argues that academic freedom could be a valid secular purpose for teaching a religious doctrine in public schools.²⁸³ *Edwards*, however, makes clear that no mandate is necessary to provide teachers with the freedom to teach subjects that do not violate the Establishment Clause or state or local curriculum requirements.²⁸⁴

As discussed earlier, Stephen Marshall also disagrees with the proposition that intelligent design is a sham for creationism.²⁸⁵ If Marshall is correct in his view that intelligent design constitutes a valid scientific theory and not a religious doctrine, then there would be no need for a court to reach the constitutional issue of whether intelligent design could be taught in public schools for a secular purpose.

On the other hand, while Jeffrey Addicott concludes that teaching intelligent design "must be presented in a way that is in keeping with the school's secular purpose of providing students with critical thinking and excellence in education,"²⁸⁶ he acknowledges that "[a]t the end of the day, from a jurisprudential standpoint, the crux of any Establishment Clause analysis revolves around the matter of determining whether intelligent design theory is a religious-based idea passed off as a scientific theory or a genuine scientific theory."²⁸⁷

Addicott's statement succinctly summarizes the hurdle proponents of intelligent design would have to overcome in light of *Edwards*, namely that mandating the teaching of intelligent design in public schools requires the demonstration of an actual secular purpose. Under this standard, once a court finds that intelligent design constitutes a religious doctrine, the court only has to determine whether the stated purpose of teaching intelligent

279. See *supra* note 187 and accompanying text.

280. *Edwards v. Aguillard*, 482 U.S. 578, 590-91 (1987) (quoting *Epperson v. Arkansas*, 303 U.S. 97, 106, 107 (1968)).

281. See *supra* note 188 and accompanying text.

282. See *supra* notes 134-35 and accompanying text.

283. See *supra* note 189 and accompanying text.

284. *Edwards*, 482 U.S. at 587.

285. See *supra* notes 165-67 and accompanying text.

286. See *supra* note 171 and accompanying text.

287. See *supra* note 174 and accompanying text.

design is a pretext for a religious purpose. This Note has argued that, under *Edwards*, intelligent design as a religious doctrine cannot be taught alongside or in place of evolution for a secular purpose that is not a pretext for a religious purpose. Other commentators have gone further to argue that intelligent design is a sham for the conservative Christian interpretation of creationism.

However, the foregoing raises a difficult question—if a court were only to require a plausible secular purpose for mandating the teaching of intelligent design in public schools, would it pass constitutional muster? If a court only required a plausible secular purpose, the relationship of intelligent design to creationism becomes less important to the analysis, and the issue of whether the theory is scientifically valid becomes more important. In other words, mandating the teaching of intelligent design in public schools might be constitutional even if it is motivated by religious purpose if it nonetheless fosters scientific debate about human origins. However, the following section argues this can never be the case because intelligent design, as a religious doctrine, cannot be successfully translated into a secular scientific discourse that would allow nonbelievers to accept the theory as plausible.

2. Intelligent Design Cannot Be Endorsed as a Valid Scientific Theory of Origins in Public Schools Because Intelligent Design Is Not Science

This section does not critique the particulars of the scientific underpinnings of intelligent design theory. For example, this section does not enter the debate over whether or not the bacterial flagellum is structured in such a way that it could not have evolved over time and therefore was intelligently designed.²⁸⁸ Debating such particulars assumes that intelligent design is debatable in scientific terms. Instead, this section argues that intelligent design is not debatable in scientific terms precisely because intelligent design is an attempt to change those terms. This means that intelligent design is more than an alternative theory of origins; it is an attempt to reformulate science in a way that allows the use of religion to explain patterns found in nature.

Recall Dembski's description:

Intelligent design is a two-pronged approach for eradicating naturalism. On the one hand, intelligent design presents a scientific and philosophical critique of naturalism. . . . The other prong of intelligent design is a positive scientific research program. As a positive research program, intelligent design is a scientific discipline that systematically investigates the effects of intelligent causes.²⁸⁹

Design proponents wish to eradicate naturalistic explanations of scientific data and, in their place, inject religious explanations. In this way, teaching

288. See *supra* notes 27-29 and accompanying text.

289. *Dembski, supra* note 18, at 119.

intelligent design teaches religion under the guise of scientific discovery. At its core, intelligent design identifies patterns found in nature that it claims cannot be explained by way of evolution and that therefore signal the presence of design. Under the theory, such presence of design must be the result of an intelligent designer.²⁹⁰

However, once a particular pattern found in nature is labeled “design,” the pattern’s description is no longer scientific. The only way to accept that the pattern was actually designed is to believe that there exists an intelligent designer, because by definition, design and designer are inextricably linked. Since intelligent design rejects a priori any naturalistic explanation of the pattern, intelligent design is not subject to alternative explanation.

Assume a student who does not believe in a supernatural creator of man is presented with a pattern found in nature. The student is told that the pattern exhibits scientific evidence of design. Without believing in the existence of a designer, the student cannot accept this explanation as true, and, because naturalism cannot explain design, the student cannot challenge the explanation or present an alternative explanation. The inquiry ends before it begins for the nonbeliever. Recall Michael Behe’s description of intelligent design: “To a person who does not feel obligated to restrict his search to unintelligent causes, the straightforward conclusion is that many biochemical systems were designed.”²⁹¹ Therefore, if the student is “obligated to restrict his search to unintelligent causes” because he does not maintain the religious belief that man was created by a supernatural intelligent cause, he cannot accept the conclusion that the pattern he has been presented with constitutes evidence of intelligent design. Accordingly, religious faith is the quintessential prerequisite for accepting the theory of intelligent design as true.

It is important here to distinguish intelligent design’s description of design in nature from the interpretation that natural selection constitutes a form of design. For example, Stuart Kauffman notes,

Darwin was himself inheritor of the tradition of Natural Theology, a tradition in which organisms were considered to have been constructed by the agency of God. This tradition focused on the design of organisms, their intimate meeting, and the matching of their traits to their environments, all as evidence of a higher purpose and intelligence. . . . Powerfully inimical to the theological consequences, Darwin’s notion of natural selection can be enthroned in God’s stead as the creative agency.²⁹²

However, while natural selection can be interpreted as being consistent with God’s creative agency,²⁹³ one does not have to adopt this interpretation of

290. *See supra* Part I.A.

291. *See supra* note 34 and accompanying text.

292. Stuart A. Kauffman, *The Origins of Order: Self-Organization and Selection in Evolution* 11 (1993).

293. Arguably, the Vatican has traditionally adopted this position. In 1996, Pope John Paul II affirmed the position Pope Pius XI took in 1950 by recognizing “evolution as more

natural selection to accept it as the mechanism of evolution. For example, natural selection is not a mystical, supernatural force that drives evolution. Natural selection is the method by which scientists explain how organisms develop and lose traits over time as a function of their interaction with a changing environment. It is a paradigm for describing the phenomenology of life, not for explaining the purpose of life. For example, it attempts to describe the existence of life; the variety of life; distinct and shared traits across species; the changing of traits over time including the loss of traits and the persistence of others; the persistence of traits from generation to generation by way of reproduction; death; migration and domains of species; apparent competition for resources by species; parasitic and symbiotic relationships between species; the food web; reproduction; the relationship of organism size to the number of individuals and progeny within a particular species; and the role of DNA in the transfer of traits from generation to generation.²⁹⁴ All of these phenomena are observable in the natural world and explainable by natural mechanisms.²⁹⁵

Therefore, by explaining that certain traits are selected for or against, natural selection does not necessarily mean that a higher intelligence is responsible. It means that the survival or extinction of those traits over time can be explained by the way in which those traits interacted with their environment over time. What we view today as the appearance of directionality or selection may really be an emergent property of a highly complex system.²⁹⁶ Accordingly, evolution can be explained and debated within the ambit of empirical observation of the natural world, a method that requires no reference to a higher authority.

The same cannot be said for intelligent design. On the surface, intelligent design claims that design is empirically detectable. As scientists understand empirical observation, it means that one can formulate a hypothesis and then go out into the natural world and objectively observe an event in order to test the hypothesis. Once data are collected, inferences and conclusions about the meaning of the data are drawn. Before the data are analyzed, the scientist does not know whether the data will confirm or

than a hypothesis." See Message from Pope John Paul II to Pontifical Academy of Sciences, *Magisterium Is Concerned with Question of Evolution, for It Involves Conception of Man* (Oct. 22, 1996), available at <http://www.its.caltech.edu/~nmcenter/sci-cp/evolution.html>. More recently, Rev. George Coyne, the Vatican's chief astronomer wrote,

If they respect the results of modern science, and indeed the best of modern biblical research, religious believers must move away from the notion of a dictator God or a designer God, a Newtonian God who made the universe as a watch that ticks along regularly. . . . God in his infinite freedom continuously creates a world that reflects that freedom at all levels of the evolutionary process to greater and greater complexity. . . . He is not continually intervening, but rather allows, participates, loves.

Vatican Official, *supra* note 5.

294. Yaneer Bar-Yam, *Dynamics of Complex Systems* 534-36 (1997) (proposing a theory of evolutionary dynamics).

295. *Id.*

296. *Id.*

refute his hypothesis. In fact, science allows for the unexpected, and it is usually when the unexpected occurs that the greatest discoveries are made.²⁹⁷

However, detecting design in nature is not empirical—it involves rendering a subjective conclusion about a particular pattern found in nature before one actually observes it. Intelligent design argues that certain biological structures could not have evolved over time because if they were reduced to some less complex structure, they would lose their present function. However, intelligent design only observes these structures at one point in time, in relation to a particular function, and in relation to a particular environment. Anything observed at one point in time in relation to the function it performs at that time within a particular environment may have the appearance of design, but that does not mean it actually was designed. Intelligent design, by definition, does not acknowledge that the structure, during prior generations, may have maintained different structures with different functions or may not have existed at all within the larger organism. In contrast, evolution, among other things, specifically examines how organisms have changed over time in relation to changes in their environment. Therefore, intelligent design, unlike evolution, is not empirically detectable.

If intelligent design cannot be explained by naturalistic means, and if detecting design cannot be empirically tested, then one cannot conclude design exists without believing that an intelligent designer exists outside of nature. Accordingly, intelligent design cannot successfully accommodate acceptance by nonbelievers because it cannot be translated into a secular scientific discourse. As a result, mandating intelligent design's substantive teaching cannot have any plausible secular purpose because intelligent design is simply not accessible to nonbelievers and does not truly foster scientific debate about human origins.²⁹⁸

297. Consider, for example, Sir Alexander Fleming's discovery of penicillin, which occurred after he left culture plates containing staphylococci bacteria unwashed while he went on vacation. See Nobel Found., *The Discovery of Penicillin*, http://nobelprize.org/educational_games/medicine/penicillin/readmore.html (last visited September 17, 2006). Upon returning, Fleming observed that the mold *Penicillium notatum* had grown on the plates and that it was secreting a substance (that Fleming named penicillin) that was preventing the staphylococci from growing. *Id.* Fleming never fully realized the potential for penicillin because it was unstable, so it was not until ten years later that Ernest Chain and Sir Howard Florey began the research that ultimately led to the development of antibiotic drugs. *Id.*

298. This Note does not argue that intelligent design is "religiously-based bad science" as other commentators have done. See, e.g., Wilson, *supra* note 225, at 240. Rather it takes the position that intelligent design is not science—it is attempting to change science in order to communicate a religious explanation of human origins as if it were science.

C. *Teaching Intelligent Design in Public Schools Would Have the Effect of Advancing or Inhibiting Religion*

The foregoing analysis demonstrates that the substantive teaching of intelligent design in public schools is unconstitutional on the basis that it would fail *Lemon's* purpose prong. However, assuming for the moment that intelligent design is both a religious doctrine and a valid scientific theory, and thus could be taught substantively for a plausible secular purpose, it is worth briefly noting that teaching intelligent design in public schools would inevitably fail *Lemon's* effects prong. Government cannot declare the truth or falsity of a religious doctrine.²⁹⁹ However, the entire purpose of intelligent design is to identify evidence in nature that an intelligent designer exists outside of nature. In other words, the theory seeks to prove the existence of a supernatural creator as true. Even if intelligent design used valid scientific methods to achieve this purpose, mandating the substantive teaching of intelligent design in public schools must fail *Lemon's* effects prong because substantively teaching intelligent design cannot avoid attempting to advance the truth of this religious proposition.

Interestingly, assuming intelligent design uses valid scientific methods to prove the existence of a supernatural creator, it may actually have the effect of inhibiting religion because it brings the existence of a supernatural creator within the ambit of science. If this is so, then science can just as easily disprove the existence of the creator as it can prove the existence of one, depending on the evidence. Government cannot compel education in a discipline that relegates religious belief to scientific proof or disproof. This Note has agreed with other commentators that whatever religion is, it involves a belief in an extra-human source of value, which takes religion out of the arena of public debate.³⁰⁰ Religion is true on the basis of faith alone. Accordingly, intelligent design may undermine religion as much as it does science.

D. *If Asked About Intelligent Design, Public School Teachers Should Refer Students to Learn About Intelligent Design at Home or Places of Worship*

Although teaching intelligent design substantively as a competing scientific theory in public schools would violate the Establishment Clause, it would be permissible, in theory, for public school teachers to describe the theory to students so long as they do so without vouching for or rejecting its validity, as commentators such as Wexler and Olin have argued.³⁰¹ The Establishment Clause does not prohibit discussion of religious topics in

299. See, e.g., Koppelman, *supra* note 149, at 89.

300. See *supra* note 261 and accompanying text.

301. See *supra* notes 239-45 and accompanying text.

public schools; rather it prohibits schools from teaching subjects in a way that either advances or inhibits religion.³⁰²

For example, if public school teachers want to educate their students about the history of opposition to evolution, or the proposals throughout the United States to include alternative origins theories into science curricula, or to discuss the legal implications of the controversy, including the *Dover* decision, they could legally do so. Presumably, a basic discussion of intelligent design would be necessary to discuss these topics effectively. So long as it is clear from the curriculum that evolution is taught as the scientific understanding of origins and the merits of intelligent design are not presented or endorsed, the constitutional line would not, in theory, be crossed.

However, discussing intelligent design without endorsing or rejecting its validity will involve walking a very fine line. Some might view the mere description of intelligent design as an endorsement of intelligent design. Given the historic contentiousness of the debate over teaching alternative origins theories in public schools, discussing intelligent design in public schools at any level will likely provoke constitutional challenge. Resolving whether or not public school teachers cross the constitutional line would involve highly fact-intensive inquiries into whether teachers endorse or dispute the validity of intelligent design during the course of their discussions. The more teachers educate their students about the substance of intelligent design, the more an argument can be made that, to a reasonable observer, teachers appear to endorse intelligent design's validity. To avoid such scrutiny, public school teachers must take care to avoid discussing the substance of intelligent design altogether. If public school teachers are asked about intelligent design, they should inform their students that some people believe in religious understandings of human origins but that public school is not the appropriate place to debate those issues. Public school teachers should refer their students to discuss these issues at home or at places of worship.

This Note advocates a more conservative position on this point than previous commentators such as Wexler and Olin and disagrees with them on other related points. For example, Olin has argued that concepts upon which intelligent design is based, such as the concept of irreducible complexity, could be taught substantively in science class as a secular criticism of evolution.³⁰³ Olin interprets irreducible complexity as not suggesting any "religious or nonreligious view" but rather as a "scientific and testable theory that presents a natural observation challenging

302. See *Epperson v. Arkansas*, 393 U.S. 97, 106 (1968) ("[S]tudy of religions and of the Bible from a literary and historic viewpoint, presented objectively as part of a secular program of education, need not collide with the First Amendment's prohibition[; however] the State may not adopt programs or practices in its public schools or colleges which 'aid or oppose' any religion." (quoting *Abington Sch. Dist. v. Schempp*, 374 U.S. 203, 225 (1963))).

303. See Olin, *supra* note 241, at 1143-44.

evolution.”³⁰⁴ Therefore, Olin argues that so long as the concept is not used as “evidence of a designing agent,” it may be taught in science class.³⁰⁵ However, as the preceding discussion demonstrates, irreducible complexity cannot be discussed without implicating the designer, it is not a scientific or testable theory, and it is not a natural observation.³⁰⁶ Therefore, teachers may not legally present irreducible complexity as a scientific concept or endorse its merits. Overall, the only way to avoid a context-specific and fact-intensive constitutional inquiry is for teachers not to discuss the substance of intelligent design at any level. Public school teachers should refer their students to discuss such issues at home or at places of worship.

CONCLUSION

The debate in the United States over human origins is once again in full swing. However, it is important to clarify that for constitutional purposes, this debate is not about which side is right or wrong: It is about jurisdiction. If the theory of intelligent design is correct, it cannot be taught as true in the public school classroom because it is an inherently religious doctrine and is not science. In fact, even if it could be taught as science, it would inevitably have the effect of subjecting an inherently religious doctrine to scientific proof or disproof, which government cannot allow because it would be the equivalent of declaring religious truth or falsity.

Intelligent design could, in theory, be introduced to public school students so long as views on intelligent design’s merits are not discussed. However, since substantively teaching intelligent design in public schools is unconstitutional, discussing intelligent design at even a basic level might provoke a legal challenge that teachers and schools endorse its validity. Resolving such disputes would involve fact-intensive inquiries and therefore, if asked about intelligent design, public school teachers should inform students that some people believe in religious understandings of human origins and that students should turn to their families or places of worship to discuss those understandings.

304. *Id.* at 1144.

305. *Id.*

306. *See supra* Part III.B.2.