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## THE POTENTIAL CONSTITUTIONALITY OF INTELLIGENT DESIGN?

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### INTRODUCTION

The Board of Directors of Pennsylvania's Dover Area School District passed, on October 18, 2004, the following resolution by a 6-3 vote:

Students 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.<sup>1</sup>

Subsequently, on November 19, 2004, the Dover Area School District mandated that teachers read to ninth grade biology students at Dover High School the following statement:

Because Darwin's Theory is a theory, it is still being tested as new evidence is discovered. The Theory is not a fact. Gaps in the Theory exist for which there is no explanation that unifies a broad range of observations.

Intelligent design is an explanation of the origin of life that differs from Darwin's theory. The reference book, *Of Pandas and People*, is available for students to see if they would like to explore this view in an effort to gain an understanding of what intelligent design actually involves.

As is true with any theory, students are encouraged to keep an open mind.<sup>2</sup>

In December 2004, in response to the School District's resolution and statement, the American Civil Liberties Union ("ACLU") filed the first lawsuit in the nation challenging the constitutionality of intelligent design, an alternative explanation to the origin of life that credits an "intelligent

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<sup>1</sup> Complaint at 1, *Kitzmiller v. Dover Area Sch. Dist.*, No. 4:CV 04-2688 (M.D. Pa. Dec. 14, 2004) [hereinafter *ACLU Kitzmiller Complaint*], available at 2004 WL 3008270.

<sup>2</sup> Letter from Michael R. Baksa, Assistant Superintendent, Dover Area School District, to Parents (no date), available at [http://www.dover.k12.pa.us/3598\\_731791451/site/default.asp](http://www.dover.k12.pa.us/3598_731791451/site/default.asp).

Designer,” as opposed to the natural processes of evolution, with the origin of life.<sup>3</sup>

The ACLU is seeking a declaratory judgment that Dover’s intelligent design policy violates the Establishment Clause of the First Amendment of the United States Constitution and the Constitution of the Commonwealth of Pennsylvania.<sup>4</sup> In addition, the ACLU is seeking an injunction prohibiting the defendant School District from implementing its intelligent design policy in any school within the District.<sup>5</sup> Finally, the ACLU is requesting that the injunction require the removal of the book *Of Pandas and People*, which endorses intelligent design, from classrooms.<sup>6</sup>

Although the Dover case marks the first time that intelligent design will undergo constitutional scrutiny, the lawsuit represents the latest battle in the nation’s indefatigable fight over the place of religion in public schools, particularly the science classroom. Since the early nineteenth century, there has been an ongoing struggle to prioritize, or at least reconcile, religious tenets with scientific theories on the subject of the origin of life.<sup>7</sup> What distinguishes this case, however, is that intelligent design might just pass constitutional muster. Unlike creationism, intelligent design is supported by an extensive list of scholars with prestigious pedigrees;<sup>8</sup> more-

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<sup>3</sup> The lawsuit was filed jointly by Americans United for Separation of Church and State and attorneys with Pepper Hamilton LLP on behalf of eleven Dover parents. Press Release, ACLU, Federal Judge Orders Georgia School District to Remove Evolution Disclaimers (Jan. 13, 2005), available at <http://www.aclu.org/ReligiousLiberty/ReligiousLiberty.cfm?ID=17312&c=139>.

<sup>4</sup> ACLU Kitzmiller Complaint, *supra* note 1 (Prayer for Relief).

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> In most instances, the offensive side of this struggle has been waged by the states, often at the behest of various religious groups. Their strategy has been to devise methods which, when adopted and implemented, supplant the teaching of Darwin’s theory of evolution with a perspective that is more reflective of the creation story depicted in the Bible. On the defensive side are scientific, academic, and secular groups whose objective has been to prevent the withdrawal of Darwin’s theory from the public school science curriculum. Finally, the courts have served as a referee, attempting to maintain the separation of church and state by carefully scrutinizing programs that have the potential to undermine the First Amendment.

<sup>8</sup> Over 300 scientists, including scholars from Yale, Princeton, MIT and the Smithsonian Institute signed a public statement declaring that they were “skeptical of claims for the ability of random mutation and natural selection to account for the complexity of life” and encouraging “careful examination of the evidence for Darwinian theory.” Discovery Institute, *A Scientific Dissent from Darwinism*, <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=302> (last modified Jan. 2005). However, see <http://www.geocities.com/CapeCanaveral/Hangar/2437/doctor.htm> for a list of intelligent design academics’ false credentials, and <http://www.sundayssoftware.com/creationist.htm> for a discussion by an ex-creationist on the faulty credentials of creationist academics and creationism in general.

over, it purports to be a scientific theory wholly distinct from religious doctrine.<sup>9</sup>

This Article has two primary goals. First, it seeks to offer an honest and objective examination of the constitutionality of intelligent design as it has been implemented in Dover, Pennsylvania. By analyzing a pending case, and the first of its kind, this Article hopes to tackle subject matter that the literature could previously only address in a speculative manner.<sup>10</sup> Second, this Article suggests that even if the Dover intelligent design case is struck down, it is only a matter of time until intelligent design succeeds in passing constitutional muster. Arguably, if certain conditions are met, or teaching approaches are taken, intelligent design may eventually be taught as an alternative to evolution in public schools.

The Article proceeds in five sections. Section I defines the origins of life debate by describing in brief the competing origin of life theories. Section II provides a survey of the evolution controversy, its historical context, and the judicial treatment to date of various anti-evolution tactics. After laying this foundation, Section III analyzes the intelligent design case pending in Dover, Pennsylvania, concluding that the program is likely to be struck down based on evidence that the Dover Area School Board lacked a secular purpose in adopting its program. Thereafter, Section IV suggests ways in which intelligent design might surpass legal obstacles and find its way into public schools after all. Finally, the Conclusion offers some thoughts on the jurisprudential and socio-political implications of having intelligent design taught alongside evolution in our nation's schools.

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<sup>9</sup> The Harvard Law Review referred to members of the Intelligent Design group as "sophisticated and well-credentialed scientists, philosophers, and legal scholars." Book Note, *Not Your Daddy's Fundamentalism: Intelligent Design in the Classroom*, 117 HARV. L. REV. 964, 964 n.3 (2004) (reviewing FRANCIS J. BECKWITH, LAW, DARWINISM, AND PUBLIC EDUCATION: THE ESTABLISHMENT CLAUSE AND THE CHALLENGE OF INTELLIGENT DESIGN (2003)); see also Francis J. Beckwith, *Science and Religion Twenty Years After McLean v. Arkansas: Evolution, Public Education, and the New Challenge of Intelligent Design*, 26 HARV. J. L. & PUB. POL'Y 456, 470 (2003) [hereinafter *Science and Religion*] (discussing scholarly support for intelligent design); Francis J. Beckwith, *Public Education, Religious Establishment, and the Challenge of Intelligent Design*, 17 NOTRE DAME J.L. ETHICS & PUB. POL'Y 461, 462-63 (2003) (listing scholars associated with intelligent design).

<sup>10</sup> The contemporary literature on intelligent design is generally limited to discussions on the development of intelligent design, the historic controversy between science and religion, and speculation on how a court might rule on the subject by engaging in a *Lemon* test analysis. However, much of the literature fails to go far beyond these subjects. Moreover, a significant amount of what has been written is predicated on the various authors' personal or political leanings on the subject.

I. DEFINING THE DEBATE: COMPETING ORIGIN OF LIFE THEORIES<sup>11</sup>A. *Evolution*

When Charles Darwin published the *Origin of the Species* in 1859, he implicitly challenged the commonly held notion that humans were “created” in their present form.<sup>12</sup> His assertion that all species evolved from ancestral forms through a process called “natural selection,” whereby populations of organisms changed over time due to a natural selection for preferred heritable traits, set off a firestorm of controversy.

Darwin’s argument that gradual and continuous selection and adaptation explained the evolution of species<sup>13</sup> struck those who believed that humans were created in God’s image as a wholly misguided theory—it “began in the mud, had a monkey in the middle and an infidel at the tail”<sup>14</sup>—for it “exclude[d] the necessity of supernatural intervention and incorporated elements of chance and indeterminacy.”<sup>15</sup> In addition to suggesting that humans likely descended from “lower life forms” rather than from God, Darwin’s argument contradicted the belief that God was solely responsible for human development and cast doubt on the literal truth of the Bible.

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<sup>11</sup> In this Article, reference to intelligent design or creationism as a “theory” is not meant to suggest that it has met the scientific definition of the term.

<sup>12</sup> CHARLES DARWIN, *ORIGIN OF THE SPECIES* (1859). The theory of evolution and natural selection that is largely attributed to Darwin was based in part on the work and observations of other scientists, including geologist Charles Lyell, who argued in 1830 that the Earth was formed through gradual, slow-moving processes. PBS, *Online Lesson For Students: Learning Evolution*, at <http://www.pbs.org/wgbh/evolution/educators/lessons/lesson2/act2.html> (last visited Oct. 7, 2005). Other foundational contributors to the theory include English economist Thomas Malthus, who argued that since more creatures are born each year than the number that die, populations are held in check by famine and disease, and Alfred Russell Wallace, who had sent a letter to Darwin proposing very similar ideas before Darwin published his theory. *Id.*

<sup>13</sup> The National Academy of Sciences summarizes the theory of evolution as follows: “Biological evolution concerns changes in living things during the history of life on earth. It explains that living things share common ancestors. Over time, evolutionary change gives rise to new species. [Charles] Darwin called this process ‘descent with modification,’ and it remains a good definition of biological evolution today.” NATIONAL ACADEMY OF SCIENCES, *TEACHING ABOUT EVOLUTION AND THE NATURE OF SCIENCE* 3-4 (1998), available at <http://www.nap.edu/readingroom/books/evolution98/evol5.html> (last visited Oct. 11, 2005).

<sup>14</sup> PBS, *Online Lesson for Students: Learning Evolution*, at <http://www.pbs.org/wgbh/evolution/educators/lessons/index.html> (Lesson 7, activity 1) (last visited Oct. 7, 2005).

<sup>15</sup> Theresa Wilson, *Evolution, Creation, and Naturally Selecting Intelligent Design out of the Public Schools*, 34 U. TOL. L. REV. 203, 207 n.41 (2003) (quoting DOROTHY NELKIN, *THE CREATION CONTROVERSY: SCIENCE OR SCRIPTURE IN THE SCHOOLS* 25 (W.W. Norton & Co. 1982) (1977)).

At various times from 1859 to the present, anti-evolutionists have sought to limit or eliminate the teaching of evolution in public schools. The scientific community strongly criticizes these efforts. The National Academy of Science has said:

To teach biology without explaining evolution deprives students of a powerful concept that brings great order and coherence to our understanding of life . . . . Those who oppose the teaching of evolution in public schools sometimes ask that teachers present “the evidence against evolution.” However, there is no debate within the scientific community over whether evolution occurred, and there is no evidence that evolution has not occurred. Some of the details of how evolution occurs are still being investigated. But scientists continue to debate only the particular mechanisms that result in evolution, not the overall accuracy of evolution as the explanation of life’s history.<sup>16</sup>

In addition to efforts to limit or eliminate the teaching of evolution, there have been attempts to teach alternative origin of life theories such as “creationism” or “intelligent design” instead of, or alongside, evolution. Legal scholars generally reject these efforts on the ground that they run afoul of the First Amendment.

Nevertheless, although the vast majority of scientific, scholarly, educational, religious, and civil libertarian organizations accept the theory of evolution and support its being taught in public schools, only 13% of Americans believe that God was not involved in the process of evolution.<sup>17</sup> According to a 2004 Gallup Poll, 55% of Americans believe that God created humans in their present form and 27% of Americans believe that if humans did “evolve,” God guided the process.<sup>18</sup> As for the teaching of alternative theories, two-thirds of Americans (65%) support creationism being taught alongside evolution while 37% of Americans favor creationism being taught instead of evolution.<sup>19</sup> The balance of this section discusses the distinguishing characteristics of competing origin of life theories.

## B. *Creationism*

Generally speaking, a “creationist” is a person who rejects the theory of evolution and believes instead that each species on earth was put there by a Divine Being. The Dictionary of Science and Creationism defines creationism as “[t]he belief in the creation of the universe, including man

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<sup>16</sup> NATIONAL ACADEMY OF SCIENCES, TEACHING ABOUT EVOLUTION AND THE NATURE OF SCIENCE 3-4 (1998), available at <http://www.nap.edu/readingroom/books/evolution98/evol1.html>.

<sup>17</sup> CBS News, *Poll: Creationism Trumps Evolution* (Nov. 22, 2004), at <http://www.cbsnews.com/stories/2004/11/22/opinion/polls/printable657083.shtml>.

<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

and all other life forms, by a supernatural Creator . . . as specifically described in the biblical book of Genesis.<sup>20</sup> Related to creationists are “creation-scientists,” who are defined as those who put forth scientific arguments in support of creationism. A number of organizations, such as Answers in Genesis, exist solely for this purpose.<sup>21</sup>

As the most widely-recognized alternative theory, creationism is often cast on the opposite side of evolution in the creation-evolution dichotomy.<sup>22</sup> In reality, however, the title “creationism” encompasses a range of perspectives that fall along a continuum between those who believe in creationism and those who accept the premise of evolution.<sup>23</sup> The primary creationist perspectives are categorized as Young Earth Creationism, Old Earth Creationism, and Theistic Evolution Theory. Intelligent Design, which this Article will discuss in depth,<sup>24</sup> is an argument that overlaps the Young and Old Earth theories.

Young Earth Creationism is the perspective most often associated with fundamentalism. Members of this group adhere to a strict and literal interpretation of the Bible, which asserts that all organisms were formed on the Earth in a single event and that God created plants, animals and humans in their final forms.<sup>25</sup> A Young Earth Creationist believes that the Earth is not 4.6 billion years old, but is instead closer to 6,000-10,000 years old based on Genesis’ complete listing of the generations from Adam and Eve to his-

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<sup>20</sup> ROBERT L. ECKER, *DICTIONARY OF SCIENCE & CREATIONISM* 57 (1990). The creation story in the Book of Genesis is as follows: “In the beginning, when God created the heavens and the earth, the earth was a formless wasteland, and darkness covered the abyss, while a mighty wind swept over the waters . . . . God said, ‘let the earth bring forth all kinds of living creatures . . . . Let us make man in our image, after our likeness.’” *Genesis* 1:1-2, 24-26 (The New American Bible).

<sup>21</sup> Answers in Genesis contends that “the account of origins presented in Genesis is a simple but factual presentation of actual events and therefore provides a reliable framework for scientific research into the question of the origin and history of life, mankind, the Earth, and the universe.” Answers in Genesis, *Statement of Faith* § B3 at <http://www.answersingenesis.org/home/area/about/faith.asp> (last visited Oct. 7, 2005). *But see* Isaac Asimov, *Introduction: Science Versus Creationism*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/8859\\_introduction\\_science\\_versus\\_c\\_12\\_7\\_2000.asp](http://www.ncseweb.org/resources/articles/8859_introduction_science_versus_c_12_7_2000.asp) (Dec. 7, 2000) (arguing that creation science is only a way to help creationism gain legitimacy).

<sup>22</sup> Eugenie C. Scott, *Antievolution and Creationism in the United States*, 26 *ANN. REV. ANTHROPOLOGY* 263, 267 (1997), available at [http://www.ncseweb.org/resources/articles/4550\\_antievolutionism\\_and\\_creationi\\_2\\_13\\_2001.asp](http://www.ncseweb.org/resources/articles/4550_antievolutionism_and_creationi_2_13_2001.asp)

<sup>23</sup> *Id.* For a graph of this continuum, see <http://www.ncseweb.org/graphics/continuum.gif>.

<sup>24</sup> See discussion *infra* Section I.C.

<sup>25</sup> Wilson, *supra* note 15, at 208.

torical times.<sup>26</sup> Young Earth Creationists divide themselves into several subgroups, all of which reject modern physics, chemistry and biology.<sup>27</sup>

In contrast to Young Earth Creationism, Old Earth Creationism accepts that the earth is ancient.<sup>28</sup> However, Old Earth Creationists have been trying since the mid-1700s to devise explanations that reconcile an old earth position with the idea that God is the ultimate creator.<sup>29</sup> For instance, Old Earth Creationists accommodate science to a literal reading of the Bible by postulating that the six days of creation were not 24-hour days but possibly thousands or millions of years.<sup>30</sup> Like the Young Earth Creationists, the Old Earthers are comprised of various sub-groupings.<sup>31</sup>

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<sup>26</sup> Eugenie C. Scott, *The Creation/Evolution Continuum*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/9213\\_the\\_creationevolution\\_continu\\_12\\_7\\_2000.asp](http://www.ncseweb.org/resources/articles/9213_the_creationevolution_continu_12_7_2000.asp) (Dec. 7, 2000).

<sup>27</sup> Young earth creationists divide themselves into Flat Earthers, Geocentrists, and classical Young Earth Creationists. See Scott, *supra* note 22, at 267-68. The most conservative are the Flat Earthers who believe that the earth is circular and flat, not spherical. *Id.* By comparison, Geocentrists “accept that the planet is a sphere but deny that the sun is the center of the solar system.” *Id.* at 268. The organization that is most representative and commonly associated with young earth creationism and creation science is the Institute for Creation Research (ICR). See *id.* at 268. The organization, which was founded by Henry Morris and others in the early 1970s to promote the scholarship of young earth creationism, has a robust publishing arm, a graduate program offering masters degrees in science and science education, and a public museum. *Id.* Although its faculty conducts little, if any, actual research, their presence is felt at Christian revivals and on Christian radio networks. *Id.* at 269. ICR is considered the flagship creationist institution to which all other organizations look for leadership and guidance. Scott, *supra* note 22, at 268. For a comparison of ICR’s tenets on science creationism and biblical creationism, see [http://www.icr.org/index.php?module=research&action=index&page=research\\_tenets](http://www.icr.org/index.php?module=research&action=index&page=research_tenets).

<sup>28</sup> Scott, *supra* note 22, at 270.

<sup>29</sup> *Id.* at 269-72.

<sup>30</sup> *Id.* at 270.

<sup>31</sup> Old earth creationists divide into Gap Theory, Day-Age Theory and Progressive Creationists, among other theories. Scott, *supra* note 22, at 270. Gap or Restitution Theory has asserted since the late eighteenth century that there is a large temporal gap between Genesis I:1 and I:2, and within that time period there was a pre-Adam creation that was destroyed. *Id.* Thereafter, as recounted by Genesis I:2, God started over and created Adam and Eve and the world in six days. *Id.* This temporal gap between the two separate creations allows gap theorists to reconcile evidence of the earth’s antiquity with a belief in creationism. *Id.* Day-Age Theory, by comparison, reconciles scientific evidence with a literal reading of the Bible as mentioned above by postulating that the six days of creation should not be understood as six twenty-four hour days, but as days representing thousands or even millions of years. *Id.* Progressive Creationism presents the view of the majority of today’s old earth antievolution activists. *Id.* Most of these adherents believe that God “created ‘kinds’ of animals that were of a higher taxonomic level than species.” Scott, *supra* note 22, at 270. Within each kind of animal, a cat for example, evolution could have occurred such that a cat could differentiate into a lion, leopard, bobcat, or other animal from the cat family. *Id.* However, although such “horizontal” variation could have occurred, “vertical” change between different kinds of animals could not have taken place. *Id.* at 271. Hence, “[t]he basic body plans of major phyla that appear in the so-called Cambrian explosion are seen by most Old Earth Creationists as evidence of Special Creation.” *Id.*

Along the continuum, Intelligent Design Creationism overlaps Young Earth and Old Earth Creationism.<sup>32</sup> Most intelligent design proponents are Old Earthers, but the intelligent design concept is compatible with both groups because the argument avoids making factual claims regarding the age of the earth, common ancestry, or specific phylogenies.<sup>33</sup> As this Article discusses in section I.C., intelligent design creationists allow for microevolution, but deny that mutation and natural selection adequately explain the evolution of one species into another, such as apes into humans.<sup>34</sup> They believe that the origin of life and humans are too complex to have evolved naturally by chance.<sup>35</sup> Thus, an intelligent Designer must have played a role in their origin.<sup>36</sup>

Adherents of Theistic Evolution Theory, the third major strand of creationism, do not subscribe to a literal interpretation of Genesis, but still adhere to an idea of divine creation and consider the natural processes identified by Darwin as a plan intended for the world by a Creator.<sup>37</sup> Specifically, they believe that a God created time, space, and matter, but left the majority of life changes to the natural workings of evolution.<sup>38</sup> Thus, although proponents of theistic evolution differ as to the extent of God's involvement in evolution, they believe that one species can give rise to another consistent with Darwin's theory of descent with modification. This perspective of the origin of life is taught at the majority of mainstream Protestant seminaries and was recognized by Pope John Paul II as the official position of the Catholic Church in 1996.<sup>39</sup>

### C. *Intelligent Design*

Intelligent design asserts that purely natural forces cannot adequately explain the origin and development of living organisms. Intelligent design thus attributes the origin of life to the actions of an intelligent agent, posit-

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<sup>32</sup> Scott, *supra* note 26.

<sup>33</sup> *Id.* Evolutionists posit that intelligent design is not a scientific theory because it claims to be compatible with both an old view and young view of the earth. *See id.* Moreover, evolutionists place intelligent design in the progressive creationism category because “[w]henver irreducible complexity of a biological structure is encountered, there is evidence of direct design—or creationism.” *Id.*

<sup>34</sup> Scott, *supra* note 26.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

<sup>38</sup> HOWARD J. VAN TILL, *THE FOURTH DAY: WHAT THE BIBLE AND HEAVENS ARE TELLING US* (1986).

<sup>39</sup> Scott, *supra* note 22, at 271-72.

ing that if evolution occurred at all, it was not by the process of natural selection, but by the work of an omniscient Creator.<sup>40</sup>

The concept of intelligent design stems from the work of English theologian William Paley<sup>41</sup> who developed the idea in his 1802 book *Natural Theology*.<sup>42</sup> Paley compared biological structures such as an eye to a watch and theorized that since each was complex, neither could have self assembled.<sup>43</sup> Specifically, since it was obvious that an intricately made watch could not be the product of chance, the mere existence of the watch implied that a “watchmaker” had designed it with a purpose in mind.<sup>44</sup> By analogy, because there is order, purpose and design in the universe, there is an omniscient designer who created it.<sup>45</sup> Paley’s conclusion was that a Creator akin to a watchmaker explained the origin of life.<sup>46</sup>

In 1989, the modern intelligent design movement was launched when Percival Davis of Hillsborough Community College in Tampa, Florida and Dean Kenyon of San Francisco State University resurrected the 200-year-old watchmaker argument in their book *Of Pandas and People: The Central Question of Biological Origins* (“Pandas”).<sup>47</sup> The thesis of *Pandas*, whose second edition was published in 1993, is essentially identical to Paley’s theory: because classic Darwinism cannot explain the structural complexity of life, life is attributable to an intelligent Designer.<sup>48</sup>

Since *Pandas*’ publication, there have been widespread efforts to introduce it into high school biology classrooms, mostly by televangelists and

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<sup>40</sup> In its Complaint in *Kitzmiller*, the ACLU defined intelligent design as “a non-scientific argument or assertion, made in opposition to the scientific theory of evolution, that an intelligent, supernatural actor has intervened in the history of life, and that life owes its origin to a master intellect.” ACLU *Kitzmiller* Complaint, *supra* note 1 (introduction).

<sup>41</sup> Scott, *supra* note 22, at 279-80.

<sup>42</sup> WILLIAM PALEY, *NATURAL THEOLOGY* 50 (Elisha Bartlett ed., Harper & Brothers, vol. 1 1839) (1802).

<sup>43</sup> Scott, *supra* note 26 (citing Paley).

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> Scott, *supra* note 22, at 280.

<sup>47</sup> PERCIVAL DAVIS & DEAN H. KENYON, *OF PANDAS AND PEOPLE: THE CENTRAL QUESTIONS OF BIOLOGICAL ORIGINS* (1989). *Pandas* was actively promoted for public school use starting in Alabama in 1989 and continuing through the 1990s. Nick Matzke, *Introduction: Of Pandas and People, the Foundational Work of the ‘Intelligent Design’ Movement*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/8442\\_1\\_introduction\\_iof\\_pandas\\_\\_11\\_23\\_2004.asp](http://www.ncseweb.org/resources/articles/8442_1_introduction_iof_pandas__11_23_2004.asp) (Nov. 23, 2004).

After 2000, active support for *Pandas* began to wane, as reflected by the date of its last publication, 1993. *Id.* However, the textbook came into the spotlight again in 2004 when the Dover, Pennsylvania School Board accepted an anonymous donation of fifty copies of the eleven year-old book. *Id.*

<sup>48</sup> Trisha Gura, *The Evolutionary War*, HHMI BULLETIN, Sept. 2002, at 24, <http://www.hhmi.org/bulletin/pdf/sept2002/Evolution.pdf>.

intelligent design advocacy groups.<sup>49</sup> In 2005, Ohio, Kansas, Virginia, Texas, and Pennsylvania all considered whether to introduce *Pandas* into their classrooms.<sup>50</sup> Thus far, more than 20,000 copies have been sold.<sup>51</sup>

Shortly after the publication of *Pandas*, the Seattle-based Discovery Institute was founded as a conservative think tank to promote the writings of intelligent design proponents.<sup>52</sup> The Discovery Institute in turn formed the Center for Science and Culture (“CSC”) to promote a strategy referred to as the “wedge,” which strives to make a scientific case with “favorable implications for theism.”<sup>53</sup> The Institute explains the “wedge” strategy as follows: “If we view the predominate materialist science as a giant tree, our strategy is intended to function as a ‘wedge’ that, while relatively small, can split the trunk when applied at its weakest points.”<sup>54</sup> Today, CSC has an annual budget of about \$3.2 million and plans to spend approximately \$1.3 million in 2005 on intelligent design research and advocacy.<sup>55</sup> It is actively involved in debates at the state level over science standards, such as those that took place in Kansas and Ohio.

In the 1990s, intelligent design embraced two major scientific innovations: (1) Michael Behe’s concept of “irreducible complexity” and (2) William Dembski’s “design inference” argument. Behe, who presented his theory in *Darwin’s Black Box* in 1996, proposed that there are certain biochemical structures that, being “irreducibly complex,” cannot have arisen

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<sup>49</sup> See Eugenie C. Scott, *Televangelist Promotes Of Pandas and People*, NCSE REPORTS, Mar.-Apr. 1992, at 19, [http://www.ncseweb.org/resources/articles/1699\\_39\\_scott\\_1992\\_televangeli\\_11\\_24\\_2004.asp](http://www.ncseweb.org/resources/articles/1699_39_scott_1992_televangeli_11_24_2004.asp).

<sup>50</sup> Bill Toland, *Intelligent Design: Is It Just Creationism Lite?*, PITTSBURGH POST-GAZETTE, Jan. 9, 2005, at A1.

<sup>51</sup> Claudia Wallis, *The Evolution Wars*, TIME, Aug. 15, 2005, at 26.

<sup>52</sup> The CSC website defines itself as follows: “The Center for Science and Culture is a Discovery Institute program that encourages schools to improve science education by teaching students more fully about the theory of evolution, as well as supporting the work of scholars who challenge various aspects of neo-Darwinian theory and scholars who are working on the scientific theory known as intelligent design.” The Discovery Institute, *Top Questions* [hereinafter *Top Questions*], at <http://www.discovery.org/csc/topQuestions.php> (last visited Sept. 3, 2005).

<sup>53</sup> Discovery Institute, *The “Wedge Document”: “So What?”*, (Mar. 1, 2004) (discussing CSC goals, projects, five-year strategic plan and activities), at <http://www.discovery.org/scripts/viewDB/index.php?command=view&id=2101>. “Theism” is a belief in the existence of a God who created man and world. Merriam-Webster Online Dictionary, <http://www.webster.com/cgi-bin/dictionary?book=Dictionary&va=theism> (last visited Oct. 31, 2005).

<sup>54</sup> Discovery Institute, *The Wedge*, available at <http://www.aclu.org/evolution/legal/wedgedoc.pdf> (last visited Nov. 9, 2005). The Strategy is studied in detail in BARBARA FORREST & PAUL GROSS, CREATIONISM’S TROJAN HORSE: THE WEDGE OF INTELLIGENT DESIGN (2003).

<sup>55</sup> Linda Shaw, *Does Seattle Group “Teach Controversy” or Contribute to It?*, THE SEATTLE TIMES, Mar. 31, 2005, at A1.

through unguided natural processes.<sup>56</sup> Dembski, who presented his theory in *Intelligent Design: The Bridge Between Science and Technology* in 1999, contends that he has developed an algorithm—an “explanatory filter”—that can distinguish between the products of “intelligent design” and the workings of natural law and chance.<sup>57</sup>

Based on the research of Behe, Dembski and others,<sup>58</sup> proponents insist that intelligent design is a valid scientific theory separate and distinct from the Bible. In fact, proponents claim that as a theory, intelligent design is only incompatible with evolution to the extent that evolution is defined as neo-Darwinism—the idea that evolution is driven by natural selection acting on random mutations.<sup>59</sup> On the other hand, intelligent design distinguishes itself from creationism in two fundamental ways: it does not explicitly identify God as the universe’s intelligent Designer and it accepts scientific theories other than evolution. Nevertheless, both creationism and intelligent design rest on the assumption that because there are “gaps”<sup>60</sup> in evolutionary theory, evolution is incapable of explaining human development.

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<sup>56</sup> MICHAEL J. BEHE, *DARWIN’S BLACK BOX: BIOCHEMICAL CHALLENGE TO EDUCATION* 39 (1996). Behe argues that an irreducibly complex system—a “single system composed of several well-matched interacting parts that contribute to the basic function, wherein the removal of any one of the parts cause the system to effectively cease functioning”—cannot evolve through Darwinian mechanisms because “any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional.” *Id.*

<sup>57</sup> Wilson, *supra* note 15, at 210. The filter, which was developed to detect design inside or outside biology, uses statistical techniques to determine if a predictable process is the cause of an event or object, or if the event or object could have arisen by chance. *Id.*

<sup>58</sup> Among the scholars affiliated with Intelligent Design are: Francis J. Beckwith, Phillip E. Johnson, William Dembski, Alvin Plantiga, J.P. Moreland, Michael Behe, Dean Kenyon, Dallas Willard, Stephen C. Meyer, Walter Bradley, Hugh Ross, David Berliski, Paul Nelson, Henry F. Shafer III, Jonathon Wells, William Lane Craig, and Robert Kaita. *Science and Religion*, *supra* note 9, at 470.

<sup>59</sup> Intelligent design adherents posit that random mutation suggests a purposeless process that has no specific direction or goal, including survival of a species. Top Questions, *supra* note 52.

<sup>60</sup> One such gap is described in *Pandas* as follows:

The absence of unambiguous transitional fossils is illustrated by the fossil record of whales. The earliest forms of whales occur in rocks of Eocene age, dated some 50 million years ago, but little is known of their possible ancestors. By and large, Darwinists believe that whales evolved from a land mammal. The problem is that there are not clear transitional fossils linking land mammals to whales. If whales did have land-dwelling ancestors, it is reasonable to expect to find some transitional fossils.

Kenneth R. Miller, *Of Pandas and People: A Brief Critique*, available at <http://www.kcfs.org/pandas.html> (quoting *Pandas*) (citations omitted) (last visited Oct. 31, 2005).

As evidenced by this statement, intelligent design proponents are willing to suggest that lack of certain evidence is enough to indicate that evolution is wrong. However,

in the past ten years . . . three true intermediate forms [of whales] have been discovered. Up until 1986, the oldest known fossil whale had been *Basilosaurus*, dating to about 40 million years before present. However, fossil-hunters have now found three intermediates that link *Basilosaurus* to land-dwelling ancestors. They are: *Pakicetus inachus* (52 myr), *Ambulocetus natans* (50 myr), and *Rodhocetus kasrani* (46 myr).

Regarding the teaching of intelligent design in public schools, the Discovery Institute and its Center for Science and Culture argue that students should be presented with evolution's unresolved issues. To do less, according to the Institute, is censorship.<sup>61</sup> While many creationists—including many intelligent design proponents—want evolution out of the classroom altogether, the Institute attempts to distinguish intelligent design by advocating a “teach the controversy” approach. Such an effort would allow instruction of evolution, but would require a discussion of gaps in Darwin's theory and the presentation of alternative perspectives.<sup>62</sup>

Not surprisingly, what intelligent design calls “gaps,” scientists regard as evidence waiting to be discovered, and what intelligent design calls a “compromise,” critics label a creationist agenda.

## II. THE ORIGIN OF LIFE CONTROVERSY AND JUDICIAL TREATMENT TO DATE

The issue of whether alternative paradigms of origin theory can be taught within public schools has become a cultural and educational controversy seemingly unparalleled in First Amendment jurisprudence. This section briefly traces the development of the controversy and the role of courts within the debate by placing the controversy in its historical context and highlighting seminal decisions.

In Colonial America, there was no separation between church and state. As a consequence, a European pattern of church-dominated schools prevailed until the late eighteenth century when a demand for secular education emerged. By the 1830s, this demand had catalyzed the end of state-supported church establishments and the emergence of free, tax-supported, nonsectarian public schools.<sup>63</sup>

Despite the emergence of secular schools as the accepted educational model throughout the United States, the de-emphasis of religion in public schools led to widespread discontent and even riots among some segments of the population. However, rather than directly challenge this shift toward secular education, many denominations simply established their own private, church-supported learning institutions.

Coexistence of separate secular and sectarian academic institutions defined the waning days of the nineteenth century. One scholar referred to the

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*Id.*

<sup>61</sup> Top Questions, *supra* note 52.

<sup>62</sup> *Id.*

<sup>63</sup> Derek H. Davis, *Kansas Versus Darwin: Examining the History and Future of the Creationism-Evolution Controversy in American Public Schools*, 9 KAN. J.L. & PUB. POL'Y 205, 208 (1999).

period as the “high water mark of the principle of separation of church and state.”<sup>64</sup> By contrast, the twentieth century was an era of contentious debate over the role of religion in public schools, particularly concerning the preference for Darwin’s theory of evolution over the Bible’s theory of creation.

While proponents of evolution have sought to secure and defend evolution’s place within the public school science curricula, opponents have attempted to forbid, limit, or otherwise undermine its teaching with an ever-evolving range of strategies. The following discussion not only catalogues these efforts, but also illustrates that each new attempt is a more sophisticated and strategically crafted approach than the one that failed before it.

#### A. *Anti-Evolution Statutes*

Anti-evolution statutes were the outgrowth of a 1920s conservative crusade “to reform social and moral behavior.”<sup>65</sup> Following ratification of the Eighteenth Amendment, which outlawed the sale of alcoholic beverages and ushered in the era of prohibition, conservatives turned their attention to outlawing the teaching of evolution based on their belief that “more than anything else, [teaching evolution] harmed the spiritual and moral development of students.”<sup>66</sup> Toward this end, between 1921 and 1929, creationists proposed volumes of Populist legislation, including anti-evolution bills in thirty-seven states aimed at eradicating the teaching of evolution from public schools.<sup>67</sup>

##### 1. *Scopes v. State*

On March 13, 1925, the Tennessee general assembly passed the most historically famous of these anti-evolution statutes, the Butler Act.<sup>68</sup> The statute made it

unlawful for any teacher in any of the . . . public schools of the State which are supported in whole or in part by the public school funds of the State, to teach any theory that denies the

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<sup>64</sup> *Id.*

<sup>65</sup> EDWARD J. LARSON, TRIAL AND ERROR: THE AMERICAN CONTROVERSY OVER CREATION AND EVOLUTION 35-36 (1989).

<sup>66</sup> *Id.* at 36.

<sup>67</sup> *Id.* at 28-29; NELKIN, *supra* note 15, at 31.

<sup>68</sup> TENN. CODE ANN. § 27 (1925).

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.<sup>69</sup>

Just two years after being put into force, the statute was challenged in the infamous case of *Scopes v. State*,<sup>70</sup> commonly referred to as the Scopes Monkey Trial. There, John T. Scopes, a substitute biology teacher, was indicted for violating the Butler Act.<sup>71</sup> He defended himself by arguing the merits of evolution rather than the statute's unconstitutionality under the First Amendment.<sup>72</sup>

At the time of the trial, the theory of evolution was largely accepted by scientists as well as by many Christian theologians.<sup>73</sup> Nevertheless, the trial court concluded that the legislature had the right to control education in the state and Scopes was fined \$100 for violating the Act.<sup>74</sup> The court concluded that the Butler Act did not violate either the state or federal Constitution.<sup>75</sup> The Tennessee Supreme Court subsequently overturned the decision, but only on minor procedural grounds.<sup>76</sup>

Although *Scopes* addressed a state law, the media frenzy surrounding the trial made the case one of national interest and concern. Creationists felt that they were being made a fool of by the Northern press and, as a result, began an attack on local communities that amounted to what one critic described as "the emasculation of textbooks, the 'purging' of libraries, and . . . the continued hounding of teachers."<sup>77</sup> Such an effort almost succeeded in fully removing Darwin from the classroom. The impact on American science education is illustrated by a scholarly survey of the content of biology

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<sup>69</sup> *Id.*

<sup>70</sup> 289 S.W. 363 (Tenn. 1927).

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* at 366.

<sup>73</sup> H. Wayne House, *Darwinism and the Law: Can Non-Naturalistic Scientific Theories Survive Constitutional Challenge?*, 13 REGENT U. L. REV. 355, 369 (2001).

<sup>74</sup> *Scopes*, 289 S.W. at 363.

<sup>75</sup> *Id.* It ruled that the jury, not the judge, should have ascertained the fine. Interestingly, Clarence Darrow, Scopes' attorney, had asked the jury to find Scopes guilty so that the issue could be won at a higher court on appeal. Richard M. Cornelius, *World's Most Famous Court Trial*, at <http://www.bryan.edu/802.html> (last visited Oct. 31, 2005).

<sup>76</sup> It has been suggested that the Tennessee Supreme Court did not address a violation of the First Amendment because, at the time of the trial, the Supreme Court had yet to apply the First Amendment to State governmental activity through its incorporation of the First Amendment into the due process clause of the Fourteenth Amendment. Thus, under Tennessee law there was no basis for considering the legislative prohibition of evolution on religious grounds to be a violation of the law. House, *supra* note 73, at 406.

<sup>77</sup> Davis, *supra* note 63, at 213 (citing RONALD L. NUMBERS, *THE CREATIONISTS, IN GOD AND NATURE: HISTORICAL ESSAYS ON THE ENCOUNTER BETWEEN CHRISTIANITY AND SCIENCE* 391, 403 (David C. Lindberg & Ronald L. Numbers eds., 1986)).

textbooks up to 1960. The study revealed that textbooks published throughout the later half of the 1920s ignored evolutionary biology, and new editions of older volumes deleted the words “evolution” and “Darwin” from the index.<sup>78</sup>

Hence, the *Scopes* trial and its immediate aftermath marked not only the beginning of public awareness of the evolution controversy, but also threatened to tip the balance in favor of creationism.

## 2. *Epperson v. Arkansas*

Creationists and evolutionists came face to face again in *Epperson v. Arkansas*,<sup>79</sup> this time before the United States Supreme Court. Arkansas had passed a statute in 1928 that forbade public universities and school teachers from teaching that humans descended or ascended from a lower order of animals and forbade the selection of textbooks that promoted evolution theory.<sup>80</sup> In contrast to Tennessee’s Butler Act, violation of the Arkansas statute was accompanied by a minimum fine and termination of employment.<sup>81</sup>

Susan Epperson, a tenth-grade teacher in her first year of teaching, was required by her local school administration to teach from a textbook that discussed the theory of evolution.<sup>82</sup> In order to preempt any action against her, Epperson sought a declaratory judgment that the Arkansas statute was void.<sup>83</sup> The Chancery Court invalidated the statute on the ground that it infringed upon the First Amendment’s Free Speech guarantee.<sup>84</sup> On appeal, however, the Arkansas Supreme Court reversed, employing reasoning similar to that of the Tennessee Supreme Court in *Scopes*.<sup>85</sup>

The U.S. Supreme Court, however, in a landmark ruling that permanently forbade the use of anti-evolution statutes, swung the evolution-creationism pendulum back in favor of evolution. According to the Court, the Arkansas statute violated the Establishment Clause of the First Amend-

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<sup>78</sup> NELKIN, *supra* note 15, at 33.

<sup>79</sup> 393 U.S. 97 (1968).

<sup>80</sup> ARK. STAT. ANN. § 80-1627 (1960 Repl. Vol.).

<sup>81</sup> *Id.* §§ 80-1627 to -1628.

<sup>82</sup> *Epperson*, 393 U.S. at 100.

<sup>83</sup> *Id.*

<sup>84</sup> *Id.* at 100-01.

<sup>85</sup> *State v. Epperson*, 416 S.W.2d 322, 322 (Ark. 1967), *rev’d*, 393 U.S. 97 (1968). The court held that a statute pertaining to teaching of evolution theory “is a valid exercise of the state’s power to specify the curriculum in its public schools.” *Id.*

ment.<sup>86</sup> In articulating its holding, the Court focused largely on the statute's non-secular purpose.

Without specifically defining "science" or "religion," the Court held that the Arkansas statute promoted Biblical divine creation and therefore violated the Establishment Clause by preferring Christian doctrine.<sup>87</sup> Although the Court recognized the right of states to determine their own educational curricula, it reasoned that states could not prohibit the teaching of a scientific theory when such a prohibition violated the First Amendment.<sup>88</sup> States would not be allowed to prohibit the teaching of scientific doctrines simply because science conflicted with religious tenets.<sup>89</sup>

The Court's ruling in *Epperson* sent a strong message to both lower courts and creationists. State courts began striking down anti-evolution statutes while creationists began to strategize about how to repackage creationism to survive judicial scrutiny.<sup>90</sup>

#### B. *Balanced Treatment Statutes*

As in the case of anti-evolution statutes, state legislatures enacted balanced treatment statutes in response to certain political and social events. In particular, the content of science textbooks used in public schools was scrutinized in the wake of two seemingly unrelated events: the Soviets' 1957 launch of Sputnik and the 100th anniversary of the publication of Darwin's *Origin of the Species*.<sup>91</sup> While the anniversary of *Origin of the Species* awakened within the American public a renewed interest in the subject of evolution, the launch of Sputnik sparked political concern regarding Russian scientific advancement and superiority.<sup>92</sup>

Together, these two events served as the impetus for a study conducted by the Biological Sciences Curriculum Study (BSCS) that confirmed that biology education in America not only lagged behind European biology education, but also failed to integrate the last twenty years of biol-

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<sup>86</sup> *Epperson*, 393 U.S. at 106-07.

<sup>87</sup> *Id.* at 109.

<sup>88</sup> *Id.* at 107.

<sup>89</sup> *Id.*

<sup>90</sup> The last of the anti-evolution statutes was declared unconstitutional in the 1970 case, *Smith v. State*, 242 So. 2d 692 (Miss. 1970). There, a mother filed suit on behalf of her student daughter, arguing that Mississippi's anti-evolution statute deprived her daughter, who wanted to pursue a scientific career, of a proper scientific education. *Id.* The Mississippi Supreme Court relied on *Epperson* to find the statute unconstitutional. *Id.* at 696-97.

<sup>91</sup> House, *supra* note 73, at 368-69.

<sup>92</sup> LARSON, *supra* note 65, at 91.

ogy research.<sup>93</sup> In response to the study's findings, BSCS immediately began revising science texts.<sup>94</sup> The result was that by the 1960s, the BSCS textbooks "gained and held half the biology textbook market."<sup>95</sup> Subsequently—in stark contrast to the texts available following the *Scopes* trial—almost every newly published biology textbook on the market boldly discussed the theory of evolution.<sup>96</sup>

American desire to assert its scientific superiority was met with a somewhat conflicting desire to assert its religious superiority. In order to contrast "God-fearing Americans" and "spiritually corrupt Communists," creationists sought to emphasize the virtues of American morality and faith by renewing their lobbying efforts against the teaching of evolution.<sup>97</sup> The Creation Research Society and the Institute for Creation Research were developed in 1963 and 1972 respectively, solely for this purpose.<sup>98</sup> Thus, while the scientific community was committed to increasing the presence of evolution in biology curricula, the religious community was preparing to limit it.

The strategy of the leading creationist organizations, which had internalized the lessons of *Scopes* and *Epperson*, was two-fold.<sup>99</sup> First, they adopted a "balanced treatment" platform, whereby creationism would be taught alongside, rather than in place of, evolution.<sup>100</sup> A 1980 poll indicated that seventy-five percent of the public approved of this sort of balanced treatment approach.<sup>101</sup> Second, the word "creationism" was replaced with "scientific creationism,"<sup>102</sup> signaling a recognition that creationist tenets invoking science, and not rooted solely in religion, were more likely to receive judicial sanction. Toward this end, biblical references to Genesis were omitted and replaced with "scientific" arguments against evolution.<sup>103</sup>

The two-prong strategy illustrates a conspicuous, deliberate and meaningful shift in creationist tactics. Whereas creationists had begun their cru-

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<sup>93</sup> NELKIN, *supra* note 15, at 39, 44-47.

<sup>94</sup> LARSON, *supra* note 65, at 91, 95-96.

<sup>95</sup> *Id.* at 95.

<sup>96</sup> *Id.* at 95-96.

<sup>97</sup> Davis, *supra* note 63, at 213.

<sup>98</sup> See Scott, *supra* note 22. Following World War II, fundamentalists were "preoccupied with . . . setting up Bible camps, colleges, seminaries, newspapers and radio stations." Davis, *supra* note 63, at 213. Their focus at the time was prayer and sex education. *Id.* However, in the late 1960s, fundamentalists turned their attention back to evolution after the publication of the BSCS texts. *Id.* at 213 (quoting NELKIN, *supra* note 15, at 33).

<sup>99</sup> See Davis, *supra* note 63, at 213-14.

<sup>100</sup> *Id.*

<sup>101</sup> *Id.* at 214 (citing NUMBERS, *supra* note 77, at 249).

<sup>102</sup> *Id.* at 214.

<sup>103</sup> *Id.* (citing NUMBERS, *supra* note 77, at 244-45).

sade against evolution by demanding that evolution be banned entirely from public schools, they now endeavored to place creationism alongside evolution. This emphasis reveals both a calculation and a willingness to compromise the original creationist position in order to achieve the ultimate goal of having creationism taught in schools.

1. *McLean v. Arkansas Board of Education*

The Balanced Treatment for Creation-Science and Evolution-Science Act<sup>104</sup> was the statute at issue in *McLean v. Arkansas Board of Education*.<sup>105</sup> This Act declared that both creationism and evolution were sciences and therefore should be given equal treatment in the classroom.<sup>106</sup> Several religious and educational groups, along with a high school biology teacher, brought suit on the ground that the Act violated the Establishment Clause.<sup>107</sup>

A federal district court agreed with the plaintiffs and invalidated Arkansas' Balanced Treatment statute by applying the "purpose" prong of the *Lemon* test. The *Lemon* test, which courts apply to determine if a law establishes a religion, asks whether: "(1) the statute has a secular legislative purpose; (2) its principal or primary effect is one that neither advances nor inhibits religion; and (3) the statute fosters 'an excessive government entanglement with religion.'"<sup>108</sup> The court stated that although the Act espoused secular purposes, including "promoting academic freedom" and

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<sup>104</sup> ARK. CODE ANN. § 80-1663 (Michie Supp. 1985).

<sup>105</sup> 529 F. Supp. 1255 (E.D. Ark. 1982).

<sup>106</sup> *McLean*, 529 F. Supp. at 1256, 1259-60. Advocates of balanced treatment statutes articulate a number of reasons for giving creation as much classroom time as evolution. They argue that "the religion of 'secular humanism' is promoted in public schools through the teaching of evolution." House, *supra* note 73, at 392. They contend that by not giving equal time, the state is acting hostilely toward religion, and such action itself violates the free exercise rights of parents and children. *Id.* at 394. Further, they assert that because creation science is science, teaching both creation and evolution is the only way for the state to maintain a neutral position on the subject. *Id.* at 396. Finally, creationist advocates posit that the teaching of creation aids student educational development by exposing students to alternative theories and providing a diversity of perspective. *Id.* at 397.

<sup>107</sup> *McLean*, 529 F. Supp. at 1257.

<sup>108</sup> The *Lemon* Test was formulated by Chief Justice Warren Burger in the 1971 majority opinion of *Lemon v. Kurtzman*, 403 U.S. 602 (1971). *Lemon* dealt with Rhode Island and Pennsylvania programs that supplemented the salaries of teachers in religiously based, private schools who taught secular subjects. *Id.* The Court struck down both programs as violative of the establishment clause. *Id.* The purpose of the *Lemon* test is to determine when a law has the effect of establishing religion. *Id.* at 606-07, 612. Although the test has been criticized and modified since it was first articulated, it has served as the foundation for many of the Court's post-1971 establishment clause rulings. See *infra* Section III.B.1

“preventing discrimination against students on the basis of their person beliefs,” the legislative history revealed the opposite.<sup>109</sup>

The Act was both devised and lobbied for by Paul Ellwanger, president of Citizens for Fairness in Education.<sup>110</sup> Ellwanger, who believed that evolution was “a forerunner of . . . social ills such as Nazism, racism and abortion,” had written the law as part of “a religious crusade . . . between God and anti-God forces.”<sup>111</sup> The Act thus belied an effort to “introduce the Biblical version of creation into the public school curricula.”<sup>112</sup> Based on this non-secular purpose, the court found that the statute violated the First Amendment’s prohibition against the establishment of religion.<sup>113</sup>

Although the absence of a secular purpose was sufficient to invalidate the Act, the court went further and found that the Act also advanced religion.<sup>114</sup> In doing so, the court took the unprecedented step of trying to determine whether creation science was in fact science. After setting out five characteristics of “science” and making a detailed inquiry into the nature of creation-science,<sup>115</sup> the court ultimately concluded that creation science was more religion than science and the primary effect of the statute was to advance religion.<sup>116</sup> Although *McLean* was a federal district court decision, it represents the first time that a court held that creationism was ipso facto “religious teaching” in violation of the First Amendment.

## 2. *Edwards v. Aguillard*

In 1981, Louisiana passed the Balanced Treatment for Creation-Science and Evolution-Science in Public School Instruction Act,<sup>117</sup> which prohibited the teaching of evolution without equal instruction of creation-science.<sup>118</sup> The Act also required the development of curricula for creation science, but not for evolution.<sup>119</sup>

In *Aguillard v. Edwards*,<sup>120</sup> a group of students, teachers and religious leaders challenged the statute on the ground that it violated the Establish-

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<sup>109</sup> *McLean*, 529 F. Supp. at 1264.

<sup>110</sup> *See id.* at 1261-63.

<sup>111</sup> *Id.* at 1261.

<sup>112</sup> *Id.* at 1264.

<sup>113</sup> *Id.* at 1272-73.

<sup>114</sup> *Id.* at 1264.

<sup>115</sup> *McLean*, 529 F. Supp. at 1267.

<sup>116</sup> *Id.* at 1269, 1272.

<sup>117</sup> LA. REV. STAT. ANN. §§ 17:286.1 to :286.7 (West 2001).

<sup>118</sup> *Id.* § 17:286.4.

<sup>119</sup> *Id.* § 17:286.7.

<sup>120</sup> 765 F.2d 1251 (5th Cir. 1985).

ment Clause.<sup>121</sup> The Fifth Circuit affirmed the district court's summary judgment ruling in favor of the Plaintiffs based on a lack of a secular purpose.<sup>122</sup> It concluded that the actual purpose of the statute was to "discredit evolution by counterbalancing its teaching at every turn with the teaching of creationism, a religious belief."<sup>123</sup>

Subsequently, in the watershed decision of *Edwards v. Aguillard*,<sup>124</sup> the U.S. Supreme Court held in 1987 that a requirement that public schools teach "creation science" alongside evolution violated the Establishment Clause of the United States Constitution because it lacked a secular purpose.<sup>125</sup> In an opinion authored by Justice Brennan, the Court rejected Louisiana's argument that the secular purpose of the statute was to promote academic freedom.<sup>126</sup> Brennan noted that although the Court was "normally deferential to the state's articulation of a secular purpose," such a purpose must be "sincere and not a sham."<sup>127</sup> Moreover, the Court appeared to endorse the sentiments articulated by *McLean* concerning the scientific quality of creation science. The Court found that it is "inherently religious" to hold a belief that a supernatural Creator was responsible for creation.<sup>128</sup>

*Edwards* signaled to creationists that balanced treatment statutes would fare no better than anti-evolution statutes. However, rather than persuading creationists to abandon their crusade, the Court's ruling further mobilized the anti-evolution movement. Based in part on Justice Antonin Scalia's dissent in *Edwards*, which stated that Christian fundamentalists "are quite entitled, as a secular matter, to have whatever scientific evidence there may be against evolution presented in their schools,"<sup>129</sup> creationists devised new ways to bring alternative evolution theories into public school classrooms.

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<sup>121</sup> *Id.* at 1253-54.

<sup>122</sup> *Id.* at 1257-58.

<sup>123</sup> *Id.* at 1257.

<sup>124</sup> 482 U.S. 578 (1987).

<sup>125</sup> *Id.* at 596-97.

<sup>126</sup> *Id.* at 586.

<sup>127</sup> *Id.* at 586-96.

<sup>128</sup> *Id.* at 600 n.2 (citing *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255, 1266 (E.D. Ark. 1982)) ("Creation 'ex nihilo' means creation 'from nothing' and has been found to be an 'inherently religious concept.'").

<sup>129</sup> *Edwards*, 482 U.S. at 634 (Scalia, J., dissenting).

### C. *Recent Strategies*

Recent strategies to counter the presence of evolution in schools are particularly creative. They include modifying state science standards,<sup>130</sup> issuing disclaimers,<sup>131</sup> and a new “teach the controversy” approach.<sup>132</sup> With nearly two-thirds of Americans favoring the teaching of creationism alongside evolution,<sup>133</sup> creationists have succeeded in encouraging states such as Missouri, Ohio, Wisconsin<sup>134</sup> and South Carolina<sup>135</sup> to place issues related to the teaching of evolution on their 2005 legislative agendas or judicial dockets.<sup>136</sup>

#### 1. Modification of State Science Standards

In recent years, states have taken new steps to implement the old approach of substantially limiting—if not eliminating—any mention of the term “evolution” from state science curricula and standardized tests. Intelligent design proponents have turned their focus to statewide curriculum standards for several reasons. In addition to success at the state level having a broader impact than anything achieved with local school boards, there is a decreased risk of local activists making religious statements that jeopardize intelligent design’s chance of surviving constitutional challenge in court.<sup>137</sup> Furthermore, “[t]he decision-making bodies involved in approving state science standards tend to be small, not particularly knowledgeable, and,

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<sup>130</sup> See discussion *infra* Section II.C.1.

<sup>131</sup> See discussion *infra* Section II.C.2.

<sup>132</sup> See discussion *infra* Section II.C.3. Some other contemporary tactics that have proven less successful include pressuring textbook publishers to minimize their coverage of evolution and lobbying for governmental funding of private religious schools through tuition tax credits and vouchers. Davis, *supra* note 63, at 212-215.

<sup>133</sup> Neela Banerjee, *An Alternative to Evolution Splits a Pennsylvania Town*, N.Y. TIMES, Jan. 16, 2005, § 1 (citing a November 2004 CBS poll).

<sup>134</sup> In Wisconsin, the Grantsburg School Board voted unanimously on October 12, 2004 to adopt the following resolution: “When theories of origin are taught, students will study various scientific models/theories of origins and identify the scientific data supporting each.” The School Board felt that teaching only evolution was “tantamount to indoctrination.” Susanne Quick, *Grantsburg Unearths Questions of Science*, MILWAUKEE J. SENTINEL, Nov. 13, 2004.

<sup>135</sup> Banerjee, *supra* note 133 (“In South Carolina, legislation will be introduced to examine the state’s curriculum on teaching the origin of species.”).

<sup>136</sup> Susan Jacoby, *Caught Between Church and State*, N.Y. TIMES, Jan. 19, 2005, at A19.

<sup>137</sup> Wallis, *supra* note 51, at 30.

above all, elected,” so they are susceptible to political pressure and public opinion.<sup>138</sup>

The approach the Kansas school board took in 1999 to modify its state’s science standards is noteworthy. Other states have taken a similar approach.<sup>139</sup> On August 11, 1999, the Kansas State Board of Education voted 6-4 to adopt a modified version of the state’s science standards which would de-emphasize the teaching of evolution in Kansas public schools.<sup>140</sup> Specifically, state school boards would be given a set of guidelines that made it clear that schools had no obligation to teach evolution. Meanwhile, “macroevolution,”<sup>141</sup> was eliminated from state-mandated tests in order to further encourage teachers to focus their lessons on subjects other than evolution.<sup>142</sup> The new standards reflect a position that if creationism cannot be taught as a classroom subject, creationism’s place vis-à-vis evolution will at least be protected by discouraging the teaching of evolutionary theory.<sup>143</sup>

One year after the Kansas science standards were passed, however, voters ousted two anti-evolution board members and a third resigned.<sup>144</sup> The new board reinserted evolution into the science standards.<sup>145</sup> However, the defeat in November 2004 of a “pro-science” incumbent by a candidate who openly questioned evolution shifted the balance once again on the 10-member school board to six in favor of opposing evolution.<sup>146</sup>

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<sup>138</sup> *Id.* (quoting Glenn Branch of the National Center for Science Education) (internal quotation marks omitted).

<sup>139</sup> See Deborah A. Reule, Note, *The New Face of Creationism: The Establishment Clause and the Latest Efforts to Suppress Evolution in Public Schools*, 54 VAND. L. REV. 2555, 2583-84 & n.195 (2001) (citation omitted) (“Alabama, Kentucky, Illinois, and Colorado have all enacted measures to remove the word ‘evolution’ from science curricula standards . . .”).

<sup>140</sup> *Id.*; Davis, *supra* note 63, at 205. This vote defied the recommendations of a “twenty-seven-member state committee of scientists that had spent an entire year drafting [science] standards.” Davis, *supra* note 63, at 205.

<sup>141</sup> Davis, *supra* note 63, at 206 (“[M]acroevolution’ [is] the process by which one species of life evolves into another.”).

<sup>142</sup> *Id.* Although there was outrage from some members of the board, the drafting committee and Kansas Governor Bill Graves over the passage of these new science standards, creationist organizations such as the Institute for Creation Research praised the state’s actions. See Davis, *supra* note 63, at 206-07 for a collection of illuminating comments from both supporters and opponents of the state’s guidelines.

<sup>143</sup> Davis, *supra* note 63, at 215.

<sup>144</sup> Kate Beem, *Kansas Education Board Votes to Bring Back Evolution Theory*, THE KANSAS CITY STAR, Feb. 14, 2001.

<sup>145</sup> *Id.*

<sup>146</sup> Laura Parker, *School Science Debate Has Evolved*, USA TODAY, Nov. 28, 2004, at 3A.

In 2005, the science standards were scheduled to be revised again.<sup>147</sup> On February 9, the board voted to establish a subcommittee “to conduct hearings to investigate the merits of the two opposing views” of evolution and intelligent design.<sup>148</sup> Shortly thereafter, on February 15, a nonbinding resolution was introduced in the Kansas House of Representatives<sup>149</sup> which would, if enacted, urge “the State Board of Education and public schools within the state . . . to provide a curriculum that will help students understand the full range of scientific views that exist.”<sup>150</sup> Hearings on the new standards began on May 6 and a decision is expected by late fall. Whether Kansas will repeat in 2005 its decisions of 1999 remains to be seen, but there are determined efforts to achieve this end.

Kansas is not alone in trying to revise its science standards to deemphasize evolution.<sup>151</sup> Currently, science standard revision efforts are underway in at least ten other states.<sup>152</sup> For example, on March 16, 2005, bill HB

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<sup>147</sup> National Center for Science Education, *Kansas Kangaroo Court Keeps Evolving* (Mar. 11, 2005) [hereinafter, *Kansas Kangaroo Court*], [http://www.ncseweb.org/resources/news/2005/KS/28\\_kansas\\_kangaroo\\_court\\_keeps\\_ev\\_3\\_11\\_2005.asp](http://www.ncseweb.org/resources/news/2005/KS/28_kansas_kangaroo_court_keeps_ev_3_11_2005.asp). Several websites provide up-to-date content. See, for example, Kansas Citizens for Science Home Page, <http://www.kcfs.org>; Kansas Department of Education Home Page, <http://www.ksde.org>; National Center for Science Education Home Page, <http://www.ncseweb.org/default.asp>.

<sup>148</sup> *Kansas Kangaroo Court*, *supra* note 147.

<sup>149</sup> See National Center for Science Education, *Shenanigans in Kansas* (Feb. 18, 2005), at [http://www.ncseweb.org/resources/news/2005/KS/979\\_shenanigans\\_in\\_kansas\\_2\\_18\\_2005.asp](http://www.ncseweb.org/resources/news/2005/KS/979_shenanigans_in_kansas_2_18_2005.asp).

<sup>150</sup> H.R. 6018, 2005 Leg., 2005 Spec. Sess. (Kan. 2005), available at <http://www.kslegislature.org/bills/2006/6018.pdf>.

<sup>151</sup> Ohio found itself in the spotlight when a Fordham Foundation study gave Ohio an “F” for the way it taught evolution in the classroom, which was not to mention evolution in science classes from kindergarten through high school. See David Lore, *On Subject of ‘E,’ Ohio Ranks an ‘F,’* COLUMBUS DISPATCH, Sept. 27, 2000, at 4D. In the process of revising its science standards, which were finalized in 2002, Ohio reintroduced evolution but also attempted to include intelligent design. Josh Funk, *Kansas Attack on Evolution Began Trend*, WICHITA EAGLE, Feb. 20, 2005, at 1A, available at <http://www.ntskeptics.org/news/news2005-02-23.htm>. As of 2004, Ohio was teaching evolution while emphasizing its shortcomings. *Id.* In July 2001, the Hawaii Board of Education attempted to introduce creationism into public school science classes. Crystal Kua, *Bible Gains Ground at BOE: A Committee Investigates Changes to Standards that Now Require Students to Know About “Multiple Theories” of Origin, Not Just Evolution*, HONOLULU STAR-BULL., July 27, 2001, available at <http://starbulletin.com/2001/07/27/news/story1.html>.

<sup>152</sup> Bills submitted to state legislatures in 2005 have called variously for the following:

[R]equiring equal time for “scientific creationism” (Mississippi), requiring or allowing the teaching of “intelligent design” (Arkansas and Pennsylvania), investigating “alternatives” to evolution (South Carolina), teaching “scientific evidence inconsistent with or not supporting” evolution (Georgia), and teaching “the full range of scientific views that exist” (Alabama [two bills], Kansas [non-binding resolution], Missouri [requiring textbooks contain a “critical analysis of origins”]). One bill, in Montana, never completed the drafting process, so its content is unclear. Many of the bills contain versions of the so-called Santorum language, drafted originally by intelligent design proponent Phillip Johnson, promoted by Senator Rick Santorum, and removed from what became the No Child Left Behind Act.

1007 was introduced in the Pennsylvania House of Representatives to promote “intelligent design creationism.”<sup>153</sup> If enacted, the bill will add a section<sup>154</sup> to the Public School Code of 1949, enabling school boards to add intelligent design to any curriculum containing evolution and allowing teachers to use, subject to the approval of the board, “supporting evidence deemed necessary for instruction on the theory of intelligent design.”<sup>155</sup> The language of the bill reflects a concerted effort to prevent constitutional challenge through its explicit requirement that “[w]hen providing supporting evidence on the theory of intelligent design, no teacher in a public school may stress any particular denominational, sectarian or religious belief.”<sup>156</sup>

Against the backdrop of *Kitzmiller*, states are curiously watching both Kansas and Pennsylvania to determine whether intelligent design efforts can prevail.

## 2. Disclaimers

A second approach that creationists have recently adopted is that of an evolution “disclaimer.” Most disclaimers, which take the form of stickers attached to biology textbooks or statements read out-loud by teachers in science classrooms, amount to a statement that denies evolution as a scientific fact. Some disclaimers go further and reference the possibility that the origin of life can be attributable to Biblical accounts such as creationism. To date, Louisiana, Georgia, Alabama,<sup>157</sup> Oklahoma,<sup>158</sup> Arkansas,<sup>159</sup> South Carolina, and Mississippi have all attempted to implement disclaimers.<sup>160</sup>

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Nick Matzke, *Intelligent Design Bill Proposed in Pennsylvania*, National Center for Science Education, Apr. 1, 2005, at [http://www.ncseweb.org/resources/news/2005/PA/929\\_intelligent\\_design\\_bill\\_propos\\_4\\_1\\_2005.asp](http://www.ncseweb.org/resources/news/2005/PA/929_intelligent_design_bill_propos_4_1_2005.asp).

<sup>153</sup> H.R. 1007, 2005 Gen. Assem., Reg. Sess. (Pa. 2005), available at <http://www.legis.state.pa.us/WU01/LI/BI/BT/2005/0/HB1007P1153.HTM>.

<sup>154</sup> The section will be entitled “Teaching Theories on the Origin of Man and Earth.” *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> *Id.*

<sup>157</sup> From 1995 to 2001, Alabama textbooks contained the following disclaimer: “No one was present when life first appeared on Earth. Therefore, any statement about life’s origins should be considered a theory.” Eric Meikle, *State Board of Education Adopts Another Evolution Disclaimer*, National Center for Science Education, Nov. 8, 2001, at [http://www.ncseweb.org/resources/news/2001/AL/123\\_state\\_board\\_of\\_education\\_adopt\\_11\\_8\\_2001.asp](http://www.ncseweb.org/resources/news/2001/AL/123_state_board_of_education_adopt_11_8_2001.asp). The current disclaimer provides that evolution is a “controversial theory” which “should be approached with an open mind, studied carefully, and critically considered.” *Id.*

<sup>158</sup> In April 2000, Christian conservative Oklahoman legislators tried to pass a measure in the House of Representatives “requiring science textbooks to acknowledge that there is ‘one God as the Creator of human life in the universe.’” Reule, *supra* note 139, at 2586 n.211 (quoting Steve Benen,

Although the disclaimer strategy is becoming a widely used tactic, it has already failed to survive constitutional challenge. One of the most notable disclaimer cases involved the Board of Education in Tangipahoa Parish, Louisiana, which implemented in 1993 a policy requiring teachers to read a disclaimer to their students prior to beginning instruction on evolution.<sup>161</sup> The disclaimer sent the message that evolution was a theory, not a scientific fact, and that creationism could be a valid alternative.<sup>162</sup>

In *Freiler v. Tangipahoa Parish Board of Education*,<sup>163</sup> a federal district court held that the school board could not require its teachers to read a disclaimer whenever they taught evolution.<sup>164</sup> The Fifth Circuit later affirmed that the disclaimer was unconstitutional.<sup>165</sup> Both courts focused largely on the secular purpose prong of the *Lemon* test, noting that only two of the three stated objectives for the disclaimer were sincere.<sup>166</sup> In addition,

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*Science Test: Seventy-Five Years After the Scopes Trial, Religious Right Activists Are Trying New Tactics to Expel Evolution from the Public Schools*, 53 CHURCH & STATE 152, 152 (2000)). This measure died in committee before the proposal was put to a vote. *Id.*

<sup>159</sup> On February 10, 2005, Arkansas' Beebe School District responded to pressure from the ACLU and agreed to remove stickers placed in science textbooks that undermined evolution and introduced the concept of intelligent design. See Press Release, ACLU, ACLU of Arkansas Action Results in Removal of Evolution Disclaimers from Science Textbooks (Feb. 10, 2005) at <http://www.aclu.org/ReligiousLiberty/ReligiousLiberty.cfm?ID=17456&c=139>. The stickers, which carried the headline "A message from the Beebe School Board," described evolution as a "controversial theory" and suggested that "evolution alone is not adequate to explain the origins of life." *Id.* The stickers specifically named an "intelligent designer" as a possible source for those origins. *Id.*

<sup>160</sup> David J. Hacker, *Warning! Evolution Lies Within: Preserving Academic Freedom in the Classroom with Secular Evolution Disclaimers*, 16 WASH. U. J.L. & POL'Y 333, 334 (2004).

<sup>161</sup> See *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337, 341 (5th Cir. 1999).

<sup>162</sup> The disclaimer stated:

Whenever, in classes of elementary or high school, the scientific theory of evolution is to be presented, whether from textbook, workbook, pamphlet, or other written material, or oral presentation, the following statement shall be quoted immediately before the unit of study begins as a disclaimer from endorsement of such a theory. "It is hereby recognized by the Tangipahoa Board of Education that the lesson to be presented, regarding the origin of life and matter is known as the Scientific Theory of Evolution and should be presented to inform students of the scientific concept and not intended to influence or dissuade the Biblical version of Creation or any other concept. It is further recognized by the Board of Education that it is the basic right and privilege of each student to form his/her own opinion and maintain beliefs taught by parents on this very important matter of the origin of life and matter. Students are urged to exercise critical thinking and gather all information possible and closely examine each alternative toward forming an opinion."

*Freiler*, 185 F.3d at 341.

<sup>163</sup> 975 F. Supp. 819 (E.D. La. 1997), *aff'd*, 185 F.3d 337 (5th Cir. 1999).

<sup>164</sup> *Id.* at 821.

<sup>165</sup> *Freiler*, 185 F.3d at 349.

<sup>166</sup> See *id.* at 345-47; *Freiler*, 975 F. Supp. at 829-31. The three stated purposes of the disclaimer were as follows: "(1) to encourage informed freedom of belief, (2) to disclaim any orthodoxy of belief that could be inferred from the exclusive placement of evolution in the curriculum, and (3) to reduce

the disclaimer failed the “effect” prong of the *Lemon* test because the primary effect of the disclaimer was to promote and maintain a particular religious viewpoint.<sup>167</sup> In 2000, the Supreme Court denied the Board’s petition for writ of certiorari.<sup>168</sup>

The most recent disclaimer case was decided January 13, 2005, when a federal judge in Georgia ruled that schools in Cobb County must remove from science textbooks stickers that read: “Evolution is a theory, not a fact”<sup>169</sup> that should be “approached with an open mind, studied carefully, and critically considered.”<sup>170</sup> The ruling was based on the judge’s application of the *Lemon* test and subsequent conclusion that the stickers, perhaps inadvertently, “convey a message of endorsement of religion”<sup>171</sup> violating the First Amendment’s separation of church and state and the Georgia Constitution’s prohibition against using public money to aid religion.

When applying the *Lemon* test, the judge noted that the purpose of the disclaimer sticker was sufficiently secular—it fostered critical thinking and presented evolution to students who oppose it in a “not unnecessarily hostile” way<sup>172</sup>—but nevertheless, the effect of the sticker was to convey a message of endorsement of religion. The judge concluded that “the sticker sends a message to those who oppose evolution for religious reasons that they are favored by members of the political community, while the sticker sends a message to those who believe in evolution that they are political outsiders.”<sup>173</sup> Given the roots of the sticker and its language, the judge recognized that any informed, reasonable person would understand the religious connotation behind it.<sup>174</sup>

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offense to the sensibilities and sensitivities of any student or parent caused by the teaching of evolution.” *Freiler*, 185 F.3d at 344.

<sup>167</sup> *Freiler*, 185 F.3d at 346. The primary effect was to promote and maintain a particular religious viewpoint, i.e. creationism. *Id.* The court’s decision was based on three factors: first, the disclaimer both questioned evolution and urged teachers to consider alternative theories; second, it reminded students that they may maintain their own beliefs about the origins of human life as taught in the home; third, it mentioned only the “Biblical version of creation” as an alternative theory. *Id.*

<sup>168</sup> *Freiler v. Tangipahoa Parish Bd. of Educ.*, 530 U.S. 1251 (2000).

<sup>169</sup> The full text of the disclaimer sticker read: “This textbook contains material on evolution. Evolution is a theory, not a fact, regarding the origin of living things. This material should be approached with an open mind, studied carefully and critically considered.” Ellen Barry, *Judge Nixes Stickers Challenging Evolution*, L.A. TIMES, Jan. 14, 2005, at A11.

<sup>170</sup> Ariel Hart, *Judge in Georgia Orders Anti-Evolution Stickers Removed from Textbooks*, N.Y. TIMES, Jan. 14, 2003, at A16.

<sup>171</sup> *Selman v. Cobb County Sch. Dist.*, No. 1:02-CV-2325-C, 2005 WL 83829, at \*19 (N.D. Ga. Jan. 13, 2005).

<sup>172</sup> *Id.*

<sup>173</sup> *Id.*

<sup>174</sup> *Id.*

Despite the court's holding, the Cobb County School Board has already voted 5-2 to appeal to the Eleventh Circuit.<sup>175</sup> It will argue that the U.S. District Court's order to remove the disclaimer stickers "amounts to unnecessary judicial intrusion into local control of schools."<sup>176</sup> Following the Cobb County ruling, officials in states such as Alabama, which has required disclaimers since 1996,<sup>177</sup> were quick to respond that they did not think that the ruling affected the evolution disclaimers in their state science books.<sup>178</sup>

Based on these events, it is clear that creationists will not be easily deterred from their goal. Whether they orchestrate revision of state science standards, disclaimers, or tactics not yet imagined—creationists will continue to fight the teaching of evolution despite recent setbacks or opposition from the courts.

### 3. "Teach the Controversy"

Today, "teach the controversy" is the latest creationist tactic and the one particularly associated with intelligent design proponents. This approach was developed in March 2002 by Stephen Meyer, Director of the Discovery Institute, and Bruce Chapman, the Institute's President, upon their realization that other tactics were complicating efforts to limit the teaching of evolution.<sup>179</sup>

Meyer considers a "teach the controversy" approach a winning strategy because it avoids "unnecessary constitutional fights" over separation of church and state while still succeeding in calling evolution into question.<sup>180</sup> Specifically, this strategy evades "defeats suffered by creationists" while

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<sup>175</sup> Associated Press, *School Board to Appeal Evolution Ruling* (Jan. 18, 2005), available at [www.msnbc.msn.com/id/6840416](http://www.msnbc.msn.com/id/6840416).

<sup>176</sup> *Id.*

<sup>177</sup> Joe Kaplinsky, *Creationism, Pluralism and the Compromising of Silence: The Trouble with "Teaching the Controversy,"* The American Scientific Affiliation, at <http://www.asa3.org/ASA/topics/Faith-Science/%20News/Kaplinsky2005.html> (Mar. 1, 2005). (The American Scientific Affiliation is an organization of Christian scientists.)

<sup>178</sup> Associated Press, *Judge Nixes Evolution Textbook Stickers - Disclaimer Questioning Theory Ruled Unconstitutional* (Jan. 13, 2005), at <http://www.msnbc.msn.com/id/6822028>. The Alabama disclaimer states that "any statement about life's origins should be considered theory, not fact," and lists four of the "many unanswered questions about the origin of life which are not mentioned in your textbook." *Id.* One of the questions is, "How did you and all living things come to possess such a complete and complex set of 'Instructions' for building a living body?" *Id.*

<sup>179</sup> David K. Dewolf, Stephen C. Meyer, & Mark Edward Deforrest, *Teaching the Origins Controversy: Science, or Religion or Speech?*, 2000 UTAH L. REV. 39 (2000) (laying out the Discovery Institute's legal strategy).

<sup>180</sup> Shaw, *supra* note 55.

“buying time” for the 40-plus scientists affiliated with the Institute to perfect the theory of intelligent design and present it in a manner capable of surviving judicial scrutiny.<sup>181</sup>

Meyer recognizes that “there are a hundred ways to get [a ‘teach the controversy approach’] wrong, and only a few to get [it] right.”<sup>182</sup> Ohio—which followed Kansas’ lead in revising its science standards—got it right, according to Meyer, when its Board of Education voted in 2002 to require teaching that scientists “continue to investigate and critically analyze aspects of evolutionary theory.”<sup>183</sup> Even evolutionists had to concede that Ohio’s approach was a victory for intelligent-design supporters.<sup>184</sup> In sharp contrast, Meyer called Georgia’s disclaimer stickers a “dumb idea.”<sup>185</sup>

Tellingly, Meyer also thinks that the School Board in Dover, Pennsylvania got it wrong.<sup>186</sup> Meyer admits that “intelligent design isn’t established enough yet for [inclusion in the science curriculum].”<sup>187</sup> Whether Meyer is right will be determined by *Kitzmiller v. Dover Area School District*.

### III. THE LATEST EVOLUTION CONTROVERSY TO MAKE IT TO THE COURTS: A CASE STUDY OF INTELLIGENT DESIGN IN DOVER, PENNSYLVANIA

The town of Dover, Pennsylvania, which is located twenty-five miles southwest of Harrisburg and has a population of 25,000, was described by a New York Times article as a “cluster of modest churches, clapboard homes, weathered family restaurants” and “rolling farmland.”<sup>188</sup> In the article, its citizens are portrayed as particularly tolerant, having themselves originally settled as a small Protestant denomination among the Pennsylvania Dutch.<sup>189</sup> Despite its roots, however, the reality is that the demographics and tolerance of Dover’s citizenry may be changing.<sup>190</sup>

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<sup>181</sup> Peter Slevin, *Battle on Teaching Evolution Sharpens*, WASH. POST, Mar. 14, 2005, at A1.

<sup>182</sup> Shaw, *supra* note 55.

<sup>183</sup> *Id.*

<sup>184</sup> *Id.*

<sup>185</sup> *Id.*

<sup>186</sup> In fact, he told an audience just that at a roundtable discussion that took place in Topeka, Kansas on Nov. 4, 1999. Interview with Robert O’Neil, participant in Washburn Round Table (Apr. 15, 2005), <http://www.arn.org/docs/kansas/washburn110499.htm>.

<sup>187</sup> Shaw, *supra* note 55.

<sup>188</sup> Banerjee, *supra* note 133.

<sup>189</sup> *Id.*

<sup>190</sup> A growing number of conservative Christians in Dover believe that their faith is being marginalized. In the November 2004 presidential election, the county in which Dover is located (York) voted for President George Bush by a nearly 2 to 1 margin. *Id.* Nevertheless, the controversy was arguably not born out of blue-red competition. The attempts to work intelligent design into the curriculum dates back

In 2004, the Dover School Board voted to introduce “intelligent design” into its 2,800 student public school district.<sup>191</sup> In response, eleven local parents represented by the ACLU and Americans United for the Separation of Church and State sued the School Board in mid-December of that year.<sup>192</sup> *Kitzmiller v. Dover Area School District* is the first-ever challenge to the constitutionality of intelligent design. It will make Dover, Pennsylvania a critical testing ground in the ever-widening national debate over the instruction of evolution in public schools.

This section provides background on the Dover School Board’s actions and speculates on how the district court deciding *Kitzmiller* might rule on this case of first impression.

### A. *Facts of the Case*

Dover’s intelligent design controversy began with a dispute over what textbook to purchase for use in Dover High School biology classes.<sup>193</sup> The text at issue was the latest edition of *Biology* by Kenneth Miller and Joseph Levine published by Prentice Hall.<sup>194</sup> In a June 7, 2004 public meeting of the Dover Area School Board William Buckingham, Chair of the Board’s

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to the early 1990s when it became a goal of the movement. Susan Jacoby writes in *The New York Times*, “Many liberals mistakenly believe that these controversies are largely the product of the post-1980 politicalization of the Christian right. In fact, the elected anti-evolutionists on local and state school boards today are the heirs of decades of fundamentalist campaigning against Darwinism through back-door pressure on textbook publishers and school officials.” Jacoby, *supra* note 136.

<sup>191</sup> Toland, *supra* note 50.

<sup>192</sup> ACLU *Kitzmiller* Complaint, *supra* note 1; Americans United for Separation of Church and State, *Pennsylvania Parents File First-Ever Challenge to “Intelligent Design” Instruction in Public Schools* (Dec. 14, 2004), at [http://www.au.org/site/News2?page=NewsArticle&id=7089&news\\_iv\\_ctrl=1241&abbr=pr](http://www.au.org/site/News2?page=NewsArticle&id=7089&news_iv_ctrl=1241&abbr=pr). Defendant’s Motion for Summary Judgment was denied on September 12, 2005. The bench trial subsequently began September 26, 2005, and is expected to last through November 2005. Court Schedule, available at <http://www.pamd.uscourts.gov/kitzmiller/kitzmiller.htm> (last visited Oct. 31, 2005). Judge John E. Jones III, whom President Bush nominated to the federal bench in 2002, is presiding. Biography of Judge John E. Jones III, available at <http://www.pamd.uscourts.gov/kitzmiller/jonesbio.htm> (last visited Oct. 31, 2005). A host of experts will testify in the *Kitzmiller* case. Witnesses for the defense include intelligent design proponent Michael Behe. National Center for Sciences Education, *Kitzmiller et al. v. Dover Area School District: Legal Documents, Trial Materials, Updates* (Sept. 21, 2005), at [http://www2.ncseweb.org/wp/?page\\_id=12](http://www2.ncseweb.org/wp/?page_id=12). William Dembski and Stephen Meyer were also both scheduled to give expert testimony for the defendants, but both have since withdrawn. *Id.* For the plaintiffs, Barbara Forrest and Kenneth Miller are among those scheduled to testify. *Id.* For a full list of expert witnesses in the trial, see *id.*

<sup>193</sup> ACLU *Kitzmiller* Complaint, *supra* note 1, ¶ 29.

<sup>194</sup> *Id.*

Curriculum Committee, criticized *Biology* as being “laced with Darwinism.”<sup>195</sup>

Buckingham advocated that the Board purchase instead a textbook that included creationism as well as Darwin’s theory of evolution.<sup>196</sup> When prompted about the potential need to also address the views of Hindus, Buddhists, Muslims and other competing faiths on the origin of life, Buckingham reportedly said that “[t]his country wasn’t founded on Muslim beliefs or evolution.”<sup>197</sup> He continued that “[it] was founded on Christianity and our students should be taught as such.”<sup>198</sup> At a subsequent public meeting of the Dover School Board held on June 14, 2004, Mr. Buckingham continued to reveal his motivations for replacing *Biology*.<sup>199</sup> He allegedly said, “Two thousand years ago, someone died on a cross. Can’t someone take a stand for him?”<sup>200</sup> Finally, Buckingham is on record as having claimed that “[n]owhere in the Constitution does it call for a separation of church and state.”<sup>201</sup>

On August 2, 2004, with the deadline for ordering a new textbook having passed, Mr. Buckingham threatened to vote down the purchase of *Biology* unless the School District also purchased *Of Pandas and People: The Central Question of Biological Origin*.<sup>202</sup> Despite a 5-3 vote in favor of purchasing only *Biology*, the School District subsequently accepted an anonymous donation of fifty copies of *Pandas* for Dover High School.<sup>203</sup> Thereafter, a series of events secured the place of intelligent design in the Dover biology curriculum.

On October 18, 2004, the School Board passed by a 6-3 vote a resolution that it would make students aware of gaps and problems in Darwin’s theory of evolution.<sup>204</sup> The resolution was “developed without the participa-

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<sup>195</sup> *Id.*

<sup>196</sup> *Id.*

<sup>197</sup> *Id.*

<sup>198</sup> *Id.*

<sup>199</sup> See ACLU Kitzmiller Complaint, *supra* note 1, ¶ 30.

<sup>200</sup> *Id.*; Banerjee, *supra* note 133.

<sup>201</sup> ACLU Kitzmiller Complaint, *supra* note 1, ¶ 30.

<sup>202</sup> *Id.* ¶ 31.

<sup>203</sup> *Id.* ¶¶ 31-32. Ultimately, the School District accepted sixty donated copies. Brief for the ACLU at 17, *Kitzmiller v. Dover Area Sch. Dist.*, 229 F.R.D. 463 (M.D. Pa. 2005) (No. 4:CV 04-2688). During a January 2005 deposition, Buckingham stated that he did not know who donated the copies of *Pandas* to the School District. Mike Argento, *Buckingham Seesaws on the Stand*, YORK DAILY REC., Oct. 28, 2005, available at <http://ydr.com/story/doverbiology/92062/>. In recent testimony before the district court, however, Buckingham “acknowledged he had collected about \$850 from members of his church to pay for about 60 copies of ‘Of Pandas and People.’” Jon Hurdle, *Intelligent Design Advocate Denies Religious Agenda*, REUTERS, Oct. 27, 2005, at <http://today.reuters.com/news/newsArticleSearch.aspx?storyID=317574+27-Oct-2005>.

<sup>204</sup> ACLU Kitzmiller Complaint, *supra* note 1, ¶ 33.

tion of district science faculty,” and the faculty opposed the resolution after learning of it.<sup>205</sup> That same day, two board members resigned in protest.<sup>206</sup> Then, on December 6, 2004, yet another School Board member resigned, stating that she regretted voting for the October 18 resolution and had only done so under pressure of board members who had accused her of being an atheist and un-Christian.<sup>207</sup>

Intelligent design’s sudden presence in the Dover curriculum was confirmed on November 19, 2004, when the School District issued a press release communicating that the District’s new policy was to “treat intelligent design as a bona fide scientific theory competing with the scientific theory of evolution.”<sup>208</sup> The release explained that in an effort to create a “balanced” science curriculum, Dover would make *Pandas* available for students,<sup>209</sup> and teachers would read an explanatory statement prior to teaching any chapters related to evolution.<sup>210</sup>

In early January 2005, however, Dover High School science teachers refused to read the statement criticizing evolution and crediting intelligent design as an alternative theory.<sup>211</sup> The teachers claimed that forcing them to do so violated Pennsylvania’s professional standards and practices code for teachers.<sup>212</sup> Moreover, the teachers argued that the change to the curriculum amounted to “teaching intelligent design, a theory that was inherently religious and not scientific.”<sup>213</sup> One teacher predicted that “the first question

<sup>205</sup> *Id.* ¶ 34.

<sup>206</sup> *Id.* ¶ 36. Two other School Board members had offered their resignations on October 4, 2004, and they became effective on November 1 and November 15 of 2004. *Id.* ¶ 37.

<sup>207</sup> *Id.* ¶ 39. Another resigning board member had been asked if she had been “born again.” *Id.* ¶ 36.

<sup>208</sup> ACLU Kitzmiller Complaint, *supra* note 1, ¶ 40.

<sup>209</sup> *Id.*

<sup>210</sup> The text of the statement is as follows:

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

Letter from Michael R. Baksa, Assistant Superintendent, Dover Area School District, to Parents (no date), available at [http://www.dover.k12.pa.us/3598\\_731791451/site/default.asp](http://www.dover.k12.pa.us/3598_731791451/site/default.asp).

<sup>211</sup> Associated Press, *Teacher Refuses “Intelligent Design” Statement* (Oct. 7, 2005), available at <http://www.msnbc.msn.com/id/9620585>.

<sup>212</sup> Toland, *supra* note 50.

<sup>213</sup> Banerjee, *supra* note 133.

[students] will ask is, ‘Well, who’s the designer. Do you mean God?’<sup>214</sup> In reaction to the teacher’s refusal to read the statement, the School Board decided that an administrator would read the statement instead.<sup>215</sup>

### B. *Establishment Clause Jurisprudence*

The Establishment Clause of the First Amendment of the United States Constitution states that “Congress shall make no law respecting an establishment of religion.”<sup>216</sup> The Clause has been interpreted fundamentally as erecting a “wall of separation between church and state.”<sup>217</sup>

As a practical matter, the Supreme Court stipulated in *Everson v. Board of Education*<sup>218</sup> the requirements of the Establishment Clause: Government must not “pass laws which aid one religion, aid all religions, or prefer one religion over another.”<sup>219</sup> This initial interpretation was clarified in *McCullum v. Board of Education*<sup>220</sup> as requiring only that government maintain a neutral stance toward religion, not treat all religions equally.<sup>221</sup> As an increasing number of cases involving religion in schools came before the Court, this principle was gradually expanded. Steadily, the policy of government abstention evolved into a policy of complete separation of church and state, best stated by the holding of *Zorach v. Clauson*<sup>222</sup> that “[t]here cannot be the slightest doubt that the First Amendment reflects the philosophy that Church and State should be separated. And . . . the separation must be complete and unequivocal.”<sup>223</sup>

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<sup>214</sup> *Id.*

<sup>215</sup> *Monkey See, Monkey Do?*, J. EDITORIAL REP., May 27, 2005, at <http://www.pbs.org/wnet/journaleditorialreport/052705/briefing.html>

<sup>216</sup> U.S. CONST. amend. I.

<sup>217</sup> *Reynolds v. United States*, 98 U.S. 145, 164 (1878) (citations omitted).

<sup>218</sup> 330 U.S. 1 (1947) (holding that reimbursement to parents for public transportation to religious schools did not violate the Establishment Clause).

<sup>219</sup> *Id.* at 15.

<sup>220</sup> 333 U.S. 203 (1948).

<sup>221</sup> The government must “abstain from fusing functions of Government and of religious sects.” *Id.* at 227 (Frankfurter, J., concurring) (striking down a program that allowed public school children to receive sectarian education during school time and on school premises). “[T]he Constitution . . . prohibit[s] the Government common to all from becoming embroiled, however innocently, in the destructive religious conflicts of which the history of even this country records some dark pages.” *Id.* at 228.

<sup>222</sup> 343 U.S. 306 (1952) (upholding a release-time program that allowed public school children to leave school in order to receive religious education and distinguishing itself from *McCullum* on the ground that this case did not utilize public funds nor offer the religious instruction on public school property).

<sup>223</sup> *Zorach*, 343 U.S. at 312.

Although the Supreme Court has set forth the general principle of the Establishment Clause, it has yet to settle on an analytical framework by which to apply it. Presently, the Court utilizes either the *Lemon* test, the Endorsement test, or the Coercion test, or some combination of those, in its Establishment Clause jurisprudence.<sup>224</sup>

### 1. The *Lemon* Test

The Court's first attempt to set forth a framework to determine whether a particular government action complied with the Establishment Clause was in *Lemon v. Kurtzman*.<sup>225</sup> In that case, the Court laid out three distinct prongs: "(1) the statute must have a secular legislative purpose; (2) [the statute's] principal or primary effect must be one that neither advances nor inhibits religion; [and] (3) the statute must not foster an excessive government entanglement with religion."<sup>226</sup>

As applied and interpreted, the first prong of the *Lemon* test—the "purpose prong"—does not require that government have a purely secular purpose. Rather, it requires that the government's purpose not be to advance a specific religion or religion in general.<sup>227</sup> The second prong—the "effects" test—evaluates the impact that the state's action has on those who come within its reach.<sup>228</sup> Finally, the third prong is considered to be a "question of kind and degree"<sup>229</sup> as to the interaction between government and religion.

The second and third prongs of the *Lemon* test were modified further in the context of government aid to religious schools in *Agostini v. Felton*.<sup>230</sup> In that case, the Court stated three factors that should be considered in determining a statute's effect: whether the statute (1) results in government indoctrination; (2) defines its recipients by reference to religion; or (3) creates excessive entanglement.<sup>231</sup> The entanglement prong was thus recast

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<sup>224</sup> Before *Lemon*, the Court utilized a two-prong test articulated in *School District v. Schempp*: [1] that the law or statute has a secular purpose; and [2] that the primary effect not advance nor inhibit religion. 374 U.S. 203, 222 (1963). This test reflects the court's initial interpretation of the Establishment Clause as requiring neutrality. However, when the court began to recognize that interaction between church and state might be inevitable, it suggested that the separation between the two be regarded as a "blurred" line rather than a wall. *Lemon v. Kurtzman*, 403 U.S. 602, 614 (1971) (discussing *Walz v. Tax Comm'n*, 397 U.S. 664 (1970)).

<sup>225</sup> 403 U.S. 602 (1971).

<sup>226</sup> *Id.* at 612-13.

<sup>227</sup> *Wallace v. Jaffree*, 472 U.S. 38, 52-53, 56 (1985).

<sup>228</sup> *Lemon*, 403 U.S. at 612.

<sup>229</sup> *Lynch v. Donnelly*, 465 U.S. 668, 684 (1984).

<sup>230</sup> 521 U.S. 203 (1997).

<sup>231</sup> *Id.* at 234.

as “one criterion relevant to determining a statute’s effect.”<sup>232</sup> Although the *Lemon* test has not been consistently applied since the early 1990s,<sup>233</sup> it is currently the standard test for scrutinizing Establishment Clause questions.

## 2. The Endorsement Test

The “Endorsement” test originated in Justice Sandra Day O’Connor’s *Lynch v. Donnelly* concurrence.<sup>234</sup> As O’Connor stated, and as it has since been applied, a government has effectively endorsed religion in violation of the Establishment Clause if it “sends a message to nonadherents that they are outsiders, not full members of the political community, and an accompanying message to adherents that they are insiders, favored members of the political community.”<sup>235</sup> Hence, the test inquires as to whether the government action at issue has the effect of communicating a position of endorsement or disapproval of religion.

## 3. The Coercion Test

The “Coercion” test was proposed by Justice Anthony Kennedy in a plurality opinion in *Lee v. Weisman*,<sup>236</sup> a case which examined clergy-led prayer at graduation ceremonies. The Court held that “[t]he school district’s supervision and control of a high school graduation ceremony places public pressure, as well as peer pressure, on attending students to stand as a group or, at least, maintain respectful silence during the invocation and benediction.”<sup>237</sup> The Court continued that “[t]he pressure, though subtle and indirect, can be as real as any overt compulsion.”<sup>238</sup> Compared to the “[t]he atmosphere at the opening of a session of the state legislature, where adults are free to enter and leave with little comment and for any number of reasons,” a school graduation is one of the “most important [events] for [a]

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<sup>232</sup> *Mitchell v. Helms*, 530 U.S. 793, 808 (2000).

<sup>233</sup> Certain justices began to find the *Lemon* test problematic. Both Justice Scalia and Justice Rehnquist advocate for the Court’s complete abandonment of the test. See *Edwards v. Aguillard*, 482 U.S. 578, 636-40 (1987) (Scalia, J. dissenting); *Wallace v. Jaffree*, 472 U.S. 38, 75-80 (1985) (Rehnquist, J., dissenting). While Justice O’Connor would not abandon the test, she believes it can be improved. *Wallace*, 472 U.S. at 68-69; see *infra* Section III.B.2.

<sup>234</sup> *Lynch v. Donnelly*, 465 U.S. 668, 688-94 (1984) (O’Connor, J., concurring).

<sup>235</sup> *Id.* at 688.

<sup>236</sup> 505 U.S. 577 (1992).

<sup>237</sup> *Id.* at 593.

<sup>238</sup> *Id.*

student to attend.”<sup>239</sup> Thus, the Coercion test articulates that “[a]t a minimum, the Constitution guarantees that government may not coerce anyone to support or participate in religion or its exercise.”<sup>240</sup>

The courts most often use the *Lemon* test in cases that address religion in schools.<sup>241</sup> Moreover, until *Lemon* is expressly overruled, it is likely that lower courts will continue to rely on it.

### C. *(Un)Constitutionality of Dover, Pennsylvania’s Intelligent Design Policy*

The ACLU asserts in the complaint it filed in *Kitzmiller* that the plaintiffs are entitled to “relief under 42 U.S.C. § 1983 because defendants, acting under the color of law, subjected plaintiffs to a deprivation of their rights under the Establishment Clause of the First Amendment of the Constitution of the United States, as applied to the states by the Fourteenth Amendment.”<sup>242</sup> Constitutionally, schools may teach a variety of explanations about life on earth—including religious ones—in comparative religion classes.<sup>243</sup> In science classes, however, teachers may only present genuinely scientific theories and scientific critiques of theories.<sup>244</sup> It is unlawful for schools to teach religious explanations of life on earth—such as creationism—or refuse to teach evolution because it is inconsistent with a religious explanation.<sup>245</sup>

Specifically, the ACLU contends that “[t]he October 18, 2004 school board resolution and the November 19, 2004 press release (collectively, the ‘defendants’ intelligent design policy’ . . .) facially and as applied violate

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<sup>239</sup> *Id.* at 597. Justice Antonin Scalia wrote in the dissenting opinion that

[f]rom our Nation’s origin, prayer has been a prominent part of governmental ceremonies and proclamations. The Declaration of Independence, the document marking our birth as a separate people, “appealed to the Supreme Judge of the world for the rectitude of our intentions” and avowed “a firm reliance on the protection of divine Providence.” In his first inaugural address, after swearing his oath of office on a Bible, George Washington deliberately made a prayer a part of his first official act as President . . . . Most recently, President Bush, continuing the tradition established by President Washington, asked those attending his inauguration to bow their heads, and made a prayer his first official act as President.

*Id.* at 633-34 (Scalia, J., dissenting).

<sup>240</sup> *Id.* at 587 (citations omitted).

<sup>241</sup> See, e.g., *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337, 343-44 (1999).

<sup>242</sup> ACLU *Kitzmiller* Complaint, *supra* note 1, ¶ 49.

<sup>243</sup> ACLU, *Joint Statement of Current Law on Religion in the Public Schools* (Apr. 12, 1995) [hereinafter ACLU Joint Statement], at <http://www.aclu.org/ReligiousLiberty/ReligiousLiberty.cfm?ID=9007&c=139>.

<sup>244</sup> *Id.*

<sup>245</sup> *Id.*

the Establishment Clause<sup>246</sup> in the following ways. First, the policy lacks a secular purpose.<sup>247</sup> The purpose of the policy is to “advance and endorse the specific religious viewpoint and beliefs encompassed by the assertion or argument of intelligent design.”<sup>248</sup> Second, the defendants’ intelligent design policy “convey[s] a governmental message that students should subscribe to the religious views reflected in the assertion or argument of intelligent design.”<sup>249</sup> This endorsement and promotion of religious views makes plaintiffs feel “harmed, intimidated, and distressed.”<sup>250</sup> Third, the defendants’ intelligent design policy results in an “excessive entanglement of government and religion, coerced religious instruction, and an endorsement by the state of religion over non-religion and of one religious viewpoint over others.”<sup>251</sup> In addition, the policy results in “excessive entanglement of government and religion because . . . the Dover Area School District will have to monitor the classroom behavior of its teachers to prevent them from identifying God as the ‘intelligent agent’ or ‘designer’” upon student questioning.<sup>252</sup>

This section analyzes *Kitzmiller* under the Establishment Clause and concludes that given its facts, the United States District Court for the Middle District of Pennsylvania is likely to find that the plaintiffs are entitled to the declaratory and injunctive relief they seek. However, since the court might not reach some of the more difficult questions raised by the case, this section also speculates on how a court forced to confront such questions would decide.

### 1. *Lemon* Test Applied

The Dover Area School District’s intelligent design policy will most likely fail the *Lemon* test because it lacks a secular purpose; specifically, the School Board, in devising its intelligent design policy, was motivated by religious considerations that contravene the Establishment Clause. Although the court may take the opportunity to engage in an analysis of intelligent design as a religious doctrine per se, it will likely limit its discussion to the first prong of *Lemon* since the case can be decided on that issue alone.

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<sup>246</sup> ACLU *Kitzmiller* Complaint, *supra* note 1, ¶ 50.

<sup>247</sup> *Id.*

<sup>248</sup> *Id.*

<sup>249</sup> *Id.* ¶ 51.

<sup>250</sup> *Id.*

<sup>251</sup> *Id.* ¶ 52.

<sup>252</sup> ACLU *Kitzmiller* Complaint, *supra* note 1, ¶ 52.

The Dover School Board claims that its purpose in adopting its intelligent design policy—which consists of making students aware of gaps/problems in Darwin’s theory of evolution and of other theories of evolution including, but not limited to intelligent design—is to “provide students with a balanced view, and not to teach or present religious beliefs.”<sup>253</sup> Similarly, making *Of Pandas and People: The Central Question of Biological Origin* available for students to access on a voluntary basis is intended to foster a fair and balanced science curriculum.<sup>254</sup> From the School Board’s perspective, its policy has the effect of providing an opportunity for “open critical discussion.”<sup>255</sup> Moreover, its policy is consistent with the Establishment Clause because teachers are directed not to teach intelligent design, creationism, or present their, or the Board’s, religious beliefs.<sup>256</sup> Finally, Superintendent Dr. Nilsen and others intend to monitor science instruction to ensure that religion is neither inhibited nor promoted by its policy.<sup>257</sup>

Courts are normally deferential to governments’ articulation of a secular purpose, so long as it is “sincere and not a sham.”<sup>258</sup> In the case at hand, the court is likely to find that the District’s stated secular purpose is not its chief motivating factor. School Board discussions reveal that, contrary to the Board’s purported purpose, there is a religious motivation behind the adoption of the District’s intelligent design policy. As discussed in Section III.A. *supra*, while the District contends that its purpose is to present students with a balanced curriculum, the events leading to the Board’s adoption of the policy conspicuously indicate that its real intent is to expose students to origin of life theories consistent with the Bible. The most convincing evidence of the District’s non-secular purpose are the theistic statements of the School Board’s leading proponent for intelligent design, the mysterious arrival of fifty copies of *Pandas*, the harassment and subsequent resignation of School Board members who opposed the new policy, and the swift adoption of the resolution and press release securing intelligent design’s place in Dover’s curriculum despite initial opposition.

While lack of a secular purpose is sufficient to strike down Dover’s policy, the court may also consider whether *Lee v. Weisman*<sup>259</sup> and *Santa Fe Independent School District v. Jane Doe*<sup>260</sup> principles are applicable on the

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<sup>253</sup> Press Release, Dover Area School District, Biology Curriculum (Nov. 19, 2004), available at [http://www.ncseweb.org/kitzmiller/DASD\\_Policy.htm](http://www.ncseweb.org/kitzmiller/DASD_Policy.htm).

<sup>254</sup> *Id.*

<sup>255</sup> *Id.*

<sup>256</sup> *Id.*

<sup>257</sup> *Id.*

<sup>258</sup> *Edwards v. Aguillard*, 482 U.S. 578, 586-87 (1987).

<sup>259</sup> 505 U.S. 577 (1992).

<sup>260</sup> 530 U.S. 290 (2000).

issue of coercion. In *Weisman*, where the plurality held that clergy-led prayers within the official school graduation ceremony were inconsistent with the Establishment Clause, the decisive factors were the mandatory attendance policy at the graduation ceremony and the role of government in directing the content of the prayer.<sup>261</sup> Moreover, the Court noted that there is a heightened concern of coercion in an elementary and secondary school environment.<sup>262</sup> Similarly, *Santa Fe* held that student-led prayer prior to school football games violates the Establishment Clause, given that such prayer rises to the level of public speech.<sup>263</sup> The *Santa Fe* Court concluded that such speech, when authorized by government policy and taking place on government property at a government-sponsored school-related event, is coercive.<sup>264</sup>

Applying these principles to Dover's intelligent design policy may lead a court to conclude that the same coercive elements are present. Specifically, biology is a mandatory class for students. Although students may be excused from listening to the School District's statement on its new curriculum, those students will feel like outsiders. Moreover, even if excused from the reading of the statement, such students will nonetheless be subject to class instruction on intelligent design. Finally, because teaching intelligent design is authorized by government policy, and occurs in an environment where attendance is mandatory, its instruction raises the same coercion concerns at issue in *Weisman* and *Santa Fe*.

In addition to addressing the non-secular purpose and potentially coercive effect of Dover's policy, the court may also choose to comment on whether the policy leads to an entanglement of government with religion. On this issue, entanglement will likely be found based on two factors. First, any student who questions the identity of intelligent design's "designer" will force a teacher to abandon a neutral stance on the issue and discuss the existence of a Creator—a decidedly theistic concept. Second, the Dover School District has promised to monitor teachers to ensure that entanglement issues do not arise. However, the need for monitoring, and the monitoring itself, amounts to entanglement. For instance, although only a few chapters of the science textbook are dedicated to evolution, students may have questions about evolution that precede or extend beyond the unit. In addition, students often ask questions in places other than the classroom, such as after school, during a teacher's office hours, at tutoring sessions, or in the lunchroom cafeteria. It would be impossible for the District to monitor all the times and places that entanglement issues may arise. Finally,

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<sup>261</sup> *Weisman*, 505 U.S. at 595.

<sup>262</sup> *Id.* at 592.

<sup>263</sup> *Santa Fe*, 530 U.S. at 310.

<sup>264</sup> *Id.* at 310-11.

given the lack of secular purpose behind the policy, the court might harbor skepticism as to how rigidly the District will monitor intelligent design instruction.

In summary, while the District has publicly stated that its objective is to provide students with a balanced curriculum, the Board's statements and actions relating to the adoption of its intelligent design policy contradict this articulated purpose. The facts indicate that the School Board desires to present students with an alternative to evolution whose content is consistent with Christian beliefs depicted in the Bible. Since failure of one prong of the *Lemon* test is sufficient to invalidate an entire program, Dover's intelligent design policy is violative of the Establishment Clause and will be struck down. That coercion and entanglement concerns are also present only strengthens this conclusion.

## 2. *Of Pandas and People*: An Additional Constitutional Concern

A court is likely to find that the availability of the textbook *Of Pandas and People: The Central Question of Biological Origin* also violates the Establishment Clause. Since the ACLU includes *Pandas* as an indistinguishable aspect of Dover's intelligent design policy, the court may not analyze its constitutionality separately.<sup>265</sup> This Article proceeds in such an analysis, however, on the assumption that the next intelligent design case involving *Pandas* will require a determination of whether the text is itself constitutional.

While *Pandas* represents itself as an open, objective examination of the pros and cons of evolutionary biology, most biologists have concluded that it is a collection of "half-truths, distortions, and outright falsehoods that attempts to misrepresent biology and mislead students as to the scientific status of evolutionary biology."<sup>266</sup> According to Kenneth Miller, a renowned professor of biology at Brown University, *Pandas* lacks any discussion of the age of the earth, seriously misrepresents the nature of the fossil record, ignores the issue of extinction and the sophistication of radiometric dating, misrepresents the molecular evidence of evolution, and makes predictions that are dramatically incorrect.<sup>267</sup>

Miller is not alone in his criticism of *Pandas*. In 1989, shortly after *Pandas* was published, University of California, Berkeley paleontologist Kevin Padian warned teachers in his review of the text that *Pandas* was a

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<sup>265</sup> If analyzed, the court will likely find that the School District lacked a secular purpose in accepting fifty donations of the text and placing them in science classrooms.

<sup>266</sup> Miller, *supra* note 60. Miller is a professor of biology at Brown University.

<sup>267</sup> *Id.*

“wholesale distortion of modern biology . . . [and] . . . fundamentalist creationism in disguise.”<sup>268</sup> On Padian’s list of “fallacies in [his] catalog of errors”<sup>269</sup> is *Pandas*’ treatment of the fossil record, the Cambrian period, homology, and biochemistry, among other topics.<sup>270</sup> Joel Canon, a Christian physics professor with the American Science Association said it is “bad science, and its theology is worse.”<sup>271</sup>

While *Pandas*’ scientific shortcomings are alarming, they do not alone raise constitutional questions. The text is a matter of constitutional concern because the scientific shortcomings are a deliberate attempt to promote a worldview that is reflective of theistic doctrine. In essence, the text has a sectarian purpose behind its content. *Pandas* mentions “creationism” only once,<sup>272</sup> but the authors have been explicit about their non-secular motivations. They have frequently acknowledged that *Pandas* aims to make a favorable case for intelligent design and raise doubt about natural descent theory.<sup>273</sup> In addition, one of the authors said in a Wall Street Journal article, “[o]f course my motives were religious. There’s no question about it.”<sup>274</sup>

Of course, the Supreme Court has clearly stated that there is no prohibition against teaching religion, or teaching religiously oriented texts in public schools.<sup>275</sup> The history of religion, comparative religion, and religious literature such as the Bible are permissible and desirable public school subjects.<sup>276</sup> What may not be taught in public schools is religion. Religion is taught when religious tenets or texts are presented as literal truth and not for their historical or literary value.<sup>277</sup> Hence, the problem with *Pandas* is that the book intentionally omits important and reliable scientific evidence and presents intelligent design as the “truth” of the origin of life.

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<sup>268</sup> Kevin Padian, *Gross Misrepresentation*, BOOKWATCH REVIEWS 2(11) 1989, reprinted in REVIEW OF CREATIONIST BOOKS (Liz Rank Hughs ed., Berkley: NCSE 2d ed. 1993), available at [http://www.ncseweb.org/resources/articles/9767\\_22\\_padian\\_1989\\_gross\\_misr\\_10\\_26\\_2004.asp](http://www.ncseweb.org/resources/articles/9767_22_padian_1989_gross_misr_10_26_2004.asp).

<sup>269</sup> *Id.*

<sup>270</sup> For a discussion of these errors, see *id.*

<sup>271</sup> Toland, *supra* note 50 (statement by Joel Cannon, physics professor at Washington & Jefferson College); see also <http://www.sundaysoftware.com/creationist.htm> for a discussion by an ex-creationist about the faulty science associated with creationism theory.

<sup>272</sup> Eugenie C. Scott & Glenn Branch, “*Intelligent Design*” *Not Accepted by Most Scientists*, School Board News (National School Boards Association) [hereinafter Scott & Branch], available at [http://www.ncseweb.org/resources/articles/996\\_intelligent\\_design\\_not\\_accep\\_9\\_10\\_2002.asp](http://www.ncseweb.org/resources/articles/996_intelligent_design_not_accep_9_10_2002.asp) (Aug. 13, 2002).

<sup>273</sup> ACLU Kitzmiller Complaint, *supra* note 1 (introduction).

<sup>274</sup> Toland, *supra* note 50.

<sup>275</sup> See, e.g., *Sch. Dist. v. Schempp*, 374 U.S. 203, 222 (1963).

<sup>276</sup> *Id.* at 225.

<sup>277</sup> See *id.*

This construction disqualifies the book as a legitimate scientific textbook appropriate for science classroom instruction.

An obscure case whose facts bear a striking resemblance to those at hand is *Hendrin v. Campbell*.<sup>278</sup> In *Campbell*, the Superior Court in Marion County, Indiana held that a biology textbook that emphasized “Biblical creationism” violated the Establishment Clause.<sup>279</sup> Similar to *Pandas*’ treatment of intelligent design, the textbook at issue in *Campbell*, *A Search for Order in Complexity*, purported to offer a balanced view of evolution and creationism.<sup>280</sup> The court found, however, that despite the text’s attempt to balance the two theories, its real purpose was to promote fundamentalist Christian doctrine in the public schools by presenting Biblical creationism as a bona fide scientific theory.<sup>281</sup> The court noted that *A Search for Order* consistently presented creationism in a positive light and evolution in a negative posture.<sup>282</sup> Furthermore, the book’s publishers admitted that the text was designed to stress creationism in public schools.<sup>283</sup> The striking resemblance between the motivations behind *A Search for Order in Complexity* and *Pandas* suggests that the teaching of *Pandas*, like the teaching of *A Search for Order*, violates the Establishment Clause.

The introduction of *Pandas* into the public schools is constitutionally problematic not only because it is a religiously motivated text whose introduction into schools would lack a secular purpose, but also because it has the effect of promoting a religious perspective that may not be adhered to by all Dover students. Consequently, *Pandas* conveys a governmental message that students should subscribe to the religious views underlying the intelligent design argument. As the ACLU suggests in its complaint, such a message may leave students feeling harmed, intimidated, ostracized and otherwise distressed if they do not agree with the message.

In addition to the message of endorsement that *Pandas* conveys, the text raises concerns of entanglement of government and religion. The presence of sixty copies<sup>284</sup> of *Pandas* in the Dover schools will encourage students to read the text and ask inevitable questions—questions that will force teachers to abandon a neutral stance on the origin of life and involve themselves in a discussion of religious theories. For example, *Pandas*’ au-

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<sup>278</sup> 45 U.S.L.W. (BNA) No. 44, at 2530 (Ind. Super. Ct., Apr. 14, 1977).

<sup>279</sup> *Id.*

<sup>280</sup> *Id.*

<sup>281</sup> *See id.*

<sup>282</sup> *Id.*

<sup>283</sup> Brief for the ACLU, *supra* note 203, at 17.

<sup>284</sup> Initially, fifty copies of the text were donated, but by the time *Kitzmiller* was filed, the School District was in possession of sixty copies of *Pandas*. *Id.*

thors neglect to discuss the age of the earth and geological ages.<sup>285</sup> Thus, students who read *Pandas* are encouraged to doubt that the earth is more than 10,000 years old. Instead of presenting well founded and widely accepted scientific theories regarding this subject, teachers will be forced to introduce students to the young-earth theory of the Bible. Similarly, *Pandas* raises unwarranted doubts about evolution by suggesting that certain fossils do not exist, that “all major groups of organisms originated in just one period,” and avoiding the problem of extinction.<sup>286</sup> Most importantly, teachers will be compelled to answer questions about the identity of the “intelligent agent” described in *Pandas*. These entanglement concerns are exacerbated by the need for the monitoring of classroom instruction. *McLean* is instructive on this point: “[t]he need to monitor classroom discussion in order to uphold [a law’s] prohibition against religious instruction will necessarily involve administrators in questions concerning religion. These continuing involvements of State officials in questions and issues of religion create an excessive and prohibited entanglement with religion.”<sup>287</sup>

That *Pandas* was donated to the Dover School District, rather than purchased, should not affect the court’s analysis. The focus of a court’s inquiry should not be how the text was acquired, but why it was placed into the classroom and how it will be utilized. In the Dover, Pennsylvania situation, it is probable that the School District intended for students to access *Pandas*, albeit on a voluntary basis, in order to learn—if not outright accept—alternative theories to evolution. The large numbers of texts made easily accessible to students by their strategic placement in classrooms<sup>288</sup> increase the likelihood that endorsement and entanglement issues will arise. Thus, whether the texts are purchased with school funds or are donated, the same constitutional violations arise.

Additionally, the court should not concern itself with an argument that *Pandas* is not a required text. Many items that are typically voluntarily available in a science classroom—such as microscopes, books, posters, projects on display, and the like—are not a mandatory component of the students’ curricula. Nevertheless, their mere availability is intended to, and often succeeds in, raising questions in students’ minds that science teachers are expected to answer. For example, if a student observes plants growing in the classroom window and asks the teacher about them, a science teacher is expected to explain that the plants are part of a photosynthesis project, if

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<sup>285</sup> Miller, *supra* note 60. Arguably, such an omission is the result of evidence supporting a conclusion that the earth is old, and is thus at direct odds with creationist views.

<sup>286</sup> *Id.*

<sup>287</sup> *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255, 1272 (E.D. Ark. 1982).

<sup>288</sup> Another option would be for the school to place copies of *Pandas* in the school library, or in teachers’ offices, to be loaned out by special request.

that is the case. If the student then asks about photosynthesis, a science teacher is expected to provide some sort of scientific explanation. Likewise, if a student examines a poster of the solar system hanging in the classroom and asks which planet is Earth, the teacher should point out the planet. If the student then follows up with questions about the age of the earth, a teacher would be expected to provide an answer based on neutral scientific evidence. When questions about photosynthesis, the solar system, or evolution must be answered by invoking religious concepts, constitutional issues are implicated, regardless of whether the question stemmed from mandatory or voluntary classroom learning.

In short, for scientists, the most compelling reason to keep *Pandas* out of the biology classroom is that its content is “bad science, pure and simple.”<sup>289</sup> For a court, however, *Pandas* should be kept out both because its non-secular content conveys a governmentally supported message that students should subscribe to the religious views of intelligent design, and because it raises entanglement concerns that require excessive monitoring.

### 3. Further Inquiry: Is Intelligent Design Science or Religion?

Whether intelligent design is scientific or religious is the question that could ultimately decide its future presence in public schools. If intelligent design is religious, or the embodiment of religious doctrine or tenets, then regardless of a school’s stated purpose for including intelligent design in its curriculum, teaching the concept will likely be unconstitutional. By contrast, if intelligent design belongs in the sphere of science, then a public school’s decision to teach intelligent design may pass constitutional scrutiny.

The ACLU asserts in its *Kitzmiller* complaint that intelligent design is an “inherently religious argument or assertion that falls outside the realm of science.”<sup>290</sup> The implication of the court deciding differently will be far reaching. Witold Walczak, legal director of Pennsylvania’s ACLU, predicts that if Dover’s program prevails, “you’re going to see [intelligent design] all over the country.”<sup>291</sup>

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<sup>289</sup> Miller, *supra* note 60. Miller points out that while “[t]here is a great deal that we do not know about the origin of life on this planet,” this uncertainty “does not mean that science is obliged to pretend that it knows nothing, or to engage in a kind of scientific relativism, pretending that all speculations about the origin of our species are equally correct.” *Id.*

<sup>290</sup> ACLU *Kitzmiller* Complaint, *supra* note 1 (introduction).

<sup>291</sup> Toland, *supra* note 50.

a. *Intelligent Design: Is It Science?*

What qualifies as “science” is at the core of the evolution-creationism controversy. Prior to 1859, “the modern notion of a separation of church and science did not exist;”<sup>292</sup> most scientists viewed their secular work as adding to the glory of God.<sup>293</sup> However, ever since Darwin proposed his theory of natural selection, there has been a rift between scientific research and religious doctrine, notably among biologists who accept the theory of evolution and Christian fundamentalists who do not.<sup>294</sup>

The Oxford Dictionary defines science as a “branch of study which is concerned either with a connected body of demonstrated truths or with observed facts systematically classified and more or less colligated by being brought under general laws, and which includes trustworthy methods for the discovery of new truth within its own domain.”<sup>295</sup> Similarly, the five-criterion test developed in *McLean v. Arkansas Board of Education* defines science as a theory (1) guided by natural law; (2) explanatory by reference to natural law; (3) testable against the empirical works; (4) tentative in its conclusions; and (5) falsifiable.<sup>296</sup>

While there is general agreement as to the literal definition of science, whether all so-called scientific “theories” actually qualify as science is contentious. For scientists, the term “theory” has a distinct meaning, one that “does not suggest uncertainty, doubt, or speculation.”<sup>297</sup> Hence, that evolu-

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<sup>292</sup> Wilson, *supra* note 15, at 206.

<sup>293</sup> *Id.*

<sup>294</sup> Although Christian fundamentalists are the group most often associated with anti-evolutionist activism—and they are by far the most visible group promoting alternative explanations to evolution—they are not the only group that questions evolution or prefers to believe that the origin of life was the work of a deity. For example, Catholics, mainline Protestant denominations, and Orthodox Jews subscribe to some form of belief in theistic evolution. Eugenie C. Scott, *Creationism, Ideology, and Science*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/5200\\_creationism\\_ideology\\_and\\_sci\\_6\\_24\\_1996.asp](http://www.ncseweb.org/resources/articles/5200_creationism_ideology_and_sci_6_24_1996.asp) (June 24, 1996). A distinction, however, is that these later groups do not view their belief as being at odds with the theory of evolution. *Id.*

<sup>295</sup> 2 THE COMPACT EDITION OF THE OXFORD ENGLISH DICTIONARY 2668 (3d ed. 1971).

<sup>296</sup> *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255, 1267 (E.D. Ark. 1982).

<sup>297</sup> ACLU Kitzmiller Complaint, *supra* note 1, ¶ 13. “The National Academy of Sciences defines ‘theory’ as follows: ‘In Science, a well-substantiated explanation of some aspect of the natural world that can incorporate facts, laws, inferences and tested hypotheses.’” *Id.* (citing THE NATIONAL ACADEMY OF SCIENCES, *TEACHING ABOUT EVOLUTION AND THE NATURE OF SCIENCE*, (1991), *available at* <http://www.nap.edu/books/0309063647/html/5.html>). A theory is a “well-substantiated explanation of some aspect of the natural world that typically incorporates many confirmed observations, laws, and successfully verified hypotheses.” PBS, *Online Lesson on Evolution: Glossary of Terms*, at <http://www.pbs.org/wgbh/evolution/library/glossary/index.html> (last visited Oct. 7, 2005). By contrast, a hypothesis is an “explanation of one or more phenomena in nature that can be tested by observations, experiments, or both. In order to be considered scientific, [even] a hypothesis must be falsifiable.” *Id.*

tion is a 'theory, not a fact' does not mean that evolution is any less credible than the theories of gravity, germ disease, plate tectonics, atomic theory,<sup>298</sup> or the heliocentric theory of the solar system. By comparison, scientists do not consider intelligent design a theory because it is neither testable nor verifiable. A scientist at the University of Chicago explained, "not only is there not evidence for [it], but intelligent design by scientific definition cannot be a theory because it cannot be tested—only believed."<sup>299</sup> Moreover, no research supporting the claims of intelligent design has ever been published in any recognized, professional, peer-reviewed scientific Journal.<sup>300</sup> Finally, scholars have not applied the theories of intelligent design to any other scientific questions.<sup>301</sup>

Both the American Association for the Advancement of Science ("AAAS") and the National Academy of Science ("NAS") have declared intelligent design scientifically unwarranted.<sup>302</sup> In a 2002 resolution, the AAAS described intelligent design as "an interesting philosophical or theological concept" but one that should not be taught in science classrooms.<sup>303</sup> This conclusion is supported by such diverse individuals and groups as President George W. Bush's former science advisor<sup>304</sup> and Christian scien-

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<sup>298</sup> This theory is the basis of the periodic table of elements. ACLU Kitzmiller Complaint, *supra* note 1, ¶ 13.

<sup>299</sup> Trisha Gura, *The Evolutionary Wars in Ohio*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/2867\\_the\\_evolutionary\\_wars\\_in\\_ohio\\_10\\_7\\_2002.asp](http://www.ncseweb.org/resources/articles/2867_the_evolutionary_wars_in_ohio_10_7_2002.asp) (Oct. 7, 2002). Although the list of criteria set forth in *McLean* is still good law, the Supreme Court and state courts following its lead generally admit scientific evidence only if it can be validated by experimentation and is generally accepted by the scientific community. Arianne Ellerbe, Comment, *We Didn't Start the Fire: The Origins Science Battle Rages on More than Seventy-Five Years After Scopes*, 64 LA. L. REV. 589, 594 (2004). State courts following this lead have increasingly adopted the view that scientific legitimacy is best tested using the weight and reliability of empirical research supporting the theory. *Id.* Thus, a court has the ability to find that any theory, including origin of life theory, amounts to science so long as it is supported by extensive research and empirical evidence. See *Daubert v. Merrell Dow Pharm., Inc.*, 516 U.S. 869 (1995).

<sup>300</sup> PBS, *Evolution on Trial: Frequently Asked Questions About Evolution*, at <http://www.pbs.org/wgbh/evolution/library/faq/cat09.html>. Stephen C. Meyer of the Discovery Institute says that "intelligent design proponents [have not] published articles in peer-reviewed journals because the scientific community is 'biased' against intelligent design and therefore [will not] accept [articles on the subject]." Gura, *supra* note 48.

<sup>301</sup> Scott & Branch, *supra* note 272.

<sup>302</sup> National Center for Science Education, *Statements from Scientific and Scholarly Organizations* (Dec. 19, 2002), at [http://www.ncseweb.org/resources/articles/918\\_statements\\_from\\_scientific\\_an\\_12\\_19\\_2002.asp](http://www.ncseweb.org/resources/articles/918_statements_from_scientific_an_12_19_2002.asp).

<sup>303</sup> Jerry Adler, *Doubting Darwin*, NEWSWEEK, Feb. 7, 2005, at 50.

<sup>304</sup> John Marburger has said "intelligent design is not a scientific theory . . . . I don't regard [it] as a scientific topic." Chris Mooney, *Intelligent Denials*, AM. PROSPECT (Feb. 22, 2005) (quoting Marburger), at <http://www.prospect.org/web/page.wv?section=root&name=ViewWeb&articleId=9216>. Marburger's comments on intelligent design contrast with earlier statements made by Bush. While

tists at the American Scientific Affiliation (ASA).<sup>305</sup> By contrast, the evidence for evolution is considered “overwhelming.”<sup>306</sup> No biological concept has been more extensively tested or more thoroughly corroborated than that of the evolutionary history of organisms.<sup>307</sup> According to NAS, “evolution is one of the strongest and most useful scientific theories we have.”<sup>308</sup>

Nevertheless, intelligent design theorists insist that their argument qualifies as science. Their research on the subject is premised on the following logic: there are “gaps” in evolution theory, the existence of which confirm that evolution does not explain the origin of life. Therefore, an alternative theory, likely intelligent design, must explain our origins.<sup>309</sup> Design theorists seek evidence to support this argument by looking for reliable, rigorously defined indicators of design and by ruling out alternative explanations, such as Darwin’s theory of evolution.<sup>310</sup> The scientific tool

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campaigning for the presidency in 1999, Bush defended the teaching of creationism alongside evolution saying, “I believe children ought to be exposed to different theories about how the world started.” *Id.* However, in 2004 there were allegations endorsed by forty-eight Nobel Laureates that the Bush administration had systematically abused science. National Center for Science Education, *AAAS, Nobelists, Lawrence Mayor Criticize Kansas Board of Education* (Sept. 16, 2005), at [http://www.ncseweb.org/resources/news/2005/KS/279\\_aaas\\_nobelists\\_lawrence\\_mayo\\_9\\_16\\_2005.asp](http://www.ncseweb.org/resources/news/2005/KS/279_aaas_nobelists_lawrence_mayo_9_16_2005.asp) Nevertheless, in 2005 Bush reiterated his position that both sides should be taught so people can understand what the debate is about. Elizabeth Bumiller, *Bush Remarks Roil Debate on Teaching Evolution*, N.Y. TIMES, Aug. 3, 2005, at A14.

<sup>305</sup> House, *supra* note 73.

<sup>306</sup> David Quammen, *Was Darwin Wrong?*, NAT’L GEOGRAPHIC, Nov. 2004, at 4.

<sup>307</sup> NAT’L ACAD. OF SCIENCES, SCIENCE AND CREATIONISM: A VIEW FROM THE NATIONAL ACADEMY OF SCIENCES 1 (2d ed. 1999).

<sup>308</sup> ACLU, *Kitzmiller v. Dover Area School District FAQ—Intelligent Design and Evolution* (Dec. 14, 2004), <http://www.aclu.org/ReligiousLiberty/ReligiousLiberty.cfm?ID=17204&c=139>.

<sup>309</sup> Phillip E. Johnson, author of *Darwin on Trial*, made such an argument in his book when he invoked the legal argument of ‘reasonable doubt’ to support his claim that because you can’t prove that evolution created human beings, you must allow for alternatives to it. “In *Of Pandas and People: The Central Question of Biological Origin*, the authors allege ‘weaknesses’ or ‘gaps’ or ‘problems’ with evolutionary theory, leading them to conclude that ‘life itself owes its origin to a master intellect’ and that ‘new organisms arise from a blueprint, a plan, a pattern, devised by an intelligent agent.’” ACLU *Kitzmiller Complaint*, *supra* note 1, ¶ 19.

<sup>310</sup> Mark Hartwig, one of the early organizers of the intelligent design movement, explains the science of intelligent design and its application to biology as follows:

[I]f we could trace the creation of a book, our investigation would lead us to the author. You could say, then, that specified complexity is a signature of design.

To see how this applies to biology, consider the outboard motor that bacteria such as *E. coli* use to navigate their environment. This water-cooled contraption, called a flagellum, comes equipped with a reversible engine, drive shaft, U-joint and a long whip-like propeller. It hums along at a cool 17,000 rpm.

Decades of research indicate that its complexity is enormous. It takes about 50 genes to create a working flagellum. Each of those genes is as complex as a sentence with hundreds of letters.

Moreover, the pattern—a working flagellum—is highly specified. Deviate from that pattern, knock out a single gene, and our bug is dead in the water (or whatever).

they utilize is termed “specified complexity.”<sup>311</sup> The basic idea is to identify objects that are complex (i.e., objects composed of many parts) and are arranged in a recognizable, delimited pattern (i.e., are specified).<sup>312</sup> According to Design theorist William Dembski, “in every instance where we find specified complexity, and where [its] history is known, it turns out that design actually is present.”<sup>313</sup>

Scientists strongly refute the premise on which design theorists base their argument and research. For scientists, the fact that disagreement exists regarding some of the particularities of evolution theory—such as the exact sequence of certain genetic changes—does not amount to general scientific disagreement about whether evolution is the mechanism by which life on earth came to exist.<sup>314</sup> Jack W. Szostak, who studies the principles of Darwinian evolution on populations of DNA molecules at Massachusetts General Hospital in Boston, explains that when anti-evolutionists claim that disagreements among evolutionary scientists cast doubt on whether evolution occurred at all, they are making a misrepresentation that does not suddenly validate intelligent design.<sup>315</sup> “Evolution is not ad hoc theorizing,” says Szostak. “Evolution is a large body of scientific fact that is supported

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Such highly specified complexity, which demands the presence of every part, indicates an intelligent origin. It’s also defies [sic] any explanation, such as contemporary Darwinism, that relies on the stepwise accumulation of random genetic change.

In fact, if you want to run the numbers, as Dembski does in his book *No Free Lunch*, it boils down to the following: If every elementary particle in the observed universe . . . were cranking out mutation events at the cosmic speed limit (about 1045 times per second) for a billion times the estimated age of the universe, they still could not produce the genes for a working flagellum.

And that’s just one system within multiple layers of systems. Thus the flagellum is integrated into a sensory/guidance system that maneuvers the bacterium toward nutrients and away from noxious chemicals—a system so complex that computer simulation is required to understand it in its entirety. That system is meshed with other systems. And so on.

Mark Hartwig, *Science of Design*, RealityCheck.Org, at <http://www.therealitycheck.org/GuestColumnist/mhartwig040705.htm> (last visited Oct. 7, 2005).

<sup>311</sup> Ker Than, *Why Scientists Dismiss “Intelligent Design”* (Sept. 23, 2005), at <http://msnbc.msn.com/id/9452500>.

<sup>312</sup> 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, 765 (2002).

<sup>313</sup> Hartwig, *supra* note 310.

<sup>314</sup> Many forums present the evolution-creation debate as a Theory A vs. Theory B scenario, having one person from the intelligent design camp respond to one speaker from the evolution camp. However, this format of presentation is a false representation of the controversy. Kenneth Miller suggests that the dialogue would be more accurate if there were about 10,000 scientists to respond to every intelligent design presenter. Kenneth R. Miller, *Goodbye, Columbus*, National Center for Science Education, at [http://www.ncseweb.org/resources/articles/2493\\_goodbye\\_columbus\\_4\\_4\\_2002.asp](http://www.ncseweb.org/resources/articles/2493_goodbye_columbus_4_4_2002.asp) (Apr. 4, 2002) (quoting Lawrence Krauss, Chair of the Case Western Physics Department, at the Ohio Board of Education intelligent design/evolution panel discussion).

<sup>315</sup> Gura, *supra* note 48.

by a large body of theory.”<sup>316</sup> In short, where intelligent designers say “gaps” exist, scientists claim that evidence is just waiting to be discovered.<sup>317</sup>

Just as evolutionists are sensitive to the characterization of “gaps” in evolution theory, design theorists are defensive about the perception that intelligent design is unscientific. The Center for Science and Culture criticized AAAS’s 2002 resolution, classifying intelligent design as “unscientific,” as reflecting “prejudice [rather] than impartial investigation.”<sup>318</sup> Likewise, design theorists claim that they have been published in peer-reviewed journals, but less than they would prefer, due to the “open hostility from those who hold to neo-Darwinism [who make] it difficult for design scholars to gain a fair hearing for their ideas.”<sup>319</sup> Design theorists admit that in the past, “detecting design was hampered by vague and subjective criteria, such as discerning an object’s purpose.”<sup>320</sup> Moreover, design theorists recognize that their work has been entangled with natural theology, given past efforts “to infer God’s character by studying nature rather than revelation.”<sup>321</sup> However, design theorists now argue that since the 1980s “developments in several fields have made it possible to rigorously distinguish between things that ‘just happen’ and those that happen ‘on pur-

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<sup>316</sup> *Id.*

<sup>317</sup> Evolution predicts that evidence of transitional life forms linking swimming mammals with land mammals should exist. This absence of evidence, intelligent designers argue, is proof of the inaccuracy of evolution theory.

However, in the past ten years . . . three true intermediate forms [of whales] have been discovered. Up until 1986, the oldest known fossil whale had been *Basilosaurus*, dating to about 40 million years before present. However, fossil-hunters have now found three intermediates that link *Basilosaurus* to land-dwelling ancestors. They are: *Pakicetus inachus* (52 myr), *Ambulocetus natans* (50 myr), and *Rodhocetus kasrani* (46 myr).

Miller, *supra* note 60 (citation omitted).

<sup>318</sup> Top Questions, *supra* note 52.

<sup>319</sup> *Id.* In regard to peer reviewed journals, CSC states that Dembski’s *The Design Inference* (Cambridge University Press) and Behe’s *Darwin’s Black Box* (The Free Press) have both been published in such journals. *Id.* In addition, Behe has defended his concept of “irreducible complexity” in the peer-reviewed journal *Philosophy of Science* published by the University of Chicago. *Id.* There is also now a peer-reviewed journal that focuses on design theory—*Progress in Complexity, Information, and Design*—“which has an editorial advisory board of more than 50 scholars from relevant scientific disciplines, most of whom have university affiliations.” *Id.* “Finally, the works of design theorists are starting to be cited by other scholars in peer-reviewed journals such as the *Annual Review of Genetics*.” *Id.*

<sup>320</sup> Hartwig, *supra* note 310.

<sup>321</sup> *Id.* RealityCheck.Org, referred to in note 310, is a “conservative issue advocacy and information group established to promote and defend conservative social, political, and economic principles nationally.” <http://www.therealitycheck.org/>. Hartwig received a Ph.D. in educational psychology from the University of California, and he specializes in statistics and research design. His articles have appeared in publications such as *The Wall Street Journal*, *The Los Angeles Times*, *The Denver Post*, and *The Houston Chronicle*. Hartwig, *supra* note 310.

pose.”<sup>322</sup> This in turn has “helped design theory emerge as a distinct enterprise, aimed at detecting intelligence rather than speculating about God’s character.”<sup>323</sup>

In sum, strong arguments are offered by both scientists and design theorists regarding whether intelligent design is science. However, that intelligent design lacks the support of the scientific community and is an argument that can be neither tested nor verified will likely persuade a court that intelligent design currently falls outside the realm of science.

b. *Intelligent Design: Is It Religion?*

While a finding that intelligent design fails to qualify as science might weigh against its inclusion within a student’s formal science education, that alone does not necessitate a finding that its instruction is unconstitutional. For intelligent design to violate the Establishment Clause, a court must be persuaded that absent, or in the presence of, a secular purpose, intelligent design is either a religion unto itself, or embodies and thereby promotes religious tenets in ways that contravene First Amendment principles.

That said, a court will likely be skeptical of attempts to influence science education through an attack on evolution theory given the historical link between religious activism and educational reform of evolution theory. Meanwhile, it should also be noted that the *Lemon* test is only triggered when a program at issue consists of plausible, facially demonstrative religious content. Thus, if a program does not embody “religious content,” it does not require a secular purpose, nor does it necessitate an analysis of its effect or entanglement implications. For example, having “In God We Trust” on our coins has been found to be sufficiently secular so that a specific secular purpose need not be identified. Similarly, teaching kindness to animals, respect for capitalism, or the importance of dairy farming—all part of some schools’ curricula—are considered secular, and are thus insulated from constitutional attack.<sup>324</sup>

The difficult question in determining whether *Lemon* is triggered, however, is whether a program consists of plausible religious content. While definitions of religion exist,<sup>325</sup> the Supreme Court has never explic-

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<sup>322</sup> *Id.*

<sup>323</sup> *Id.*

<sup>324</sup> Interview with Robert O’Neil (Apr. 2005).

<sup>325</sup> William W. Van Alstyne compiled this assortment of dictionary definitions:

*Religion*: [1] the personal commitment to and serving of God or a god with worshipful devotion; conduct in accord with divine commands especially as found in accepted sacred writings or declared by authoritative teachers; a way of life recognized as incumbent on true believers; and typically the relating of oneself to an organized body of beliefs. [2] one of the systems of faith and worship. [3] a personal awareness of or conviction of the existence of a

itly defined the criteria of “religion” under the First Amendment.<sup>326</sup> Moreover, most cases that have considered whether a practice, program or belief is religious are analyzed under the Free Exercise rather than the Establishment Clause.<sup>327</sup> Thus, what exactly establishes a prima facie case of religious content such that a secular purpose is required is uncertain.

The difficulty of identifying what is religious is compounded by the Supreme Court’s inconsistent reading of the reach of the Establishment Clause.<sup>328</sup> There is general agreement, however, that the Clause has been read narrowly under the Rehnquist Court.<sup>329</sup> Recent cases—although many have been decided by the narrowest of margins—demonstrate the Rehnquist Court’s preference to favor religious efforts in the area of gov-

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supreme being or of supernatural powers or influences controlling one’s own, humanity’s or all nature’s destiny accompanied by or arousing reverence and a sense of duty to obey. [4] the body of institutionalized expressions of sacred beliefs, observances, and social practices found within a given cultural context. [5] a value held to be of supreme importance, a cause, principle, system of tenets held with ardor, devotion, conscientiousness, and faith. [6] any objective attended to or pursued with zeal or conscientious devotion.

WILLIAM W. VAN ALSTYNE, *THE AMERICAN FIRST AMENDMENT IN THE TWENTY-FIRST CENTURY: CASES AND MATERIALS* 1076 (3d ed. 2002).

<sup>326</sup> *Malnak v. Yogi*, 592 F.2d 197, 200 (3d Cir. 1979) (per curiam) (Adams, J., concurring).

<sup>327</sup> *See United States v. Seeger*, 380 U.S. 163 (1965) (considering the meaning of the term “Supreme Being” as used in the Universal Military Training and Service Act, and whether the objectors in three consolidated cases qualified for conscientious objector status); *Welsh v. United States*, 398 U.S. 333 (1970) (considering whether petitioner qualified for an exemption from military service because he was “by virtue of religious training and belief” a conscientious objector to war); *Torasco v. Watkins*, 367 U.S. 488 (1961) (holding that the Maryland Declaration of Rights, which required persons to declare their belief in the existence of God to qualify for state office, violated the constitutional protection of freedom of religion, which included the freedom not to believe). In *Seeger*, the Court held that the term “Supreme Being” meant the concept of a power or being, or a faith, to which all else is subordinate or upon which all else is ultimately dependent. 380 U.S. at 176. The court established this test: a sincere and meaningful belief that occupied in the life of its possessor a place parallel to that filled by the God of those admittedly qualifying for the exemption comes within the statutory definition. *Id.* The court concluded that each of the cases at bar satisfied this test for conscientious objector status. 380 U.S. at 165-66. In *Welsh*, in determining whether the beliefs were “religious” within the statute, the Court interpreted *Seeger* to mean that “if an individual deeply and sincerely holds beliefs that are purely ethical or moral in source and content, but that nevertheless impose upon him a duty of conscience . . . those beliefs certainly occupy in the life of that individual ‘a place parallel to that filled by God’ in traditionally religious persons.” 398 U.S. at 340. The Court also noted that in considering views that are “essentially political, sociological or philosophical,” it should be remembered that the category of conscientious objectors is not limited only to those whose views are the result of “religious training and belief.” *Id.* at 434. Because the petitioner’s beliefs functioned as a religion in his life, he was entitled to an exemption just like someone qualifying for traditional religious reasons. *Id.* at 434-44.

<sup>328</sup> Kent Greenawalt, *Religion and the Rehnquist Court*, 99 NW. U. L. REV. 145 (2004).

<sup>329</sup> *Id.* at 146. The four major Establishment Clause issues with which the Rehnquist Court has dealt are prayer in public schools, organized private devotional practice within public schools, displays with religious components on government property, and aid to religious schools or organizations. *Id.* at 161.

ernment aid but to limit government involvement with schools on issues of prayer and Bible reading.<sup>330</sup> Despite these generalizations, how the Supreme Court will analyze the religious content of intelligent design is unclear and difficult to predict given that the composition of the Court will have changed by October 2005, long before a case on intelligent design case is granted certiorari. Therefore, the remainder of this section engages in a hypothetical analysis of how the Court might perceive the religious nature of intelligent design.

As mentioned, intelligent design proponents insist that their argument is not a product of religion. The Discovery Institute asserts that design theory is not based on the Bible, but is a product of various influences, including Plato and Aristotle.<sup>331</sup> Other design advocates similarly insist that intelligent design has “no theological content,” and is not “identified with a transcendent, supernatural deity.”<sup>332</sup> Toward this end, intelligent design is careful to distance itself from creationism. The Institute addresses the attempt to conflate intelligent design and creationism with the following argument:

Intelligent design theory is simply an effort to empirically detect whether the “apparent design” in nature acknowledged by virtually all biologists is genuine design (the product of an intelligent cause) or is simply the product of an undirected process such as natural selection acting on random variations. Creationism is focused on defending a literal reading of the Genesis account, usually including the creation of the earth by the Biblical God a few thousand years ago. Unlike creationism, the scientific theory of intelligent design is agnostic regarding the source of design and has no commitment to defending Genesis, the Bible or any other sacred text. Honest critics of intelligent design acknowledge the difference between intelligent design and creationism.<sup>333</sup>

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<sup>330</sup> Susan Ratner, *Religion in Public Schools: Dangerous Trends*, 26 RUTGERS L. REC. 8 (2002). Ratner considers Establishment Clause jurisprudence flawed in its condoning of religious clubs in schools and moment of silence statutes. *Id.* She warns that the strength of the Establishment Clause can be weakened by just a few harmless Supreme Court decisions. *Id.* See also John W. Borkowski & Maya R. Kobersy, *The 2003-2004 Term of the United States Supreme Court and Its Impact on Public Schools*, 191 ED. LAW. REP. 1 (2004).

<sup>331</sup> Top Questions, *supra* note 52. As also noted by the Institute, “most scientists until the latter part of the nineteenth century accepted some form of intelligent design. The scientific community largely rejected design in the early twentieth century after neo-Darwinism claimed to be able to explain the emergence of biological complexity through the unintelligent process of natural selection acting on random mutations.” *Id.*

<sup>332</sup> Jay D. Wexler, *Darwin, Design, and Disestablishment: Teaching the Evolution Controversy in Public Schools*, 56 VAND. L. REV. 751, 814 (2003) (citing DAVID K. DEWOLF ET AL., INTELLIGENT DESIGN IN PUBLIC SCHOOL SCIENCE CURRICULA: A LEGAL GUIDEBOOK 495-96 (1999)).

<sup>333</sup> The Institute further states:

University of Wisconsin historian of science Ronald Numbers is critical of intelligent design, yet according to the Associated Press, he “agrees the creationist label is inaccurate when it comes to the ID [intelligent design] movement.” Why, then, do some Darwinists keep trying

Although intelligent design can be distinguished from creation science, there is still a strong similarity between the two. Both creationism and intelligent design contend that there is scientific evidence to support the Genesis account of creation, although intelligent design is not particularly explicit on this point.<sup>334</sup> In addition, both share the belief that the theory of evolution is largely incorrect.<sup>335</sup> Finally, both reject naturalism by appealing to the tenets of Christianity.<sup>336</sup> One of intelligent design's leading advocates, William Dembski, has stated that he seeks to "unif[y] the Christian world about creation" because Christians like himself do not believe that nature is self-evident.<sup>337</sup> Rather, they believe that God created nature as well as any laws by which nature operates.<sup>338</sup>

Most importantly, both creationism and intelligent design involve an intervening deity—although again, intelligent design advocates are careful not to explicitly mention the identity of their intelligent agent. Design advocates reserve the task of "connect[ing] the intelligence inferred by the design theorist with the God of Scripture" for a theologian.<sup>339</sup> Nevertheless, it is clear to many that intelligent design's Designer is a supernatural God.<sup>340</sup> Even absent explicit identification of the design agent, the religious nature of intelligent design is apparent from its cultural renewal program, which focuses on ideological and religious, rather than scholarly, goals.<sup>341</sup> Most of these efforts are aimed at convincing politicians and the public, not the scientific community, of intelligent design's validity. For example, the Center for the Renewal of Science and Culture is explicit about its mission to "renew" American culture by grounding society's major institutions,

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to conflate intelligent design with creationism? According to Dr. Numbers, it is because they think such claims are "the easiest way to discredit intelligent design." In other words, the charge that intelligent design is "creationism" is a rhetorical strategy on the part of Darwinists who wish to delegitimize design theory without actually addressing the merits of its case.

Top Questions, *supra* note 52.

<sup>334</sup> Scott & Branch, *supra* note 272.

<sup>335</sup> *Id.*

<sup>336</sup> Dembski has written "as Christians, we know naturalism is false. Nature is not self-sufficient." Barbara Forrest, *The Newest Evolution of Creationism*, NATURAL HISTORY MAGAZINE, Apr. 2002, available at <http://www.naturalhistorymag.com/darwinanddesign.html>.

<sup>337</sup> Wendy F. Hanakahi, Comment, *Evolution-Creationism Debate: Evaluating the Constitutionality of Teaching Intelligent Design in Pubic School Classrooms*, 25 U. HAW. L. REV. 9, 39 (2002) (quoting William A. Dembski, *Introduction to MERE CREATION: SCIENCE, FAITH, & INTELLIGENT DESIGN* 13 (William A. Dembski ed., 1998)).

<sup>338</sup> *Id.*

<sup>339</sup> Dembski, *supra* note 337, at 18.

<sup>340</sup> Scott & Branch, *supra* note 272.

<sup>341</sup> *Id.*

especially education, in evangelical religion.<sup>342</sup> The Center believes that if this can be achieved, naturalism and its consequences will be defeated.<sup>343</sup>

In short, many consider intelligent design the “wink, wink, nudge, nudge school of science education. We know what they’re saying is God.”<sup>344</sup> However, whether teaching intelligent design is tantamount to teaching religion requires a more structured analysis.

#### i. *Malnak* Criteria with Modification

Given that the Supreme Court has declined to define religion, scholars can only speculate as to what model of analysis a court will employ in deciding whether intelligent design is religious. This Article suggests that one set of criteria that a court should consider is that which was proposed by Judge Adams in his concurrence to the Third Circuit case *Malnak v. Yogi*,<sup>345</sup> and which was subsequently relied on by the Third and Ninth Circuits.<sup>346</sup>

In *Malnak*, the Third Circuit held that a public school elective—Science of Creative Intelligence Transcendental Meditation (“SCI/TM”)—constituted religious activity and had the primary effect of advancing relig-

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<sup>342</sup> Forrest, *supra* note 336.

<sup>343</sup> *Id.* Toward this end, the Center lacks any empirical research program, but engages in an aggressive public relations campaign that includes conferences, recruitment of students through lectures sponsored by campus ministries, and cultivation of alliances with conservative Christians and influential political figures. *Id.* Recently, CRSC nearly succeeded in inserting into the federal No Child Left Behind Act of 2001 a “sense of the Senate” that supported the teaching of intelligent design. Forrest, *supra* note 336. Forrest adds that in 1996, Philip E. Johnson, author of *Darwin on Trial* (1991)—which helped launch the modern intelligent design movement—declared “this isn’t really, and never has been, a debate about science. It’s about religion and philosophy.” *Id.* Dembski has stated that intelligent design “is just the Logos of John’s Gospel restated in the idiom of information theory.” *Id.*

<sup>344</sup> ACLU, *Creationism, with New Name, Is Taught in Schools* (May 7, 2001), available at [www.aclu.org/religiousliberty/religiousliberty.cfm?ID=7034&c=139](http://www.aclu.org/religiousliberty/religiousliberty.cfm?ID=7034&c=139).

<sup>345</sup> 592 F.2d 197, 208 (3d Cir. 1979) (per curiam) (Adams, J., concurring).

<sup>346</sup> *Africa v. Pennsylvania*, 662 F.2d 1025 (3d Cir. 1981) (relying on Adams’ “three useful indicia,” the court concluded that a prisoner claiming a Free Exercise exemption on the grounds that he was an adherent of MOVE failed to demonstrate that his belief or practice was religious for First Amendment purposes); *Alvarado v. City of San Jose*, 94 F.3d 1223 (9th Cir. 1996) (referencing *Africa* and *Malnak*, the court found that a statute instituted by the city with the intention of commemorating the Mexican and Spanish contributions to the city’s culture was not a religious symbol for Establishment Clause purposes). For other cases involving public school curricula and the definition of religion, see *Pelozo v. Capistrano Unified Sch. Dist.*, 37 F.3d 517 (9th Cir. 1994) (considering a science teacher’s charge that “evolutionism” was a religion and a school’s requirement that he teach evolution was a violation of the Establishment Clause, and also holding that neither evolution nor secular humanism may be defined as religion); *Fleischfresser v. Directors of Sch. Dist. 200*, 15 F.3d 680, 687-89 (7th Cir. 1994) (holding that a school’s use of a reading series that included stories and exercises concerning witchcraft did not establish religion).

ion and religious concepts.<sup>347</sup> The court also held that governmental aid provided to teach the course, coupled with the use of public school facilities, constituted excessive governmental entanglement with religion.<sup>348</sup> Although this case is more than two decades old and the criteria Adams developed in his concurrence have not been widely adopted, the time might be ripe for a court to reexamine its relevance.

In his *Malnak* concurrence, Judge Adams divides relevant decisional law into four principal groupings—(1) traditional definition of religion, (2) cases dealing with prayers recited in school, (3) cases involving the conscientious objector exemption to selective service laws,<sup>349</sup> and (4) cases touching on a newer constitutional definition of religion—and identifies the criteria that courts have employed in determining what qualifies as “religion” in each group.<sup>350</sup> For example, Adams notes that the original definition of religion, and the position of the Supreme Court at the end of the nineteenth century, was closely tied to a belief in God.<sup>351</sup> However, the constitutional definition of religion now extends beyond a pure theistic formulation.<sup>352</sup> The conscientious objector cases, for instance, granted plaintiffs exemptions notwithstanding refusals to affirm a faith in a supreme being.<sup>353</sup> In these cases, the Court was less concerned with formal theistic faith than it was with “sincere religious beliefs which are based upon a power or being, or upon a faith, to which all else is subordinate or upon which all else is ultimately dependent.”<sup>354</sup>

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<sup>347</sup> 592 F.2d at 197.

<sup>348</sup> *Id.* The course taught that pure creative intelligence was the basis of life, and that through the process of Transcendental Meditation students could perceive the full potential of their lives. *Id.* In affirming the district court's judgment that religious activity was involved in the teaching of the course, the court stated that a careful examination of the textbook, the expert testimony, and the uncontested facts concerning the puja—a religious ceremony that involved the chanting of a mantra—demonstrated that religious activity was involved and that there was no reversible error in the district court's determination. *Id.*

<sup>349</sup> See *supra* note 327 (discussing *Seeger* and *Welsh*).

<sup>350</sup> *Malnak*, 592 F.2d at 200.

<sup>351</sup> *Id.* at 201.

<sup>352</sup> *Id.* at 203-07.

<sup>353</sup> *Id.* at 204 (citing *United States v. Seeger*, 380 U.S. 163 (1964)).

<sup>354</sup> *Seeger*, 380 U.S. at 176. The Court has reigned in this broad definition, which was called a “distortion to avert an inevitable constitutional collision” by Justice Harlan in *Welsh v. United States*, 398 U.S. 333, 354 (1970), but both *Seeger* and *Welsh* remain constitutionally significant. *Malnak*, 592 F.2d at 204-05. Judge Adams writes, “the constitutional values prompting such a statutory construction can only be taken to suggest a broad definition of religion.” *Id.* at 205. Moreover, “Justice Harlan explicitly recognized as ‘religions’ various non-Theistic belief systems.” *Id.* Justice White's definition, by contrast, “included non-Theists, but excluded economic, philosophical, or merely personal opinions, however sincerely held.” *Id.*

In addition to the traditional religion cases and the conscientious objector cases, Judge Adams separately identified a cluster of cases which “[suggest] a new constitutional definition” of religion.<sup>355</sup> These cases represent a complete rejection of the view that religion must be defined solely in terms of a Supreme Being.<sup>356</sup> Instead, Judge Adams highlights three indicia that may be utilized in determining whether a set of ideas amounts to religion.<sup>357</sup> Although these indicia should not be considered a final “test” for religion, and although Judge Adams derived this new definition from free exercise challenges, as a set of objective guidelines, his indicia are capable of being applied to Establishment Clause issues like intelligent design.<sup>358</sup>

“The first and most important of the three indicia is the nature of the ideas in question.”<sup>359</sup> This inquiry is not intended to determine the truth or falsity of the supposed religion, but to investigate whether the “subject matter it comprehends is consistent with the assertion that it is, or is not, a religion.”<sup>360</sup> For example, there is an expectation that religious ideas address fundamental questions such as man’s role in the universe, a proper moral code, and other issues important to a believer.<sup>361</sup> Such subjects are of utmost importance and must be carefully guarded against governmental interference and conversion into official government doctrine.<sup>362</sup> Although not all ultimate questions are necessarily religious, “the ‘ultimate’ nature of the ideas presented is the most important and convincing evidence that [the ideas] should be treated as religious.”<sup>363</sup>

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<sup>355</sup> *Malnak*, 592 F.2d at 205.

<sup>356</sup> *Id.* at 205-07.

<sup>357</sup> *Id.* at 208-10.

<sup>358</sup> Judge Adams advocates that the broader definition of religion developed in the free exercise cases should be applied under the Establishment Clause. *Id.* at 213. Thus, while Professor Lawrence Tribe asserts that the Free Exercise Clause should be read broadly to include anything “arguably religious” while the Establishment Clause should not be construed to encompass anything “arguably religious,” Judge Adams contends that a stronger argument can be made for a unitary definition that prevails for both First Amendment clauses. *Malnak*, 592 F.2d at 210-13. On this issue, courts have generally not adopted a bifurcated analysis but have followed the sentiment of Justice Rutledge in *Everson v. Board of Education*:

“Religion” appears only once in the [First] Amendment. But the word governs two prohibitions and governs them alike. It does not have two meanings, one narrow to forbid “an establishment” and another, much broader, for securing “the free exercise thereof.” “Thereof” brings down “religion” with its entire and exact content, no more and no less, from the first into the second guaranty, so that Congress and now the states are as broadly restricted concerning the one as they are regarding the other.

300 U.S. 1, 32 (Rutledge, J., dissenting).

<sup>359</sup> *Malnak*, 592 F.2d at 208.

<sup>360</sup> *Id.* at 208.

<sup>361</sup> *Id.*

<sup>362</sup> *Id.*

<sup>363</sup> *Id.*

The second indicium identified by Judge Adams inquires into the “comprehensiveness” of a set of ideas.<sup>364</sup> While ultimate questions tend to suggest the presence of religion, a program or argument which lacks a comprehensive belief system may not properly be classified as such.<sup>365</sup> The “Big Bang” theory is illustrative of this point: it touches on an ultimate concern, but is not comprehensive because it is “unlikely to proffer a systematic series of answers . . . to resemble a religion.”<sup>366</sup> Adams concedes, however, that when scientific theories are combined into a comprehensive system, the result may well become a “ruling science” that the Establishment Clause must guard against.<sup>367</sup>

Judge Adams’ final indicium of religion is “any formal, external, or surface signs that may be analogized to accepted religions.”<sup>368</sup> “Such signs might include formal services, ceremonial functions, the existence of clergy, structure and organization, efforts at propagation, and observation of holidays.”<sup>369</sup> Yet, Judge Adams also implies that a religion may exist without any of these signs such that the absence of such signs is not determinative in resolving the question of whether a group or cluster of ideas qualifies as religion.<sup>370</sup>

Similar to the position of the Dover School District, the appellants in *Malnak* alleged that Creative Intelligence was verifiable science, not religion.<sup>371</sup> Judge Adams disagreed, and concluded that SCI/TM represented religious teaching for the following reasons.<sup>372</sup> First, SCI/TM “provides answers to questions concerning the nature of both world and man.”<sup>373</sup> Second, although it is not as comprehensive as some religions, SCI/TM is sufficiently comprehensive to be distinguished from an isolated theory disconnected from any particular world-view or belief system.<sup>374</sup> Third, while SCI/TM lacks clergy and traditional rites such as marriage, it trains teachers and exists for the purpose of propagating its message.<sup>375</sup> Thus, while SCI/TM is clearly not a theistic religion, it deserves the constitutional pro-

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<sup>364</sup> *Id.* at 209.

<sup>365</sup> *Malnak*, 592 F.2d at 209.

<sup>366</sup> *Id.*

<sup>367</sup> *Id.*

<sup>368</sup> *Id.*

<sup>369</sup> *Id.*

<sup>370</sup> *Id.*

<sup>371</sup> *Malnak*, 592 F.2d at 213 n.55.

<sup>372</sup> *Id.* at 213-15.

<sup>373</sup> *Id.* at 213.

<sup>374</sup> *Id.*

<sup>375</sup> *Id.* at 214.

tections (and restraints) articulated by Establishment Clause jurisprudence—including the prohibition of its teaching in public schools.<sup>376</sup>

Intelligent design theorists who have analyzed intelligent design under the *Malnak* criteria conclude that intelligent design is not a religion. Francis Beckwith, a leading critic of evolution and an advocate of intelligent design, articulated the reasons underlying this conclusion in the following manner: intelligent design (1) does not attempt to address fundamental and ultimate questions, but instead “addresses the same questions raised by Darwinists: [w]hat is the origin of apparent design in biological organisms and/or other aspects of the natural universe,” (2) is an example of “isolated teaching” and thus lacks comprehensiveness, and (3) embodies none of the formal and external signs associated with religion, such as clergy or ritual.<sup>377</sup>

While Beckwith’s analysis is superficially accurate, it fails to acknowledge that, in other respects, intelligent design meets the *Malnak* criteria. Thus, it is an open question whether a court will classify intelligent design as religion. Regarding the first indicium—“the nature of the ideas in question”—intelligent design contemplates fundamental questions given that it is primarily concerned with the origin of life. Beckwith asserts that the focus of intelligent design is simply to question how biological organisms acquire their design.<sup>378</sup> However, the purpose of this inquiry is motivated by certain religious beliefs and the answers to the inquiry are consistent with theistic tenets. Thus, intelligent design advocates and Darwinists are not asking the same question as Beckwith suggests because intelligent design is not really asking a question. Intelligent design is searching for scientific evidence to support a pre-determined conclusion.

Furthermore, intelligent design might satisfy the “comprehensiveness” inquiry that *Malnak*’s second indicium articulates. While intelligent design may be analogous to the Big Bang theory—it similarly articulates an interpretation of the universe that answers an ultimate question while not advancing a religious idea itself<sup>379</sup>—it is also meaningfully distinct. The Big Bang theory is a neutral theory supported by objective scientific evidence. By contrast, intelligent design is not supported by any verifiable scientific evidence,<sup>380</sup> and it advances a concept that is essentially indistinguishable from a theistic interpretation of creation.

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<sup>376</sup> See *id.*

<sup>377</sup> Francis J. Beckwith, *Public Education, Religious Establishment, and the Challenge of Intelligent Design*, 17 NOTRE DAME J.L. ETHICS & PUB. POL’Y 461, 494-95 (2003).

<sup>378</sup> *Id.*

<sup>379</sup> *Malnak*, 592 F.2d at 209 & n.41 (Footnote 41 states: “It is a widespread practice in high school biology courses . . . to include discussion of Darwin’s theory of evolution. This theory is offensive to some religious groups, but it is not in itself religious.”).

<sup>380</sup> See *supra* Section III.C.3.a.

While it is unlikely that a court will classify a neutral scientific theory as religious, a court may consider a scientific theory that is materially consistent with religious tenets, and not based on verifiable data, religious. If this is the case, then intelligent design may in fact rise to the level of a “ruling science” despite it being a relatively isolated, uncomprehensive theory. This conclusion is partly based on a presumption that if the creation line of cases—*Epperson*, *McLean*, *Edwards* and *Freiler*—were analyzed under *Malnak*, creationism would have qualified as a ruling science despite its isolated and uncomprehensive focus. Moreover, intelligent design may not be that isolated, given that it overflows into other academic disciplines. For example, “new research and discoveries in such fields as physics, cosmology, biochemistry, genetics, and paleontology have caused a growing number of scientists and science theorists to question neo-Darwinism and propose design as the best explanation for the existence of specified complexity in the natural world.”<sup>381</sup> Therefore, intelligent design may satisfy the comprehensiveness criteria notwithstanding its existence as a relatively isolated concept.

Regarding the third indicium of religion identified by Judge Adams—any “sign that may be analogized to accepted religion”—intelligent design evades a simple classification. Countless websites, films, and books dedicate themselves to promoting the idea of intelligent design, and a sizable number of Design advocates are at any given time presenting the virtues of Design theory around the country.<sup>382</sup> While intelligent design undertakes efforts of propagation, however, it lacks ceremonial functions, traditional rights, clergy, and formal services. Nevertheless, it is worth noting that despite the list of “useful signs that a group or belief system is religious,”<sup>383</sup> “religion may exist without any of these signs.”<sup>384</sup>

It is also important to recall that Adams’ criteria are only a set of guidelines to guard against ad hoc justice; it is not a formal test. A court can limit the inquiry or modify the criteria. Given the unique position of intelligent design—its tenets resemble religious doctrine but it proclaims itself secular—this Article suggests that a court might modify the third indicium in the following manner. Rather than identifying signs or rituals in a program and analogizing them to that of a recognized religion, a court might consider whether a purportedly non-religious program is the product of, utilized by, or is consistent with, a recognized religion. Such an inquiry is appropriate for programs like intelligent design, where the underlying

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<sup>381</sup> Top Questions, *supra* note 52.

<sup>382</sup> Dr. Michael Behe participated in a seminar on Intelligent Design at Dover Area High School on April 23, 2005.

<sup>383</sup> *Malnak*, 592 F.2d at 210.

<sup>384</sup> *Id.* at 209.

theory may serve as the silent arm of an organized religion. Without this modification to the third indicium, alone, a program like intelligent design may not be found to possess the signs and symbols typical of a religion. However, if a program's central idea, purpose, and activities are wholly consistent with, or orchestrated by, a recognized religion, then a court may conclude that notwithstanding a lack of "surface signs," the program is in fact religious.

The evidence that intelligent design is a product of creationism or is at least wholly consistent with the theistic tenets of Christianity, such that it may be either's "silent arm," is compelling. As discussed, the similarities between creationism and intelligent design, and Christianity and intelligent design, are striking.<sup>385</sup> In addition to such similarities, the strategy of creationists in the face of judicial defeat is one of resourcefulness, resilience, and adaptability. Each time a court has struck down an attempt by creationists to teach their theory within the classroom, creationists have devised a new approach—one that comes closer to passing under the constitutional radar. Intelligent design may thus be characterized as the latest and most impressive attempt to reinvent and repack creationism. The argument succeeds in casting doubt on evolution and encouraging belief in a Designer while avoiding the now-obvious pitfalls of explicitly identifying a supreme being or referencing the Book of Genesis. Finally, it is noteworthy that almost all of intelligent design's adherents, advocates, and supporters—whether scientist or lay person—hail from politically conservative organizations or maintain Christian affiliations.<sup>386</sup>

In summary, by modifying the third criterion of the *Malnak* test, a court may more accurately resolve whether a program is religious. In the case of intelligent design, the argument's similarity to creationism and its interconnectedness with Christianity may lead a court to conclude that despite its lack of surface signs, it is indeed religious.

## ii. Proposal: A Conceptual Separability Test

Although the *Malnak* criteria adapted in the aforementioned manner may provide a useful framework, it is also possible that the test is altogether inappropriate for analyzing the constitutionality of intelligent design. Design critic Jay D. Wexler points out that the *Malnak* test has a limited purpose—to help determine whether an unfamiliar belief system is a relig-

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<sup>385</sup> See *supra* Section I.B-C and pp. 64-66.

<sup>386</sup> For example, Michael Behe is a senior fellow at the conservative intelligent design headquarters, the Discovery Institute. William Dembski heads a center for intelligent design at Southern Baptist Theological Seminary. Wallis, *supra* note 51, at 29.

ion by comparing it to traditional systems commonly understood as religious.<sup>387</sup> The constitutional status of intelligent design, by contrast, poses an altogether different problem: “whether a core tenet of a familiar and traditional religious belief system (that a designer created the universe) is by itself sufficient to constitute a religious belief that the government cannot promote or endorse.”<sup>388</sup>

Given the potential inapplicability of *Malnak* to intelligent design, this Article presents a new framework which may more accurately help determine whether intelligent design is religious. This new framework concludes that where a core tenet is a central and defining characteristic of a well-established religion, such that it can not be conceptually separated from that religion, that tenet, standing alone, is inherently religious for constitutional purposes. After all, if a tenet is so central to a well-established religious doctrine that the religion would be unrecognizable without its presence, it is unrealistic to expect the belief to exist on its own in a way that is genuinely independent of that religion. The implication of such a presumption is that regardless of how the tenet is couched—as religious dogma or scientific theory—if it is a central tenet of a traditional, well-established religion, it is “religious” for purposes of the First Amendment.

The following objective inquiry can identify what qualifies as a “central tenet” of a religion. The first consideration is whether the religion would be recognizable to its members if that tenet (belief or practice) were absent. It is appropriate to analyze the tenet from the perspective of both a casual member and a devout one. While the perspective of the casual member can best determine how well-recognized and integrated the tenet is, the perspective of the devout can gauge its doctrinal importance to the faith. For instance, if a belief in “one God” was severed from Christianity, Judaism, or Islam, even the most casual of members would cease to recognize those religions. Meanwhile, devout members would undoubtedly confirm that the tenet was one on which the religion depended. By contrast, if the practice of Christmas caroling ceased to exist, casual Christians would still recognize their religion and devout members would concede the unaltered state of Christianity. Likewise, if kosher dietary laws were removed from Judaism, or circumcision from Islam, the religion would still be recognizable to its mainstream members. As for the perspective of the devout, they would argue that while the ritual is important to the faith, and perhaps even ordained by God, it is not the embodiment of the religion. Therefore, since caroling, dietary laws, and circumcision are “conceptually separate” from the core of recognized religion, a public school course that exposes students

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<sup>387</sup> Wexler, *supra* note 332, at 816.

<sup>388</sup> *Id.*

to them would not raise constitutional concerns in the same way that teaching about belief in one God would.

The second consideration of the objective inquiry is whether the tenet at issue is one in which all members believe. For example, if a Christian does not believe that Jesus is the son of God, that person would probably not be considered a Christian. Therefore, believing that Jesus is the son of God is a central tenet of a well-established religion and should be considered as such for constitutional purposes.

Another way of looking at this question is to ask whether the belief is held by religious adherents alone, or by atheists as well. For example, belief that Jesus is the son of God can rightly be classified as “religious” not only because it is a central tenet of a recognized religion, but also because the belief is held only by persons who are religious. By contrast, Judaism’s belief in atonement, forgiveness, and renewal is the focus of the faith’s most holy day, Yom Kippur. It is thus a central tenet of a recognized religion, but it is not religious per se for constitutional purposes because, unlike a belief in Jesus as the son of God, it is not a belief unique to religious adherents. Distinguishing between religious tenets that are uniquely held by religious adherents, and tenets that are universally held, ensures that beliefs classified as “religious” truly are religious.

This conceptual separability inquiry forms a two-part framework for analyzing whether intelligent design’s argument that the universe was created by a designer is a central religious tenet, and hence “religious” for constitutional purposes. First, we consider whether the most casual members of an established religion would recognize the belief as central to their faith. The idea that the universe is designed—whether or not the designer is specifically identified as God—is a central, animating idea of the major Western theistic traditions.<sup>389</sup> Given that the story of creation as depicted in the Book of Genesis is often a child’s first introduction to religion, even casually religious adult members would recognize the idea of creationism as a central religious tenet. Alternatively, casual members would likely fail to recognize their religion absent this creationist belief.

Next, we consider whether devout adherents of a well-established religion would consider the belief critical to the faith. Although a court would engage in an evidentiary hearing, or accept qualified studies on this issue, we can presume that the story of creation is a central tenet of Western monotheistic religions given that the devout believe in the inerrancy of the Bible. In addition, we can draw this conclusion from the degree of activism engaged in by the devout to ensure that the story of creation is perceived as truth by its members. Finally, we can rely on the Supreme Court’s recogni-

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<sup>389</sup> Wexler, *supra* note 332, at 816.

tion that, at the very least, “belief in a supernatural Creator of mankind is the essence of traditional religious belief.”<sup>390</sup>

Second, we ask whether belief in a designed universe is a tenet upon which members of a particular religion subscribe, or alternatively, whether the belief is unique to religious ideology. Given that the story of creation is central to the Book of Genesis, it may be regarded as either a central component of a particular religion or as a uniquely religious sentiment. Although some non-adherents accept the existence of a supernatural power, agnostic and anticlerical persons do not attribute the origin of life to the work of a designer, at least not alone. By contrast, if someone proclaimed a belief in a God-created or intelligently designed world, she would be regarded as having uttered a religious idea.<sup>391</sup>

Based on the presumptions that arise from this two-step analysis, a court might conclude that a belief that the “universe was created by a designer” is in fact religious and, as such, should not be taught in public schools as truth. In light of such a holding, teaching intelligent design in public schools would clearly offend the Establishment Clause. The purpose and effect of singling out evolution from all other scientific topics in the curriculum for special, negative treatment would be regarded by a court as advancing and endorsing the beliefs of religion generally, and Christianity specifically. In addition, it would be misleading and detrimental to students’ science education. Finally, if intelligent design were presented without any discussion of its “gaps,” students would be encouraged to believe that the theory of evolution was false while the religious beliefs espoused by intelligent design bespeak truth. Such a policy demonstrates a preference for intelligent design over evolution, which amounts to a public school preferring religion over a neutral scientific theory.

Despite this analysis under the proposed conceptual separability test, it remains an open question what set of criteria a court will ultimately utilize in an inquiry about the religious nature of intelligent design.

#### IV. HOW INTELLIGENT DESIGN MIGHT PASS CONSTITUTIONAL MUSTER AFTER ALL

If the Pennsylvania court finds that Dover’s intelligent design policy violates the Establishment Clause, such a decision will not end the controversy over intelligent design, but will usher in the controversy’s next chapter. It is predictable that creationists will once again demonstrate their resilience and resourcefulness in the face of judicial defeat. As the *Campbell*

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<sup>390</sup> *Id.* at 818.

<sup>391</sup> *Id.* at 817-18.

court aptly described, “[w]ith each new decision . . . religious proponents have attempted to modify or tailor their approach . . . time and time again, [forcing] the courts to reassert and redefine the prohibitions of the first amendment.”<sup>392</sup>

This Article argues that even if the intelligent design program in *Kitzmiller* is struck down, it is only a matter of time until intelligent design proponents modify their argument in such a way as to satisfy a future constitutional challenge. This section identifies adaptations that the intelligent design movement can undertake to increase its chances of surviving a constitutional challenge. In addition, it sets forth approaches to teaching intelligent design that schools can permissibly engage in before a court even rules on the constitutionality of intelligent design.

#### A. *A Secular Purpose*

If Dover’s intelligent design program is held unconstitutional, it will be for a lack of a secular purpose. Therefore, it may just be that all the next design program requires is the absence of an apparent religious motivation. The secular-purpose prong of *Lemon* is not particularly difficult to overcome in the absence of clear evidence to the contrary. Most courts are likely to find that the objective of presenting students with a balanced education is sufficiently desirable and secular.<sup>393</sup> The presence of a secular pur-

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<sup>392</sup> Hendrin v. Campbell, 45 U.S.L.W. (BNA) No. 44, at 2530 (Ind. Super. Ct., Apr. 14, 1977).

<sup>393</sup> However, see Wexler, *supra* note 332 at 803-12, for an argument that the “educational case for teaching about intelligent design is extremely weak, at best.” He makes the following points: (1) “[T]he argument that students will learn more comprehensively about the substantive nature of the scientific controversy over origins is fallacious, because there is nothing even approaching a significant substantive scientific debate over the basic premises of evolutionary theory”; (2) “teaching intelligent design will do very little to teach students about how to understand and discuss important and controversial public issues in a diverse and pluralistic population”; (3) “[t]he possibility that teaching intelligent design may reform origins education to make it more exciting and lively standing alone does not constitute a strong argument for teaching the alternative theory”; and (4) there are problems with relying on the argument that teaching alternatives to the prevailing theory of evolution will allow schools to better educate students regarding the nature and process of scientific thought.

“[First], it is far from clear that schools are currently failing to teach students generally about the nature and process of science . . . . Second, given that scientists overwhelmingly support the theory of evolution and reject the theory of intelligent design, the controversy over these theories would not be a very good example to use to teach students about the gradual progression of scientific knowledge and understanding . . . . Finally, even if schools are in fact not teaching students about the scientific process, and even if using a controversy over a theory that is accepted by an overwhelming consensus of scientists is a good way to teach students about the evolving nature of science, teaching this one scientific controversy in isolation still would constitute an arbitrary choice that is radically under-inclusive with respect to achieving the desired goal.”

Wexler, *supra* note 332, at 803-10.

pose will at least afford the intelligent design program a chance of surviving constitutional attack, or at the very least, present a case for analysis under the second and third prongs of *Lemon*.

#### B. *Address Evolution's Shortcomings*

While state science standards should not replace the evolution curriculum with intelligent design, the standards may legitimately require teachers to acknowledge the gaps/problems of evolution. These standards may even require schools to keep a few copies of *Pandas* in their libraries for students to reference on a voluntary basis. In fact, the National Association of Biology Teachers (NABT) recommends something akin to this approach. NABT guidelines suggest that teachers instruct students that the theory of evolution is only a well supported scientific theory, not a fact.<sup>394</sup> Furthermore, NABT recommends that teachers advise students of the students' own responsibility as informed citizens to seek out information on creationism from theological experts so that they can decide for themselves the merits of each discipline and its relevance to their lives.<sup>395</sup>

It is fair to expect teachers to convey the limits of science. But teachers should not be required to present an alternative theory to evolution that itself rests on questionable scientific evidence. Therefore, this comprehensive approach to teaching evolution may be the most practical, and constitutionally permissible, way to satisfy the goals of both evolutionists and intelligent design proponents. In this manner, evolution's limitations are presented, but the theory itself is not wholly undermined. At the same time, the existence of alternative origin of life theories are acknowledged, but students are encouraged to investigate such theories in Sunday school, rather than in the science classroom.

#### C. *Elective Courses*

Absent a judicial decision to the contrary, it may be permissible to teach intelligent design as an interdisciplinary elective. The Supreme Court has suggested that religious texts, including the Bible, are worthy of study for their literary and historic qualities.<sup>396</sup> The only limitation on such in-

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<sup>394</sup> *Position of the Iowa Department of Public Instruction Regarding Creation, Evolution and Public Education*, NEWS & VIEWS (Nat'l Ass'n of Biology Teachers, Reston, Va.), Apr. 1978, at 5. This perspective differs from the message of textbook disclaimers, however, because it emphasizes that evolution is not just a theory, but a well-supported and scientific theory. *Id.*

<sup>395</sup> *Id.*

<sup>396</sup> *Sch. Dist. v. Schempp*, 374 U.S. 203, 225 (1963).

struction is that religious texts and concepts be presented objectively and as part of a secular education program.<sup>397</sup>

Accordingly, intelligent design can be taught as an elective course comparing origin of life theories in which intelligent design is just one of the many theories presented to explain the origin of the universe and humankind. Comparative theories might include those that stem from scientific research, Native American folklore, Greek myths, and religious perspectives. Sources could include literature, history, art, science, and religion. Since the focus of the elective would be to identify the characteristics of each perspective and to demonstrate areas of difference and similarity between all the views, rather than weighing the validity of each, schools will succeed in presenting intelligent design without appearing to promote or favor its argument.

While an interdisciplinary elective will satisfy the First Amendment, the approach may not suit the agenda of intelligent design proponents or constitutional separationists.<sup>398</sup> On the one hand, intelligent design proponents will resent relegating instruction on intelligent design to an elective course. Acquiescence with such a program essentially concedes that intelligent design is the product of religious doctrine, not science. Furthermore, outside the science classroom, intelligent design will prove less effective in casting doubt on the legitimacy of evolution.

On the other hand, separationists will object to intelligent design being taught in public schools at all. They fear that teachers—many of whom are religious themselves—will inadvertently, or intentionally, violate the Establishment Clause by emphasizing or somehow legitimizing intelligent design above other theories. It is also probable that majoritarian religious views will at least tacitly subordinate or disadvantage the views of minority groups in the classroom. Similarly, teaching intelligent design, even as part of an elective, may burden students' religious beliefs by imposing scientifically faulty ideas upon them.<sup>399</sup> Finally, the costs of such a course, which may include extensive training for teachers, could be significant. At least

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<sup>397</sup> *Id.* (“Nothing we have said here indicates that such study of the Bible or of religion, when presented objectively as part of a secular program of education, may not be effected consistently with the First Amendment.”).

<sup>398</sup> “Separationists” are primarily concerned with maintaining a strict separation of church of state; therefore, they reject the teaching of any religious doctrine in schools. Evolutionists specifically prioritize the teaching of evolution over religious origin of life theories.

<sup>399</sup> This argument possesses little constitutional traction given that courts have not recognized a constitutional right to be free from such religiously neutral public school requirements. *See, e.g., Mozert v. Hawkins County Bd. of Educ.*, 827 F.2d 1058, 1063-70 (6th Cir. 1987) (rejecting a free exercise of religion claim that certain required readings would expose students to inaccurate ideas and would thus violate students' constitutional rights).

one scholar concludes that it may be inherently impossible to teach religious subjects in a pedagogically neutral way.<sup>400</sup>

Despite the aforementioned objections by both sides to the controversy, there are reasons for each to welcome an elective course on comparative origin theories. Intelligent design proponents should rejoice that their argument is actually being taught in public schools, while separationists should comfort themselves that intelligent design is presented as only one religious perspective on the origin of life. Whereas teaching evolution and intelligent design side-by-side in a biology class implicitly suggests that one perspective is right and the other wrong, exposing children to multiple perspectives in an elective conveys the message that while there is one scientific explanation, a variety of religions and cultural theories exist, all of which may shed light on how mankind developed.

Students deserve exposure to all origin of life theories, but in a manner that allows each perspective to be explained by a qualified individual, and in a manner that does not undermine or cast doubt on another theory. With an elective course, students will be equipped to objectively weigh the merits of each explanation and choose for themselves what to believe. Most importantly, students will realize that our society is made up of many different views—all of which deserve respect.

#### D. *After-School Clubs*

The Equal Access Act,<sup>401</sup> which was upheld by the Supreme Court in *Board of Education v. Mergens*,<sup>402</sup> provides that public secondary schools that permit extracurricular clubs may not exclude religious clubs from sponsorship or school facilities.<sup>403</sup> So long as a school's criteria for supporting a club are neutral, the subject matter of the club is not required to be pedagogically neutral. It follows that it is constitutionally permissible for student groups to meet on school premises during non-instructional time to discuss intelligent design.

After-school intelligent design clubs are an attractive alternative to teaching intelligent design in biology class. In addition to their being constitutionally permissible, after-school clubs are often student-led, membership is voluntary, and teachers often assume a non-participatory or advisory

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<sup>400</sup> Phillip C. Kissam, *Let's Bring Religion into the Public Schools and Respect the Religion Clauses*, 49 U. KAN. L. REV. 593, 608 (2001).

<sup>401</sup> 20 U.S.C. §§ 4071-4074 (1994).

<sup>402</sup> 496 U.S. 226 (1990).

<sup>403</sup> 20 U.S.C. § 4071(a) (prohibiting all secondary schools that receive federal funding from discriminating against student groups on the basis of their "religious, political, philosophical, or other content of the speech at such meetings").

role. The composition of such clubs thus protects against any student feeling ostracized or the school appearing to endorse religion. Moreover, the approach is a far less costly option than classroom monitoring or developing an elective class.

Yet, civil libertarian groups warn that such clubs amount to clever “artifices” that “circumvent” Supreme Court decisions striking down the teaching of creationism in public schools.<sup>404</sup> Senator Hatfield, a leading proponent of the Equal Access Act, essentially conceded that such clubs were in fact a device to elude the Establishment Clause.<sup>405</sup> Separationist groups also predict that clubs of this kind will serve as “fronts” for evangelizing activity organized behind the scenes by adults.<sup>406</sup> Students may experience subtle pressure to adopt the school-endorsed club’s beliefs in order to meet what they perceive as the school’s expectations.<sup>407</sup> Meanwhile, members of the religious minority will feel “inundated by a torrent of allegedly voluntary”<sup>408</sup> views.

Given these concerns, schools that permit an intelligent design club will have to be vigilant in avoiding any appearance of endorsement of the club. Signs of endorsement will exist, for example, if the school principal announces club meetings daily over the public address system, or if the club’s faculty advisor assumes an active leadership or instructional role in the organization. Although these factors alone would probably prove insufficient to support the finding of a constitutional violation, the existence of these factors plus others—such as rescheduling the club’s meetings to a study hall period during the school day, or the club’s invitation of teachers from the science department to address the group—might together create a situation that blurs the line between a student-initiated organization and a school-endorsed one.

Schools must also avoid the perception of outright coercion. Justice Marshall warned in his *Mergens* concurrence that “in the absence of a truly robust forum that includes the participation of more than one advocacy-oriented group, the presence of a religious club could provide a fertile ground for peer pressure, especially if the club commanded support from a substantial portion of the student body.”<sup>409</sup> Thus, schools should encourage,

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<sup>404</sup> Dena S. Davis, *Religious Clubs in the Public Schools: What Happened After Mergens?*, 64 ALB. L. REV. 225, 233 (2000) (citing Brief of Amicus Curiae Anti-Defamation League of B’nai B’rith et al. at 6, 8, *Mergens* (No. 88-1597) [hereinafter B’nai B’rith Amicus Brief]).

<sup>405</sup> B’nai B’rith Amicus Brief, *supra* note 404, at 6, 8.

<sup>406</sup> Davis, *supra* note 404, at 233.

<sup>407</sup> *Id.* (citing B’nai B’rith Amicus Brief, *supra* note 404, at 15).

<sup>408</sup> Davis, *supra* note 404, at 234 (citing Editorial, *School Prayer Anxieties*, N.Y. TIMES, July 13, 1995, at A22).

<sup>409</sup> Bd. of Educ. of Westside Cmty. Sch. v. *Mergens*, 496 U.S. 226, 268 (1990) (Marshall, J., concurring).

or at least genuinely tolerate, the emergence of organizations based on a variety of political and religious perspectives, including agnostic and anti-clerical, even if they offend the community.

Despite these obstacles, the existence of a student-led intelligent design organizations, operating alongside other groups, may just succeed in fostering increased engagement, tolerance, understanding, and respect for the views of others.

#### E. *Released Time for Alternative Instruction*

Intelligent design may also find its way into public schools through an arrangement whereby students are released from biology class in order to receive alternative instruction on intelligent design elsewhere. Such a “release time” program would be modeled on already recognized release time programs that allow students to take advanced German, or advanced Hebrew, instead of regularly scheduled language classes. Schools have the discretion to dismiss students for religious instruction off school premises, provided that the schools do not encourage or discourage participation in the program, or penalize those who do not attend.<sup>410</sup>

*McCollum v. Board of Education*<sup>411</sup> and *Zorach v. Clauson*<sup>412</sup> are the two seminal cases on “release time” programs. By understanding why the Supreme Court struck down the program in *McCollum* while upholding the program in *Zorach*, schools can structure a program that allows the release of students for the purpose of studying intelligent design.

In *McCollum*, the Court disapproved of a program that authorized the release of students from secular classes in order to attend certain religious classes convened in the public school building by religious figures.<sup>413</sup> Students who did not volunteer for release were required to attend to their secular studies, an arguably far less attractive option.<sup>414</sup> The Court held that the First Amendment’s prohibition against the establishment of religion forbade students of public schools from electing to take courses in religious education, even with the approval of their parents.<sup>415</sup>

In *Zorach*, the Court upheld a program where students were released from secular subjects in order to attend religious classes held at nearby religious centers.<sup>416</sup> In its opinion, the Court stressed that the program involved

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<sup>410</sup> ACLU Joint Statement, *supra* note 243.

<sup>411</sup> 333 U.S. 203 (1948).

<sup>412</sup> 343 U.S. 306 (1952).

<sup>413</sup> *McCollum*, 333 U.S. at 203.

<sup>414</sup> *Id.* at 209.

<sup>415</sup> *Id.* at 203.

<sup>416</sup> *Zorach*, 343 U.S. at 309.

neither religious instruction in public school classrooms nor an expenditure of public funds.<sup>417</sup> Moreover, no one was forced to attend the offsite religious classes and no religious instruction was brought back into the schools.<sup>418</sup> The Court also emphasized that the First Amendment did not require government hostility toward religion.<sup>419</sup> Separation of church and state does not prohibit a public school from adjusting its schedule to accommodate the religious needs of its students.<sup>420</sup>

These two cases suggest that a public school desiring to expose its students to intelligent design need only construct a release time program that patterns itself after the distinguishing facts in *Zorach*. Specifically, intelligent design classes should not be taught on school premises, especially by religious figures that come onto school property in conspicuously religious garb. Additionally, classes must be voluntary and open to any student interested in attending, but should not be scheduled in a manner that makes attending such classes a more attractive option than the default classroom instruction. Appearing to treat some children more favorably than others could itself lead to an Establishment Clause challenge. Finally, in order to avoid entanglement concerns, schools must avoid frequent consultation with parents and clergy about their personal beliefs and aspects of evolution they find specifically objectionable.

Although the legal objections to a release time program are surmountable, such a program may not be acceptable to the various groups concerned. The most likely opponent will be the intelligent design proponents themselves. The thrust of the intelligent design argument is that intelligent design is rooted in science and deserves recognition as a secular argument. The purpose of such a release time program, however, is to allow students to receive religious instruction. If the intelligent design advocates support a release time program, they would effectively concede that intelligent design is religious. Agreeing to a release time arrangement would thus undoubtedly weaken the ability of intelligent design proponents to introduce intelligent design into the public school curriculum.

Evolutionists would also find a release time program unacceptable if the program is constructed as a substitute for, rather than supplement to, a biology class that teaches evolution. States have a compelling interest in providing students with a comprehensive science education. To allow children to opt out of important aspects of a core curriculum that teaches evolution will prove detrimental to student education, and will likely engender religious divisiveness in the school.

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<sup>417</sup> *Id.*

<sup>418</sup> *Id.* at 311.

<sup>419</sup> *Id.* at 311-12.

<sup>420</sup> *Id.*

A case that illustrates this very issue is *Mozert v. Hawkins County Board of Education*,<sup>421</sup> a case considered by at least one scholar to be the most important constitutional case on the subject of exemptions for public school students from parts of the curriculum.<sup>422</sup> In *Mozert*, the United States Court of Appeals for the Sixth Circuit rejected the claim of several parents that their children should be excused from using a basic reading series that the parents found objectionable on the ground that the reading series was inconsistent with their Fundamentalist Christian beliefs.<sup>423</sup> The reader at issue advocated tenets of “secular humanism,” including the theory of evolution, which the parents considered not only sacrilegious, but also a burden on Christians who accept the inerrancy of the Bible.<sup>424</sup> The court upheld the use of the reader, however, because its mere placement within the curricula lacked the “critical element of compulsion to affirm or deny a religious belief or to engage or refrain from engaging in a practice forbidden or required in the exercise of plaintiff’s religion.”<sup>425</sup> Applying the legal reasoning of *Mozert* to intelligent design, it appears that a student’s objection to evolution, even if religious, should not permit her excusal from a Biology class that teaches evolution, so long as instruction on evolution does not compel that student to deny her religious belief in a designed world.

In sum, there is precedent for release time programs, but in the context of intelligent design, it may not reflect the most attractive option. Not only will the program engender little support from intelligent design proponents who fear that such a program will transform intelligent design into a

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<sup>421</sup> 827 F.2d 1058 (6th Cir. 1987).

<sup>422</sup> Kent Greenawalt, *Teaching About Religion in the Public Schools*, 18 J.L. & POL. 329, 381 (2002).

<sup>423</sup> 827 F.2d at 1078.

<sup>424</sup> *Id.* at 1062. Some of the plaintiffs’ objections to the book centered on (1) a version of the Goldilocks story geared for a first-grader that did not punish Goldilocks for her misbehavior, (2) a play based on The Wizard of Oz that cast magic in a favorable light, and (3) an excerpt from the Diary of Anne Frank where Anne says to her friend Peter, “I wish you had a religion . . . [I]t doesn’t matter what. Just believe in something.” Greenawalt, *supra* note 422, at 371 (citations omitted). For the trial judge’s summary of plaintiffs’ main objections, see *Mozert v. Hawkins County Pub. Sch.*, 579 F. Supp. 1051, 1052 (E.D. Tenn. 1984).

<sup>425</sup> *Mozert*, 827 F.2d at 1069. For a discussion on whether children of Christian Fundamentalists should be excused from using secular texts to which they object, and an in-depth analysis of *Mozert*, see Greenawalt, *supra* note 422. He concludes with respect to *Mozert* that educational authorities can accommodate students if (1) the schools do not have to undertake serious costs to develop alternative programs, (2) parents can assure that excused children will maintain an adequate level of competence, (3) students using the standard text will not suffer serious disruption or interference with their program, (4) the parents’ objections are not so extensive that satisfying them would remove their children from most of the public school program, and (5) granting the exemptions would not be likely to lead to a wide range of objections from parents with different views, satisfaction of which would be unmanageable in terms of space and a coherent program. *Id.* at 380-81.

movement synonymous with religion, but it could also open the floodgates to various free exercise complaints, lead to divisiveness in the school, and potentially undermine the science education of all students.

#### F. *Academic Freedom and the University*

Academic freedom, as it relates to the rights of both students and teachers in the public school setting, is too broad a concept to be provided sufficient treatment in this Article. However, a few observations follow given that the issue has important implications for the topic of teaching intelligent design.

One unresolved conflict within the sphere of academic freedom is a tension between the courts and schools regarding the teaching of origin theory. The Supreme Court has repeatedly emphasized that “safeguarding academic freedom”<sup>426</sup> is a “value to all of us”<sup>427</sup> and the government should avoid casting a “pall of orthodoxy”<sup>428</sup> over public school classrooms. This position is grounded in the notion that the classroom is a place for a robust exchange of ideas and that no field of education is impervious to the potential introduction of new discoveries. However, the Court does not advocate an unbridled endorsement of academic freedom. School boards retain wide latitude and authority to prescribe what teachers may teach and discuss in the classroom.

Thus, the values that underpin academic freedom, school board agendas, and constitutional standards clash in two instances: (1) when teachers claim that they have a right to teach religious concepts contrary to school board instructions, and (2) when school boards require teachers to include religious instruction in their classrooms in violation of the Constitution. These conflicts, which are created by this interplay between academic freedom and desire to teach origin theory, are compounded by the heightened scrutiny with which the Establishment Clause is applied in the public primary and secondary school context. The rationale for this heightened scrutiny ranges from a notion that public schools are the bedrock of a free and democratic society<sup>429</sup> to a concern about the magnified impact of government activities in the eyes of impressionable children.<sup>430</sup> Of this more exacting standard, the Supreme Court has stated:

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<sup>426</sup> *Keyishian v. Bd. of Regents*, 385 U.S. 589, 603 (1967).

<sup>427</sup> *Id.*

<sup>428</sup> *Id.*

<sup>429</sup> Jay D. Wexler, *Of Pandas, People, and the First Amendment: The Constitutionality of Teaching Intelligent Design in the Public Schools*, 49 STAN. L. REV. 439, 455 & n.158 (1997).

<sup>430</sup> *Id.* at n.160.

Families 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 . . . Students in such institutions are impressionable and their attendance is involuntary. The State exerts great authority and coercive power through mandatory attendance requirements, and because of the students' emulation of teachers as role models and the children's susceptibility to peer pressure.<sup>431</sup>

Given these issues of academic freedom and the heightened scrutiny implicated by the teaching of origin theory in public schools at primary and secondary levels, intelligent design proponents may consider, for entirely strategic reasons, an entirely new approach: the introduction of intelligent design into the university classroom. While a university class on intelligent design would clearly be designated as an elective offering, it would easily dodge constitutional challenge since it would be composed of students with far less impressionable minds than those in middle school. While proponents of intelligent design undoubtedly desire the exposure of the argument to younger students, the university is perhaps the only forum where the kind of robust discussion that intelligent design advocates profess to seek can most genuinely occur.

#### CONCLUSION

Although the controversy over the role of religion in public schools has been ongoing since the early nineteenth century, it is today entering a new phase and the courtroom will once again serve as center stage. Just as the politics of the 1920s and 1950s prompted the emergence of anti-evolution and balanced treatment statutes, today's political climate is prompting the U.S. to closely examine its values, faith, and scientific prowess. At the forefront of our national dialogue is the War in Iraq, flaws in the U.S. space program, advances by other nations in the field of cloning, and the religious right's ambitious vision for America.

While the groundwork for the intelligent design movement rests on decades of efforts by creationist groups, Darwin's modern critics are not only religiously motivated creationists, but are also scientists and mathematicians. Having failed twice to convince the U.S. Supreme Court that creationism is a legitimate scientific theory, modern anti-evolutionists—armed with the conviction that teaching evolution results in a bias toward religion—have seized on intelligent design as the next hope for introducing alternative evolution theories into the classroom.

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<sup>431</sup> Julie K. Underwood, *Establishment of Religion in Primary and Secondary Schools*, 55 WEST'S EDUC. L. REP. 807, 809 (1989) (citing *Edwards v. Aguillard*, 482 U.S. 578, 584 (1987)).

Until recently, intelligent design was regarded as a fad that could not seriously threaten evolution. However, when the Kansas state school board—which has been embroiled in attempts to revise its science standards to teach alternative origin of life theories since 1999—began its latest set of hearings on May 6, 2005, it finally became clear that intelligent design is a political battle, and a serious threat. In November 2005, the Kansas Board of Education voted 6 to 4 to adopt new science standards that required Darwin's theory of evolution be challenged in the classroom.<sup>432</sup> The standards will change the basic definition of "science" to one that contemplates supernatural explanations.<sup>433</sup>

To counter the threat of intelligent design, scientists and educators are making tactical decisions that range from boycotting the Kansas hearings<sup>434</sup> to mobilizing lobbying efforts to educate the public about the perceived peril of intelligent design.<sup>435</sup> These efforts, which are largely grounded outside a debate over the First Amendment, find the community of scientists, educators, and evolutionists opposed to intelligent design combating a better funded and more politically savvy opponent. The National Center for Science Education, with its annual budget of \$700,000, must defend against the efforts of intelligent design's Discovery Institute and the \$1 million a year it devotes to research and multimedia efforts.<sup>436</sup> Intelligent design activism in states such as Virginia includes Liberty University's sponsoring of the Creation Mega Conference with Answers in Genesis, which raised \$9 million in 2003 for intelligent design propagation,<sup>437</sup> and the new Intelligent Design and Evolution Awareness Club at George Mason University, the state's largest public university.<sup>438</sup> Moreover, since the target of the intelligent design movement is not only schools, but also the American moral conscience,<sup>439</sup> scientists and educators, with their limited public relations experience, struggle to respond swiftly and effectively to calls for evolution

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<sup>432</sup> Jodi Wilgoren, *Kansas Board Approves Challenges to Evolution*, N.Y. TIMES, Nov. 9, 2005, at A5.

<sup>433</sup> Wallis, *supra* note 51, at 26, 28.

<sup>434</sup> Associated Press, *Scientists Boycott Kansas Evolution Hearings* (May 8, 2005), available at <http://www.foxnews.com/story/0,2933,155863,00.html>. The rationale behind this strategy is that engaging in a debate about intelligent design will give the argument legitimacy.

<sup>435</sup> Wallis, *supra* note 51, at 28.

<sup>436</sup> See Peter Slevin, *Teachers, Scientists Vow to Fight Challenge to Evolution*, WASH. POST, May 5, 2005, at A3.

<sup>437</sup> See Slevin, *supra* note 181.

<sup>438</sup> Geoff Brumfiel, *Intelligent Design: Who Has Designs on Your Students' Minds?*, 434 NATURE 1062, 1062 (2005).

<sup>439</sup> Such efforts are demonstrated by the marketing of DVDs, the distribution of literature such as "10 questions to ask [your child's] biology teacher," and the movement's various public action campaigns. G. Jeffrey MacDonald, *New Tactic in Evolution Debate*, CBSNews.com, at <http://www.cbsnews.com/stories/2005/05/03/tech/printable692524.shtml> (May 3, 2005).

reform couched in seemingly innocuous slogans like “teach the controversy”<sup>440</sup> and “both sides ought to be properly taught . . . so people can understand what the debate is about.”<sup>441</sup>

At the national level, politicians are also weighing in on the issue. Pennsylvania Republican Rick Santorum proposed the following addition to the 2001 No Child Left Behind Act: “Where biological evolution is taught, the curriculum should help students to understand why this subject generates so much controversy, and should prepare the students to be informed participants in public discussions.”<sup>442</sup> At the local level, as of August 2005, at least 20 states were considering proposals that would require schools to question evolution or otherwise inject religion into the curriculum.<sup>443</sup>

Finally, scientists and educators are fighting a battle against public opinion. In a Harris Poll conducted in June 2005, fifty-five percent of 1,000 adults surveyed said children should be taught creationism and intelligent design along with evolution in public schools. The same poll found that fifty-four percent did not believe that humans had developed from an earlier species, compared to the forty-five percent of people who held that view in 1994.<sup>444</sup>

For all of these reasons, scientists’ and educators’ best hope for securing the place of evolution over intelligent design is in the courtroom, where religious views, politics, and public opinion have little traction. While it remains to be seen how a court will analyze intelligent design—is it religion or science?—a decision against the School District in a case like *Kitzmiller v. Dover Area School District* will represent a meaningful achievement in halting intelligent design’s march into science classrooms.

But, as this Article has argued, even though the Dover program is likely to be struck down, it may only be a matter of time until the next iteration of intelligent design emerges and prevails. In a few short years, evolu-

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<sup>440</sup> Wallis, *supra* note 51, at 29.

<sup>441</sup> Bumiller, *supra* note 304 (quoting President George W. Bush).

<sup>442</sup> Slevin, *supra* note 436. Although this eleventh hour “sense of the Senate” passed 91-8, groups mobilized to quash it. *Id.* However, the language still remains in the bill’s nonbinding conference report. *Id.*

<sup>443</sup> Wallis, *supra* note 51, at 28. *See also* Richard Cohen, *Backward Evolution*, WASH. POST, Apr 12, 2005, at A21. In May 2005, a bill was introduced into the New York State Assembly calling for intelligent design instruction in public schools. H. Allen Orr, *Devolution: Why Intelligent Design Isn’t*, THE NEW YORKER, May 30, 2005, available at [http://www.newyorker.com/fact/content/articles/050530fa\\_fact](http://www.newyorker.com/fact/content/articles/050530fa_fact). Alabama and Georgia legislators recently introduced bills to allow teachers to challenge evolutionary theory in the classroom. Slevin, *supra* note 181. Ohio, Minnesota and New Mexico have approved new rules allowing the same. *Id.* Tennessee’s legislators are attempting to place disclaimer stickers in textbooks that state that evolution remains unproven. *Id.*

<sup>444</sup> Wallis, *supra* note 51, at 28.

tion science as it is now taught may have changed. Students may be instructed as to the possibility that the earth is only 10,000 years old and religion may be part of a scientific curriculum. In such an eventuality, however, while creationists will have prevailed in introducing intelligent design into public schools, they will have failed to weaken the merits or persuasiveness underlying evolution.

Teachers who are required by school boards to present intelligent design against their will can blunt its impact on evolution theory. Teachers are in a position to arm students with the critical reasoning and analytical skills that will ultimately allow them to call intelligent design's argument into question. Moreover, teachers can explain the scientific community's position on intelligent design and expose *its* gaps/problems. Thus, "teaching the controversy" does not necessarily need to confuse students or cast doubt on evolution as intelligent design proponents intend. Exposing students to the debate, if done in the absence of a religious agenda, could instead result in an improved scientific literacy, allowing students to appreciate the merits of evolution theory and the scientific shortcomings of intelligent design. If this is the case, creationists would have only succeeded in debunking their own assault on evolution.

Science, like law, seeks truth. Creationists have been resourceful in repackaging biblical theory, but they have ultimately failed to convince courts of creationism's legitimate place in public schools. Whether proponents of intelligent design will succeed in introducing their argument into biology classrooms remains to be seen. What is clear, however, is that whether one believes in God, science, or is capable of reconciling the two, any argument that strives to compete with evolution will always have to contend with the extraordinary amount of scientific evidence in support of evolution and be consistent with a faithful application of the First Amendment.