The More Things Change: Have Antievolutionists Charted Another Constitutional Collision Course in Louisiana?

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ABSTRACT

In Edwards v. Aguillard, the Supreme Court invalidated a Louisiana statute that attempted to weaken the teaching of evolution in the public schools by balancing it with “creation science.” This defeat was only a minor setback for evolution’s opponents, who quickly began devising new strategies with an increased emphasis on secular and scientific appeals. Now, these efforts have culminated in the passage of the Louisiana Science Education Act (“LSEA”), which authorizes teachers to introduce supplemental textbooks and other educational materials in the name of promoting “critical thinking skills and open discussion of scientific theories.” This Article outlines the development of recent antievolution strategies with a particular emphasis on the judiciary’s treatment of their scientific validity. The Article then argues that LSEA, while far more carefully crafted than previous efforts, nevertheless violates the Establishment Clause. In particular, the Article considers LSEA under facial and as-applied challenges and finds it constitutionally vulnerable under both the Lemon and endorsement tests.

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I. INTRODUCTION

In the words of John H. Marburger III, White House science advisor to former President George W. Bush, the theory of evolution is “the cornerstone of modern biology.”¹ Yet its seemingly unpalatable theological implications have sparked vigorous opposition for nearly two centuries. In the United States, the antievolution movement began in earnest with the widespread introduction of the theory into public school biology classrooms in the early 1900s. Antievolutionists responded in the political arena with the first attempts at state suppression of the theory. Since that time, antievolution laws and policies have been defeated by a series of legal challenges, including two that advanced to the United States Supreme Court. Louisiana has been the site of several of these legal battles, including the most famous challenge to an antievolution law, Edwards v. Aguillard,² in which the Supreme Court invalidated, as violative

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of the Establishment Clause, a statute requiring “balanced treatment” for evolution and creation 
“science.” Evolution’s religious opponents have adapted in the wake of each defeat, however, 
and now they may have succeeded in passing a law that survives constitutional scrutiny. The 
Louisiana Science Education Act (“LSEA”) authorizes teachers to introduce supplemental 
textbooks and other educational materials in the name of promoting “critical thinking skills and 
open discussion of scientific theories.”

This Article places LSEA in the context of antievolutionism in general, and argues that 
the Act is potentially unconstitutional. Part II outlines the various tests the Supreme Court has 
developed to deal with Establishment Clause challenges. Part III traces the history of the 
methods employed by those with religiously-based objections to the theory of evolution. 
Particular focus is given to bills like LSEA that would permit teachers and school boards to 
introduce “scientific” materials critical of evolution, as this is the approach currently favored by 
antievolutionists. These bills are merely the latest in a long line of increasingly sophisticated 
efforts to preserve the suppressive effect of the original “monkey laws” of the 1920s while 
cloaking them in the language of science in the hope that such camouflage will be sufficient to 
guard against constitutional attack. Part IV predicts that, because of the antievolutionist embrace 
of science-like language, challenges to antievolutionist policies will force courts to wade 
increasingly deeply into the scientific arguments surrounding evolution. Part IV also examines 
the well-known 2005 challenge to a school board’s intelligent design policy, *Kitzmiller v. Dover*

_Bd. of Educ._, 185 F.3d 337 (5th Cir. 2000) (invalidating a school district’s policy of placing an 
oral disclaimer before the teaching of evolution).


4 Tennessee’s Butler Act of 1925, made famous in the Scopes trial of the same year, made it 
“unlawful for any teacher to teach any theory that denies the Story of Divine Creation of man as 
taught in the Bible, and to teach instead that man has descended from a lower order of animal.” 
Area School District, and defends the court’s use of science in that case. Part V develops a legal argument against the constitutionality of LSEA, from the perspective of both facial and as-applied challenges. Finally, Part VI offers concluding remarks.

II. APPLICABLE SUPREME COURT ESTABLISHMENT CLAUSE JURISPRUDEENCE

The Establishment Clause of the First Amendment forbids Congress from making any law “respecting an establishment of religion.”\(^5\) Although the plain language of the Establishment Clause appears to apply only to Congress, the Court has assumed that it was incorporated into the Fourteenth Amendment and is therefore enforceable against the states.\(^6\) In the context of the public school system, the Court has generally afforded states and local school boards “considerable discretion in operating public schools.”\(^7\) This discretion must, of course, be constrained by the demands of the First Amendment.\(^8\) The Court has developed several tests to aid in the adjudication of Establishment Clause challenges.\(^9\)

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\(^5\) U.S. CONSTR. amend. I.


\(^9\) This section will focus on judicially developed or approved tests, although it is worth mentioning some of the other tests that scholars have developed for antievolution cases. See Louis J. Virelli III, Making Lemonade: A New Approach to Evaluating Evolution Disclaimers Under the Establishment Clause, 60 U. MIAMI L. REV. 423, 446 (2006) (“In the context of facially neutral evolution disclaimers, social prejudice against evolution may lead to the de facto promotion of religious explanations of human origins in public schools, despite the fact that the disclaimers do not mention religion. In this situation, the “disparate-impact model” first looks at whether a facially neutral disclaimer has the effect of granting preferential treatment to a particular religion. If the answer is yes, the question becomes whether that impact was the result of its drafters’ religious intent. This two-tiered approach permits courts to review a neutral disclaimer without encountering the problems of over and under-inclusiveness inherent in exiting Establishment Clause doctrine.”); see also Charles Kitcher, Lawful Design: A New Standard for Evaluating Establishment Clause Challenges to School Science Curricula, 39 COLUM. J.L. & SOC. PROBS. 451, 457 (2006) (arguing for a standard called “honest purpose and substantial reliability— in which ‘hones purpose’ refers to the quality of the legislative intent and ‘substantial reliability’ refers to that of the underlying science.”).
A. The Lemon Test

This test, articulated in *Lemon v. Kurtzman*, requires that a challenged action satisfy three prongs: “[f]irst, the statute must have a secular legislative purpose; second, its principal or primary effect must be one that neither advances nor inhibits religion; finally, the statute must not foster ‘an excessive entanglement with religion.’” Initially, the Court stated that a governmental action would fail the purpose prong only if it were “motivated wholly by religious considerations.” In another words, even a vanishing hint of secular purpose would save a challenged law. Recently, however, the Court has explained that the law fails the purpose prong if the religious purpose predominates. Lemon’s effects prong asks whether a reasonable observer familiar with the history of the practice at issue would find it likely “to be perceived by adherents of the controlling denominations as an endorsement, and by the nonadherents as a disapproval, of their individual religious choices.” In this respect, the effects prong is substantially similar to the endorsement test, described below. Excessive entanglement has been unhelpfully defined as “impermissible merging or intermeddling of the proper spheres of religion and government.” Fortunately, the entanglement prong has been avoided in antievolution cases. Although the Lemon test has come under heavy criticism lately, with Justice Scalia likening it to “some ghoul in a late-night horror movie that repeatedly sits up in its grave and

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10 403 U.S. 602 (1971).
13 *See McCreary County v. ACLU of Kentucky*, 545 U.S. 844, 860 (2005) (“When the government acts with the ostensible and predominant purpose of advancing religion, it violates that central Establishment Clause value of official religious neutrality, there being no neutrality when the government's ostensible object is to take sides.”); *Edwards v. Aguillard*, 482 U.S. 578, 589 (1987) (“As in *Stone* and *Abington*, we need not be blind in this case to the legislature’s preeminent religious purpose in enacting this statute.”).
14 *Vasquez v. Los Angeles County*, 487 F.3d 1246, 1256 (9th Cir. 2007) (citation omitted).
shuffles abroad, after being repeatedly killed and buried.”\textsuperscript{16} the test has appeared in nearly every antievolution case since its inception.\textsuperscript{17}

B. The Endorsement Test

The endorsement test was developed by Justice O’Connor in her concurring opinion in \textit{Lynch v. Donnelly},\textsuperscript{18} and finally garnered majority support from the Court in \textit{County of Allegheny v. ACLU}.\textsuperscript{19} In Allegheny, the Court stated that the Establishment Clause “preclude[s] government from conveying or attempting to convey a message that religion or a particular religious belief is \textit{favored} or \textit{preferred}.”\textsuperscript{20} “Whether the key word is ‘endorsement,’ ‘favoritism,’ or ‘promotion,’ the essential principle remains the same. . . . [t]he Establishment Clause, at the very least, prohibits government from appearing to take a position on questions of religious belief.”\textsuperscript{21} Justice O’Connor’s problem with government endorsement of religion is that it “sends a message to nonadherents that they are outsiders, not full members of the political community,” and the opposite message to adherents.\textsuperscript{22} This justification recalls James Madison’s concern over a state law requiring donations to religion: “[i]t degrades from the equal rank of Citizens all those whose opinions in Religion do not bend to those of the Legislative

\textsuperscript{18} \textit{See} 465 U.S. 668, 687-94 (O’Connor, J., concurring).
\textsuperscript{19} 492 U.S. 573 (1989).
authority.” In *Santa Fe Independent School Dist. v. Doe*, the Court applied the endorsement test to a case involving school-sponsored prayer and sharpened the inquiry to “whether an objective observer, acquainted with the text, legislative history, and implementation of the statute, would perceive it as a state endorsement of prayer in the public schools.” Occasionally, the effect prong of *Lemon* and the endorsement test are combined. The endorsement test is also a judicial favorite in antievolution cases.

C. The Coercion Test

Justice Kennedy is the chief proponent of judging Establishment Clause cases by applying a test that prohibits government from “coercing anyone to support or participate in any religion or its exercise[].” Unconstitutional coercion can be subtle and indirect, as in *Lee v. Weisman*, a case striking down a Rhode Island school district’s custom of inviting members of the clergy to deliver prayers at graduation ceremonies. “The undeniable fact,” Justice Kennedy

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26 See *Freiler v. Tangipahoa Parish Bd. of Educ.*., 185 F.3d 337, 346 (5th Cir. 2000) (“Under either the second Lemon prong or the endorsement test, the Supreme Court has cautioned that a government practice may not aid one religion, aid all religions, or favor one religion over another.”).


wrote, “is that the 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.”  

Concern for coercion is especially salient in the school setting, given the impressionable nature of students, the existence of peer pressure, the mandatory attendance requirements, and the desire to emulate teachers as role models. The coercion test has not been explicitly applied in antievolution cases.

D. Divisiveness?

One major problem with the Lemon and endorsement tests is that they fail to explain satisfactorily how certain religious invocations--“In God We Trust” on money or “under God” in the Pledge of Allegiance--can withstand First Amendment scrutiny. Noting that the real problem is not the government’s religious endorsement or purpose, but the “strife, alienation, and divisiveness arising from the government’s use of religion,” some have proposed divisiveness as

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32 See, e.g., Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 343 (5th Cir. 2000) (“Where, as in the instant action, the practice at issue does not direct student participation in a formal religious exercise, we elect not to apply the coercion test.”). For an argument explaining how introducing antievolutionism into the public school science classroom might fail the coercion test, see Nicholas A. Schuneman, One Nation, Under . . . The Watchmaker?: Intelligent Design and The Establishment Clause, 22 BYU J. Pub. L. 179, 216-17 (2007):

Instruction on the Intelligent Design hypothesis in a science course would result in obvious coercion if students are required to derive, apply, or argue for the hypothesis on their class work. This is especially true if grades are determined on the basis of whether students obtained the “correct” answer consistent with the Intelligent Design causal-analytic system, which would necessarily involve the attribution of causation to a supernatural agent. But, even if students are not required to apply the Intelligent Design hypothesis on written class work, any presentation of the hypothesis would require students to sit quietly while observing the teacher engage in the religious exercise of inferring a supernatural creator from evidence found in the natural universe. Such a scenario is equivalent to the plight of the graduating students in Lee v. Weisman, and would thus violate the Establishment Clause’s “minimum guarantee” against coercion.

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the touchstone in Establishment Clause cases. Under a divisiveness analysis, judges would conduct a fact-based inquiry and invalidate any use of religion that causes excessive social agitation. Such an approach has the advantage of directly responding to the Framers’ fear that religion would become a divisive, threatening force. Justice Breyer has come close to recognizing divisiveness as an Establishment Clause test, writing that the clause’s basic purpose was “to avoid that divisiveness based upon religion that promotes social conflict.” Although courts in antievolution cases have noted the “discord” such battles have inflicted upon their communities, divisiveness has not yet been applied as an independent test.

III. ANTEVOLUTIONISM IN THE COURTS

American antievolutionism has, ironically, undergone considerable evolution throughout the twentieth century. Scholars have suggested a classification scheme that divides the movement’s history into three periods. In the first period, those opposed to the teaching of evolution adopted a direct approach, attempting to censor the theory through flat prohibitions on its teaching. When these attempts failed due to their religious nature, antievolutionists adopted a less aggressive strategy. They began to cloak their efforts in the language of the scientific community, and advocated “balancing” approaches rather than outright bans. The failure of these approaches caused the movement to adopt a “diverse set of schemes, including various

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33 See Middle District of Pennsylvania Holds that the Teaching of Intelligent Design Violates the Establishment Clause, 119 HARV. L. REV. 2268, 2270 (2006).
repackagings of creation science as well as some new offerings. The antievolution approaches of the third, or “neocreationist” period, despite their diversity, share with their second-period forbearers a continued effort to circumvent legal precedent by erasing overt religiosity from their attempts and blunting their attacks on evolution. The three-period approach is a bit of an historical oversimplification, as some of the third-period approaches, such as evolutionary disclaimers, appeared in cases pre-dating Edwards v. Aguillard, which is commonly taken as the dividing line between the second and third periods. Nevertheless, this method of categorization is a useful means of understanding the types of evolution cases to come before the courts, and similar tripartite categorization systems have been used throughout the literature.

A. Direct Prohibitions

The expansion of the public high school population and the rise of Protestant Fundamentalism combined in the early nineteenth century to produce the first legal battle over the teaching of evolution, a theory first articulated by Charles Darwin over fifty years earlier.

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40 See, e.g., Daniel v. Waters, 515 F.2d 485 (6th Cir. 1975) (invalidating a Tennessee statute that requiring biology textbooks to contain a disclaimer that “specifically states that [evolution] is a theory... and is not represented to be scientific fact.”).
41 482 U.S. 578 (1987)
43 See Edward J. Larson, Trial and Error: The American Controversy Over Evolution 26-27 (Oxford Univ. Press 1985). Rising public school enrollment meant that more students were being exposed to evolution, a scenario with troubling implications for those who opposed the implications of the theory.
The case, *Scopes v. State*,\(^46\) arose when high school biology teacher John Scopes was charged and convicted with violating Tennessee’s Butler Act, which declared it unlawful for any public school teacher to teach “any theory that denies the story of the divine creation of man as taught in the Bible and to teach instead that man has descended from a lower order of animals.”\(^47\) The state high court held that the law did not violate the Establishment Clause (but ultimately reversed the conviction on a technicality), as it was simply unable “to see how the prohibition of [evolution] gives preference to any religious establishment or mode of worship. . . . [b]elief or unbelief in the theory of evolution is no more a characteristic of any religious establishment or mode of worship than is belief or unbelief in the wisdom of the prohibition laws.”\(^48\) A concurring opinion suggested that the statute did not, in fact, criminalize the teaching of evolution, but only prohibits teaching evolution in a way that “denies, takes issue with, [or] positively disaffirms, the creation of man by God.”\(^49\)

Some have interpreted the Scopes trial as creating a “fruit of the poisonous tree” effect that permanently taints any attempt to question evolution in the public schools.\(^50\) A similar effect has occurred before in Establishment Clause cases, most notably in *McCreary County v. ACLU of Kentucky*.\(^51\) In *McCreary*, two Kentucky counties attempted to place large, gold-framed copies of the Ten Commandments in their courthouses.\(^52\) The ACLU sued the counties in Federal District Court, prompting them to authorize a second, expanded display, which, in

\(^{46}\) 289 S.W. 363 (Tenn. 1927).
\(^{49}\) *Scopes v. State*, 289 S.W. 363, 369 (Tenn. 1927).
\(^{51}\) 545 U.S. 844 (2005).
\(^{52}\) *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 851 (2005).
addition to the Ten Commandments, contained “eight other documents in smaller frames, each either having a religious theme or excerpted to highlight a religious element.”

After the District Court ordered that the display be removed, the counties replaced them with a third display consisting of nine framed documents of equal size: the Ten Commandments, the Magna Carta, the Declaration of Independence, the Bill of Rights, the lyrics of the Star Spangled Banner, the Mayflower Compact, the National Motto, the Preamble to the Kentucky Constitution, and a picture of Lady Justice. The purpose for erecting the display was apparently to show documents with particular historical and legal significance. The Court, after examining “the record of evidence showing the progression leading up to the third display of the Commandments,” affirmed the lower court’s invalidation of the display. Despite the counties’ attempt to minimize the religious nature of the original Ten Commandments display, “no reasonable observer could swallow the claim that the Counties had case off the objective so unmistakable in the earlier displays.” In essence, the counties’ original sectarian purpose had doomed future efforts to redeem the display, even though the third version of the display was probably not inherently unconstitutional. Similarly, the original, forbidden motives behind the antievolution bills cause the courts to treat future attempts by antievolutionists with heightened

53 *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 853-54 (2005). “The documents were the ‘endowed by their Creator’ passage from the Declaration of Independence; the Preamble to the Constitution of Kentucky; the national motto, ‘In God We Trust’; a page from the Congressional Record of February 2, 1983, proclaiming the Year of the Bible and including a statement of the Ten Commandments; a proclamation by President Abraham Lincoln designating April 30, 1863, a National Day of Prayer and Humiliation; an excerpt from President Lincoln’s ‘Reply to Loyal Colored People of Baltimore upon Presentation of a Bible,’ reading that ‘[t]he Bible is the best gift God has ever given to man’; a proclamation by President Reagan marking 1983 the Year of the Bible; and the Mayflower Compact.” *Id.*

54 *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 855-56 (2005).


57 *McCreary County v. ACLU of Ky.*, 545 U.S. 844, 872 (2005).
skepticism. In antievolution cases, however, the forbidden purpose poisons all legislatures and
government entities across the United States. Justice Scalia refers to this effect as “an
intellectual predisposition created by the facts and the legend of Scopes v. State.”
Although future antievolution laws and policies have been almost universally struck down by courts, this is
more likely a product of the content of those measures than “the beloved secular legend of the
Monkey Trial.” Even antievolution authors have case doubt on the fruit-of-the-poisonous-tree
view of history.

The success of Tennessee’s antievolution statute encouraged other states to enact similar
laws. Mississippi and Arkansas passed laws prohibiting the teaching of evolution in 1926 and
1928, respectively. Other bills were introduced but ultimately defeated in Arkansas,
Oklahoma, Missouri, West Virginia, Delaware, Georgia, Alabama, North Carolina, Florida,
Minnesota, and California. The Supreme Court did not examine these laws until 1963, in
Epperson v. Arkansas. Epperson involved a challenge to an Arkansas statute that, like its
ancestor in Tennessee, criminalized the teaching of evolution. After looking into the purpose
and primary effect of the law, the Court held that it violated the Establishment Clause because it
“selects from the body of knowledge a particular segment which it proscribes for the sole reason

60 See Casey Luskin, Does Challenging Darwin Create Constitutional Jeopardy? A
Comprehensive Survey of Case Law Regarding the Teaching of Biological Origins, 32 HAMLIN
L. REV. 1, 63 (2009) (arguing that caselaw indicates that “evolution may be taught critically so
long as it is done with the secular intent of improving science education, and so long as religion
is not established in the classroom.”).
61 Todd R. Olin, Fruit of the Poison Tree: A First Amendment Analysis of the History and
62 EUGENIE C. SCOTT, EVOLUTION VS. CREATIONISM: AN INTRODUCTION 102 (Greenwood Press
2009).
that it is deemed to conflict with a particular religious doctrine; that is, with a particular
interpretation of the Book of Genesis by a particular religious group.\textsuperscript{65} The Establishment
Clause requires government neutrality on religious matters, prohibiting it from passing laws that
“aid one religion, aid all religions, or prefer one religion over another.”\textsuperscript{66} The Court’s opinion
also contained a concurrence by Justice Black, who questioned whether the theory of evolution
was an anti-religious doctrine that the state might need to remove in order to satisfy the
Constitution’s requirement of religious neutrality.\textsuperscript{67}

B. Balanced Treatment

After \textit{Epperson}, states could no longer directly prohibit the teaching of evolution.
Furthermore, the Court in \textit{Epperson} had little difficulty gleaning a clearly religious purpose
behind the Arkansas statute.\textsuperscript{68} Thus, the post-Epperson period was characterized by attempts to
attack evolution by developing a plausibly scientific alternative\textsuperscript{69} and thus undercutting the
theory without banning it outright. The result was a “balanced” curriculum resolution first
developed by conservative Christian layman Paul Ellwanger, who submitted it to the Anderson,
South Carolina, school district.\textsuperscript{70} Evolution and creation science were allegedly equally valid
alternative origin theories; if one were taught, schools would be required to also teach the other.

\textsuperscript{65} \textit{Epperson v. Arkansas}, 393 U.S. 97, 103 (1963).
\textsuperscript{66} \textit{Epperson v. Arkansas}, 393 U.S. 97, 106 (1963) (citation omitted).
\textsuperscript{67} \textit{Epperson v. Arkansas}, 393 U.S. 97, 113 (1963) (Black, J., concurring).
\textsuperscript{68} \textit{Epperson v. Arkansas}, 393 U.S. 97, 108 n.16 (1963) (“Letters from the public expressed the
fear that teaching of evolution would be ‘subversive of Christianity,’ . . . and that it would cause
school children ‘to disrespect the Bible[.]’”) (citations omitted).
\textsuperscript{69} \textit{See} Eugenie C. Scott, \textit{Evolution vs. Creationism: An Introduction} 104-113
(Greenwood Press 2009) (detailing the history of creation science).
\textsuperscript{70} Eugenie C. Scott, \textit{Evolution vs. Creationism: An Introduction} 113 (Greenwood Press
2009).
In *McLean v. Arkansas Bd. of Ed.*, a federal court confronted an Arkansas statute that mandated balanced treatment for “creation-science” and “evolution-science.” Creation science was defined in the Act as

the scientific evidences for creation and inferences from those scientific evidences. Creation-science includes the scientific evidences and related inferences that indicate: (1) Sudden creation of the universe, energy, and life from nothing; (2) The insufficiency of mutation and natural selection in bringing about development of all living kinds from a single organism; (3) Changes only within fixed limits of originally created kinds of plants and animals; (4) Separate ancestry for man and apes; (5) Explanation of the earth's geology by catastrophism, including the occurrence of a worldwide flood; and (6) A relatively recent inception of the earth and living kinds.

The court recounted the history of the Fundamentalist movement and of the religious activities surrounding the passage of the law, concluding that both the purpose and effect of the law were impermissibly religious. Central to the court’s conclusion that advancing religion was “only real effect” of the Act was creation science’s failure to meet the court’s definition of the “essential characteristics of science”: (1) it must be guided by natural law, (2) it must be explained by reference to natural law, (3) it must be empirically testable, (4) it must be tentative in its conclusions, and (5) it must be falsifiable. Finally, the court rejected both academic freedom and the religious nature of evolution as secular justifications for the law.

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76 *McLean v. Arkansas Bd. of Ed.*, 529 F. Supp. 1255, 1273 (E.D. Ark. 1982) (“Several witnesses testified that academic freedom for the teacher means, in substance, that the individual teacher should be permitted unlimited discretion subject only to the bounds of professional ethics. The Court is not prepared to adopt such a broad view of academic freedom in the public schools.”).
77 *McLean v. Arkansas Bd. of Ed.*, 529 F. Supp. 1255, 1274 (E.D. Ark. 1982) (“The defendants argue in their brief that evolution is, in effect, a religion, and that by teaching a religion which is contrary to some students’ religious views, the State is infringing upon the student’s free exercise...”)
The Supreme Court considered Louisiana’s version of the balanced treatment statute in *Edwards v. Aguillard*. 78 Louisiana’s Creationism Act did not require the teaching of either creationism or evolution, but instead provided that if either were taught, the other must also be taught. 79 Louisiana had been more successful than Arkansas in purging the statute of religious parallels, and the text clearly stated that the purpose of the Act was to protect academic freedom. 80 Nevertheless, the Court, after inquiring into the historical context and legislative history of the statute, determined that this purpose was “a sham.” 81 The true purpose of the Act was, instead, “to restructure the science curriculum to conform with a particular religious viewpoint.” 82 Thus, it failed *Lemon*’s purpose prong. *Edwards* is also famous for Justice Scalia’s bitter dissent. Writing for himself and Chief Justice Rehnquist, Justice Scalia criticized the entire *Lemon* framework, especially the emphasis on divining actual legislative purpose. 83 But even under *Lemon*, Justice Scalia still thought there was enough evidence of a secular purpose to uphold the Act. 84

C. Neocreationism

*Edwards*, although a certain defeat for the antievolution movement, was narrow in its holding. In fact, the language of the case, once parsed by the antievolutionists, suggested a variety of tactics for weakening the teaching of evolution in public schools. Pursuing these

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approaches involved further attenuating the link between religious fundamentalism and
opposition to evolution by accelerating two trends already present in the post-*Epperson*
period: purging religious references and softening attacks on evolution. The main
neocreationist strategies are discussed below. Many cases involve a combination two or more of these
strategies.

1. “Alternative” Scientific Theories

A favorite creationist tactic has been the development of alternative theories with which
to replace or “balance” the teaching of evolution. Creation science was the first such theory, but
its cool reception in *McLean* and *Edwards* essentially destroyed its viability as an alternative.
Antievolutionists were heartened, however, by the Court’s admission in *Edwards* that it was not
implying that a legislature “could never require that scientific critiques of prevailing scientific
theories be taught. . . . [T]eaching a variety of scientific theories about the origins of humankind
to schoolchildren might be validly done with the clear secular intent of enhancing the
effectiveness of science instruction.”\(^85\) The challenge, then, was to create a theory that was
rigorously scientific but still required a creative force for the origin and development of life.

Intelligent Design (“ID”), a theory positing that “certain features of the universe and of
living things are best explained by an intelligent cause,”\(^86\) purports to be such a theory. ID does
not insist upon claims specifically associated with the Bible and creation science, such as a
6,000-year-old Earth and a catastrophic worldwide flood.\(^87\) In 2005, a school board in Dover,


\(^{86}\) Center for Science and Culture, Discovery Institute, What is Intelligent Design?,
http://www.intelligentdesign.org/whatisid.php

\(^{87}\) See generally, PERCIVAL DAVIS & DEAN H. KENYON, OF PANDAS AND PEOPLE: THE CENTRAL
Pennsylvania, adopted a resolution directing that a statement that explained that the theory of evolution

is not a fact. Gaps in the theory exist for which there is no evidence. . . . 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. 88

In Kitzmiller v. Dover Area School District, 89 this policy failed to withstand an Establishment Clause challenge. The court applied both the Lemon and endorsement tests, and held that school board’s actions were invalid under either test. 90 After an exhaustive examination of the history surrounding the resolution, the court concluded that the alleged secular purpose of improving science education was “a pretext for the Board’s real purpose, which was to promote religion in the public school classroom.” 91 Furthermore, because the court found ID to be “an inherently religious concept,” the school board’s policy endorsed a religious view. 92 The court also engaged in an extended discussion of the scientific status of ID, concluding that “ID fails on three different levels, any one of which is sufficient to preclude a determination that ID is science.” 93

Kitzmiller’s declaration that ID was inherently religious and not scientific has doomed its viability as an alternative in the Middle District of Pennsylvania, and probably in the rest of the Nation, as well. However, the court’s focus on the religiosity inherent in the theory’s “designer”

93 Kitzmiller v. Dover Area School Dist., 400 F.Supp.2d 707, 735 (M.D. Pa. 2005) (“(1) ID violates the centuries-old ground rules of science by invoking and permitting supernatural causation; (2) the argument of irreducible complexity, central to ID, employs the same flawed and illogical contrived dualism that doomed creation science in the 1980’s; and (3) ID's negative attacks on evolution have been refuted by the scientific community.”).
suggests a solution for future antievolution efforts: omit the designer. Indeed, this approach was considered long before Kitzmiller. After Edwards invalidated a definition of creation science that included “origin through abrupt appearance in complex form,”94 Wendell Bird, lawyer for the antievolutionist Institute for Creation Research,95 wrote a book attempting to develop “abrupt appearance” into a scientific theory.96 Abrupt appearance theory, in his words, “involves the scientific evidence that natural groups of plants and animals appeared abruptly but discontinuously in complex form, and also that the first life and the universe appeared abruptly but discontinuously in complex form.”97 Note that Bird carefully avoids identifying any agent as having caused this event. “Bird was meticulous in avoiding any references that could be interpreted as religious and would therefore expose abrupt appearance theory to the same First Amendment challenges as creation science.”98 During the Kitzmiller case, a draft of a future intelligent design textbook was uncovered that contained a similar construction: “sudden emergence theory.”99 To date, there have been no attempts to assert abrupt appearance theory into public schools, nor has the theory been examined by the courts.

2. Evolution Disclaimers.

95 The Institute for Creation Research exists, according to its website, to equip “believers with evidences of the Bible’s accuracy and authority through scientific research, educational programs, and media presentations, all conducted within a thoroughly biblical framework.” Institute for Creation Research, http://www.icr.org/zlp/fb-icr-a5-ca-chr/.
Another antievolutionist tactic involves denigrating the theory of evolution by introducing its teaching with a written or oral disclaimer. These disclaimers share several common features. First, they often take advantage of the public’s misunderstanding of the scientific term theory\(^{100}\) by stating that evolution is just a theory, not a fact.\(^{101}\) In doing so, the disclaimer creates the false impression that the theory of evolution is akin to a guess or hypothesis. Furthermore, in singling out evolution from the body of scientific knowledge, these disclaimers imply that it is somehow less valid than other scientific theories. Frequently, “just a theory” language is combined with exhortations for students to use critical thinking skills.\(^{102}\)

*Freiler v. Tangipahoa Parish Board of Education*\(^{103}\) involved a challenge to an oral disclaimer stating that the teaching of evolution was “not intended to influence or dissuade the Biblical version of Creation or any other concept. . . . it is the basic right and privilege of each

\(^{100}\) “A scientific theory is a well-substantiated explanation of some aspect of the natural world, based on a body of facts that have been repeatedly confirmed through observation and experiment. Such fact-supported theories are not "guesses" but reliable accounts of the real world. The theory of biological evolution is more than "just a theory." It is as factual an explanation of the universe as the atomic theory of matter or the germ theory of disease. Our understanding of gravity is still a work in progress. But the phenomenon of gravity, like evolution, is an accepted fact.” American Association for the Advancement of Science, Q & A on Evolution and Intelligent Design, [http://www.aaas.org/news/press_room(evolution/qanda.shtml](http://www.aaas.org/news/press_room(evolution/qanda.shtml)


\(^{102}\) See *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337, 341 (5th Cir. 2000) (“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.”); *Selman v. Cobb County School Dist.*, 390 F. Supp. 2d 1286, 1292 (N.D. Ga. 2005) (“[Evolution] should be approached with an open mind, studied carefully, and critically considered.”).

\(^{103}\) 185 F.3d 337 (5th Cir. 2000).
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." The disclaimer concluded by encouraging students to “exercise critical thinking and gather all information possible and closely examine each alternative toward forming an opinion.” The Fifth Circuit upheld the lower court’s invalidation of the disclaimer. The court applied Lemon and found that, although “the contested disclaimer does not further the first articulated objective of encouraging informed freedom of belief or critical thinking by students,” the disclaimer did further the second and third objectives: disclaiming any orthodoxy of belief that could be inferred from the exclusive teaching of evolution, and reducing offense to antievolution students or parents. However, the court held that the disclaimer ultimately failed both the endorsement test and the effect prong of the Lemon test. The “primary effect of the disclaimer [was] to protect and maintain a particular religious viewpoint, namely belief in the Biblical version of creation.” The Supreme Court denied a petition for certiorari, leaving the Fifth Circuit’s opinion as the final ruling in the case.

The challenged disclaimer in Selman v. Cobb County School District consisted of a sticker placed at the beginning of the district’s biology textbook warning that:

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.

After applying Lemon, the court found two secular purposes for the sticker: “foster[ing] critical thinking by encouraging students to learn about evolution and to make their own assessment

104 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 341 (5th Cir. 2000).
105 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 341 (5th Cir. 2000).
107 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 348 (5th Cir. 2000).
regarding its merit,” and “reduc[ing] offense to students and parents whose beliefs may conflict with the teaching of evolution.”\textsuperscript{112} The court then combined \textit{Lemon}’s effect and entanglement prongs into a single “effect” prong, and found that the disclaimer failed this test by sending “a message to those who oppose evolution for religious reasons that they are favored members of the political community.”\textsuperscript{113} According to the court, the informed, reasonable observer would have knowledge of the conflict over evolution generally and in Cobb County in particular. The observer would know that the “theory, not fact” language is the calling card of the antievolution movement, and that by crafting a policy that allows this language to feature prominently in high school biology textbooks, the district was “sid[ing] with the proponents of religious theories of origin in violation of the Establishment Clause.”\textsuperscript{114} \textit{Selman} was appealed to the Eleventh Circuit, which remanded the case after finding the record inadequate.\textsuperscript{115} Before the case could be retried or the record corrected, the parties settled on December 19, 2006.\textsuperscript{116} As a result of the settlement, the stickers were removed from the textbooks.


Rather than insert creationism at the level of the school board or state legislature, some antievolutionists have begun encouraging individual teachers to teach creationism and then assert their First Amendment rights to freedom of speech and freedom of religion. This approach

\begin{itemize}
\item \textsuperscript{112} \textit{Selman} v. \textit{Cobb County School Dist.}, 390 F. Supp. 2d 1286, 1305 (N.D. Ga. 2005).
\item \textsuperscript{113} \textit{Selman} v. \textit{Cobb County School Dist.}, 390 F. Supp. 2d 1286, 1306 (N.D. Ga. 2005).
\item \textsuperscript{114} \textit{Selman} v. \textit{Cobb County School Dist.}, 390 F. Supp. 2d 1286, 1307 (N.D. Ga. 2005).
\item \textsuperscript{115} See \textit{Selman} v. \textit{Cobb County School Dist.}, 449 F.3d 1320 (11th Cir. 2006).
\end{itemize}
represents the extension of a strategy employed by religious conservatives to reframe Establishment Clause cases in free speech terms.\textsuperscript{117}

In \textit{Webster v. New Lenox School District No. 122},\textsuperscript{118} the Seventh Circuit upheld the dismissal of a high school teacher’s First Amendment challenge to a school board’s requirement that he refrain from teaching creationism in his social studies class.\textsuperscript{119} After teaching his students nonevolutionary theories “to rebut a statement in the social studies textbook indicating that the world is over four billion years old,” Ray Webster was admonished by the superintendent not to teach creation science or engage in religious advocacy.\textsuperscript{120} The court noted that this was not a case involving a complete prohibition on material, as Webster was forbidden only from religious advocacy and could discuss creationism in the historical context of church-state relations.\textsuperscript{121} “Given the school board's important pedagogical interest in establishing the curriculum and legitimate concern with possible establishment clause violations, the school board's prohibition on the teaching of creation science to junior high students was appropriate.”\textsuperscript{122}

In \textit{Peloza v. Capistrano Unified School District},\textsuperscript{123} the Ninth Circuit held that evolution was not a religion, and therefore a high school biology teacher could be required to teach it, even if it conflicted with his religious beliefs.\textsuperscript{124} Evolution, the court explained, “has nothing to do with how the universe was created; it has nothing to do with whether or not there is a divine

\textsuperscript{118} 917 F.2d 1004 (7th Cir. 1990).
\textsuperscript{119} \textit{Webster v. New Lenox School District No. 122}, 917 F.2d 1004, 1006 (7th Cir. 1990).
\textsuperscript{120} \textit{Webster v. New Lenox School District No. 122}, 917 F.2d 1004, 1008 (7th Cir. 1990).
\textsuperscript{121} \textit{Webster v. New Lenox School District No. 122}, 917 F.2d 1004, 1006, 1008 (7th Cir. 1990).
\textsuperscript{122} \textit{Webster v. New Lenox School District No. 122}, 917 F.2d 1004, 1008 (7th Cir. 1990).
\textsuperscript{123} 37 F.3d 517 (9th Cir. 1994).
\textsuperscript{124} \textit{Peloza v. Capistrano Unified School District}, 37 F.3d 517, 522-23 (9th Cir. 1994).
Creator."125 Because evolution was not a religion, requiring Peloza to teach it did not violate the Establishment Clause.126 The court also dismissed Peloza’s free speech claim, stating that the state interest in avoiding an Establishment Clause violation justified restricting his right to discuss religious matters during the school day.127

The most recent (and most famous) case involving an attempt to use the Free Speech Clause to support the teaching of creationism arose when Rodney LeVake, a high school biology teacher, explained to school administrators after being confronted over his inadequate treatment of evolution that he believed the theory was “impossible from a ‘biological, anatomical, and physiological standpoint.’”128 LeVake proposed to teach evolution, but to “accompany that treatment of evolution with an honest look at the difficulties and inconsistencies of the theory without turning my class into a religious one.”129 Concerned that this teaching method did not fit the approved curriculum, the school district reassigned LeVake.130 He subsequently filed a lawsuit alleging that the school district had violated, inter alia, his prompting him to file suit, alleging violations of, inter alia, his free speech and free exercise of religion.131 The appeals court upheld a grant of summary judgment, noting that LeVake did not allege a sufficient basis for his free exercise claim, as he did not assert that the district attempted to prevent him from practicing his religion outside of the classroom, or that the curriculum requirements incidentally

125 Peloza v. Capistrano Unified School District, 37 F.3d 517, 521 (9th Cir. 1994).
126 Peloza v. Capistrano Unified School District, 37 F.3d 517, 521 (9th Cir. 1994).
127 Peloza v. Capistrano Unified School District, 37 F.3d 517, 522 (9th Cir. 1994) (“To permit [Peloza] to discuss his religious beliefs with students during school time on school grounds would violate the Establishment Clause of the First Amendment. Such speech would not have a secular purpose, would have the primary effect of advancing religion, and would entangle the school with religion. In sum, it would flunk all three parts of the test articulated in [Lemon]”).
infringed upon his religious practice. The court also disposed of his free speech claim after finding his First Amendment rights outweighed by the state’s interest in having public school teachers conform to the prescribed curriculum. This case turned LeVake into a minor celebrity in antievolution circles.


Evidence against evolution (“EAE”) and “academic freedom” bills are policies enacted at the level of either the state legislature or the school district that permit, but do not require, teachers to introduce creationism into their classrooms under the guise of scientific evidence against evolution. This approach, like the development of alternative scientific theories, draws inspiration from the Edwards majority’s endorsement of improving scientific education and Justice Scalia’s view that “[t]he people of Louisiana . . . are quite entitled, as a secular matter, to have whatever scientific evidence there may be against evolution presented in their schools[.]”

Although academic freedom bills and EAE bills share many common traits, each emphasizes a different point. The former purport to protect teachers who wish to discuss the full range of scientific views regarding evolution as well as students who dissent from the scientific view on the subject, while the latter are designed to promote critical thinking skills in students by allowing teachers to discuss the scientific strengths and weaknesses of evolution (and occasionally, global warming, human cloning, and other scientific issues of concern to religious

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136 The National Center for Science Education provides an overview and news updates regarding antievolution legislation at http://ncse.com/creationism/general/academic-freedom-legislation
conservatives). To date, over 30 of these bills have been introduced in state legislatures, but only one, the Louisiana Science Education Act, has been passed.

a. Academic Freedom Bills

The Discovery Institute, intelligent design’s institutional home and greatest cheerleader, recently launched an “academic freedom” campaign aimed at supporting scientists, teachers, and students who have allegedly come “under increasing attack by self-appointed defenders of the theory of evolution who are waging a malicious campaign to demonize and blacklist anyone who disagrees with them.” The campaign’s website also contains a sample of a model academic freedom statute. Section 3 of the model bill gives public school teachers and university instructors the affirmative right to “present scientific information pertaining to the full range of scientific views regarding biological and chemical evolution.” Section 4 protects public school teachers and university instructors from being “terminated, disciplined, denied tenure, or otherwise discriminated against” for presenting the full range of scientific views, provided the state’s science standards have been appropriately taught. Section 5 protects students from being “penalized in any way” because of their particular positions on biological or chemical

evolution. Section 6 states that the act does not require or encourage a change in curriculum standards or content in any public school or university. Finally, Section 7 indicates that nothing in the act shall be construed as promoting a religious doctrine or discriminating for or against any religious beliefs.

b. “Evidence Against Evolution” Bills.

The premier example of an EAE bill is the Louisiana Science Education Act, signed into law on June 25, 2008. The Act directs the State Board of Elementary and Secondary Education (“BESE”) to assist school officials in creating an environment that “promotes critical thinking skills, logical analysis, and open and objective discussion of scientific theories being studied including, but not limited to, evolution, the origins of life, global warming, and human cloning.” In addition to the standard textbook material, the Act allows teachers to use supplementary texts and materials unless otherwise prohibited by BESE. Section (1)(D) contains an attempt to inoculate the Act against constitutional attack by disavowing any construction that “promote[s] any religious doctrine, promote[s] discrimination for or against a particular set of religious beliefs, or promote[s] discrimination for or against religion or

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Finally, the Act directs BESE to promulgate the rules and regulations necessary to implement its provisions prior to the 2008-2009 school year. In January 2009, BESE adopted a policy that mirrored much of the Act’s language, although science groups complained over the deletion of a provision that would have specifically prohibited “materials that teach creationism or intelligent design or that advance the religious belief that a supernatural being created humankind.” The current BESE policy, revised in September 2009, states that once teachers have presented material that conforms to the Louisiana Science Content Standards, they are free to use “supplemental textbooks and other instructional materials as permitted by the LEA [Local Education Agency] unless otherwise prohibited by BESE.” If a supplemental educational material approved by a local education agency is challenged, its admissibility is


151 The biological evolution section of the science content standards requires that students be able to:

a. GLE 14: Analyze evidence on biological evolution, utilizing descriptions of existing investigations, computer models, and fossil records (LS-H-C1).
b. GLE 15: Compare the embryological development of animals in different phyla (LS-H-C1) (LS-H-A3).
d. GLE 17: Explain how factors affect gene frequency in a population over time (LS-H-C3).
e. GLE 18: Classify organisms from different kingdoms at several taxonomic levels, using a dichotomous key (LS-H-C4).
f. GLE 19: Compare characteristics of the major kingdoms (LS-H-C5).
g. GLE 20: Analyze differences in life cycles of selected organisms in each of the kingdoms (LS-H-C6).
h. GLE 21: Compare the structures, functions, and cycles of viruses to those of cells (LS-H-C7).
i. GLE 22: Describe the role of viruses in causing diseases and conditions (e.g., AIDS, common colds, smallpox, influenza, warts) (LS-H-C7) (LS-H-G2).


essentially determined by a five-member panel consisting of two reviewers named by the Department of Education, one reviewer named by the challenger, one reviewer named by the school, and one reviewer named by the book’s publisher.\textsuperscript{153} The reviewing panel is directed to ensure that the challenged text is grade-level appropriate, scientifically sound, and does not promote any religious viewpoint.\textsuperscript{154} This procedure has been criticized for being unnecessarily complicated and for giving defenders of suspect materials “more of a voice than concerned parents and citizens.”\textsuperscript{155}

Scientists, commentators, and civil liberties groups decried passage of the Act. The Advocate opined that it “supporters of this legislation are seeking a way to get creationism -- the story of creation as told in the biblical book of Genesis -- into science classrooms.”\textsuperscript{156} Alan Leshner, CEO of the American Association for the Advancement of Science, complained that the Act would “unleash an assault against scientific integrity, leaving students confused about science and unprepared to excel in a modern workforce.”\textsuperscript{157} Barry Lynn, executive director of Americans United for Separation of Church and State, warned that “[i]f this new law is used to promote religion in Louisiana public schools, I can guarantee there will be legal action.”\textsuperscript{158} Conservative columnist John Derbyshire, a staff writer at the National Review, replied to attempts by those at the Discovery Institute to defend the Act:

\begin{itemize}
\item \textsuperscript{154} \textsc{La. Admin. Code} tit. 28, § 2304(D)(4)(a)-(c) (2009)
\item \textsuperscript{155} National Center for Science Education, \textsc{NCSE Advises Louisiana}, \url{http://ncse.com/news/2010/01/ncse-advises-louisiana-005271}
\item \textsuperscript{156} Advocate Opinion Page Staff, \textit{Our Views: Just Another Waste of Time}, \textsc{The Advocate}, Apr. 19, 2008, \url{http://www.2theadvocate.com/opinion/17931559.html}
\item \textsuperscript{157} \textit{Anti-Science Law Threatens Tech Jobs of the Future}, \textsc{The Times-Picayune}, May 6, 2008, \url{http://www.nola.com/timespic/stories/index.ssf?base=news-11/1210051370253650.xml&coll=1}
\item \textsuperscript{158} Will Sentel, \textit{Evolution Bill Close to Approval; Lawsuits Expected}, \textsc{The Advocate}, Jun. 12, 2008, \url{http://www.2theadvocate.com/news/politics/19813589.html?showAll=y&c=y}
\end{itemize}
Some local school board will take the Act as a permit to bring religious instruction into their science classes. That will irk some parents. Those parents will sue. There will be a noisy and expensive federal lawsuit, possibly followed by further noisy and expensive appeals. The school board will inevitably lose. The property owners of that school district will take the financial hit. Where will the Discovery Institute be when these legal expenses come due? Just where they were in the Dover case — nowhere!  

D. The Future of Antievolutionism.

Of the four main post-Edwards strategies employed by the antievolutionist movement—alternative scientific theories, evolution disclaimers, free speech and free exercise claims, and academic freedom and EAE bills—the future appears to lie with academic freedom and EAE bills. Intelligent design suffered a public relations disaster in Kitzmiller, and abrupt or sudden appearance theory has not gathered any serious support within the movement. Evolution disclaimers have also failed in court, and are not aggressive enough to satisfy most antievolutionists. Free speech claims depend on high school science teachers being receptive to evolutionary criticisms, a situation that history has shown to be exceedingly rare.

Furthermore, as explained by the Discovery Institute’s model academic freedom statute, “existing law does not expressly protect the right of teachers . . . to present scientific critiques of prevailing scientific theories.” Thus, academic freedom and EAE bills are needed to provide legal cover for the introduction of creationist materials into public school classrooms. Many of these bills have been introduced in state legislatures. At the time of this writing, three bills have been introduced in state legislatures. At the time of this writing, three bills have been introduced in state legislatures.

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159 John Derbyshire, Patsy Jindal, NATIONAL REVIEW ONLINE, Jul. 9, 2008, http://corner.nationalreview.com/post/?q=NGI0ZmZlMDVlMDM0MzVhNTcwNzA3MmYwYjY2NGM0Y2Q


already been introduced in 2010, in Missouri, Kentucky and Mississippi. Mississippi’s bill requires an instructional lesson in human evolution that includes “proportionately equal instruction from educational materials that present scientifically sound arguments by protagonists and antagonists of the theory of evolution.” On February 2, 2010, the bill died in committee. The Missouri bill would require state and local education administrators to “endeavor to create an environment within public elementary and secondary schools that encourages students to explore scientific questions, learn about scientific evidence, develop critical thinking skills, and respond appropriately and respectfully to differences of opinion about controversial issues, including biological and chemical evolution.” The bill continues on to permit teachers to “help students understand, analyze, critique, and review in an objective manner the scientific strengths and scientific weaknesses of the theory of biological and hypotheses of chemical evolution.” Finally, Kentucky’s bill, the latest of the three, mirrors LSEA in permitting teachers to “use, as permitted by the local school board, other instructional materials to help students understand, analyze, critique, and review scientific theories in an objective manner, including but not limited to the study of evolution, the origins of life, global warming, and human cloning.” Kentucky’s bill differs from LSEA, however, in its reference to “advantages and disadvantages of scientific theories.”

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163 http://billstatus.ls.state.ms.us/2010/pdf/history/HB/HB0586.xml  
IV. THE GROWING IMPORTANCE OF “THE SCIENCE QUESTION”

As antievolutionism has attempted to distance itself from its patently biblical antecedents by cloaking itself in the veil of science, the scientific status of its approaches has come under increasing scrutiny. In Kitzmiller, a federal court in Pennsylvania, faced with a case involving creationism’s latest iteration, intelligent design, devoted an entire section of its opinion to the question and concluded unequivocally that “ID is not science.” \(^{168}\) Answering the science question, although controversial, was institutionally appropriate and relevant to the court’s disposition of the case. Furthermore, academic freedom and EAE bills have only heightened the antievolutionist emphasis on “science,” making future inquiries into the science surrounding evolution more likely.

A. Creationism and its Variants

It is important to note that the views of the antievolution community on the question of biological--and more importantly, human--origins come in different flavors. Each perspective that has at its core the idea that the creative force of a supreme being was actively necessary for the origin of life and of species shall, for the purposes of this Article, fall under the broad heading of creationism. Creationism therefore encompasses biblically literal scientific creationism as well as intelligent design. Different categorizations for origin perspectives have been offered, although examining them reveals substantial similarity. A document referenced in Kitzmiller lists five different origin viewpoints: “Young Earth Creationism (Creation Science), Progressive Creationism (Old Earth Creation), Evolutionary Creation (Theistic Creation), Deistic Evolution (Theistic Evolution), and Dysteleological Evolution (Atheistic Evolution).” \(^{169}\) Other scholars have created similar continuums of creation views with creationism at one end and

\(^{168}\) 400 F. Supp. 2d 707, 735 (2005).

evolution at the other, where the degree of biblical literalism decreases as one moves toward the evolution end of the continuum. For example, Alan Gishlick’s continuum contains ten beliefs: Flat Earthism, Geocentrism, Young-Earth Creationism, Gap Creationism, Day-Age Creationism, Progressive Creationism, Evolutionary Creationism, Theistic Evolutionism, and Materialist Evolutionism. These variants of creationism contain different subordinate religious beliefs. For example, Gap Creationists and Day-Age Creationists differ on their method of accounting for the ancient age of the earth: the former claim that there was a large temporal gap between the first and second verses of chapter one of Genesis, while the latter consider each of the six days of creation described in Genesis to represent thousands or millions of years. Of the different claims made by creationist perspectives, some appear to fall within the realm of science. The following discussion examines intelligent design, the most prominent form of creationism, and orders its claims according to their scientific status.

B. Intelligent Design and Science

Distinguishing science from non-science is no easy task. Indeed, some philosophers have seriously questioned whether demarcation is even possible. Thus, this section will not attempt

\[170\] These continuums are, to some degree, unfortunate, as placing evolution on a scale with other religious beliefs implies that it too is a religious belief. One must remember that it is not evolution itself, but the adjectives modifying it (theistic, agnostic, materialist), that constitute religious beliefs.


\[173\] Intelligent Design is considered Progressive Creation in the Kitzmiller continuum, see 400 F. Supp. 2d 707, 753 (2005), and is located in the range between Young-Earth to Progressive Creationism in the Gishlick continuum, see Eugenie C. Scott, Evolution vs. Creationism: An Introduction 64 (Greenwood Press 2009).

\[174\] See Larry Laudan, Beyond Positivism and Relativism: Theory, Method, and Evidence 211 (Westview Press 1996) (“[T]here is no demarcation line between science and
to define the boundaries of science with exquisite precision, but will instead engage in a rough ordering of the claims of intelligent design according to the principle of methodological naturalism. Methodological naturalism “holds that as a principle of research we should regard the universe as a structured place that is ordered by uniform natural processes, and that scientists may not appeal to miracles or other supernatural interventions that break this presumed order.”\(^\text{175}\)

In other words, ID’s claims will be judged by their conformity to the overriding and defining rule of science, which reads: “Let us see how far and to what extent we can explain the behavior of the physical and material universe in terms of purely physical and material causes, without invoking the supernatural.”\(^\text{176}\)

Under this classification scheme, ID’s central tenet, that “certain features of the universe and of living things are best explained by an intelligent cause,”\(^\text{177}\) fails to qualify as science. ID proponents claim that the “designer” does not have to be a supernatural entity, but could instead be a space alien or a time-travelling biologist.\(^\text{178}\) However, this is irreconcilable with ID’s mantra that the theory has nothing whatever to say about the identity of the designer.\(^\text{179}\)


\(^{177}\) Center for Science and Culture, Discovery Institute, *What is Intelligent Design?*, http://www.intelligentdesign.org/whatisid.php


Intelligent causes such as human beings or extraterrestrials are, as scientists point out, actually natural. After all, “[n]o one disputes that the behavior of humans and animals can be studied and understood through the application of scientific principles.”¹⁸⁰ To claim that the designer’s identity cannot be understood through science is to admit that the designer is supernatural. This accords with the near-universal admission by ID proponents that the designer is God,¹⁸¹ as well as their insistence on changing the very definition of science to include supernatural explanations.¹⁸²

Intelligent design also makes several claims of fact. The theory’s central ideas are irreducible complexity and specified complexity, the former advanced chiefly by Lehigh University biochemist Michael Behe; the latter by Southwestern Baptist Theological Seminary mathematician William Dembski. Irreducible complexity holds that certain structures (mainly cellular) could only be produced by an intelligent designer because they could not function if a single part were removed, and therefore natural selection, which operates through incremental additions to functional systems, would have nothing upon which to act.¹⁸³ It should be noted that this is not, in fact, an argument in favor of intelligent design, but a critique of evolutionary theory (and a false one at that, as will be shown below). Dembski’s argument relies on an algorithm that posits three possible explanations--natural law, chance, and design--for any object or event in the world and then proceeds to attribute those events which occur with a high probability to

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natural law, those which occur with intermediate probability to chance, and those which occur with a specified small probability to design. Specified complexity is the element that eliminates chance and regularity from the equation. A phenomenon displays specified complexity when it occurs with a low probability (i.e., it is complex) and displays a certain identifiable pattern (i.e., it is specified). Specified complexity has been illustrated as follows: “A single letter of the alphabet is specified without being complex. A long sentence of random letters is complex without being specified. A Shakespearean sonnet is both complex and specified.” As discussed above, the inference that these arguments beg their audience to make does not satisfy the requirements of methodological naturalism. Although the arguments themselves appear to speak the language of naturalism, this does not automatically mean that they can be understood scientifically. As some have argued, ID’s definition of “design” is not like “design” as we understand the concept in terms of our ordinary experience, and thus we have no ability to draw any inference about it.

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186 See Robert T. Pennock, Can’t Philosophers Tell the Difference between Science and Religion?: Demarcation Revisited, SYNTHESIS (2009). Pennock continues:

Presumably . . . the ordinary observation that not everything in nature is purple shows that the hypothesis [that an omnipotent supernatural being wanted above all that everything in nature be purple] is false because an omnipotent being with such a desire would surely have made the world so. If we are thinking of this in terms of a naturalistic understanding of notions such as “a being,” “desire,” “above all,” “nature,” “to be,” “purple,” and so on, that test may be perfectly fine. But what can we say when we treat the hypothesis supernaturally? Might not all of nature now indeed “be purple” in its noumenal substance, irrespective of its accidents, as wine purportedly becomes blood without observable change in the miracle of the Eucharist? Is it even possible for God (to specify the being behind this generic talk of omnipotent supernatural entities), to want such a thing “above all”? Even if one sets aside Leibnizian problems with such a notion it is not clear how we could tell whether this is a coherent thesis. And what can we say follows
arguments “against” evolution, like irreducible complexity, appear to pass the test imposed by methodological naturalism. Out of charity, the naturalistic version of specified complexity will also be assumed. Thus, for the purposes of this section, ID’s lower-order fact claims fall within the realm of science.¹⁸⁷

C. Kitzmiller, Intelligent Design, and Science

In Kitzmiller v. Dover Area School District, the court confronted the science question head-on and found that “ID fails on three different levels, any one of which is sufficient to preclude a determination that ID is science.”

First, ID violated the ground rules of science by “invoking and permitting supernatural causation.”¹⁸⁸ The court relied on the National Academy of Sciences and several expert witnesses for its understanding of the “ground rules” of science.¹⁸⁹ NAS explained that “[a]nything that can be observed or measured is amenable to scientific investigation. Explanations that cannot be based upon empirical evidence are not part of science.”¹⁹⁰ ID’s leading intellectuals revealed the movement’s receptiveness to supernatural explanations by admitting that ID aspired to broaden the definition of science to embrace supernatural causes.¹⁹¹

from a claim of supernatural “wanting”, by an omnipotent being or not, unless we treat that desire naturalistically like our own? One could easily continue, but let us not belabor the point--it is only under a tacit naturalistic reading that the testability of hypotheses with containing [sic] such concepts could be thought plausible. Id.¹⁸⁸ There is a difference between the scientific status of a theory and its scientific validity. Stated in different terms, just because something is science does not mean that it is good science.

¹⁹⁰ Kitzmiller v. Dover Area School Dist., 400 F. Supp. 2d 707, 736 (M.D. Pa. 2005). ID’s leading intellectuals, who also served as expert witnesses for the defense, also acknowledged that their new definition of science would encompass astrology. Id. The Discovery Institute, a think tank promoting Intelligent Design, has the stated goal of “replac[ing] materialistic explanations with the theistic understanding that nature and human beings are created by God.” Id. at 737.
One of ID’s main claims, that “design of biological systems can be inferred from the ‘purposeful arrangement of parts’” was simply a repackaging of the old “if it looks complex or designed, it must have been designed” argument. Most importantly, “there [was] no quantitative criteria for determining the degree of complexity or number of parts that bespeak design, rather than a natural process.” Thus, such a design inference was a “completely subjective proposition . . . not testable by scientific means and therefore cannot qualify as part of the scientific process or as a scientific theory.”

Second, the court recognized that irreducible complexity, one of ID’s central arguments, “employs the same flawed and illogical contrived dualism that doomed creation science in the 1980’s.” An “irreducibly complex” system is one composed of several interacting parts that are so interdependent that “the removal of any one of the parts causes the system to effectively cease functioning.” Because “an irreducibly complex system that is missing a part is by definition nonfunctional,” then such systems could not have arisen gradually through evolution by natural selection because natural selection only acts on systems that are already working. This argument, however, is not an argument in support of ID, as even its proponents concede. Instead it falls into the “contrived dualism,” first described in McLean, by assuming “only two explanations for the origins of life and existence of man, plants and animals: It was either the work of a creator or it was not . . . [a]pplication of these two models . . . dictates that all scientific evidence which fails to support the theory of evolution is necessarily scientific evidence in

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support of creationism.” As stated by the court in *Kitzmiller*: “arguments against evolution are not arguments for design . . . [e]xpert testimony revealed that just because scientists cannot explain today how biological systems evolved does not mean that they cannot, and will not, be able to explain them tomorrow.” In fact, as revealed at trial, scientists had offered potential explanations for all of the allegedly “irreducibly complex” structures to which Dr. Michael Behe, the developer of the concept, had applied it.

Third, the court pointed out that the scientific community had refuted ID’s attacks on evolution. In supporting this claim, the court examined *Of Pandas and People*, the pro-ID textbook that the School Board’s disclaimer directed students to consult. The textbook, which both sides agreed was “representative of ID,” grossly distorted evolutionary principles:

First, *Pandas* misrepresents the “dominant form of understanding relationships” between organisms, namely, the tree of life, represented by classification determined via the method of cladistics. . . . Second, *Pandas* misrepresents “homology,” the “central concept of comparative biology,” that allowed scientists to evaluate comparable parts among organisms for classification purposes for hundreds of years. . . . Third, *Pandas* fails to address the well-established biological concept of exaptation, which involves a structure changing function, such as fish fins evolving fingers and bones to become legs for weight-bearing land animals. . . . Finally . . . *Pandas* distorts and misrepresents evidence in the fossil record about pre-Cambrian-era fossils, the evolution of fish to amphibians, the evolution of small carnivorous dinosaurs into birds, the evolution of the mammalian middle ear, and the evolution of whales from land animals.

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199 529 F. Supp. at 1266.
201 See *Kitzmiller v. Dover Area School Dist.*, 400 F. Supp. 2d 707, 740 (M.D. Pa. 2005) (“Professor Behe has applied the concept of irreducible complexity to only a few select systems: (1) the bacterial flagellum; (2) the blood-clotting cascade; and (3) the immune system. Contrary to Professor Behe’s assertions with respect to these few biochemical systems among the myriad existing in nature, however, Dr. Miller presented evidence, based upon peer-reviewed studies, that they are not in fact irreducibly complex.”).
Finally, the court noted the failure of ID to gain acceptance in the scientific community.\textsuperscript{204} Simply put, the record indicated a “complete absence of peer-reviewed publications supporting the theory.”\textsuperscript{205} Furthermore, “[n]ot a single expert witness over the course of the six week trial identified one major scientific association, society or organization that endorsed ID as science.”\textsuperscript{206}

D. Reception to \textit{Kitzmiller}

The court’s 12-page analysis was the first judicial attempt at answering the “science question” for intelligent design, and easily the most comprehensive and searching inquiry ever attempted for creationism in general. The holding made national headlines,\textsuperscript{207} and drew divided responses. The academic and scientific community largely applauded the decision. Barbara Forrest, a philosophy professor at Southeastern Louisiana University and expert witness for the plaintiffs, praised the judge for “recognize[ing] the truth when we presented it to him and [having] the integrity to act accordingly.”\textsuperscript{208} Likewise, Jerry Coyne, a biology professor at the University of Chicago, hailed the ruling as “a splendid victory for American schoolchildren, for evolution, and, indeed, for science itself.”\textsuperscript{209} Intelligent Design’s defenders held little back in their criticisms.\textsuperscript{210}

The Thomas Moore Law Center, which represented the school board in the

\textsuperscript{204} \textit{Kitzmiller v. Dover Area School Dist.}, 400 F. Supp. 2d 707, 735 (M.D. Pa. 2005).


\textsuperscript{208} Barbara Forrest, \textit{My Role in Kitzmiller v. Dover}, 26 REPORTS OF THE NATIONAL CENTER FOR SCIENCE EDUCATION 47, 48 (2006), \url{http://ncse.com/ncse/26-1-2/my-role-kitzmiller-v-dover-0}

\textsuperscript{209} JERRY A. COYNE, \textit{WHY EVOLUTION IS TRUE} xiii (Viking Press 2009).

\textsuperscript{210} Indeed, a death threat received after the \textit{Kitzmiller} opinion was issued prompted the judge, John E. Jones III, to seek the protection of the U.S. Marshal’s Service. Amy Worden, \textit{Judge in Dover Case Still Fighting}, THE PHILADELPHIA INQUIRER, June 5, 2006, at A01.
case, attacked the entire Establishment Clause landscape in which the case was decided. The Discovery Institute’s John West tarred the opinion with the predictable charge of judicial activism. The opinion was, according to West, the product of “an incredibly sloppy judge who selects the facts to fit the result he wants.” But ad hominem attacks aside, ID’s defenders at the Discovery Institute offered several legal critiques in their book and subsequent law review articles. The principal criticism, according to West, was that instead of disposing of the case once it became clear that the Dover School Board acted from religious motives, the judge “got on his soapbox to offer his own views of science, religion, and evolution.” Put more specifically, “Judge Jones’s attempt to decide whether ID is science exhibits poor legal reasoning, goes well beyond the issues needed to dispose of the case, and raises troubling First Amendment concerns.” Importantly, this argument is the only one raised by the ID community that has also been adopted by neutral legal scholars. For example, law professor Jay Thomas Moore Law Center, Court Issues Troubling Decision In Dover Intelligent Design Case, Dec. 21, 2005, http://www.thomasmore.org/qry/page.taf?id=19&_function=detail&sbtblct_uid1=80&_nc=a06b8d6ebb206acb8bc1db4a93fd (“Richard Thompson, President and Chief Counsel for the Law Center, commented, ‘What is clear from this decision is that our present Establishment Clause jurisprudence, as several Supreme Court justices have noted, is in hopeless disarray and in need of substantial revision.’”).


D. Wexler agreed that “[t]he part of Kitzmiller that finds ID not to be science is unnecessary, unconvincing, not particularly suited to the judicial role, and even perhaps dangerous both to science and to freedom of religion.”218

E. Defending Kitzmiller’s Analysis of the Scientific Validity of ID

The court thought that resolving the science question was “essential to our holding that an Establishment Clause violation ha[d] occurred[.]”219 Other scholars have supported the court’s tackling of the issue.220 Richard B. Katskee, one of the principal attorneys for the Kitzmiller plaintiffs, has been particularly forceful in attempting to justify this part of the court’s holding.221 Katskee et al. have the better of the argument. Rather than embodying judicial activism, Kitzmiller’s analysis of the scientific validity of ID was institutionally appropriate and relevant to its holding.

First, it is important to note what the court did not decide. As repeatedly stated in the opinion, the court avoided the central tenet of intelligent design that posits a supreme intelligence behind the creation of life and the development of species.222 The court’s science discussion also did not implicate any of the religious beliefs relating to biblical interpretation that are associated with ID by virtue of their being held by its proponents. Instead, the court limited itself to deciding a definitional issue—whether ID was science—and to evaluating ID’s fact claims:

220 See Peter Irons, Disaster in Dover: The Trials (and Tribulations) of Intelligent Design, 68 MONT. L. REV. 59 (2007).
irreducible complexity, “purposeful arrangement of parts,” and “gaps” in evolutionary theory.\textsuperscript{223} Thus, the court held only that ID was not compatible with science as traditionally defined, and that ID’s fact claims were false.\textsuperscript{224} In other words, ID was neither science nor good science.

Also worth noting is that Kitzmiller’s decision to tackle the science question does not make it a judicial aberration. In McLean, the court tested “creation science” against traditional definitions of science and found that it “simply was not science.”\textsuperscript{225} According to the court, the “essential characteristics” of science are: “(1) It is guided by natural law; (2) It has to be explanatory by reference to natural law; (3) It is testable against the empirical world; (4) Its conclusions are tentative, i.e., are not necessarily the final word; and (5) It is falsifiable.”\textsuperscript{226} Creation science, as described in Arkansas’s balanced treatment statute, failed to display these characteristics.\textsuperscript{227} As in Kitzmiller, the court also noted the movement’s dismissal among those in the scientific community.\textsuperscript{228} Thus, Kitzmiller was not the first time a court thought the science question made a legal difference.

\textsuperscript{224} Criticism of the Kitzmiller decision displayed a type of outrage that would be understandable had the court infringed upon the central creation claim or even the subordinate, explicitly biblical claims held by some of its proponents. But attacks like West’s have a “how dare he!” quality that is difficult to understand given the essentially factual claims at issue. Certainly, to adjudge irreducible complexity is not to address a belief of comparable order to the one in Ballard, nor does it involve interpretation of doctrine “at the core of religion” as in Presbyterian Church. Here one catches a glimpse of the extent to which religion permeates ID. Even these fact claims, purported to be entirely scientific, could not be divorced from the clearly religious beliefs of the movement. Thus, for these critics, all of Intelligent Design’s claims were wholly religious, and the court could not adjudicate the science question without launching a secular assault on their religious beliefs.
\textsuperscript{228} McLean v. Arkansas Bd. of Ed., 529 F. Supp. 1255, 1268 (D.C. Ark. 1982) (“There is, however, not one recognized scientific journal which has published an article espousing the creation science theory described in Section 4(a). Some of the State’s witnesses suggested that the scientific community was “close-minded” on the subject of creationism and that explained
1. Science and *Lemon’s* Purpose Prong

The principal reason that ID’s scientific status has legal significance comes from the purpose prong of the Supreme Court’s *Lemon* test. *Lemon*’s first prong asks the reviewing court to inquire into the purpose of the state action. This presents an undeniably difficult challenge for a court.\(^{229}\) The bar was set higher by the Court’s declaration in *Edwards* that the balanced-treatment act only failed because the primary purpose was to advance a particular religious doctrine.\(^{230}\) Thus, mere “coincidence or harmonization with the tenets of some or all religions” would not suffice to make the purpose of a challenged action religious.\(^ {231}\) In fact, invalidating a law under the purpose prong may be even more difficult. Apart from the difficulties inherent in the purpose determination, in public school creationism cases the legislature or school board will almost certainly have learned not to adopt *Scopes*’s clumsy reference to “the story of Divine Creation of man as taught in the Bible”\(^ {232}\) and will instead proffer a seemingly valid secular purpose for its action. Stated purposes have included (1) “promoting academic freedom,”\(^ {233}\) (2) preventing a free exercise violation by “balancing” evolution with creationism,\(^ {234}\) (3) encouraging students to exercise their critical thinking skills and advising them of their “right to form their own opinions or maintain the beliefs taught to them by parents or in Sunday

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\(^{229}\) See *Edwards v. Aguillard*, 482 U.S. 578, 636-37 (1987) (Scalia, J., dissenting) (“[D]iscerning the subjective motivation of those enacting the statute is, to be honest, almost always an impossible task. The number of possible motivations, to begin with, is not binary, or indeed even finite.”)


\(^{232}\) *Scopes v. State*, 289 S.W. 363 (Tenn. 1927).


School,” (4) “encourage[ing] informed freedom of belief,” (5) “disclaim[ing] any orthodoxy of belief that could be inferred from the exclusive placement of evolution in the curriculum,” (6) “reduc[ing] offense to the sensibilities and sensitivities of any student or parent caused by the teaching of evolution,” and (7) “foster[ing] critical thinking among students, . . . allow[ing] academic freedom consistent with legal requirements, . . . promot[ing] tolerance and acceptance of diversity of opinion, and . . . ensur[ing] a posture of neutrality toward religion[.]

In Kitzmiller, the school board’s disclaimer, which would be read before the start of ninth grade biology class, stated that the theory of evolution “is not a fact,” that “[g]aps in the [t]heory exist for which there is no evidence,” and that “Intelligent Design is an explanation of the origin of life that differs from Darwin’s view[.]” This disclaimer was added with the superficially reasonable purpose of “improv[ing] science education.” Such proffered purposes, however, are not the end of the purpose inquiry. The court must look beyond the asserted secular purpose to determine whether it is “a sham.”

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236 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 344 (5th Cir. 2000).
237 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 344 (5th Cir. 2000).
238 Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 344 (5th Cir. 2000).
242 Edwards v. Aguillard, 482 U.S. 578, 586-87 (1987); see also McCreary County v. ACLU of Ky., 125 S. Ct. 2722, 2735 (2005); Stone v. Graham, 449 U.S. 39, 41 (1980) (“Under this Court’s rulings, however, such an ‘avowed’ secular purpose is not sufficient to avoid conflict with the First Amendment.”).
analyzing legislative purpose: the disclaimer’s history and the statements of its proponents.\textsuperscript{243} Such evidence strongly suggested a clear religious purpose.\textsuperscript{244}

But statements of the legislature or school board are not the only evidence relevant to the purpose inquiry. The scientific bankruptcy of intelligent design (or whatever variant of creationism the case presents) is also relevant evidence in favor of a religious purpose when examining whether a proffered purpose such as promoting critical thinking or improving science education is sincere.\textsuperscript{245} Because ID is not science, and indeed has nothing of scientific value to say, inserting it into the public school classroom does not objectively advance secular purposes like improving science education. Because such purposes are not advanced, it is less likely that the school board believed these purposes were being advanced. Thus, it is less likely that the school board acted with the secular purpose of improving science education, and more likely that it acted with to serve an alternative purpose. Given the inherently religious nature of creationism and intelligent design, the only credible “alternative” purpose in these cases is the advancement of religion. Thus, by examining the truth of ID’s fact claims and of its status as science functions, courts are able to “smoke out” a hidden religious purpose. Courts in creationism cases have recognized this logic before.\textsuperscript{246} Only by getting to the heart of ID could the court truly examine whether the school board’s policy could be squared with its secular purpose.

\textsuperscript{244} For example, school board member Alan Bonsell “identified ‘creationism’ as his number one issue,” and “said he wanted creationism taught 50/50 with evolution in biology class.” See Kitzmiller v. Dover Area School Dist., 400 F. Supp. 2d 707, 748 (M.D. Pa. 2005).
\textsuperscript{245} Indeed, in cases where legislative statements are unavailable or unhelpful, the science question becomes even more important.
\textsuperscript{246} See McLean v. Arkansas Bd. of Ed., 529 F. Supp. 1255, 1272 (E.D. Ark. 1982) (“The conclusion that creation science has no scientific merit or educational value as science has legal significance in light of the Court's previous conclusion that creation science has, as one major effect, the advancement of religion. The second part of the three-pronged test for establishment reaches only those statutes having as their primary effect the advancement of religion. Secondary
True, the legislature could simply be mistaken in its belief that it was advancing a secular purpose. Because the Lemon test focuses on actual motive, not whether the secular purpose is likely to be achieved by the enacted provision, a sincere but misguided attempt to advance a secular purpose would not run afoul of Lemon’s purpose prong. As stated in Justice Scalia’s Edwards dissent, “what is crucial is not [the legislature’s] wisdom in believing that purpose would be achieved by the bill, but their sincerity in believing it would be.” However, the argument for resolving the science question is not that it is dispositive, but that it makes the existence of an impure motive more likely. Furthermore, sincerity is not a defense to violations of either Lemon’s effect prong or O’Connor’s endorsement test. Both tests focus not on the legislature’s intentions but the objective effects of its policies. It is also true that ID’s failure as science is only relevant when the secular purpose depends on ID being scientifically valuable. For example, the school board in Selman placed a sticker disclaiming evolution in biology textbooks to reduce offense caused to creationist parents and students by the teaching of evolution. In McLean, one stated purpose of requiring the teaching of creation science was to remedy an alleged free exercise violation caused by the teaching of evolution. In these cases, the scientific status of creationism would not be relevant Lemon’s purpose analysis. However, most school boards and legislatures proffer purposes such as academic freedom, critical thinking, effects which advance religion are not constitutionally fatal. Since creation science is not science, the conclusion is inescapable that the only real effect of Act 590 is the advancement of religion.”; see also Freiler v. Tangipahoa Parish Bd. of Educ., 975 F. Supp. 819, 829 (E.D. La. 1997) (“[I]f there is no clearly secular purpose to the act, the Court is left with but two conclusions” (1) the act was enacted for religious purposes, or . . . (2) the act had no purpose.”). See Lynch v. Donnelly, 465 U.S. 668, 690 (1984) (O’Connor, J., concurring) (noting that the question is whether the policy “in fact conveys a message of endorsement or disapproval of religion, irrespective of what the government might have intended by it.”) (emphasis added). See Selman v. Cobb County School Dist., 390 F. Supp. 2d 1286 (N.D. Ga. 2005). See McLean v. Arkansas Bd. of Ed., 529 F. Supp. 1255 (E.D. Ark. 1982).
and the improvement of scientific education (the stated purpose in *Kitzmiller*), where the scientific status of creationism is relevant.

2. Legislative Purpose as Narrow Tailoring

As explained above, the Court, when faced with a stated secular purpose which it believes to be pretextual, has felt the need to look beneath the surface of the enactment to determine whether the explicit purpose is a sham. This deeper inquiry has appeared in both of the Court’s antievolution cases, as well in several others involving public schools. When looking beyond the putative secular purpose, the Court has relied upon legislative history and the historical context of the enactment. However, this approach to legislative purpose is plagued by myriad problems. Perhaps recognizing this, the Court has bolstered its purpose inquiry

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254 First, legislature motivation is difficult to determine. *See Edwards v. Aguillard*, 482 U.S. 578, 637, (1987) (Scalia, J., dissenting) (“In the present case, for example, a particular legislator need not have voted for the Act either because he wanted to foster religion or because he wanted to improve education. He may have thought the bill would provide jobs for his district, or may have wanted to make amends with a faction of his party he had alienated on another vote, or he may have been a close friend of the bill's sponsor, or he may have been repaying a favor he owed the majority leader, or he may have hoped the Governor would appreciate his vote and make a fundraising appearance for him, or he may have been pressured to vote for a bill he disliked by a wealthy contributor or by a flood of constituent mail, or he may have been seeking favorable publicity, or he may have been reluctant to hurt the feelings of a loyal staff member who worked on the bill, or he may have been settling an old score with a legislator who opposed the bill, or he may have been mad at his wife who opposed the bill, or he may have been intoxicated and utterly unmotivated when the vote was called, or he may have accidentally voted “yes” instead of “no,” or, of course, he may have had (and very likely did have) a combination of some of the above and many other motivations. To look for the sole purpose of even a single legislator is probably to look for something that does not exist.”). Second, there is no agreement on how many legislators must have an invalidating intent before that intent can be fairly said to taint the legislature as a whole. Third, it is not clear why the underlying motivations of the legislature can doom an otherwise non-objectionable law. *See Fletcher v. Peck*, 10 U.S. 87 (1810) (“If the legislature might constitutionally pass such an act; if the act be clothed with all the requisite forms of a law, a court, sitting as a court of law, cannot sustain a suit between individuals
with another approach similar to that in free speech cases: requiring a reasonable fit between the purpose the law seeks to achieve and the means employed to achieve it.\footnote{255}

For example, in \textit{Edwards}, the fact that Louisiana’s Balanced Treatment Act was remarkably poor at furthering its stated purpose--protecting academic freedom--was a factor in the Court’s determination that this purpose was pretextual. The Court first noted that the Act “actually serves to diminish academic freedom by removing the flexibility to teach evolution without also teaching creation science.”\footnote{256} Because Louisiana public school teachers already possessed the authority to present material on any scientific theory, the Act also failed to grant them any new authority.\footnote{257} Additionally, if academic freedom encompassed, as the state claimed, “a basic concept of fairness,” then the act failed to accomplish this purpose, as it provided curriculum guides and resource for only creation science, not evolution.\footnote{258} Finally, by making the teaching of creation science contingent upon the teaching of evolution, the Act did not even ensure that creation science would be taught.\footnote{259} Similar approaches were taken in \textit{Wallace v. Jaffree}, where the challenged law’s purpose of providing for a one-minute period for meditation was rejected in part because existing law already provided for such a one-minute

\footnote{255} \textit{See} Pleasant Grove City, Utah \textit{v. Summum}, 129 S.Ct. 1125, 1132 (2009) (noting that “any restriction based on the content of the speech must satisfy strict scrutiny, that is, the restriction must be narrowly tailored to serve a compelling government interest.”)
period, and in Stone v. Graham, where a law aimed at promoting secular appreciation for the country’s foundational legal code by placing the Ten Commandments in public school classrooms was struck down because the commandments did not confine themselves merely to secular matters. The Kitzmiller court also looked into the fit between the school board’s secular purpose of improving science education, and concluded sharply:

[T]he Board took none of the steps that school officials would take if these stated goals had truly been their objective. The Board consulted no scientific materials. The Board contacted no scientists or scientific organizations. The Board failed to consider the views of the District’s science teachers. The Board relied solely on legal advice from two organizations with demonstrably religious, cultural, and legal missions, the Discovery Institute and the [Thomas Moore Law Center]. Moreover, Defendants’ asserted secular purpose of improving science education is belied by the fact that most if not all of the Board members who voted in favor of the biology curriculum change conceded that they still do not know, nor have they ever known, precisely what ID is. To assert a secular purpose against this backdrop is ludicrous.

In free speech cases, requiring that a challenged law be narrowly-tailored to achieving its objective serves the purpose of ensuring that the state does not restrict more speech than necessary. However, in the case of content-based laws, this requirement has the additional effect of uncovering illicit legislative motivations. Consider a hypothetical case involving a law prohibiting citizens from placing newsracks on public property to dispense free advertisements for contraceptives, justified on the basis of the state’s interest in the safety and attractive appearance of its streets and sidewalks. One way to determine whether the state’s avowed purpose is genuine, or whether the law was really enacted out of forbidden motives (such as disapproval for the ideas expressed), is to inquire into the legislative history and context

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surrounding the enactment. However, one can also test the motives of the legislature by examining the fit between the ends and means of the law. If safety and esthetics were the true legislative aims, then surely noncommercial newsracks would also have been prohibited, and if they were not, then the asserted state interests are likely to be a sham. Although not officially a part of Establishment Clause doctrine, this “narrow tailoring” assessment avoids many of the pitfalls associated with subjective purpose inquiry while retaining the effect of uncovering forbidden legislative motivations.

Of course, conditioning the constitutionality of a law on its displaying a certain degree of efficacy would lead the courts to invalidate reams of legislation under Lemon’s purpose prong. Instead, the tailoring of a law should be examined only in certain circumstances. Because the Court has already declared that it would be particularly vigilant in guarding against religious encroachment in the public schools, a case can be made that narrow tailoring should be part of the inquiry in those cases. Indeed, Wallace, Stone, and Edwards were all public school cases. Certainly, the history of antievolutionism in this country warrants judicial examination of the fit between the legislature’s ends and the means used to achieve them--either as a supplement to the standard legislative purpose inquiry or a replacement to it when legislative history is missing or unhelpful--in cases involving evolution-education policies which deviate from the National Science Education Standards.

3. Edwards and Science

    Addressing the science question was also a way of answering Edwards’s implication\(^\text{265}\) that if a form of creationism could be shown to be scientific, it would, at minimum, be much

\(^{265}\) As Katskee and others have explained, this implication was at the heart of creationist strategies to circumvent the Court’s holding in Edwards. See Richard B. Katskee, Why it Mattered to Dover that Intelligent Design Isn’t Science, 5 FIRST AMEND. L. REV. 112, 119-21
harder to exclude it from the public school classroom. The *Edwards* majority clearly stated that they “do not imply that a legislature could never require that *scientific critiques* of prevailing scientific theories be taught.”\(^{266}\) Even Justice Scalia’s dissenting opinion revealed an understanding of the importance of the science question to the outcome of these cases:

> The people of Louisiana, including those who are Christian fundamentalists, are quite entitled, as a secular matter, to have whatever *scientific evidence there may be against evolution* presented in their schools, just as Mr. Scopes was entitled to present whatever scientific evidence there was for it. *Perhaps what the Louisiana Legislature has done is unconstitutional because there is no such evidence, and the scheme they have established will amount to no more than a presentation of the Book of Genesis.* But we cannot say that on the evidence before us in this summary judgment context, which includes ample uncontradicted testimony that “creation science” is a body of scientific knowledge rather than revealed belief. *Infinitely less* can we say (or should we say) that the scientific evidence for evolution is so conclusive that no one could be gullible enough to believe that there is any real scientific evidence to the contrary, so that the legislation’s state purpose must be a lie.\(^{267}\)

Note the context in which a proper understanding of the scientific merit of intelligent design and the other creationist theories places the above statement. First, the principle of allowing scientific evidence “against” evolution is reiterated. If, as the *Kitzmiller* court discovered, there was no *scientific evidence against* evolution, then the door opened by *Edwards* is slammed shut. *Kitzmiller* accomplished this first by showing that ID was not science, then by showing that its attacks on evolution were grossly, catastrophically erroneous, and finally by noting that whatever remaining evolutionary gaps or mysteries were surely not evidence “against” the theory, as “just because scientists cannot explain how biological systems evolved does not mean that they cannot, and will not, be able to explain them tomorrow.”\(^{268}\) Put similarly, “[g]ood science is


always incomplete. It is just the best we have for the moment, and it usually gets better.”269

Edwards was unable to say that “there [was] no such evidence” against evolution to the satisfaction of the whole Court because the Court never undertook to answer that question.

Justice Scalia’s parenthetical statement, that the Court should not examine these scientific questions, suggests the beginnings of a judicial competence argument later repeated by those opposing the Kitzmiller ruling. Naturally, this argument resurfaced in the wake of Kitzmiller. Judges, Wexler states, “are neither scientists nor philosophers of science, [thus] it is hard to imagine that they would construct a successful definition of ‘science,’ if that term is unmoored to any sort of legal text.”270 This is not an unreasonable argument. Indeed, intelligent design itself is primarily the product of a lawyer’s attempt at “a comparative study of evolutionary theory.”271 Furthermore, judges have been responsible for some of the most egregious misstatements of evolutionary theory in these types of cases.272 However, the ship seems to have sailed on the institutional competence argument in Daubert v. Merrell Dow Pharmaceuticals, Inc.273 In Daubert, the Court held that, under Rule 702 of the Federal Rules of Evidence, the admissibility of expert scientific testimony was to turn a federal court’s “assessment of whether the reasoning or methodology underlying the testimony is scientifically valid and of whether that reasoning or

269 Barabra Forrest and Paul R. Gross, Creationism’s Trojan Horse: The Wedge of Intelligent Design 54 (Oxford University Press 2004).
271 See Barabra Forrest and Paul R. Gross, Creationism’s Trojan Horse: The Wedge of Intelligent Design 17 (Oxford University Press 2004).
272 See Freiler v. Tangipahoa Parish Bd. of Educ., 201 F.3d 602, 607 (5th Cir. 2000) (Barksdale, J., dissenting from denial of rehearing en banc) (“How can the effect of the disclaimer be to endorse or advance a concept that is merely mentioned, using only four words, when evolution is the only concept for the origin of life and matter that is included in the curriculum, the only one that will be explained and discussed in any lesson following the disclaimer’s being read?”) (third emphasis added).
methodology properly can be applied to the facts in issue."\textsuperscript{274} Wexler is aware of this argument, and he makes several responses. First, he notes that courts \textit{“have to engage in some sort of ‘is it science?’ question when considering expert testimony because Rule 702, which contains the word ‘scientific,’ was legislatively enacted and is thus binding on those judges.”}\textsuperscript{275} But as then-Chief Justice Rehnquist pointed out, it is not clear that Rule 702 required the kind of searching inquiry into scientific validity that \textit{Daubert} established.\textsuperscript{276} Rule 702’s text is also important for Wexler because it ensures that courts are not analyzing “science” in the “philosophical, unmoored sense,” but are instead simply interpreting a legal term.\textsuperscript{277} It is not exactly true, however, that \textit{Kitzmiller} was engaging in a grand, philosophical demarcation analysis “unmoored” from government enactment. The term “theory”—meaning scientific theory—appeared in the Dover School Board’s curriculum change and in the disclaimer it wanted read before ninth grade biology class.\textsuperscript{278} The court was simply “look[ing] to what the School District actually said in its officially enacted policy . . . and attempt[ing] to ascertain what [its] words actually meant.”\textsuperscript{279} And while Daubert’s criteria do appear to “sound in notions of good versus

\textsuperscript{276} See \textit{Daubert v. Merrell Dow Pharmaceuticals, Inc.}, 509 U.S. 579, 600-01 (1993) (Rehnquist, J., concurring in part and dissenting in part) (“I do not doubt that Rule 702 confides to the judge some gatekeeping responsibility in deciding questions of the admissibility of proffered expert testimony. But I do not think it imposes on them either the obligation or the authority to become amateur scientists in order to perform that role. I think the Court would be far better advised in this case to decide only the questions presented, and to leave the further development of this important area of the law to future cases.”).
bad science rather than science versus nonscience.” Katskee is correct that for the kind of inquiry the *Kitzmiller* court engaged in, the two questions are essentially the same. If the court were trying to determine the precise point of demarcation between science and nonscience, then there certainly would have been a gulf between the “good science/bad science” and “science/nonscience” questions. Instead, the court engaged in a kind of “ballpark” demarcation, where ID was not science because it violated the ground rule of methodological naturalism.

4. The Future Importance of The Science Question

As explained above, the currently favored strategy of attacking evolution is through the passage of academic freedom and EAE bills. Traveling the road paved by *Edwards*, these bills go to great lengths in proclaiming their focus on science. The Discovery Institute’s model academic freedom act contains 13 references to “science” or “scientific” views or information, and an explicit reference to “the right of teachers identified by the United States Supreme Court in *Edwards v. Aguillard* to present scientific critiques of prevailing scientific theories.” The

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281 See Richard B. Katskee, *Why it Mattered to Dover that Intelligent Design Isn’t Science*, 5 FIRST AMEND. L. REV. 112, 134 (2006) (“For practical purposes, though, the reliability requirement translates into a test for whether the evidence is genuine science, because the features of repeatability, falsifiability, peer review, and the like that enter into the *Daubert* calculus are the same standards to which the scientific community holds itself.”).
282 See Robert T. Pennock, *Can’t Philosophers Tell the Difference between Science and Religion?: Demarcation Revisited*, SYNTHESIS (“*Kitzmiller* articulated a simple ballpark approach in ruling out creationism, identifying methodological naturalism (MN) as a ground rule of science that ID and other forms of creationism violate. MN holds that as a principle of research we should regard the universe as a structured place that is ordered by uniform natural processes, and that scientists may not appeal to miracles or other supernatural interventions that break this presumed order. Science does not hold to MN dogmatically, but because of reasons having to do with the nature of empirical evidence.”).
Louisiana Science Education Act contains five such references. Both acts expressly disavow the promotion of or discrimination against any particular religious beliefs or religion in general. Thus, a court adjudicating a facial challenge to either act will probably find itself examining the definition of science and whether something is good or bad science. If, as many suspect, the statutes are used to smuggle creationist texts into the classroom, then an as-applied challenge would still lead to the court examining the particular materials introduced in the alleged violations. Proponents will no doubt claim that such materials are not religious, and they will support this argument by relying on Edwards and citing the contribution the challenged materials made to scientific inquiry.

V. The Case Against the Louisiana Science Education Act

A. Standard of Review

This section lays out a legal argument against the Louisiana Science Education Act (“LSEA”). This argument will progress by analyzing both facial and as-applied challenges to the statute. A facial challenge is the most difficult challenge to assert successfully, as the standard articulated by the Supreme Court in United States v. Salerno requires that a plaintiff establish “that no set of circumstances exists under which the Act would be valid.” Facial challenges also risk having the courts decide hypothetical or imaginary cases that might never materialize. However, in Santa Fe Independent School District v. Doe, the Court struck down a policy allowing a student chaplain to provide a prayer at high school football games with the

consent of the student body.\textsuperscript{288} In evaluating the status of the plaintiffs’ facial challenge, the Court sanctioned a less demanding standard in Establishment Clause cases. The Court explained that it was concerned not just with the unconstitutional application of statutes, but also with “the myriad, subtle ways in which Establishment Clause values can be eroded.”\textsuperscript{289} In an Establishment Clause challenge, these subtle erosions can appear in the purpose behind the challenged statute.\textsuperscript{290} In other words, the Court applied Lemon’s purpose prong. Because this challenge to LSEA also arises under the Establishment Clause, it will be evaluated under a standard more akin to that in Sante Fe than in Salerno. This approach accords with that taken in other antievolution cases.\textsuperscript{291}

\section*{B. Facial Challenge to the Louisiana Science Education Act}

Under both challenges, LSEA will be analyzed using the Lemon and endorsement tests. Divisiveness, although not a court-sanction test, will also be considered. Justice Kennedy’s coercion test is, as one court explained, is most applicable where the practice at issue directs student participation in a religious exercise.\textsuperscript{292} Because that situation is not present here, the coercion test will not be employed. However, courts in antievolution cases, like Justice Kennedy, have emphasized the unique problems which lead to especially vigilant judicial monitoring of the public schools: mandatory attendance, the impressionable nature of students, the school’s role in socializing its students, and the students’ impulses toward emulating their

\textsuperscript{288} 530 U.S. 290 (2000).
\textsuperscript{292} See Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 344 (5th Cir. 2000) (“Where, as in the instant action, the practice at issue does not direct student participation in a formal religious exercise, we elect not to apply the coercion test.”).
teachers as role models.\textsuperscript{293} These concerns are noted at the outset, as they provide important context for the following analysis.

1. The \textit{Lemon} Test

\begin{itemize}
\item \textit{Purpose}
\end{itemize}

The primary purpose behind the adoption of LSEA was to advance religion. In analyzing purpose, courts are to consider the plain language of the statute, enlightened by its context and contemporaneous legislative history.\textsuperscript{294} LSEA plainly states that its purpose is “to promote students’ critical thinking skills and open discussion of scientific theories.”\textsuperscript{295} LSEA also states that it “shall not be construed to promote any religious doctrine, promote discrimination for or against a particular set of religious beliefs, or discrimination for or against religion or nonreligion.”\textsuperscript{296} Courts, however, must look beyond a putative secular purpose to determine whether it is “genuine, not a sham, and not merely secondary to a religious objective.”\textsuperscript{297} This sham-purpose inquiry “must” include an examination of the circumstances surrounding the enactment.\textsuperscript{298} The circumstances surrounding the enactment include “the specific sequence of events leading to [its] passage,”\textsuperscript{299} as well as, in the antievolution context, “the broader context of historical and ongoing religiously driven attempts to advance creationism while denigrating evolution.”\textsuperscript{300} Additionally, as in \textit{Edwards, Wallace, Stone} and \textit{Kitzmiller}, the purpose inquiry

\begin{footnotes}
\footnotetext[293]{See \textit{Edwards v. Aguillard}, 482 U.S. 578, 584 (1987).}
\footnotetext[297]{\textit{McCreary County v. ACLU of Ky.}, 545 U.S. 844, 857 (2005); see also \textit{Edwards v. Aguillard}, 482 U.S. 578, 587 (1987).}
\end{footnotes}
will examine the fit between the objectives the legislature sought to achieve and the means employed to achieve them.

The author of the LSEA, Senator Ben Nevers, stated when introducing the Act that it “has only one purpose and that’s to strengthen and enhance the science education in this state.”\(^\text{301}\) When discussing the Act in legislative sessions, Senator Nevers has been consistent in avowing that its only purpose is to strengthen the teaching of science through promotion of critical thinking skills and open and objective discussion of scientific theories. None of the Act’s other sponsors appear to have asserted overtly religious objectives. The dearth of legislative history makes the sham-purpose inquiry more difficult than in previous antievolution cases, demonstrating both the adaptiveness of the antievolution movement and the growing importance of examining historical development of the bill, the context of antievolutionism in Louisiana, and the fit between the ends and means of the legislature.

LSEA began in the Louisiana Senate as SB 561.\(^\text{302}\) After claiming that “the teaching of some scientific subjects, such as biological evolution, the chemical origins of life, global warming, and human cloning, can cause controversy, and that some teachers may be unsure of the expectations concerning how they should present information on such subjects,” the bill went on to encourage the state’s teachers to “help students understand, analyze, critique, and review in an objective manner the scientific strengths and scientific weaknesses of existing scientific theories pertinent to the course being taught.”\(^\text{303}\) Senator Nevers admitted\(^\text{304}\) that he introduced

\(^{301}\) See Louisiana State Senate, Apr. 28, 2008, http://senate.legis.state.la.us/video/2008/April/042808_schamb.ram

\(^{302}\) See SB733 - 2008 Regular Session (Act 473), http://www.legis.state.la.us/billdata/History.asp?sessionid=08RS&billid=SB733

SB 561 at the behest of the Louisiana Family Forum ("LFF"), a group whose mission is “to persuasively present biblical principles in the centers of influence on issues affecting the family through research, communication and networking.” LFF stated that it supported the bill because it “makes it easier for teachers to delve into criticism of Charles Darwin’s theory of evolution.” In 2008, LFF gave Senator Nevers a rating of 78 (out of 100) based on support or opposition to the group’s policies. Senator Nevers apparently knew exactly what the bill was designed to accomplish, stating that LFF supported it because “[t]hey believe that scientific data related to creationism should be discussed when dealing with Darwin’s theory. This would allow the discussion of scientific facts . . . I feel the students should know there are weaknesses and strengths in both scientific arguments.” The text of the bill was also substantially similar to the model academic freedom statute proposed by the Discovery Institute. The Discovery Institute’s Center for Science and Culture ("CSC") is the institutional home for intelligent design, a theory that the Kitzmiller court determined to be “nothing less than a progeny of creationism.” Indeed, CSC’s foundational planning document, known as the “Wedge Document,” candidly states that the movement hopes to “replace science as currently practiced with ‘theistic and Christian science,’ . . . ‘defeat scientific materialism and its destructive moral, cultural, and political legacies,’ and ‘to replace materialistic explanations with the theistic

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308 Sylvia Schon, Bill allows teaching creationism as science, DAILY STAR, Apr. 6, 2008, http://www.hammondstar.com/articles/2008/04/06/top_stories/9327.txt
understanding that nature and human beings are created by God.” CSC praised the senate bill for protecting “the freedom of teachers to discuss both the scientific evidence for and against Darwinian evolution and other controversial scientific theories.” Before passage, SB 561 was renumbered SB 733. It was also sanitized slightly, through the removal of “strengths and weaknesses,” although the specific reference to “evolution, the origins of life, global warming, and human cloning” remained. Senator Nevers insisted, however, that the intent behind the Act remained the same. Thus, LSEA’s sectarian genesis provides evidence of legislative intent to modify the teaching of evolution to include religious objections to the theory.

In *Kitzmiller*, the court’s purpose inquiry was informed by the “ongoing religiously driven attempts to advance creationism while denigrating evolution.” The *McLean* court also considered Arkansas’s “long history of official opposition to evolution which is motivated by adherence to Fundamentalist beliefs.” Louisiana’s history displays a similar pattern, as the state has had difficulty preventing its religious fundamentalists from translating their objections to evolution into government enactments. The state was, of course, responsible for the most recent Supreme Court case to examine a policy challenging evolution, *Edwards v. Aguillard*. Louisiana was also responsible for the evolution disclaimers invalidated by the Fifth Circuit in

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In 2000, the legislature narrowly averted passing a resolution that would have condemned Charles Darwin and the theory of evolution for being racist. In 2002, a committee of the State Board of Elementary and Secondary Education approved a proposal for an evolution disclaimer similar to the one placed in biology texts in Alabama. The disclaimer, which described evolution as “only a theory,” was ultimately rejected by the Board. This historical context supports the inference that LSEA was motivated by the same religious animosity to the theory of evolution that has characterized the state’s actions concerning the theory for the better part of the last century.

Further evidence of a non-secular purpose comes from LSEA’s failure to further its stated purpose. In Wallace, the Court thought that the purpose of a law designed to provide a one-minute period for mediation or prayer was undercut by the fact that the law already protected that right. Because the state had not “identified any secular purpose that was not fully served by [existing law],” the Court concluded that the challenged law was not passed with the stated purpose in mind. In Edwards, the Court noted that Louisiana’s Balanced Treatment Act “d[id] not grant teachers a flexibility that they did not already possess to supplant the present science

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318 185 F.3d 337, 341 (5th Cir. 2000).
320 See Will Sentell, Evolution Disclaimer Supported, THE BATON ROUGE ADVOCATE, Dec. 11, 2002 at 1A; Alabama’s disclaimer states, in part: “No one was present when life first appeared on earth. Therefore any statement about life’s origins should be considered as theory, not fact. . . . Evolution also refers to the unproven belief that random, undirected forces produced a world of living things. There are many unanswered questions about the origin of life which are not mentioned in your textbook[.]” See EUGENIE C. SCOTT, EVOLUTION VS. CREATIONISM: AN INTRODUCTION 242 (Greenwood Press 2009).
curriculum with the presentation of theories, besides evolution, about the origin of life.”

*Edwards* made the relationship between a statute’s impotence and *Lemon*’s purpose prong explicit: “The Act provides Louisiana school teachers with no new authority. Thus, the stated purpose is not furthered by it.” Likewise, LSEA does not provide Louisiana’s public school teachers with any authority they did not already enjoy under current law. As the Supreme Court made clear in *Edwards*, there is no constitutional barrier to a teacher bringing additional *scientific* materials into her science class for the purpose of “promot[ing] critical thinking skills, logical analysis, and open and objective discussion of scientific theories.” Indeed, Steve Monaghan, president of the Louisiana Federation of Teachers, said that “not a single teacher in his organization has complained about current science materials.” The district court in *Freiler*, when confronted with another antievolution policy which hid behind a façade of encouraging critical thinking, thought there was “little doubt that students already had that right and are so urged in every class.” Because LSEA does not further its avowed secular purpose, a court would, as in *Freiler*, be left to conclude either that the Act had a religious purpose or that it had no purpose at all. Given that history of religious objections to evolution, and

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330 *Freiler v. Tangipahoa Parish Bd. of Educ.*, 975 F. Supp. 819, 829 (E.D. La. 1997); see also *Wallace v. Jaffree*, 472 U.S. 38, 59 (1985) (“Thus, only two conclusions are consistent with the text of § 16-1-20.1: (1) the statute was enacted to convey a message of state endorsement and promotion of prayer; or (2) the statute was enacted for no purpose. No one suggests that the statute was nothing but a meaningless or irrational act.”).
Louisiana’s history in particular, a religious purpose most likely underlies a statute affecting the teaching of evolution with a sham secular purpose.

b. Effect and Entanglement

Justice O’Connor’s endorsement test was formulated as a kind of replacement for the Lemon test’s effects prong. Since its adoption, the Court has combined endorsement and effects several times. This approach has been adopted by other courts in antievolution cases. Consequently, the effect prong and the endorsement test will be treated together in the following section. Entanglement has not been analyzed separately in any antievolution case, likely because, as the Court noted, “the factors we use to assess whether an entanglement is ‘excessive’ are similar to the factors we use to examine ‘effect.’” Thus, it too will be encompassed in the analysis of the endorsement test.

2. The Endorsement Test

The endorsement test emanates from the Court’s pronouncement that the Establishment Clause requires “governmental neutrality between religion and religion, and between religion

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332 See, e.g., Capitol Square Review v. Pinette, 515 U.S. 753, 787 (1995) (Souter, J., concurring) (“Effects matter to the Establishment Clause, and one, principal way that we assess them is by asking whether the practice in question creates the appearance of endorsement to the reasonable observer.”).
333 See Freiler v. Tangipahoa Parish Bd. of Educ., 185 F.3d 337, 346 (5th Cir. 2000) (“Under either the second Lemon prong or the endorsement test, the Supreme Court has cautioned that a government practice may not aid one religion, aid all religions, or favor one religion over another.”); see also Selman v. Cobb County School Dist., 390 F. Supp. 2d 1286 (N.D. Ga. 2005). (In fact, the Eleventh Circuit, like several other circuit courts, has combined the second and third prongs of the Lemon analysis into a single “effect” inquiry. . . The Court will do the same in the instant Order.”)
and nonreligion.” Neutrality manifests itself in Justice O’Connor’s requirement that government refrain from conveying the message that “religion or a particular religious belief is favored or preferred.” Endorsement is determined by examining the challenged governmental action from the perspective of a “reasonable, objective observer,” who is familiar with the “text, legislative history, and implementation of the statute.” This observer is aware of the historical and social context in which the enactment arose. Thus, endorsement, like Lemon’s effects test, looks to the consequences, not the intent, of the challenged action.

It initially seems difficult to analyze the consequences of LSEA, as at the time of writing the statute and BESE’s policy implementing the statute have not been used to bring in objectionable supplemental materials. LSEA, however, has a dual nature. It is a set of instructions and an authorization to take certain action, and in this sense, its “effect” has not yet been realized. But its passage and existence alone also send a message which is capable of constituting an endorsement of religion, and thus it is amenable to endorsement/effect analysis even before implementation. In this respect, LSEA is similar to the textbook disclaimer analyzed in Selman: it “may have practical effects and create perceptions in the minds of its observers, but [it] does not ‘operate’ or have an ‘application.’”

One potential endorsement test pitfall involves imparting too much information to the “reasonable observer.” The reasonable observer is, after all, not an actual citizen or even an

335 Epperson v. Arkansas, 393 U.S. 97, 104 (1968); see also Bd. Of Educ. v. Grumet, 512 U.S. 687, 703 (1994) (“A principle at the heart of the Establishment Clause [is] that government should not prefer one religion to another, or religion to irreligion.”)
338 See McCreary County v. ACLU of Ky., 545 U.S. 844, 858-59 (2005).
amalgamation of actual citizens,\textsuperscript{340} but a “purely fictitious character,” one who will “perceive precisely as much, and only as much, as its author wants it to perceive.”\textsuperscript{341} Thus, when constructing the reasonable, objective observer of LSEA, this Article will look to other antievolution cases for guidance, especially on the level of knowledge that such an observer might possess. In \textit{Kitzmiller}, the court considered the Dover school board policy from the perspectives of both an adult observer and a child observer.\textsuperscript{342} In the court’s view, the objective observer was aware of popular creationist strategies, such as the development of intelligent design theory, efforts to teach about “gaps” and “problems” in evolutionary theory, and reminders that evolution is a “theory, not a fact.”\textsuperscript{343} Even the objective student, who presumably knows less than a similarly situated adult, had considerable knowledge of the background facts concerning the school board policy, such as (1) that classroom presentation of the disclaimer was conducted by administrators because biology teachers refused to read the statement,\textsuperscript{344} (2) that the proposed curriculum change prompted massive discord in the community,\textsuperscript{345} and (3) knowledge of the history of religious opposition to the theory of evolution and the practices in keeping with that tradition.\textsuperscript{346} Likewise, the court explained that objective adult observers would have similar knowledge of the social context in which the challenge action arose, including

\textsuperscript{340} \textit{Kitzmiller v. Dover Area School Dist.}, 400 F.Supp.2d 707, 723 (M.D. Pa. 2005) (“[I]t is important to note that a reasonable, objective student is not a specific, actual student, or even an amalgam of actual students, but is instead a hypothetical student, one to whom the reviewing court imputes detailed historical and background knowledge, but also one who interprets the challenged conduct in light of that knowledge with the level of intellectual sophistication that a child of the relevant age would bring to bear.”).


\textsuperscript{342} \textit{Kitzmiller v. Dover Area School Dist.}, 400 F.Supp.2d 707, 715-16 (M.D. Pa. 2005)

\textsuperscript{343} \textit{Kitzmiller v. Dover Area School Dist.}, 400 F.Supp.2d 707, 716, 728 (M.D. Pa. 2005)

\textsuperscript{344} \textit{Kitzmiller v. Dover Area School Dist.}, 400 F.Supp.2d 707, 727 (M.D. Pa. 2005)


knowledge of the religious strategies devised to impact the teaching of the theory of evolution.\textsuperscript{347} Furthermore, the court looked to the community’s reaction, as revealed through news articles and editorials, as “relevant and probative of the community’s collective social judgment that the challenged conduct advances religion.”\textsuperscript{348} This “collective social judgment” is part of the hypothetical objective observer’s “personification of a community ideal of reasonable behavior.”\textsuperscript{349} As explained in detail above, the scientific status of intelligent design was also a factor in the court’s effects/endorsement analysis. In \textit{Selman}, the court stated that the reasonable, objective observer would “know that a significant number of Cobb County citizens had voiced opposition to the teaching of evolution for religious reasons,” and that the language of the disclaimer chosen by the school district mirrors the perspective of the religiously-motivated evolution dissenters.\textsuperscript{350} More specifically, the court thought that the objective observer would be aware of the “lengthy debate between advocates of evolution and proponents of religious theories of origin specifically concerning whether evolution should be taught as a fact or as a theory,” and that by placing a “theory not fact” sticker in its textbooks, the board appeared to taking the religious side of the dispute.\textsuperscript{351} Secondary sources, which the court examined as part of the “social facts” surrounding the case, also revealed that teaching evolution as a theory, not a fact, was one of the “latest strategies to dilute evolution instruction employed by anti-evolutionists with religious motivations.”\textsuperscript{352}

In light of the foregoing discussion, the objective, reasonable observer would view the passage of LSEA as an endorsement of religion. Like teaching evolution as a theory, not a fact, teaching “critical analysis”\(^{353}\) of the evolution by focusing on the “strengths and weaknesses” or “evidence against” the theory is also one of the latest strategies employed by those with religious objections to the theory, and like creation science, intelligent design, or other strategies, it also aims at promoting the religious doctrine that God intervened specially in development of life on Earth.\(^ {354}\) In the aftermath of Edwards, the Institute for Creation Research began suggesting that teachers “stress the scientific evidences and arguments against evolution in their classes (not just arguments against some proposed evolutionary mechanism, but against evolution per se), even if they don’t wish to recognize these as evidences and arguments for creation.”\(^ {355}\) The first attempt at enacting such a policy came when Pennsylvania Senator Rick Santorum introduced an amendment, written by ID proponent Phillip Johnson, to the No Child Left Behind Act in 2001.\(^ {356}\) The amendment singled out evolution as controversial science and, though ultimately deleted from the Act, appears in watered-down form in the conference committee report, which

states that controversial topics “such as biological evolution,” should be presented in a way that “help[s] students to understand the full range of scientific views that exist.” Similar language then began appearing in a host of “academic freedom” bills introduced in Alabama, Oklahoma, Maryland, New Mexico, Missouri, Florida, Michigan, South Carolina, Iowa, Texas. Battles over the insertion of “critical analysis” language into state science standards were also waged in Minnesota, New Mexico, Pennsylvania, South Carolina, West Virginia, Arizona, and Georgia. In 2002, the Ohio Board of Education scheduled a debate between scientists and intelligent design proponents over the content of the state’s science standards. The Board ultimately decided to have one standard read “Describe how scientists continue to investigate and critically analyze aspects of evolutionary theory,” which the Discovery Institute hailed as “historic.” After the Kitzmiller decision embarrassed intelligent design, this provision of the state science standards, and a creationist lesson plan that they had inspired, were deleted. Kansas experienced similar controversy when it modified its science standards to encourage critical analysis of scientific conclusions by including “scientific criticisms of evolutionary theory.”

358 http://ncse.com/creationism/general/chronology-academic-freedom-bills
361 Center for Science and Culture, Discovery Institute, Ohio Praised for Historic Decision Requiring Students to Critically Analyze Evolutionary Theory, http://www.discovery.org/a/1368
Once again, the Discovery Institute, which had prompted the change, praised the standards for “recognizing that students need to study all the scientific evidence relating to chemical and biological evolution.”\(^{364}\) As in Ohio, the science standards were ultimately purged of “critical analysis” language and the board that adopted them was voted out of office.\(^ {365}\) Thus, LSEA is merely the latest in a long line of religious-based attempts to depreciate and distort the teaching of evolution in public schools. “Critical analysis,” “strengths and weaknesses,” “full range of scientific views,” and “evidence against evolution,” are, like the disclaimer in *Selman* claiming evolution is a theory, “loaded issue[s] with religious undertones.”\(^ {366}\) Antievolutionists have fought vigorously for many years, in many different venues, to use such language to warp the teaching of evolution, and scientists have been equally vigorous in opposing these measures. By adopting LSEA, the state legislature was aligning itself with the antievolutionists, and thus sending the message to those who endorse evolution that they are political outsiders while sending the opposite message to the religious fundamentalists who promote such statutes.

As in *Kitzmiller*, this Article will construct the objective, reasonable observer in part by examining the “collective social judgment,” as revealed through “letters and editorials” printed in the newspaper.\(^ {367}\) When LSEA was first introduced, in the form of SB 561, the New Orleans *Times-Picayune* described it as “a license for crackpots” that was “of no conceivable benefit to anyone but Christian proselytizers.”\(^ {368}\) When LSEA’s counterpart was introduced in the Louisiana House of Representatives, the Baton Rouge *Advocate* editorialized that “it seems clear

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\(^{364}\) Center for Science and Culture, Discovery Institute, New Draft of Kansas Science Standards Praised For Encouraging Critical Analysis of Evolution, [http://www.discovery.org/a/2672](http://www.discovery.org/a/2672)


that the supporters of this legislation are seeking a way to get creationism -- the story of creation as told in the biblical book of Genesis -- into science classrooms.\textsuperscript{369} After LSEA passed the senate, Alan Leshner, CEO of the American Association for the Advancement of Science, wrote to the New Orleans \textit{Times-Picayune} that “[t]he real intent is to introduce classroom materials that raise misleading objections to the well-documented science of evolution and offer a religious idea called intelligent design as a supposed alternative.”\textsuperscript{370} The Baton Rouge \textit{Advocate} again editorialized against the bill: “We believe that the bill by Sen. Ben Nevers, D-Bogalusa, is intended to pressure schools to use Bible-based theories questioning the scientifically proven knowledge about the creation of life, among other subjects.”\textsuperscript{371} After the bill passed both houses of the legislature, many called on Louisiana governor Bobby Jindal to veto it. \textit{The New York Times} urged a veto of what it saw as a “Trojan horse” bill designed to “undercut the teaching of evolution in the public schools.”\textsuperscript{372} A coalition of nine scientific societies, including the American Institute for Biological Science, also asked the governor to veto the bill, which they understood as an effort to “insert non-scientific concepts into the classroom by seeking to skirt the United States Constitution and the nature of scientific investigation.”\textsuperscript{373} The \textit{National Review}’s John Derbyshire also viewed LSEA as “open[ing] the door to the teaching of


\textsuperscript{371} Advocate Opinion Page Staff, \textit{Our Views: Litigation is on the Way}, \textit{THE ADVOCATE}, May 21, 2008, \url{http://www.2theadvocate.com/opinion/19126289.html}

\textsuperscript{372} Louisiana’s Latest Assault on Darwin, \textit{N.Y. TIMES}, Jun. 21, 2008, \url{http://www.nytimes.com/2008/06/21/opinion/21sat4.html?_r=2}

\textsuperscript{373} American Institute of Biological Sciences, Joint Statement Requesting Louisiana Governor Jindal Veto SB 733, \url{http://www.aibs.org/position-statements/20080620_joint_statement.html}
creationism in Louisiana public schools." Finally, the Baton Rouge Advocate stated flatly that in passing LSEA, the state was “siding with the backward against not only science but the rule of law in this country.” These reports demonstrate the community’s understanding that the controversy was, at its core, about religious objections to the theory of evolution, and its perception of LSEA as an endorsement of religion.

Some might argue that LSEA’s inclusion of global warming and human cloning in its list of scrutinized scientific theories avoids the endorsement problems of Selman and Freiler, where evolution was singled out for special treatment. The endorsement test, however, is concerned with the understanding of the objective observer, and the reaction to LSEA documented above makes it clear that, text notwithstanding, the objective observer thought the Act was focused on evolution. Indeed, of the 30 witnesses who appeared at the House and Senate Committees on Education, 21 testified entirely about evolution. Clearly, LSEA’s attempt to hide its relation to its creationist forebearers did not fool the Act’s observers.

C. As-Applied Challenge to Louisiana Science Education Act

Because LSEA has not, at the time of writing, been applied, an as-applied challenge is more difficult to construct. LSEA authorizes the use of “supplemental textbooks and other instructional materials” permitted by local education agencies unless prohibited by the State

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374 John Derbyshire, Governor Jindal, Veto this Bill!, NATIONAL REVIEW ONLINE, Jun. 28, 2008, http://corner.nationalreview.com/post/?q=YjM2ODY1N2E1NGZkYTJiNDEyYWMyMWQzYTQzYWYxODU=
Board of Elementary and Secondary Education (“BESE”). Thus, constructing an as-applied challenge involves imagining the specific materials likely to be used as supplements.

Fortunately, several proponents of LSEA have already produced or recommended several such materials. The Louisiana Family Forum (“LFF”), in partnership with Charles Voss, vice-president of the Origins Research Association, promotes biology textbook addendums at TextAddOns.com. The Discovery Institute, however, is by far the largest producer of supplemental materials. Its books include *Explore Evolution*, *Icons of Evolution*, and a briefing packet for educators on the theory of intelligent design. When asked on a LA radio program what books should supplement the teaching of evolution in public schools, LFF’s Darrell White specifically mentioned *Icons of Evolution*. It has also produced numerous antievolution videos, including one based on *Icons of Evolution*. The Discovery Institute has, in fact, turned *Icons of Evolution* into a series of materials “especially useful to parents and teachers who want to educate young people about the scientific shortcomings of Darwin’s theory

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383 Stephen C. Meyer and W. Peter Allen, Center for Science and Culture, Discovery Institute, Unlocking the Mystery of Life: Documentary Reveals Growing Number of Scientific Challenges to Darwinian Evolution, [http://www.discovery.org/a/2116](http://www.discovery.org/a/2116); Center for Science and Culture, Discovery Institute, Privileged Planet: New Science Documentary Explores Earth’s Extraordinary Place in the Cosmos, [http://www.discovery.org/a/2170](http://www.discovery.org/a/2170)

384 Center for Science and Culture, Discovery Institute, Icons of Evolutionary: Documentary, [http://www.discovery.org/a/2125](http://www.discovery.org/a/2125)
of evolution.”  Because these texts, films, and educational packets have been produced by LSEA’s biggest supporters, they are the materials most likely to be adopted by a local education agency. Thus, they will form the basis for the part of this section which argues that LSEA is unconstitutional as applied by a local education agency. As with the facial challenge analysis, this section will focus on Lemon’s purpose prong, and Justice O’Connor’s endorsement test.

1. The Lemon Test: Purpose

Again, because there are not yet any concrete cases where teachers or local education agencies have introduced supplemental education materials under LSEA, there are no overt statements of purpose to examine, nor is there any “specific sequence of events” leading to the introduction of the materials. Given LSEA’s stated purposes, it is fair to assume that the authorization of any supplemental materials will be justified on the bases of improving science education and fostering “critical thinking” skills. This section will not, however, attempt to imagine any other statements that a teacher or school board might make in explaining such a policy. This handicap weakens the hypothetical as-applied challenge somewhat. Nevertheless, the history of antievolutionism in Louisiana and the scientific bankruptcy of the supplemental sources—two factors that will present themselves in any as-applied challenge—strongly weigh in favor of a religious purpose.

388 It should be noted that examinations of the legislative history in antievolution cases nearly always uncover religious statements by legislators or school board members. See, e.g., Kitzmiller v. Dover Area School Dist., 400 F.Supp.2d 707, 748 (M.D. Pa. 2005) (noting that school board member Alan Bonsell “identified ‘creationism’ as his number one issue and ‘school prayer’ as his number two issue.”).
389 See supra notes 316-21 and accompanying text.
As mentioned above, in evaluating the first prong of the *Lemon* test, courts look the context surrounding the adoption of the challenged policy, including the broader historical context.\(^{390}\) The history of the antievolutionism movement in Louisiana has been described earlier, and its existence tips the scales slightly toward a finding that any of the above materials critical of evolution were adopted for a religious purpose in violation of the Establishment Clause. Furthermore, in each case, a closer examination of each of the probable supplemental materials reveals an unmistakably religious conception. The supplements at TextAddOns.com were developed and promoted by Charles Voss and the Origins Research Association ("ORA").\(^{391}\) In 1997, Voss attempted to convince the Livingston School Parish to adopt a creationist curriculum guide.\(^{392}\) Origins Research Association were the cheerleaders for the Balanced Treatment Act which *Edwards* struck down, according to ORA, "on technical grounds."\(^{393}\) The group also promotes a list of "other creationist organizations" and "Christian organizations" on its website while simultaneously claiming to have "no religious affiliation."\(^{394}\) *Explore Evolution*, *Icons of Evolution*, and the intelligent design briefing packet are produced and promoted by the Discovery Institute, a think tank whose religiosity has been discussed above. *Icons of Evolution*, in particular, occupies a special place in antievolutionist movement for its attack on the allegedly misleading "icons" of evolution that biology textbooks use to illustrate the theory. The book’s author, Jonathan Wells, was, even by the standards of his


\(^{391}\) Information About the Author of These Addenda, http://textaddons.com/Docs/Bio_CHV_Reviewers.pdf


\(^{394}\) Origins Research Association, Links to Other Creationist Organizations, http://74.185.192.97/crlinks.htm
antievolutionist peers, unusually candid about the religious motivation behind his objections to evolution:

Father’s [the Reverend Sun Myung Moon’s] words, my studies, and my prayers convinced me that I should devote my life to destroying Darwinism, just as many of my fellow Unificationists had already devoted their lives to destroying Marxism. When Father chose me (along with about a dozen other seminary graduates) to enter a Ph.D. program in 1978, I welcomed the opportunity to prepare myself for battle.\(^5\)

The above sources’ scientific bankruptcy provides further evidence that a religious purpose underlies their introduction to the classroom. The supplemental materials that promote intelligent design, such as the Discovery Institute’s intelligent design briefing packet, are swept from the realm of science by the requirements of methodological naturalism. Many of the others, however, merely argue against evolution and are therefore capable of being understood naturalistically.\(^6\) Detailed scientific refutations of these materials are outside the scope of this Article and have been already been written by better-qualified authors.\(^7\) Essentially, the arguments made which directly contradict the theory of evolution are hopelessly flawed. Jerry


\(^6\) For example, Jonathan Wells, author of *Icons of Evolution*, states that “[T]he two major claims of evolution—that all living things are descended from a common ancestor and that their differences are due to random variations and survival of the fittest—are unsupported by evidence.” Jonathan Wells, Darwinism: Why I Went for a Second Ph.D., [http://www.tparents.org/library/unification/talks/wells/DARWIN.htm](http://www.tparents.org/library/unification/talks/wells/DARWIN.htm)

Coyne, a professor in the Department of Ecology and Evolution at the University of Chicago, summarizes the soundness of modern evolutionary theory:

[E]vidence supporting [evolution] began to accumulate starting with Darwin’s 1859 On the Origin of Species and continues to inundate us today. Every bit of information we have gathered about nature is consonant with the theory of evolution, and there is not one whit of evidence contradicting it. Neo-Darwinism, like the theory of chemical bonds, has graduated from theory to fact.\(^{398}\)

With no scientific evidence against evolution, it could not be seriously contended that introducing the above sources into the classroom, each of which endeavors to discuss the scientific flaws or shortcomings of the theory, advances science education or improves critical thinking skills. The utter failure to achieve this professed purpose would once again confront courts with a choice: either the policy had a religious purpose, or it had no purpose at all.\(^{399}\)

At this point, some might argue first that scientific education might actually be advanced by the introduction and then immediate and vigorous refutation of faulty scientific arguments against the theory of evolution. Second, it may be argued that the above sources, while making faulty arguments against evolution, also point out that which the theory has yet to answer, and examining the unknowns of a scientific theory builds critical thinking skills. If the supplemental materials above were truly used in the manner described in the first objection, then they probably would contribute to a better understanding of evolutionary theory, and would likely survive Lemon’s purpose prong. A proffered purpose similar to that contained in the second objection, although stronger than the claim that the purpose behind the introduction was to examine the


\(^{399}\) Freiler v. Tangipahoa Parish Bd. of Educ., 975 F. Supp. 819, 829 (E.D. La. 1997); see also Wallace v. Jaffree, 472 U.S. 38, 59 (1985) (“Thus, only two conclusions are consistent with the text of § 16-1-20.1: (1) the statute was enacted to convey a message of state endorsement and promotion of prayer; or (2) the statute was enacted for no purpose. No one suggests that the statute was nothing but a meaningless or irrational act.”).
“scientific” criticisms of evolution, would still suffer from some of the same problems. First, it is debatable whether examining unexplained evolutionary phenomena would in fact stimulate critical thinking. “Most of the fascinating controversies over the role of epigenetic factors in development, for example, require a great deal more developmental, morphological and genetic training than a high school student can be expected to master in the time available.”

To the extent that the policy fails to further its secular purpose, it could be vulnerable to attack. Second, when the above sources point out evolutionary “gaps”, they do so not to provoke exploration of the theory, but to discredit it. If the purpose that lead the school board or teacher to introduce these materials is similar at all to that which animated the materials’ authors, then the challenged policy is constitutionally problematic.

2. The Endorsement Test

The reasonable, objective observer, familiar with the history and context of any policy introducing the above supplementary materials, would view such a policy as an endorsement of religion. This observer, whether adult or child, would have knowledge of the strategies used by the antievolutionist movement, one of which is the creation of antievolutionist texts and videos for dissemination in the public school classrooms. The Icons of Evolution videos, for example, are specifically described as “especially useful to parents and teachers who want to


401 C.f. Kitzmiller v. Dover Area School Dist., 400 F.Supp.2d 707, 731 (M.D. Pa. 2005) (“An objective adult member of the Dover community would also be presumed to know that ID and teaching about supposed gaps and problems in evolutionary theory are creationist religious strategies that evolved from earlier forms of creationism[.].”); id. at 728 (“[T]he objective student is presumed to know that encouraging the teaching of evolution as a theory rather than as a fact is one of the latest strategies to dilute evolution instruction employed by antievolutionists with religious motivations.”).
educate young people about the scientific shortcomings of Darwin’s theory of evolution.”

The Privileged Planet also contains a Discovery Institute-created teacher guide. Explore Evolution is described as a “textbook,” and The Theory of Intelligent Design: A Briefing Packet for Educators states the intended audience right in the title. The presence of creationist literature in the classroom would be the most direct form of tailoring teaching and learning “to the principles or prohibitions of any religious sect or dogma.” Furthermore, by introducing any of these materials into the classroom, a local education agency would be giving those with religious objections to evolution exactly what they want—the ultimate affirmation of insider status. Conversely, it would “communicate[] to those who endorse evolution that they are political outsiders.”

VI. CONCLUSION

Bills promoting “academic freedom” and permitting the teaching of scientific evidence “against” evolution are the latest efforts by American antievolutionists to challenge the teaching of evolution. As the only such bill to be passed to date, LSEA is the best candidate for a constitutional analysis. By purging its text of religious references and parading its purported scientific legitimacy, LSEA represents the natural extension of the course charted by the antievolutionist movement in the wake of embarrassing judicial defeats like Epperson and

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404 See Center for Science and Culture, Discovery Institute, Explore Evolution Textbook and Website, http://www.discovery.org/a/4096
Edwards. The Act’s facial neutrality makes an Establishment Clause challenge difficult; indeed, the Act may even be immune from a facial challenge. Nevertheless, defects in the context surrounding the LSEA’s passage, as well as message sent by its passage, leave it vulnerable to an Establishment Clause challenge. This vulnerability is only increased if, in a future as-applied challenge, a court were to inquire into the scientific content of any of the likely supplemental educational materials promoted by the Act’s advocates.

LSEA might seem innocuous to some, especially if it is never used to smuggle antievolutionist texts into the public schools. But like previous efforts to inject religion into the public school biology curriculum, and like Establishment Clause violations in general, it suffers from the same flaws that have historically led the mixing of church and state to produce a rights-destroying arrangement. Yet LSEA and other efforts to warp the teaching of evolution offend a deeper constitutional value. This fundamental constitutional value has been called freedom of conscience, of creed, or of mind, but whatever the term used, the principle is that individuals possess a personal realm, into which the state may not intrude, in which they are free to develop themselves as they see fit. Freedom of mind is undoubtedly present in the mind of the judiciary when deciding religious cases, as evidenced by proclamations such as “[w]ith man’s

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409 See Wallace v. Jaffree, 472 U.S. 38, 52 (1985) (“Just as the right to speak and the right to refrain from speaking are complementary components of a broader concept of individual freedom of mind, so also the individual’s freedom to choose his own creed is the counterpart of his right to refrain from accepting the creed established by the majority.”).

410 See CHARLES FRIED, SAYING WHAT THE LAW IS: THE CONSTITUTION IN THE SUPREME COURT 79 (Harvard University Press 2005) (2004) (“The First Amendment . . . is best understood as protecting a very broad and fundamental liberty--what I call the freedom of the mind. More precisely, it places firm limits on government’s power to interfere with my liberty to think as I choose, to express my thoughts to others, and to receive their expressions in turn.”).
relations to his Maker and the obligations he may think they impose, and the manner in which an
to his Maker and the obligations he may think they impose, and the manner in which an
expression shall be made by him of his belief on those subjects, no interference can be permitted,
provided always the laws of society . . . are not interfered with.” Undermining the teaching of
science “contract[s] the spectrum of available knowledge” in schools. By impairing scientific
inquiry and the transmission of knowledge, antievolutionists violate freedom of mind by
interfering with a child’s control over his or her own reasoning process. This violation is
instrumentally damaging as well, for as Justice Rehnquist recognized in *Mueller v. Allen*, “[a]n
educated populace is essential to the political and economic health of any community.” The
Constitution does not state these values as explicitly as it directs Congress to make “no law
respecting an establishment of religion,” yet they are fundamental to liberal, democratic
government.

Antievolutionists are, at bottom, engaged in a deeply deceptive and illiberal enterprise.
Their claim against evolution is, essentially, blasphemy: a conflict between religious
dogmatism and liberal democratic values. Stated in these terms, it is easy to see, and to reject,
this effort to negate the rights of others in the name of religious power. The deception comes
from the translation of this claim into “a conflict taking place inside the democratic and

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414 U.S. CONST. amend. I.
415 See Epperson v. Arkansas, 393 U.S. 97, 104, 107 n.15 (1968) (“Former Dean Leflar of the
University of Arkansas School of Law has stated that ‘the same ideological considerations
underlie the anti-evolution enactment’ as underlie the typical blasphemy statute. He says that the
purpose of these statutes is an ‘ideological’ one which ‘involves an effort to prevent (by
censorship) or punish the presentation of intellectually significant matter which contradicts
accepted social, moral or religious ideas.”).
416 For a more complete analysis of “translation” in evolution education and other contexts, see
Guy Haarscher, *Rhetoric and Its Abuses: How to Oppose Liberal Democracy While Speaking Its
secular sphere, that is, a perfectly normal scientific controversy." In this new, artificial conflict, the victims of censorship become the violators of liberal democratic values like equality, pluralism, and--most perversely of all--freedom of speech and religion. By speaking the language of liberal democracy, the “wolf in sheep’s clothing” catches the community off-guard: “they think they are confronted with someone accepting liberal-democratic values, [and] do not see the danger--or at least the intellectual challenge--they are exposed to.” In this respect, LSEA and its kin are the most pernicious of the antievolutionists’ strategies, as they embody the most fully realized translations; the wolves whose sheepskin is most convincing.

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