We Didn't Start the Fire: The Origins Science Battle Rages on More Than 75 Years After Scopes

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I. INTRODUCTION

In 1927, the Supreme Court of Tennessee began a battle that rages on more than seventy-five years later when it upheld the constitutionality of a state law that forbade the teaching of Charles Darwin's evolutionary theory in public schools. The statute, referred to as the Tennessee "Monkey Law," made illegal the teaching of "any theory that denies the story of the divine creation of man as taught in the Bible," including those theories that taught "that man has descended from a lower order of animals." The Scopes trial serves as a central event for the fundamentalist-modernist controversy, pitting the American Civil Liberties Union against Christian church leaders and scholars. Although the "Monkey Laws" were not found unconstitutional until nearly forty years later, Scopes left an indelible mark on American education, which would lead to future reform of public school curricula.

Constitutional debate often centers on the place of religion and religious ideas in American society and government. Cases involving such debates will likely reach the United States Supreme Court this term. Recent legal battles include Newdow v. United States Congress, argued recently before the United States Supreme Court, which involves whether the speaking of the phrase "under God" in the Pledge of Allegiance in public schools serves to violate the Establishment Clause of the First Amendment. The Court refused to hear an appeal of a lower federal court ruling that Alabama Supreme Court Chief Justice Roy Moore acted impermissibly when he placed a large sculpture of the Ten Commandments in front of the Alabama Supreme Court building and defied a federal court order to remove the sculpture. Such cases illustrate a continuous battle over the "separation of church and state," a concept Thomas Jefferson first articulated in his letter on the First Amendment, but which has

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2. Id.
3. Id. at 363.
7. 328 F.3d 466 (9th Cir. 2003).
continually served as the cornerstone of constitutional debate regarding the Establishment Clause throughout America’s history.9

America’s public education system has been and remains a fertile ground for Establishment Clause debate and controversy, in particular with respect to the arena of biological science instruction, often called “origins science.”10 Since Scopes, the debate over the teaching and discussion of origins science in America’s classrooms has peaked and waned but remains alive and well today across the country. For example, the 1999 decision of the Kansas Board of Education to exclude evolution from statewide competency tests renewed a furor over the somewhat dormant issue.11 Although the Board reversed itself three years later, the initial decision remains a bone of contention between educators and activists.12 In response to a parent’s lawsuit attacking the school system’s inclusion of a disclaimer regarding evolution in science textbooks, the Cobb County Georgia school board voted in September 2002 to allow science teachers to present various theories about the origins of life, a dispute which continues currently.13 Also in 2002, the Ohio state board of education began adopting a philosophy toward “teaching the controversy” regarding alternate origins theories and, on March 9, 2004, formally adopted a model lesson plan on the “Critical Analysis of Evolution” by a thirteen to five vote, a move which is sure to draw criticism from many angles.14

The objectives of the American education system and Supreme Court jurisprudence leave the door open for the teaching of competing origins theories within the confines of the Constitution if certain criteria are met. This article will illustrate how alternative origins theories may pass constitutional muster as well as state science curriculum standards such that the theories might be presented in the context of a science classroom. Part II of this comment provides an overview of the foundational debate regarding

10. The term “origins science” is used in the context of this article to describe theories of how Earth and the various life forms came into existence.
12. Id.
origins science instruction in public schools. Part III reviews the progression of Establishment Clause and Academic Freedom jurisprudence with respect to academic settings. Part IV discusses other concepts and provisions that might guide Louisiana lawmakers and educators.

II. A HOT TOPIC—ORIGINS SCIENCE INSTRUCTION

A. Debating the Origins of Life

The modern evolutionary view is based primarily on the research of Charles Darwin, who published "Origin of the Species" in 1859, revolutionizing the field of biology.\(^{15}\) However, the theory of evolution and related concepts originate as early as ancient Greece and subsequently became formalized by European scientists in the 18th and 19th centuries.\(^{16}\) The theory states that all life forms, including humans, developed gradually over several million years through natural selection, meaning the organisms best adapted to their environment survive above others.\(^{17}\) Evolutionary teaching is currently the leading scientific theory of origins,\(^{18}\) and the scientific community generally believes evolution to be the most accurate and rational description of how life on Earth began.\(^{19}\)

The creation theory similarly dates back to ancient times, as the view finds its origins in the traditional teachings of Judaism and Christianity, namely, the first chapter of the biblical book of Genesis.\(^{20}\) Many who espouse a belief in the theory of creation also believe in "micro" evolution, which holds that life forms change over time, "genetically[,] within certain parameters."\(^{21}\) However, creationists generally reject a belief in "macro" evolution, which holds that higher life forms, such as humans, originated from significantly more basic life forms, such as amoeba.\(^{22}\) The creationist view states that the Earth and most of its life forms, rather, developed instantly by the word of a Deity.\(^{23}\) Proponents of this religiously-
based teaching generally believe that life on Earth began 6,000 years ago and that the development of Earth’s life forms spanned six days.\(^4\) While the theory of creation is related to religious beliefs, many argue that scientific, factual, testable evidence supports it.\(^5\)

Intelligent Design, another alternative origins theory, has also gained some notoriety and acceptance in the last few years. Supporters of Intelligent Design claim the theory is supported by extensive scientific research as well as logical scientific observation, despite its relatively new development.\(^6\) The theory, referred to as “ID,” holds that living things are too irreducibly complex to have occurred through random genetic changes and, therefore, must have been “designed” by some intelligent agent.\(^7\) Proponents claim the theory is scientifically based and argue that they do not suggest the nature of the intelligence, though some have found this a basis for belief in a god or other related explanations. Intelligent design theorists also generally accept that the Earth is billions of years old.\(^8\)

The teaching of ID as an alternative origins theory has found support in some American school systems and has been incorporated into science curricula in both Ohio and Georgia.\(^9\) No court has, as of yet, addressed the constitutionality or the scientific validity of teaching the ID theory, although such litigation could soon surface.

According to a 1999 Gallup poll, a majority of Americans think public schools should teach creationism.\(^30\) Many of those individuals think creationism should be taught alongside evolution in the context of a science classroom.\(^31\) A more recent People for the American

\(^{24}\) Id.


\(^{27}\) See supra note 17.

\(^{28}\) Id.

\(^{29}\) See supra notes 13 and 14.


\(^{31}\) Id.
Way survey found that nearly seventy percent of Americans see no conflict between the theories of evolution and creation as explanations for how life began, indicating that Americans on average will not feel particularly threatened or religiously influenced by the teaching of multiple origins theories. Yet, despite the apparent popular sentiment regarding the different theories, lawmakers, educators, and scientists continue to debate origins science curriculum and teaching. On one side of the fray are those who hold unswervingly to the creation theory and argue that evolution runs in direct opposition to a belief in divine creation. At the other end of the spectrum are those who argue that "creationism has no place in public schools because it is not science," but rather, is entirely religious doctrine with no scientific basis or value. Caught in the crossfire are individuals who argue that schools must "teach the controversy" that continues to rage regarding origins science in order to allow students to learn leading and minority origins theories and to think critically regarding the strengths and weaknesses of the various views presented.

B. Defining "Science"

In order to accurately determine whether the teaching of a particular subject matter is permissible under the Constitution, one must first explore the legal definition of science. Opponents of the teaching of alternative origins theories often argue that theories other than Darwin’s theory of evolution are unscientific and do not qualify as science. However, this argument, though not without merit, may be refuted in light of more recently accepted Supreme Court and contemporary definitions of science. In McLean v. Arkansas Board of Education, a federal court adopted a five-point definition of science that provides criteria for determining whether a theory qualifies as scientific based on the testimony of a well-known Darwinian philosopher, Michael Ruse. According to the court, a theory must be: (1) guided by natural law; (2) explanatory by reference to natural law; (3) testable against the empirical world; (4) tentative in its conclusions; and (5) falsifiable.

33. Chebium, supra note 15.
34. Id.
37. Id. at 1267.
However, shortly after the Arkansas federal court adopted the philosopher's view, other prominent science philosophers strongly criticized Ruse's definition of science as perpetuating a false stereotype that misrepresented contemporary thinking about science.\textsuperscript{38} Even Michael Ruse, from whom the five-point definition of science originated, has de-emphasized the importance and viability of demarcation criteria due to Darwinism's dependence on "certain unprovable metaphysical assumptions," for which creationism has also been criticized.\textsuperscript{39} Contemporary philosophers of science, instead, suggest that, in determining whether a theory qualifies as scientific, one must look to whether a theory is true or warranted by the evidence.\textsuperscript{40} The Supreme Court generally rests its findings regarding the admissibility of scientific evidence on the standard of evidentiary reliability that must be validated by experimentation, rather than on any specific list of criteria, and can be evidenced by general acceptance of the scientific community.\textsuperscript{41} State courts, too, have increasingly accepted the view that scientific legitimacy is best tested using the weight and reliability of empirical research supporting the evidence for the theory.\textsuperscript{42} The above scheme would accept as science a broad range of theories that are supported by extensive research and empirical evidence, including competing theories of origins science that are backed up by legitimate evidence. This method would not admit teaching of crank doctrines that are supported by neither a large amount of research nor legitimate research.

\textbf{III. It Only Takes a Spark—Constitutional Issues in the Academic Setting}

\textit{A. The Establishment Clause}

Those who oppose teaching public school students topics related to or influenced by religion argue that discussion of religion-related issues in the context of a state-sponsored educational institution violates the Establishment Clause, which provides: "Congress shall

\textsuperscript{38} DeWolf, \textit{supra} note 35, at 68.
\textsuperscript{39} \textit{Id.} at 74, citing Michael Ruse in a speech to the Annual Meeting of the American Assoc. for the Advancement of Science, Feb. 13, 1993.
\textsuperscript{40} \textit{Id.} at 70.
make no law respecting an establishment of religion." Thomas Jefferson described the Establishment Clause as erecting a "wall of separation between the church and the state." 43 While the words of the First Amendment have remained unaltered, the composition of American society has changed drastically in over 200 years. This change has led the courts to interpret the Establishment Clause through the lens of a diverse population and modernized world view. More specifically, in the area of education, courts are particularly sensitive to issues regarding the establishment of religion and have gone to great lengths to prevent the indoctrination of children in an educational setting.

The Supreme Court, through decades of jurisprudence, has adopted several tests that determine whether a law or practice constitutes a governmental establishment of religion. The first and most widely-used of these tests was established in 1971 through the Court's holding in Lemon v. Kurtzman, 45 which set forth relatively rigid guidelines with respect to whether a government's action or law violates the Establishment Clause. Lemon's three-pronged test analyzed whether governmental actions and enactments have: (1) an underlying "secular legislative purpose"; (2) the effect of inhibiting or advancing religion; or (3) an "excessive government entanglement with religion." 46 The purpose prong of the Lemon Test, which inquires as to whether a statute or action has a secular legislative purpose, arises most in the context of an educational setting. The Court generally looks to several factors in determining the purpose of a statute or action, including "legislative statements, the historical context at the time of passing, and the sequence of events leading up to enactment." 47

In her concurrence to Lynch v. Donnelly 48 in 1984, Justice O'Connor articulated the endorsement test, which may prove to be a more lenient replacement for Lemon's often criticized test. 49 The endorsement test, thought to be sympathetic to minority religions, questions whether the purpose behind, the effect of, or the message

46. Id. at 612-613, 91 S. Ct. at 2111.
sent by a governmental enactment or action is to “endorse or disapprove of religion.”\textsuperscript{50} The most recently proposed analysis is the coercion test, which was set forth in \textit{Lee v. Weisman} and generally applies to situations involving outward religious expressions or practices as opposed to the expression or discussion of religiously-related ideas.\textsuperscript{51} An analysis of state action using the coercion test generally focuses on examining activity akin to religious rites, celebrations, or ceremonies.\textsuperscript{52}

Four decades after the \textit{Scopes} trial in 1968, the United States Supreme Court, for the first time, held unconstitutional a law that forbade the teaching of evolution in public schools in \textit{Epperson v. State of Arkansas}.\textsuperscript{53} \textit{Epperson} came on the heels of a reform movement in science education, which was heavily influenced by the race to space of the 1950s and the one hundredth anniversary of the publication of Darwin’s \textit{Origin of the Species} in 1959.\textsuperscript{54} In finding that the First Amendment requires governmental neutrality with respect to issues of religion, the Supreme Court invalidated the Arkansas statute because the court held it served to “aid, foster, or promote one religion or religious theory against another” in violation of the First and Fourteenth Amendments.\textsuperscript{55} The \textit{Epperson} decision established the Supreme Court’s stance on the evolution-creation debate as it promoted a neutral teaching of science\textsuperscript{56} that would neither “cast a pall of orthodoxy over the classroom”\textsuperscript{57} nor “be tailored to principles or prohibitions of any religious sect or dogma.”\textsuperscript{58} The Court stated that, while states could not legislate to promote or oppose any religion, states could objectively present religious studies from a literary and historic viewpoint without violating the First Amendment’s freedom of religion.\textsuperscript{59}

Amidst the continuing debate over the teaching of origins science, the Supreme Court has slowly cracked the door to the teaching of religious principles and beliefs in public schools, beginning in the context of specialized elective courses. In \textit{School District of

\begin{thebibliography}{99}
\item \textsuperscript{50} \textit{See} Lynch, 465 U.S. at 690, 104 S. Ct. at 1368.
\item \textsuperscript{51} 505 U.S. 577, 112 S. Ct. 2649 (1992)(regarding prayer at graduation ceremonies).
\item \textsuperscript{52} \textit{See}, e.g., Santa Fe Indep. Sch. Dist. v. Doe, 530 U.S. 290, 120 S. Ct. 2266 (2000), (regarding student-initiated prayer before football games); Newdow v. United States Congress, 328 F.3d 466 (9th Cir. 2003)(regarding the constitutionality of the Pledge of Allegiance).
\item \textsuperscript{53} 393 U.S. 97, 89 S. Ct. 266 (1968).
\item \textsuperscript{54} House, \textit{supra} note 4, at 369-370.
\item \textsuperscript{55} \textit{Epperson}, 393 U.S. at 104, 89 S. Ct. at 270.
\item \textsuperscript{56} \textit{Acri}, \textit{supra} note 5, at 45.
\item \textsuperscript{57} 393 U.S. at 105, 89 S. Ct. at 270.
\item \textsuperscript{58} \textit{Id.} at 106, 89 S. Ct. at 271.
\item \textsuperscript{59} \textit{Id.}, 89 S. Ct. at 271.
\end{thebibliography}
Abington Township v. Schempp, the Supreme Court held unconstitutional the practice of beginning each school day with prayer and Bible readings. The Court went on to suggest that the study of the Bible for its literary and historic qualities and study of religion, when presented objectively as part of a secular program of education, may be effected consistent with the First Amendment. This point of law set the stage for the development and legality of academic curricula focused on the study of the Bible. Although such courses have come under attack, the objective and secular presentation of the material shields it from constitutional fire.

In Stone v. Graham, the Supreme Court found a Kentucky statute that mandated the posting of the Ten Commandments in public school classrooms violated the First Amendment because it failed to further a secular purpose and served no educational function. However, the Court did provide for the integration of the Ten Commandments or Biblical study into an academic curriculum that would meet constitutional standards. The Court explained that, if the Bible were used "in an appropriate study of history, civilization, ethics, comparative religion, or the like," such a curriculum would pass constitutional muster. According to the above decisions, public schools need not completely avoid all involvement with religion, even particular religious doctrines or faiths. On the contrary, study of a concept related to religion would be deemed constitutionally acceptable in an appropriate subject matter context. If one accepts the contemporary definitions of science as set forth above, discussion of alternative origins theories may be equally appropriate in a science classroom as well as in a philosophy course.

B. Academic Freedom

The Supreme Court has duly noted that a primary goal of the American public education system is to prepare individuals to participate as citizens in a democratic society. As part of this scheme, the state has a legitimate interest in seeking to fully develop a student's potential through academic opportunities that expand knowledge, promote imagination and inquiry, and increase tolerance.

61. Id. at 225, 83 S. Ct. at 1573.
63. Id. at 41-42, 101 S. Ct. at 193-194.
64. Id., 101 S. Ct. at 193-194.
65. Id. at 42, 101 S. Ct. at 194.
66. See supra, Part II.
and understanding. The extent of a student's development is dependent on whether a child is taught to think critically regarding his areas of study and the world around him. The foundation of critical thinking is the exposure to multiple ideas and trains of thought, even those that conflict with one’s own beliefs and ideas. Through broad and diverse educational curricula, students can acquire a sufficient universe of knowledge upon which they may base their beliefs about varied topics, from the inner-workings of their own minds and bodies to issues affecting the entire global community. The American public education system, therefore, should focus on sharpening children's critical thinking skills and should strive to afford students every opportunity to learn and discuss varying concepts and theories through a well-rounded education so that they may become the capable and complete citizens needed for democratic participation.

In 1957, the Supreme Court first formally recognized academic freedom as a constitutional right in Sweezy v. State of New Hampshire by Wyman, which specifically upheld a professor's refusal to disclose his political affiliations. In Sweezy, the Court stressed the need for freedom and trust in an academic setting that would allow inquiry and evaluation. The Court said that, without such freedom, an atmosphere of suspicion and distrust would lead to the stagnation and death of American civilization. The Court further stated that “no field of education is so thoroughly comprehended by man that new discoveries cannot yet be made.”

The Court's emphasis on discovery and inquiry as a vital part of the American education system signifies the importance of allowing students the opportunity to hear and express diverse views with respect to many issues, even those that are labeled controversial. Although the Court's decision in Sweezy dealt in particular with academic freedom on a college campus, the Court's recognition of academic freedom as a legal theory continues as a dominant philosophy in both higher and secondary educational settings. Despite vague interpretations of what constitutes academic freedom or an infringement thereon, the Supreme Court has clearly given this concept heightened protection.

70. Id. at 250, 77 S. Ct. at 1212.
71. Id., 77 S. Ct. at 1211-1212.
72. Id., 77 S. Ct. at 1211-1212.
In *Tinker v. Des Moines Independent Community School District*, the Supreme Court extended academic freedom protection to students when it upheld the rights of high school students to wear black armbands in protest of the Vietnam War. The Court's majority opinion stated that neither students nor teachers "shed their constitutional rights to freedom of speech or expression at the schoolhouse gate," signifying the Court's commitment to preserving and honoring those freedoms, even in the context of a public school setting. If the law protects and allows expression of students' controversial political views, even those which seem to take an anti-government stance, then neither should students be forced to silence their controversial scientific views in the name of following the majority view of science instruction. The *Tinker* Court held that school authorities do not enjoy the right to prohibit a student's expression of a particular opinion, even one that may be unpopular, unless they can show that such a prohibition is necessary to avoid a significant interference with either school work or discipline, rather than simply to prevent discomfort or unpleasantness, which often accompany controversial views. Though highly debatable and potentially uncomfortable, student or teacher expression of personal views regarding alternative origins theories should hardly be called "a material interference." By allowing students and teachers to discuss controversial topics, such as origins science, teachers create the possibility that a heated debate will ensue. However, rather than interfere with the learning process, such a discussion would likely facilitate student interest and information retention.

While students' and teachers' constitutionally-protected freedoms of speech and expression need not be completely shed when entering the classroom, secondary school administrators and officials still retain significant control over the statements and messages presented by public school students who are still developing intellectually and emotionally. Within the confines of a public secondary educational setting, the freedom to discuss controversial topics remains limited to the extent that such expression is balanced against the need to teach students appropriate boundaries with respect to social discourse and interaction. This balancing of interests contemplates the need for schools to guide students in developing their critical thinking skills without unfairly limiting students' ability to express their

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75. *Id.* at 506, 89 S. Ct. at 736.
76. *Id.* at 511, 89 S. Ct. at 739.
77. *Id.*, 89 S. Ct. at 739.
78. Chang, *supra* note 73, at 924.
views. In *Bethel School District No. 403 v. Fraser*, a high school imposed disciplinary sanctions on a fourteen-year-old student who used sexually explicit language and gestures during a school assembly speech in violation of school rules against the use of profanity. The Supreme Court affirmed the sanctions, holding that student expression is properly governed by individual school boards, leaving the task of orienting students to society’s shared values under local control.

Sanctioning a high school student who uses what most of society would consider vulgar or offensive language during a school-sponsored speech on school property seems an appropriate means for school officials to mold students into socially-adept citizens. However, the Court’s holding that allows school boards to impose sanctions at-will for student expression should be limited to its intended purpose, which is to impart students with the “shared values of a civilized social order.” Words and actions that do not violate the common decency of civilized discourse should not be subject to such sanctions simply because the speech or expression advocates an unconventional or controversial view. While teaching children to refrain from the use of highly offensive or threatening language is certainly essential to public education as well as a functioning society, sheltering students from controversial topics altogether is not. Within a public school classroom, school boards should be able to prohibit vulgar or abusive language, but the school board should not constrain non-vulgar or un-abusive student expression simply because the subject matter may cause debate. As long as students refrain from brutalizing each other or offending common decency, their academic freedom with respect to speech and expression should be preserved.

In *Hazelwood School District v. Kuhlmeier*, the Supreme Court upheld action on the part of school officials that limited students’ ability to publish potentially-offensive material in a student publication. The Court said that limitations on student speech would not violate the First Amendment “so long as their actions are reasonably related to legitimate pedagogical concerns.” The *Hazelwood* Court recognized that schools have more control over school-sponsored student expression than over a student’s individual expression. The purpose of such control, the Court stated, is to

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80. *Id.* at 681, 106 S. Ct. at 3163.
81. *Id.* at 678, 106 S. Ct. at 3162.
82. *Id.* at 685, 106 S. Ct. at 3165.
83. *Id.* at 683, 106 S. Ct. at 3164.
85. *Id.* at 273, 108 S. Ct. at 571.
86. *Id.*, 108 S. Ct. at 571.
ensure that student views are disassociated from the school or school system. The *Hazelwood* decision has been cited by at least one lower court as a justification for a school board's limitations on science instruction.

In *Webster v. New Lenox School District No. 122*, the Seventh Circuit upheld the school board's interest in preventing Establishment Clause violations as outweighing a student's interest in receiving instruction regarding creation science. In *Peloza v. Capistrano Unified School District*, the Ninth Circuit similarly denied a teacher's right to instruct students regarding creation science, stating that decisions regarding curriculum choice were to be left up to the local school boards. However, the courts did not go so far as to conclude that a school board would not be equally justified in allowing such instruction if it avoided Establishment Clause violations. Neither did the opinions address whether the school board would violate a student's academic freedom if it were to prohibit student debate or inquiry with respect to origins science. While school boards and courts may limit free speech rights in the public school context, the First Amendment prevents governmental entities from regulating speech for the purpose of denying students access to controversial ideas. Within the past few years, the Supreme Court has held that governmental limitations on free speech in an academic setting can be subject to litigation if such limitations are based on the substantive content or message of the speech, even when the content is religious. Despite its unanswered questions, under the *Hazelwood* decision, current law grants school boards primary control over curricula, and the Court generally refuses to displace legitimate curriculum decisions absent obvious abuse.

C. The Interplay—Preventing Establishment and Promoting Academic Freedom

*Edwards v. Aguillard*, decided in 1987, involved the United States Supreme Court's assessment of the constitutionality of the

87. *Id.* at 288, 108 S. Ct. at 579.
89. 917 F.2d 1004 (7th Cir. 1990).
Louisiana Balanced Treatment for Creation-Science and Evolution-Science in Public School Instruction Act. The Act, referred to by its opponents as the Creationism Act and by its proponents as the Balanced Treatment Act, prohibited public school teachers from instructing students as to one theory of origin science unless the other theory was also taught. In *Edwards*, the Court applied the *Lemon* Test to find the Act, which was opposed in its early stages by the Louisiana Department of Education, the State of Louisiana Board of Elementary and Secondary Education, and the Orleans Parish School Board, failed to serve its articulated secular purpose and, therefore, held the Act unconstitutional. The Court, instead, found the primary purpose of the Act was to advance certain religious beliefs, thus, endorsing religion in violation of the First Amendment.

The Supreme Court determined the Act did not fulfill its articulated secular purposes of ensuring academic freedom and exposing students to the universe of evidence regarding the origins of life. According to the Court, requiring the teaching of creation-science any time evolution-science is taught hampers teachers’ ability to select the curriculum most appropriate for their classes. In addition, the Court stated that the Act showed an unfair preference for the teaching of creation-science as it provided for the development of teaching guides for creation but not for evolution. It further protected proponents of creation-science theorists but not supporters of evolutionary theory. The Court’s main concern with the legislation was its purpose and effect of mandating that evolution be discredited and creation be upheld in the classroom. Under a *Lemon* analysis, the Court judged the sincerity and motivations of the Louisiana Legislature and found the legislature’s stated purpose to be a sham.

Citing the Court’s earlier holding in *Lynch v. Donnelly*, the dissent in *Edwards* attacked the majority’s assessment of the legislative purpose on the grounds that only statutes or actions that are motivated entirely by religious considerations ought to be prohibited under the Establishment Clause. In *Lynch*, the Court loosened Lemon’s death grip on the Establishment Clause inquiry by

95. *Id.* at 580, 107 S. Ct. at 2576.
96. Halpern, *supra* note 47 at 408.
97. 482 U.S. at 597, 107 S. Ct. at 2584.
98. *Id.* at 593, 107 S. Ct. at 2583.
100. *Id.* at 586 n.6, 107 S. Ct. at 2579 n.6.
101. *Id.* at 588, 107 S. Ct. at 2580.
102. *Id.* at 589, 107 S. Ct. at 2580.
103. *Id.* at 587, 596-597, 107 S. Ct. 2379, 2584.
interpreting Lemon's purpose prong as requiring only 'a' secular purpose for statutes or actions, which indicated that a statute motivated only in-part by religious considerations would pass muster.\textsuperscript{106} While the dissent in Edwards criticized the departure from Lynch, the Court's apparent return to the Lemon analysis lends even greater support to the dissent's argument, as the language of the purpose prong requires that an enactment have 'a' secular purpose, not that it have 'only' a secular purpose. While at least some of the legislators involved in drafting the Balanced Treatment Act may have been in some way religiously motivated, the Court cannot fairly judge the secret motivations of every legislator. According to the literal wording of the Lemon purpose prong, the Court need only find that the legislature had some desire to promote academic freedom, not that it be their only intention. Furthermore, the majority also indicated that laws truly requiring "scientific critiques of prevailing science theories," without merely giving lip-service to a secular purpose, would be acceptable by constitutional standards.\textsuperscript{107} In a similar way, teaching a variety of scientific theories about the origins of humankind to school-children might be validly done with a clear secular intent of enhancing the effectiveness of science instruction.\textsuperscript{108} In this sense, the Edwards decision remains a 'maybe' case in that a policy favorable to the teaching of alternative origins theories can pass constitutional muster if 'a' legitimate secular purpose is set forth and, in fact, accomplished.

Louisiana's continuing saga regarding public school science curricula resurfaced when parents of public school students brought Freiler v. Tangipahoa Parish Board of Education\textsuperscript{109} in response to a resolution passed by the Tangipahoa Parish Board of Education requiring the reading of a disclaimer prior to origin science teaching. The disclaimer denied the school board's endorsement of evolution over "the Biblical version of Creation or any other concept" as a scientific theory and maintained the student's right to form opinions and beliefs on the subject.\textsuperscript{110} The District Court found the disclaimer unconstitutional because it lacked a secular purpose, despite the Board's articulated purpose of encouraging critical thinking among students.\textsuperscript{111} Instead, the court found the disclaimer's main purpose to be religiously motivated.\textsuperscript{112} Further, the court found the disclaimer unnecessary in light of the fact that the law already protected

\textsuperscript{106} Lynch, 465 U.S. at 681 n.6.
\textsuperscript{107} 482 U.S. at 593, 107 S. Ct. at 2583.
\textsuperscript{108} Id. at 594, 107 S. Ct. at 2583.
\textsuperscript{109} 975 F. Supp. 819 (E.D. La. 1997).
\textsuperscript{110} Id. at 821.
\textsuperscript{111} Id. at 828-829.
\textsuperscript{112} Id. at 829.
teachers' rights to instruct students on all theories regarding the origins of life.\textsuperscript{113} On appeal, the Fifth Circuit recognized the constitutionality in the Board’s purposes in reminding students of their right to form and retain their own beliefs and preventing offense caused by teaching evolution exclusively.\textsuperscript{114} However, the court found the resolution failed constitutional muster on the grounds that its objective of promoting an “informed freedom of belief” was, in fact, a sham.\textsuperscript{115} In addition, the court took issue with the portion of the disclaimer singling out the “Biblical version of Creation” as an alternative origins theory because it said this phrase, in effect, endorsed one religious view of creation over another.\textsuperscript{116} The Supreme Court denied the state’s petition for certiorari and allowed the Fifth Circuit’s judgment to stand.\textsuperscript{117} The denial of certiorari prompted a vehement dissent by Justices Scalia, Thomas, and Rehnquist, which lambasted the Court for denying Louisiana’s right to be heard with respect to the evidence presented in favor of teaching creationism as a science.\textsuperscript{118}

In Freiler,\textsuperscript{119} the Fifth Circuit interpreted the purpose prong of the Lemon test as not requiring that a state action have either an exclusive or even predominant secular objective but only a sincere secular purpose, which likely may be found in most legislative enactments, even those that relate to religion. In fact, the Freiler court stated that a purpose may qualify as secular even if “infused with a religious element” or related to religion.\textsuperscript{120} One source states that most lawmakers “consult their religious beliefs before voting on important matters”\textsuperscript{121} which, if true, should lead to the striking down of countless national and state laws if Lemon is read to require that legislatures have exclusively secular motivations when enacting laws. However, based on the above statistic regarding legislators’ religious motives, to require purely secular motivations would seem an impossible and unreasonable task.

\begin{footnotes}
\item[113.] Id. at 828.
\item[114.] 185 F.3d 337, 345 (5th Cir. 1999), cert. denied, 530 U.S. 1251, 120 S. Ct. 2706 (June 19, 2000).
\item[115.] Id. at 344-345.
\item[116.] Id. at 346.
\item[117.] 530 U.S. 1251, 120 S. Ct. 2706.
\item[118.] Id. (Scalia, J., dissenting).
\item[119.] 185 F.3d 337 (5th Cir. 1999).
\item[120.] 185 F.3d at 345, citing Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints v. Amos, 483 U.S. 327, 335, 107 S.Ct. 2862, 2868 (1987).
\item[121.] In fact, approximately 90\% of United States Congressmen report that they ultimately base their voting decisions on their religious ideals and beliefs. Acri, supra note 5 at 76, citing Stephen L. Carter, The Culture of Disbelief: How American Law and Politics Trivialize Religious Devotion 111 (1993).
\end{footnotes}
In *Freiler*, the Fifth Circuit apparently trusted the validity and sincerity of the Tangipahoa school board’s articulated purposes in enacting a disclaimer to be read before the teaching of evolutionary theory. However, the court found that, though the board had at least some secular purpose in mind, the use of the disclaimer failed to fulfill the purpose of promoting academic freedom and critical thinking. Instead, the court found that the disclaimer served to protect and maintain a particular religious doctrine, thus, failing the second prong of the *Lemon* analysis, which requires that a statute or action neither have as its principal nor primary effect the advancement or inhibition of religion. In fact, the *Freiler* court stated that the purposes of disclaiming any orthodoxy of belief from the exclusive teaching of any theory and of reducing offense to students were entirely legitimate secular objectives. However, the school board’s focus in *Freiler*’s disclaimer and the legislatures’ focus in *Edwards*’ Balanced Treatment Act on “the Biblical version of Creation” as the primary or exclusive alternative to evolutionary instruction resulted in promoting a particular alternative view over other possible alternatives that involve either other religions, such as Hinduism’s view of Creation, or involve no religion at all, such as the theory of intelligent design. Neither the Supreme Court in *Edwards* nor the Fifth Circuit in *Freiler* have held that schools are not justified in exposing students to multiple origins theories, yet their holdings appear to emphasize the importance of avoiding endorsement of any particular theory in teaching such alternatives. In fact, in the *Edwards* decision, the Supreme Court carefully pointed out that its holding did not prohibit the teaching of alternative origins theories or critiques of modern scientific theories. The Court suggested that, were schools to successfully maintain a clear secular purpose and avoid promotion of any one theory, possibly by disclaiming all theories as non-controlling alternatives, they would be justified in teaching a variety of origins theories.

In addition, for courts to require that all state action avoid either promoting or inhibiting religion proves particularly problematic with respect to the origins science controversy. For instance, many of the teachings and activities in America’s public school system relate to various religious doctrines as much if not more than does origins science instruction. The concepts of truth telling as well as respect for others and their property, not to mention the celebration of

122. 185 F.3d 337.
123. *Id.*
124. *Id.* at 345.
125. *Id.*
127. *Id.* at 594, 107 S. Ct. 2583.
various holidays, not only form the foundation of our country but also originate from religious ideals. To prohibit any teaching or activity in the public school system that might in any way move students toward religious beliefs would require schools to eliminate all character-based teachings and rules and to cease any activity that may shed a positive light on any faith. Such a requirement would certainly aid our schools in their present downward spiral of violence and apathy. Exposing students to multiple theories regarding the origin of life without requiring them to accept one in particular as universal truth does not endorse adherence to a religious faith at any greater level than does requiring that students tell the truth, punishing students who refuse to respect authority, or hosting a Christmas-themed musical. One might even argue, as the dissenter to the denial of certiorari did in Freiler, that the court’s refusal to allow presentation or, at very least, recognition of alternative origins theories may, in fact, indicate a hostility and intolerance toward religion instead of maintaining a spirit of neutrality.128

IV. WATER OR GASOLINE—CAN LOUISIANA “TEACH THE CONTROVERSY?”

Some scientists, law makers, and educators have suggested exposing students to the controversy that continually blazes in the area of origins science. The fact that issues regarding how the earth and its life forms came into existence touch religious ideals should not preclude discussion of such topics in a public school classroom. If public schools are to truly be a “marketplace for ideas,” classroom discourse on hotly debated or controversial topics should be encouraged and nurtured rather than quickly dismissed out of an educator’s fear of litigation or loss of power.129 Several solutions for the teaching the controversies regarding origin science have been proposed and implemented across the United States. An assessment of Louisiana state science curricula analyzed in light of constitutional standards can prove helpful in guiding our state to an effective solution for its treatment of the issue while helping Louisiana avoid the potential pitfalls of such solutions.

A. Support at the Federal Level

Members of Congress have recently promoted exposing students to multiple views of a controversial topic. However, their ideas

128. 201 F.3d at 603.
failed to garner enough support to warrant inclusion in Congress' most recent education legislation. In 2001, Senator Rick Santorum of Pennsylvania proposed an amendment to the federal "No Child Left Behind" Act passed last year,\(^{130}\) which became part of the Act's report language.\(^{131}\) This report language promotes students' intellectual freedom\(^{132}\) and attempts to "avoid dictating specific curriculum to the states."\(^{133}\) Although the Senate Conference Committee modified Santorum's original text, the final provision presented by the Committee states:

The Conferees recognize that a quality science education should prepare students to distinguish the data and testable theories of science from religious or philosophical claims that are made in the name of science. Where topics are taught that may generate controversy (such as biological evolution), the curriculum should help students to understand the full range of scientific views that exist, why such topics may generate controversy, and how scientific discoveries can profoundly affect society.\(^{134}\)

The proposed amendment was not intended to require a certain approach to science teaching, but would have permitted and, in fact, encouraged openness and academic freedom with respect to origin science instruction.\(^{135}\) However, Congress chose to exclude the Santorum Amendment from the No Child Left Behind Act, possibly indicating their desire to avoid the controversy that might hamper passage of the Act as a whole. Although the amendment has been attacked as "misleading" and "fraudulent,"\(^{136}\) it has garnered support from members of both political parties,\(^{137}\) some of whom based their votes on federal requirements for science standards on its

\(^{130}\) Pub. L. No. 107-110 (2001); for full explanation of the Act, see www.nclb.gov (last visited Nov. 6, 2002).


\(^{134}\) See supra note 131.

\(^{135}\) Id.

\(^{136}\) Ken Miller, The Truth about the 'Santorum Amendment' Language on Evolution, at http://www.millerandlevine.com/km/evol/santorum.html (last visited Nov. 6, 2002).

The Supreme Court’s decisions regarding academic freedom give local school boards the ability to limit teachers’ instruction regarding controversial matters and student expression that is school-sponsored or violative of societal values. Based on the Court’s decisions, which give the school boards exclusive control over curriculum content, local boards are permitted to include instruction or allow discussion of controversial topics in the classroom or on school property. In addition, schools should not be permitted to sanction or suppress student expression that is neither profane nor school-sponsored. Because both the Supreme Court and the United States Congress place such a high value on academic freedom, so too should Louisiana enable its school boards to drive the decision-making process with respect to discussion and teaching of controversial scientific theories and to encourage its students to develop a greater understanding of competing ideas.

B. The Louisiana Science Curriculum Examined

Louisiana’s most compelling support for allowing teachers to instruct students about the origins science conflict can be found in the Louisiana Department of Education’s Science Framework, which sets forth the statewide standards for science teaching. The Louisiana science standards developed by a task force of educators, administrators, and scientists, seek to raise students’ academic expectations and to promote foundation skills including communication, problem solving, linking and generating knowledge, and citizenship. The Department’s explanations of these foundation skills as well as its definitions of science make a strong case for teaching the controversy. The Content Standards define communication as a sharing and exchange of information between individuals, which requires, among other things, critical and creative skills. The problem solving component includes identifying obstacles and challenges to theories and processes and applying both knowledge and thinking processes including reasoning, decision making, and inquiry to reach solutions using “multiple pathways, even when no routine path is apparent.” Linking and generating knowledge requires connecting concepts across multiple disciplines within numerous contexts. The Content Standards also aim to imbue

138. See supra note 133.
140. Id. at 3.
141. Id.
142. Id.
students with the understanding and responsibilities necessary for active participation as a citizen in a democratic republic through collaboration, accountability, knowledge and mentoring.\(^{143}\)

The Department’s inquiry-based curriculum stresses the importance of connecting science to other disciplines and aims to help students become informed citizens through critical and independent thinking.\(^{144}\) This framework focuses on active learning, with the teacher facilitating discussion that helps students explore various theories that they can relate to their own lives by means of cooperative work as well as exchange and critique of their own ideas.\(^{145}\) The Department emphasizes, through its standards, that science should be presented “as a human enterprise and a continuing process for extending understanding, instead of the ultimate, unalterable truth.”\(^{146}\) The curriculum recognizes the preconceptions and occasional misconceptions students have before they enter a science classroom.\(^{147}\) These preconceived notions may come from sources besides earlier science instruction, including observation, information from others, and religious beliefs. The Louisiana curriculum recommends that teachers incorporate students’ prior knowledge by eliciting students’ ideas and beliefs and allowing them to test those ideas and beliefs against scientific knowledge acquired in the classroom in order to clear up misinformation and help students construct their own understanding of scientific processes.\(^{148}\)

Under the Louisiana science curriculum standards, which places much significance on inquiry, debate, and critical thinking, science teachers would clearly be permitted to discuss controversial science topics and alternative origins theories. While theories posed as alternatives or complements to evolution are currently labeled rogue or superstitious, through classroom discussion and experimentation, they may either be proven sound or soundly defeated. Many highly-praised scientific discoveries began in the scientist’s imagination as an idea and only later became accepted after trial and error, observation, and extensive testing. While personal biases and preconceptions must eventually be removed from scientific work, the state’s method of science teaching contemplates a student’s need to build on his prior knowledge to develop objective and provable theories. The Louisiana Department of Education recognizes the importance of allowing students to develop and test their own theories through active discussion and exploration.

\(^{143}\) Id. at 4.
\(^{144}\) Id. at 7.
\(^{145}\) Id. at 12.
\(^{146}\) Id.
\(^{147}\) Id. at 13.
\(^{148}\) Id.
C. Support from Other Louisiana Law

At least some form of the "Teach the Controversy" method would likely find success in Louisiana schools based also in part on the provisions of the Louisiana Constitution and the Louisiana's Children's Code. First, Louisiana's rich religious heritage is recognized in the Constitution's opening phrase: "We, the people of Louisiana, grateful to Almighty God. . . ." This language, which sets the tone for the remainder of the document, signifies at very least an openness on the part of the state's citizenry to discussion of the partly religious controversy surrounding evolutionary theory. The preamble goes on to state that the people of Louisiana, through this Constitution, wish to "afford opportunity for the fullest development of the individual." This language appears to justify allowing students the opportunity to think critically about competing theories of origins and decide for themselves their own beliefs. As most scientists would have to agree, it is only through careful and complete observation and testing of multiple theories that one can arrive at a viable solution.

The Louisiana Children's Code complements this interpretation of the Louisiana Constitution with the following language: "The people of Louisiana recognize . . . that parents have the paramount right to raise their children in accordance with their own values and traditions; that parents should make the decisions regarding . . . the educational, moral, ethical, and religious training of the child." A child's belief about life's origins very often goes straight to the core of the family's values and traditions. For the school system to expose children exclusively to scientific theories that may directly conflict with those values and traditions may interfere with the parents' right to direct the training of their children. By closing the possibility that a family's beliefs have value, the school system stands to confuse the child, rather than promote critical thinking. The goal of education should be to expose children to multiple views without attempting to invalidate the students' core beliefs and values.

CONCLUSION

One of the main objectives of the American educational system is to develop complete individuals who are prepared to take up the duties of citizenship in a democratic society. In order to adequately equip students to fill this role, the Supreme Court has held that both

149. La. Const. of 1974, pmbl.
150. Id.
teachers and students must have the benefit of academic freedom. However, the Court has also held that the right of teachers and students to bring their ideas and beliefs freely through the "schoolhouse gate" must be balanced against other constitutional concerns, namely the First Amendment's prohibition on the governmental Establishment of religion. If America's public educational system is to fulfill its mission of creating an informed, responsible citizenry, schools must preserve academic freedom by teaching children to think critically through exposure to competing scientific theories, especially those that involve long-standing debate and controversy. Based on relevant Supreme Court jurisprudence, school boards may allow presentation of multiple origins theories without violating the "separation of church and state" that has traditionally been read into the Establishment Clause. While schools should not allow students to belittle or indoctrinate other students, discussion of controversial topics should not be stifled but encouraged even when the discussion touches on religious beliefs.

Furthermore, total separation between religion and government is highly implausible in American society, given the country's religious foundation and continued support of religious ideals. Our national government consistently recognizes America's religious roots through traditions such as the Supreme Court's regular invocation of God's favor each time it sits and Congress' commencement of each session with a prayer. Local schools also recognize the United States' religious history through their daily recitation of the Pledge of Allegiance and their posting of our national motto, "In God We Trust." Some individuals assert that traditions like Congress' prayer and students' recitation of the Pledge of Allegiance is merely lip-service to America's religious heritage rather than evidence of a current religious sentiment. However, for courts to prohibit teaching of a scientific theory simply because it recognizes the possibility of divine reality in light of the

152. In his dissent to the majority opinion in Stone v. Graham, Chief Justice Rehnquist quoted Justice Robert Jackson to point out the significant role religion and faith have played and continue to play in American society when he said: "The fact is that, for good or for ill, nearly everything in our culture worth transmitting ... is saturated with religious influences ... accepted by a large part of the world's peoples. One can hardly respect the system of education that would leave the student wholly ignorant of the currents of religious thought that move the world society for a part in which he is being prepared." 449 U.S. 39, 46, 101 S. Ct. 192, 196, citing McCollum v. Board of Education, 333 U.S. 203, 235-236, 68 S. Ct. 461, 477 (1948) (Jackson, J., concurring).

153. Although judgment with regard to the Pledge must be reserved pending the Supreme Court's impending decision in Newdow, see supra note 7.

154. Charles Lussier, Board Oks "In God We Trust" posters in schools, The Advocate (Oct. 18, 2002).
other ways in which the government appears to support such an idea seems, at best, inconsistent.

Under current constitutional law as interpreted by the United States Supreme Court, schools may incorporate into their curricula discussion of scientific ideas connected to religion without indoctrinating students to a particular faith. Provided that schools and governmental bodies sincerely set forth and maintain a clear, non-religious purpose in doing so, schools may expose students to the controversy that continues to blaze over the teaching of origins science without violating the Establishment Clause of the First Amendment. In dealing with the often controversial topic of science instruction, the Louisiana public school system, through local school boards, can allow teachers to present information regarding competing origins theories and permit students to express their views in the context of a science classroom while preventing indoctrination, which the Establishment Clause prohibits. Until the Supreme Court squarely addresses whether a teacher may present alternative origins theories in the context of a science classroom, lower courts will attempt to strike a balance between tolerance and indoctrination and create absolutes in a field of uncertainty. In the interim, schools can act, at least tentatively, on the purported words of Dudley Field Malone, an ACLU attorney in the Scopes Monkey Trial, when he argued: "For God's sake, let the children have their minds kept open—close no doors to their knowledge; shut no door from them.... Let them have both [theology and science]. Let them both be taught. Let them both live." 155

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