

# ZEAL FOR DARWIN’S HOUSE CONSUMES THEM: HOW SUPPORTERS OF EVOLUTION ENCOURAGE VIOLATIONS OF THE ESTABLISHMENT CLAUSE

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## I. INTRODUCTION

The common stereotype in the controversy over teaching evolution holds that it is the opponents of evolution who are constantly trying to “sneak religious dogma back into science education.”<sup>1</sup> While perhaps in some instances this caricature is not entirely undeserved,<sup>2</sup> the mainstream media and legal community pay scant attention to incidents where proponents of Darwinian evolution transgress the boundary between church and state erected by the Establishment Clause. By documenting ways that evolution advocates encourage violations of the Establishment Clause—in some instances, explicitly advocating state endorsement of pro-evolution religious viewpoints in the science classroom—this Article will show the impropriety of the common “*Inherit the Wind* stereotype.”<sup>3</sup>

To be sure, one area where proponents of evolution do *not* violate the Establishment Clause is in the mere fact that public schools teach the scientific evidence supporting neo-Darwinian evolution (evolution).<sup>4</sup> In the foundational 1968 case *Epperson v. Arkansas*, not only did the U.S. Supreme Court plainly rule under the presumption that teaching evolution is

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1. Stephen Pinker, endorsement on back cover of BARBARA FORREST AND PAUL GROSS, *CREATIONISM’S TROJAN HORSE: CREATIONISM AND THE WEDGE OF INTELLIGENT DESIGN* (2004).

2. For example, in the *Kitzmiller* case, it became apparent that some Dover School Board Members “had utterly no grasp of ID [intelligent design]” and “chose to change Dover’s biology curriculum to advance religion.” *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 759, 747 (M.D. Pa. 2005).

3. See PHILLIP JOHNSON, *DEFEATING DARWINISM BY OPENING MINDS* 24-36 (1998).

4. Neo-Darwinism is “[t]he modern belief that natural selection, acting on randomly generated genetic variation, is a major, but not the sole, cause of evolution.” DOUGLAS J. FUTUYMA, *EVOLUTION* 550 (2005).

constitutional, but it effectively ruled that the *failure* to teach evolution would likely be unconstitutional because any such prohibitions would be viewed with suspicions of having been animated by unconstitutional religious motivations.<sup>5</sup>

The guiding principle behind the Court's ruling in *Epperson* was the neutrality doctrine, which requires that the government may not prefer one religious sect over another, or religion over non-religion:

Government in our democracy, state and national, must be neutral in matters of religious theory, doctrine, and practice. It may not be hostile to any religion or to the advocacy of no-religion; and it may not aid, foster, or promote one religion or religious theory against another or even against the militant opposite. The First Amendment mandates governmental neutrality between religion and religion, and between religion and nonreligion. . . . Neither [a State nor the Federal Government] can pass laws which aid one religion, aid all religions, or prefer one religion over another. . . . [T]he State may not adopt programs or practices in its public schools or colleges which aid or oppose any religion. This prohibition is absolute. It forbids alike the preference of a religious doctrine or the prohibition of theory which is deemed antagonistic to a particular dogma.<sup>6</sup>

While Establishment Clause jurisprudence has long been marked by a lack of judicial consensus, the neutrality doctrine and its prohibition against sectarian preference by the state, as emphasized in *Epperson*, has a strong rooting in the case law. In one instance, the prohibition on "denominational preference" was called by the U.S. Supreme Court the "clearest command" in Establishment Clause legal doctrine.<sup>7</sup> Another Supreme Court decision described the rule that "government should not prefer one religion to another" as "a principle at the heart of the *Establishment Clause*."<sup>8</sup> Yet it is this very principle that some latter-day defenders of Darwin would disregard in their zealous advocacy for evolution education.

Although this Article will not critique the neutrality doctrine, it should be recognized that some legal scholars have called religious neutrality a goal

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5. *Epperson v. Arkansas*, 393 U.S. 97 (1968).

6. *Id.* at 104-07 (citations and internal quotation marks omitted).

7. *Larson v. Valente*, 456 U.S. 228, 244 (1982).

8. *Bd. of Educ. of Kiryas Joel Village Sch. Dist. v. Grumet*, 512 U.S. 687, 703 (1994).

that is “illusory,” “elusive,”<sup>9</sup> or perhaps even leading to an inappropriate “equation of neutrality with secularism.”<sup>10</sup> Steven D. Smith explains that *Epperson*'s mandate for religious neutrality, if applied evenhandedly, could lead to absurd results where “[t]he theory of evolution contradicts, and thus opposes some (fundamentalist) religious beliefs” and “[t]herefore, the constitutional requirement of religious neutrality absolutely prohibits the state from teaching evolution in public schools.”<sup>11</sup> Likewise, University of California (UC) Berkeley law professor Phillip Johnson observes:

Whether schools that avoid the topic of religion altogether are thereby “neutral” towards religion is debatable. For one thing, the schools have to teach subjects—biology in particular—which touch directly upon matters of religious controversy. A textbook that teaches that the human species evolved gradually over millions of years from simple life forms is anything but neutral from the viewpoint of Biblical literalists.<sup>12</sup>

Smith further criticizes the neutrality doctrine as necessarily inviting a “discourse of demonization,” because it makes “‘motive’ or ‘purpose’ dispositive of constitutionality [and thus] inevitably encourages opponents of a particular law to try to show the law was animated by religious hostility or bigotry.”<sup>13</sup> According to Smith, the “neutrality doctrine sponsors a constitutional discourse in which adversaries try to demonize each other or to portray each other in the worst plausible light.”<sup>14</sup>

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9. STEVEN D. SMITH, *FOREORDAINED FAILURE: THE QUEST FOR A CONSTITUTIONAL PRINCIPLE OF RELIGIOUS FREEDOM* 16, 78 (1995).

10. *Id.* at 82.

11. *Id.* at 83.

12. Phillip E. Johnson, *Concepts and Compromise in First Amendment Religious Doctrine*, 72 CAL. L. REV. 817, 823 (1984). Johnson clarified that he does not thereby oppose the teaching of evolution:

The point here is not that the public schools are doing something wrong in teaching evolutionary biology. . . . The schools ought to teach their students what they need to know, whether or not the teaching touches on controversial subjects. But what do the students need to know, and what do they need to be warned against? . . . Although it is possible to be more or less fair minded about such matters, there is no such thing as dead-center neutrality in comparison to which all other positions are partisan.

*Id.* at 824.

13. STEVEN D. SMITH, *GETTING OVER EQUALITY: A CRITICAL DIAGNOSIS OF RELIGIOUS FREEDOM IN AMERICA* 116 (2001).

14. *Id.*

The present author agrees with Smith's contention. The intense and widespread use of ad hominem attacks against Intelligent Design (ID) proponents, and the obsession many ID critics display regarding the religious motives, beliefs, and affiliations of ID proponents, seem to be related to the judicial scrutiny of religious motives of Darwin-skeptics in cases like *Epperson, McLean v. Arkansas*, *Edwards v. Aguillard*, *Kitzmiller v. Dover Area School District*, and others. Legal rules scrutinizing religious motives have spurred the evolution lobby to devote entire scholarly articles and books<sup>15</sup> to investigating and harping upon the alleged religious motives, beliefs, and affiliations of ID proponents. Their argument basically holds that the religious beliefs, motives, and affiliations of ID proponents somehow invalidate or disqualify ID from being considered scientific and constitutional to teach in public school science classrooms.

Investigations by ID critics of the religious activities of ID proponents are not mere abstract exercises: in the *Kitzmiller* ruling, Judge Jones praised philosopher Barbara Forrest for having "thoroughly and exhaustively chronicled . . . [the] history of ID" and for "provid[ing] a wealth of statements by ID leaders that reveal ID's religious, philosophical, and cultural content."<sup>16</sup> Given that over ninety percent of our country believes in God,<sup>17</sup> and given that many leading ID critics exhibit anti-theistic motives, beliefs, and affiliations,<sup>18</sup> it is astounding that Judge Jones found it relevant to his constitutional analysis in *Kitzmiller* that "many leading advocates of ID . . . believe the designer to be God."<sup>19</sup> It is hard to imagine a more egregious offense to the principles underlying the First Amendment than a federal judge arguing that the private religious orientations of

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15. See BARBARA FORREST & PAUL GROSS, CREATIONISM'S TROJAN HORSE: THE WEDGE OF INTELLIGENT DESIGN (2004). Steven G. Gey, Matthew J. Brauer, Barbara Forrest, *Is It Science Yet? Intelligent Design Creationism and the Constitution*, 83 WASH. U. L.Q. 1, 19-47, 58-75 (2005); Peter Irons, *Disaster in Dover: The Trials (and Tribulations) of Intelligent Design*, 68 MONT. L. REV. 59 (2007); Frank S. Ravitch, *Intelligent Design in Public University Science Departments: Academic Freedom or Establishment of Religion*, 16 WM. & MARY BILL RTS. J. 1061 (2008); Barbara Forrest, *The Non-Epistemology of Intelligent Design: Its Implications for Public Policy*, SYNTHESIS, Apr. 15, 2009, <http://www.springerlink.com/content/w76403r4w2226v34/>.

16. *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 719 (M.D. Pa. 2005).

17. Brian Braiker, *NEWSWEEK Poll: 90% Believe in God*, NEWSWEEK, Mar. 31, 2007, <http://www.msnbc.msn.com/id/17879317/site/newsweek/print/1/displaymode/1098/>.

18. See Casey Luskin, Any Larger Philosophical Implications of Intelligent Design, or Any Religious Motives, Beliefs, and Affiliations of ID Proponents, Do Not Disqualify ID from Having Scientific Merit (Sept. 8, 2008), <http://www.discovery.org/a/7081>.

19. *Kitzmiller*, 400 F. Supp. 2d at 718.

scientists backing an idea somehow contribute to making that idea constitutionally unfit for teaching in public schools.

This Article's intent, however, is not to demonize anyone, nor will this Article critique the neutrality doctrine. Rather, it will explore instances where evolutionists zealously encourage the government to prefer pro-evolution religious viewpoints (theistic, non-theistic, or atheistic) over viewpoints that oppose evolution. Some of these viewpoints opposing evolution are patently religious. Others are considered scientific by their proponents, but are stridently labeled as religious by their critics. Despite the public image that the defenders of evolution are the ones upholding the separation of church and state, this Article will show that the core of this very principle—the First Amendment's prohibition of "denominational preference"—is what many evolution lobbyists are encouraging the state to offend.

Part II will review case law showing that evolutionists do *not* encourage violations of the Establishment Clause simply by advocating the teaching of evolution or opposing the teaching of creationism in public schools. Part III will discuss how zeal for Darwin encourages certain violations of the Establishment Clause. Three themes will emerge during Part III's analysis.

*First*, creationism has been firmly deemed a religious viewpoint by multiple courts, but teaching ID in public schools has only been addressed by one federal trial court, and ID proponents consider ID to be scientific and thereby constitutional for both advocacy and critique in public schools. Critics allege that both ID and creationism are religious viewpoints, and they oppose the advocacy of both views in public schools. (On this point, the present author agrees with evolutionists with respect to teaching creationism, but disagrees with them with respect to teaching ID.) But evolutionists—who strongly hold ID is religion—ignore the First Amendment's prohibition on *inhibiting, disapproving, or opposing religion* by actively supporting *attacks* on ID and creationism in public schools.

*Second*, evolutionists purport to oppose advocating religious viewpoints in public schools, but leading lobbyists for evolution education unashamedly advocate that public school teachers endorse and advocate pro-evolution theistic religious viewpoints in science classrooms to help students accept evolution.

*Third*, many textbooks used in public schools promote evolution along with philosophical materialism, preferring non-theistic or atheistic religious viewpoints over theistic religious viewpoints. This constitutes government preference for various non-theistic or atheistic religious viewpoints that support evolution in opposition to religious viewpoints that do not support evolution.

The hope is that this discussion can help prevent future offenses to the separation of church and state that result from overzealous advocacy on behalf of Darwin.

## II. WAYS SUPPORTERS OF EVOLUTION DO NOT ENCOURAGE VIOLATIONS OF THE ESTABLISHMENT CLAUSE

Despite the U.S. Supreme Court's clear ruling in favor of the constitutionality of teaching evolution, various lawsuits since *Epperson* have tried—and failed—to convince courts that the mere teaching of evolution violates the Establishment Clause by establishing some form of “atheism” or “secular humanism.” Some of these lawsuits have argued that the constitutional requirement of religious neutrality compels public schools either to teach nothing about biological origins, or to include some non-evolutionary viewpoints about biological origins (such as creationism). These arguments have been repeatedly rejected by courts. While *actual* government endorsement of atheism or secular humanism in public schools *would* violate the Establishment Clause (*see* Part III.C), courts have been clear that there is nothing unconstitutional about a curriculum that simply teaches students about the evidence supporting evolution in a scientific fashion.

### A. *Wright v. Houston (1971)*

A federal district court in Texas concluded that teaching *only* the evidence supporting evolution does *not* establish atheistic religion, and does *not* inhibit the free exercise of theistic religion.<sup>20</sup> The plaintiffs were students who argued that teaching evolution establishes an atheistic religion and inhibits the free exercise of their own religion in violation of the First Amendment, and asked that the Biblical story of creation be required to be taught alongside evolution.<sup>21</sup> The court held that the one-sided teaching of only the pro-evolution scientific evidence was not unconstitutional and let the curriculum stand without ordering any changes.<sup>22</sup> While acknowledging that “[s]cience and religion necessarily deal with many of the same questions, and they may frequently provide conflicting answers,” the court also held that teaching only evolution is permissible because “it is not the

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20. *Wright v. Houston*, 366 F. Supp. 1208, 1211 (S.D. Tex. 1972).

21. *Id.* at 1209.

22. *Id.* at 1212-13.

business of government to suppress real or imagined attacks upon a particular religious doctrine.”<sup>23</sup>

*B. Crowley v. Smithsonian Institution (1978)*

A federal district court in Washington, D.C. rejected arguments that displays advocating evolution at the Smithsonian’s National Museum of Natural History established the religion of secular humanism and violated the constitutional mandate that the government maintain religious neutrality.<sup>24</sup> The court also denied the plaintiffs’ request for an order compelling the Smithsonian to post displays advocating the Biblical account of creation. The court found that the pro-evolution displays were not illegal because (1) they had the secular purpose of “increasing and diffusing knowledge,” and (2) because any effects that would inhibit religion are “at most incidental to the primary effect of presenting a body of scientific knowledge.”<sup>25</sup> Additionally, the court found that the exhibit did not violate the plaintiff’s free exercise of religion because the visitors “can carry their beliefs into the Museum with them, though they risk seeing science exhibits contrary to that faith.”<sup>26</sup> The court added that “the state has no legitimate interest in protecting any or all religions from views distasteful to them.”<sup>27</sup>

*C. Segraves v. State (1981)*

A parent of children in California public schools sued the California State Board of Education in state court claiming that the teaching of evolution prevented his family from freely exercising their religion.<sup>28</sup> Although the court accepted that evolution was incompatible with the plaintiffs’ religious beliefs, it held that California’s anti-dogmatism policy provided sufficient accommodation for their religious views because the policy would cause teachers to emphasize that scientific explanations of life’s origins are about physical processes rather than ultimate causes.<sup>29</sup>

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23. *Id.* at 1211.

24. *Crowley v. Smithsonian Inst.*, 462 F. Supp. 727 (D.C. Cir. 1978).

25. *Id.* at 727.

26. *Id.* at 728.

27. *Id.* at 725.

28. *Segraves v. State*, No. 278978 (Sacramento Super. Ct. 1981), [http://ncse.com/webfm\\_send/1062](http://ncse.com/webfm_send/1062).

29. *Id.*

*D. Mozert v. Hawkins County Board of Education (1987)*

Parents and students sued a school district alleging that learning about evolution, among various other subjects, did not allow students to freely exercise their religion.<sup>30</sup> The Sixth Circuit Court of Appeals ruled that teaching evolution did *not* violate the Free Exercise Clause of the First Amendment because

the requirement that public school students study a basal reader series chosen by the school authorities does not create an unconstitutional burden under the Free Exercise Clause when the students are not required to affirm or deny a belief or engage or refrain from engaging in a practice prohibited or required by their religion.<sup>31</sup>

In short, the court held that students may be required to learn *about* evolution, so long as districts do not require them to affirm or deny belief in evolution.

*E. Peloza v. Capistrano Unified School District (1994)*

The Ninth Circuit Court of Appeals held that a teacher can be ordered to teach evolution even if it conflicts with his religious beliefs. A high school biology teacher sued his school district claiming that “[e]volutionism is an historical, philosophical and religious belief system, but not a valid scientific theory [and] is based on the assumption that life and the universe evolved randomly and by chance and with no Creator involved in the process.”<sup>32</sup> The teacher alleged that the district forced him to “proselytize his students to a belief in ‘evolutionism’ ‘under the ‘guise of [its being] a valid scientific theory.’ ”<sup>33</sup> The court rejected these arguments, holding that evolution “has nothing to do with how the universe was created; it has nothing to do with whether or not there is a divine Creator . . . .”<sup>34</sup>

*F. Moeller v. Schrenko (2001)*

A panel of the Georgia Court of Appeals rejected a high school student’s claims that her biology textbook violated her religious beliefs and infringed upon her free exercise of religion because it taught that creationism was not

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30. *Mozert v. Hawkins County Bd. of Educ.*, 827 F.2d 1058, 1071 (6th Cir. 1987).

31. *Id.* at 1070.

32. *Peloza v. Capistrano Unified Sch. Dist.*, 37 F.3d 517, 519 (9th Cir. 1994).

33. *Id.*

34. *Id.* at 521.

science and mentioned scientific views supporting a natural origin of life.<sup>35</sup> The court found a secular purpose of “educating biology students regarding both the nature of the scientific method as well as the most common explanations for the origin of life.”<sup>36</sup> The court did not consider the textbook’s discussion of the origin of life to be a “religious reference” and found there were no facts to justify the plaintiffs’ allegations.<sup>37</sup> There was no infringement upon her free exercise of religion because the student had not shown that the textbook placed a “substantial burden” upon the practicing of her religious beliefs.<sup>38</sup>

#### *G. Other Factors Favoring the Constitutionality of Teaching Evolution*

Courts have decidedly rejected arguments that teaching only the evidence supporting evolution is unconstitutional. Aside from the obvious fact that evolution is a scientific theory held in high regard by most professional biologists, there are good legal reasons to understand why challenges to teaching evolution will continue to fail in the future. First, the U.S. Supreme Court has observed that “[s]tates and local school boards are generally afforded considerable discretion in operating public schools,”<sup>39</sup> and courts are generally deferential to the choices made by government agencies.<sup>40</sup> Given that school districts nationwide have taught evolution as science for decades, a decision striking down the teaching of evolution as unconstitutional would have an extremely far-reaching impact that would overturn many decades of pedagogical precedent. Second, requests that courts, on First Amendment grounds, compel a school district to teach evidence against evolution or compel a district to teach non-evolutionary views about biological origins will likely fail because courts are highly reluctant to issue such mandatory injunctions.<sup>41</sup>

#### *H. The Unconstitutionality of Advocating Creation Science*

A final area where evolutionists do not encourage violations of the Establishment Clause is in opposing the teaching of creationism. A number

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35. Moeller v. Schrenko, 554 S.E.2d 198, 200 (Ga. Ct. App. 2001).

36. *Id.* at 201.

37. *Id.* at 201-202.

38. *Id.* at 201.

39. Edwards v. Aguillard, 482 U.S. 578, 583 (1987).

40. Chevron U.S.A. v. Natural Res. Def. Council, 467 U.S. 837, 844 (1984).

41. See Stewart Rapalje & Robert L. Lawrence, A DICTIONARY OF AMERICAN AND ENGLISH LAW 658 (1997), available at <http://books.google.com/books?id=qg83MNT4WB4C&pg=PA658&lpg=PA658&dq>.

of higher and lower courts have made it clear that advocating creationism in public schools is unconstitutional.<sup>42</sup> In *Edwards*, the U.S. Supreme Court found creationism was a religious belief because it postulated a “supernatural creator.”<sup>43</sup> Citing *Edwards*, in *Peloza* the Ninth Circuit wrote, “[t]he Supreme Court has held unequivocally that . . . the belief in a divine creator of the universe is a religious belief.”<sup>44</sup> These judicial holdings seem appropriate since the “supernatural” or the “divine” lie outside the empirical domain accessible by the scientific method, and fall into the realm of religious faith.<sup>45</sup> By opposing the teaching of creationism, evolution lobbyists discourage violations of the Establishment Clause.

### III. WAYS SUPPORTERS OF EVOLUTION DO ENCOURAGE VIOLATIONS OF THE ESTABLISHMENT CLAUSE

#### A. *Attacks on Purported Religious Viewpoints that Dissent from Evolution in Public Schools*

In the summer of 2005, President Bush stated his view: in the teaching of ID and evolution, “both sides ought to be properly taught.”<sup>46</sup> Susan Spath, a spokesperson with the National Center for Science Education (NCSE), a pro-evolution lobbying organization, then criticized Bush in the *New York Times*, arguing that his view was untenable in light of her organization’s position that ID is a religious viewpoint that is unconstitutional to advocate in public schools:

“It sounds like you’re being fair, but creationism is a sectarian religious viewpoint, and intelligent design is a sectarian religious viewpoint,” said Susan Spath, a spokeswoman for the National Center for Science Education, a group that defends the teaching of evolution in public schools.<sup>47</sup>

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42. See *Edwards*, 482 U.S. at 578; *Peloza v. Capistrano Unified Sch. Dist.*, 37 F.3d 517 (9th Cir. 1994); *Webster v. New Lenox Sch. Dist.*, 917 F.2d 1004 (7th Cir. 1990); *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255 (E.D. Ark. 1982).

43. *Edwards*, 482 U.S. at 592-93.

44. *Peloza*, 37 F.3d at 521.

45. See David K. DeWolf, John G. West & Casey Luskin, *Intelligent Design Will Survive* *Kitzmiller v. Dover*, 68 MONT. L. REV. 7, 27-30 (2007).

46. Elisabeth Bumiller, *Bush Remarks Roil Debate on Teaching of Evolution*, N.Y. TIMES, Aug. 3, 2005, at A14, available at <http://www.nytimes.com/2005/08/03/politics/03bush.html>.

47. *Id.*

Evolution lobbyists like Spath, the NCSE, and others in their movement, have long contended that ID is a “sectarian religious viewpoint,” and that advocating it in public schools is thereby unconstitutional.<sup>48</sup> To illustrate, in the *Kitzmiller* case, the plaintiffs (who were closely advised by the NCSE) complained that “[t]he purpose and effect” of the Dover Area School District’s policy requiring the teaching of ID would “advance and endorse the specific religious viewpoint and beliefs encompassed by the assertion or argument of intelligent design.”<sup>49</sup> Likewise, an article published in 2007 in *Proceedings of the National Academy of Sciences USA* by NCSE executive director Eugenie Scott and former NCSE staff member Nicholas Matzke asserts that ID promotes “a sectarian religious position,”<sup>50</sup> but then claims it “has been rejected for its scientific failings” because “ID does not adequately explain the natural world.”<sup>51</sup> Another article, published in *Biochemical Journal* and co-written by Matzke and NCSE president Kevin Padian, asserts that ID is “not science, but a form of creationism,” that “ID is theology,” further endorsing the view that ID is “religiously based” and is “entirely a religious proposition . . . .”<sup>52</sup> They claim that ID’s leading proponents are motivated by “a crypto-fundamentalist Christian ideology.”<sup>53</sup> Yet these authors also assert that the “case for ID” has “collapsed,”<sup>54</sup> and argue that “no one with scientific or philosophical integrity is going to take [ID] seriously in future.”<sup>55</sup>

Darwin’s legal defenders unmistakably contend that ID is a religious viewpoint, yet such an organization as the NCSE clearly evinces no small measure of hostility and animus towards this purported “sectarian religious position.” This, of course, is their constitutional right,<sup>56</sup> but could the

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48. See *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 763 (M.D. Pa. 2005) (holding that teaching of ID violates the First Amendment’s Establishment Clause).

49. Complaint at 19-20, *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005) (No. 4:CV 04-2688).

50. Eugenie C. Scott & Nicholas J. Matzke, *Biological Design in Science Classrooms*, 104 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES 8669, 8675 (2007), available at [http://ncseweb.org/webfm\\_send/749](http://ncseweb.org/webfm_send/749).

51. *Id.* at 8671.

52. Kevin Padian & Nicholas J. Matzke, *Darwin, Dover, ‘Intelligent Design’ and Textbooks*, 417 BIOCHEMICAL J. 29, 34, 37 (2009), available at <http://www.biochemj.org/bj/417/0029/4170029.pdf>.

53. *Id.* at 39.

54. *Id.*

55. *Id.*

56. Bd. of Educ. of Westside Cmty. Schs. v. Mergens, 496 U.S. 226, 250 (1990) (“[T]here is a crucial difference between government speech endorsing religion, which the

government adopt such an attitude towards ID or creationism? If ID is a religious viewpoint, then the *Kitzmiller* plaintiffs were correct that it cannot be advocated in public school science curricula. But in such a case, would it be constitutional for the government to attack, inhibit, denigrate, oppose, disparage, or show hostility towards ID?

#### 1. Textbooks that Attack Intelligent Design and Creationism

While the present author would strongly contend that ID is *not* a religious viewpoint and that ID should be considered constitutional to advocate (or critique) in public school science classrooms,<sup>57</sup> it is troubling that many leading ID critics who *do* contend that ID is religion turn a blind eye towards attacks on ID in public schools. Additionally, the present author strongly holds that there are key distinctions between ID and creationism that make ID a bona fide scientific viewpoint. On the other hand, “special creation” or creationism are religious viewpoints that are constitutionally unfit to advocate in public school science classrooms.<sup>58</sup> But members of the evolution lobby who unwaveringly lump ID with creationism (such as the *Kitzmiller* plaintiffs or the NCSE) exhibit no apparent protests towards the use of textbooks or school policies that attack, disparage, or oppose ID or creationism. This hypocrisy could encourage

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Establishment Clause forbids, and private speech endorsing religion, which the Free Speech and Free Exercise Clauses protect.”).

57. See DAVID K. DEWOLF ET AL., TRIPSING INTO EVOLUTION: INTELLIGENT DESIGN AND THE KITZMILLER V. DOVER DECISION (2006); DeWolf et al., *supra* note 45, at 23-24 (arguing that ID does not presuppose a supernatural designer—let alone a religious one—and thus does not offend the Establishment Clause).

58. Intelligent design and special creation are not one-and-the-same. See DeWolf et al., *supra* note 45, at 28-30. As leading ID author William Dembski writes, “Intelligent design does not claim that living things came together suddenly in their present form through the efforts of a supernatural creator. Intelligent design is not and never will be a doctrine of creation.” WILLIAM DEMBSKI, NO FREE LUNCH: WHY SPECIFIED COMPLEXITY CANNOT BE PURCHASED WITHOUT INTELLIGENCE 314 (2001) (emphasis added); see also WILLIAM A. DEMBSKI, THE DESIGN REVOLUTION: ANSWERING THE TOUGHEST QUESTIONS ABOUT INTELLIGENT DESIGN 178 (2004) (“Intelligent design does not require organisms to emerge suddenly or to be specially created from scratch by the intervention of a designing intelligence. To be sure, intelligent design is compatible with the creationist idea of organisms being suddenly created from scratch. But it is also perfectly compatible with the evolutionist idea of new organisms arising from old by gradual accrual of change. What separates intelligent design from naturalistic evolution is not whether organisms evolved or the extent to which they evolved but what was responsible for their evolution.”); Casey Luskin, ID Does Not Address Religious Claims About the Supernatural (Sept. 8, 2008), <http://www.discovery.org/a/7501>.

potential violations of the First Amendment, for there are numerous examples of such long-ignored textbooks that attack ID or creationism.

Sylvia Mader's 2007 introductory biology textbook, *Essentials of Biology*, states that "most scientists in our country are dismayed when state legislatures or school boards rule that teachers must put forward a variety of 'theories' on the origin of life" because these theories "run[] contrary to the mass of data that supports the theory of evolution."<sup>59</sup> The textbook mentions "intelligent-design theory" as an example of such a theory, and goes on to claim that "teachers who have a solid scientific background do not feel comfortable teaching an 'intelligent design theory' because it does not meet the test of a scientific theory."<sup>60</sup> The textbook plainly communicates that ID runs counter to the factual scientific data:

Science is based on hypotheses that have been tested by observation and/or experimentation. A scientific theory has stood the test of time – that is, no hypotheses have been tested by observation and/or experimentation that run counter to the theory. On the contrary, the Theory of Evolution is supported by data collected in such wide-ranging fields as development, anatomy, geology, and biochemistry. . . . [N]early half of all Americans prefer to believe the Old Testament account of Creation. That, of course, is their right. But should schools be required to teach an "intelligent design theory" that traces its roots back to the Old Testament, and is not supported by observation and experimentation?<sup>61</sup>

Mader explicitly frames ID as a religious viewpoint that "traces its roots back to the Old Testament,"<sup>62</sup> yet she asserts that it "runs contrary to the

59. SYLVIA S. MADER, *ESSENTIALS OF BIOLOGY* 230 (1st ed. 2007).

60. *Id.* ID proponents counter that intelligent design is testable. *See, e.g.*, IdeaCenter.org, Does Intelligent Design Make Predictions? Is It Testable?, <http://www.ideacenter.org/contentmgr/showdetails.php/id/1156> (last visited July 10, 2009); Casey Luskin, *Finding Intelligent Design in Nature*, in *INTELLIGENT DESIGN 101: LEADING EXPERTS EXPLAIN THE KEY ISSUES* 67, 67-111 (H.W. House ed., 2008); STEPHEN C. MEYER, *SIGNATURE IN THE CELL: DNA AND THE EVIDENCE FOR INTELLIGENT DESIGN* app. (2009).

61. MADER, *supra* note 59, at 230. Identical statements appear in various other textbooks published by Mader in 2000, 2002, and 2003. *See, e.g.*, SYLVIA S. MADER, *HUMAN BIOLOGY* 473 (7th ed. 2002); SYLVIA S. MADER, *HUMAN BIOLOGY* 472 (6th ed. 2000); SYLVIA S. MADER, *INQUIRY INTO LIFE* 562 (10th ed. 2003).

62. ID proponents of course disagree and would argue that ID is not based upon any religious text. *See* WILLIAM A. DEMBSKI, *THE DESIGN REVOLUTION: ANSWERING THE TOUGHEST QUESTIONS ABOUT INTELLIGENT DESIGN* 41-42 (2004) ("Intelligent design begins with data that scientists observe in the laboratory and nature, identifies in them patterns

mass of data” and is “not supported by observation and experimentation.” If she is correct that ID *is* a religious viewpoint, is it appropriate for state schools to use her textbooks that unambiguously claim ID is empirically wrong?

At various points in her textbooks, Mader takes more explicit shots at creationist religious views, stating that “[b]efore the 1800s, most people believed that the origin and diversity of life on earth was due to the work of a supernatural being,” but that today, “[s]cientists, however, seek natural, testable hypotheses to explain natural events rather than relying on religious dogma.”<sup>63</sup> According to Mader, in this “pre-Darwinian worldview,” scientists like “Linnaeus thought that classification should describe the fixed features of species and reveal God’s divine plan.”<sup>64</sup> Today, however, she explains that “[t]he hypothesis that organisms share a common descent is supported by many lines of evidence” and therefore “the theory of evolution is one of the great unifying theories of biology because it has been supported by so many different lines of evidence.”<sup>65</sup>

Throughout this entire discussion is a clear attempt to inhibit and oppose belief in intelligent design, special creation, and other viewpoints that she labels as “religious dogma.” Where are the complaints from leaders of the evolution lobby, who oppose teaching ID on the grounds it is religion, against Mader’s denigration, inhibition, and disapproval of these purported religious viewpoints?

Peter H. Raven and George B. Johnson’s introductory college-level textbook, *Biology*, likewise denigrates, inhibits, and opposes ID. In a page dealing with “Darwin’s Critics,” it describes intelligent design as follows:

The intelligent design argument. “*The organs of living creatures are too complex for a random process to have produced—the existence of a clock is evidence of the existence of a clockmaker.*”<sup>66</sup>

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known to signal intelligent causes and thereby ascertains whether a phenomenon was designed. For design theorists, the conclusion of design constitutes an inference from data, not a deduction from religious authority.”).

63. SYLVIA S. MADER, *BIOLOGY 300* (6th ed. 1998).

64. *Id.* at 287.

65. *Id.* at 300. Some scientists feel that common descent is not clearly supported by the scientific evidence. See STEPHEN C. MEYER ET AL., *EXPLORE EVOLUTION: THE ARGUMENTS FOR AND AGAINST NEO-DARWINISM* 28 (2007) (noting that the earliest amphibian fossils bear no evidence of transitional stages from more “primitive” life forms).

66. PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY 455* (6th ed. 2002).

The 2002 edition of Raven and Johnson's text follows that description with the argument that "[b]iologists do not agree."<sup>67</sup> Another edition published in 2005 argues against ID by claiming that it is refuted by intermediate fossils.<sup>68</sup> The textbook goes on to critique "irreducible complexity"—a common ID argument—stating that "blood clotting has become 'irreducibly complex' as the result of Darwinian evolution."<sup>69</sup> The textbook later says regarding the "intelligent design argument" that "[n]one of these objections [to evolution] has scientific merit."<sup>70</sup>

While perhaps there is room for scientific disagreement over Raven and Johnson's claims, there should be little disagreement that these ID critics are confronted with the following dilemma: either ID is a religious viewpoint that is unconstitutionally opposed, inhibited, and disapproved when this textbook is used in public schools, or ID is *not* a religious viewpoint and is thereby fair game for all forms of government-sponsored attacks, disparagement, hostility, *as well as endorsement*.

An earlier series of Raven and Johnson's *Biology* textbook, published before the popularization of ID, falls into the same predicament with respect to scientific creationism. The text calls scientific creationism "a set

67. *Id.* In fact, there is good evidence from the mainstream scientific literature that credible biologists do find intelligent design arguments regarding biological complexity to be compelling. See, e.g., RICHARD A. WATSON, *COMPOSITIONAL EVOLUTION* (2006); Michael J. Behe & David W. Snoke, *Simulating Evolution by Gene Duplication of Protein Features That Require Multiple Amino Acid Residues*, 13 *PROTEIN SCI.* 2651 (2004); Evelyn Fox Keller, *Developmental Robustness*, 981 *ANNALS OF N.Y. ACAD. SCI.* 189 (2002); W.E. Lönnig & H. Saedler, *Chromosome Rearrangements and Transposable Elements*, in 36 *ANNUAL REVIEW OF GENETICS* 389 (2002); Wolf-Ekkehard Lönnig, Kurt Stüber, Heinz Saedler & Jeong Hee Kim, *Biodiversity and Dollo's Law: To What Extent Can the Phenotypic Differences Between *Misopates orontium* and *Antirrhinum majus* Be Bridged by Mutagenesis?*, 1 *BIOREMEDIATION, BIODIVERSITY & BIOAVAILABILITY* 1 (2007); Scott A. Minnich & Stephen C. Meyer, *Genetic Analysis of Coordinate Flagellar and Type III Regulatory Circuits in Pathogenic Bacteria*, in *PROCEEDINGS OF THE SECOND INTERNATIONAL CONFERENCE ON DESIGN & NATURE, RHODES, GREECE* (2004), available at <http://www.discovery.org/scripts/viewDB/filesDB-download.php?id=389>; Ø.A. Voie, *Biological Function and the Genetic Code Are Interdependent*, 28 *CHAOS, SOLITONS AND FRACTALS* 1000 (2006).

68. PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY 468* (7th ed. 2005). For a pro-ID discussion of the fossil evidence for evolution, see WILLIAM DEMBSKI & JONATHAN WELLS, *THE DESIGN OF LIFE: DISCOVERING SIGNS OF INTELLIGENCE IN LIVING SYSTEMS* 57-91 (2008).

69. RAVEN & JOHNSON, *supra* note 68, at 468. For a pro-ID treatment of the irreducible complexity of the blood clotting cascade, see MICHAEL J. BEHE, *DARWIN'S BLACK BOX: THE BIOCHEMICAL CHALLENGE TO EVOLUTION* 74-97 (1996). For a pro-ID discussion of the fossil evidence for evolution, see DEMBSKI & WELLS, *supra* note 68, at 57-91.

70. RAVEN & JOHNSON, *supra* note 68, at 469.

of religious beliefs,<sup>71</sup> and then continues to claim that “there is no scientific evidence to support the hypothesis that the earth is only a few thousand years old, and none that indicates that every species of organism was created separately.”<sup>72</sup> The textbook states that these conclusions “can be reached only on the basis of arbitrary faith” because they “are untestable, and as such, they lie outside the realm of science.”<sup>73</sup>

Regardless of whether one agrees with the claims of the scientific creationists (this author is not a young earth creationist and accepts the conventional geological age of the earth), calling such views a “set of religious beliefs” that comprise an “arbitrary faith” clearly represents an attack upon a religious viewpoint.

Additionally, it is difficult to accept that these authors actually believe their claim that scientific creationism is “untestable,” since their textbook simultaneously states that “there is no scientific evidence to support the hypothesis that the earth is only a few thousand years old.” The textbook thus adopts a self-contradictory position that scientific creationism is both scientifically untestable (point 3 below) and scientifically false (point 1 below, and the statement quoted above):

Scientific creationism should not be labeled science for three reasons:

1. It is not supported by any scientific observations.
2. It does not infer its principles from observation, as does all science.
3. Its assumptions lead to no testable and falsifiable hypotheses.<sup>74</sup>

Raven and Johnson seem to be following the conflicted arguments of the U.S. National Academy of Sciences (NAS), who in 1999 lumped ID with creationism and declared that both are “not subjectable to meaningful tests” and “not testable,”<sup>75</sup> but then subjected these views to various evidentiary critiques, concluding that “[s]cientists have considered the hypotheses proposed by [ID and creationism] and rejected them because of a lack of

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71. PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY* 385 (3d ed. 1992).

72. *Id.* at 401.

73. *Id.*

74. *Id.* (emphasis omitted).

75. NATIONAL ACADEMY OF SCIENCES, *SCIENCE AND CREATIONISM: A VIEW FROM THE NATIONAL ACADEMY OF SCIENCES* 25 (2d ed. 1999). For a response to the NAS, see Casey Luskin, *A Critical Analysis of Science and Creationism: A View from the National Academy of Sciences* (2002), <http://www.ideacenter.org/contentmgr/showdetails.php/id/1131>.

evidence.”<sup>76</sup> In one instance, the NAS directly states that “[m]olecular evolutionary data counter a recent proposition called ‘intelligent design theory,’” which they defined in religious terms as holding that “structural complexity is proof of the direct hand of God in specially creating organisms.”<sup>77</sup> Likewise, the NAS’s *Teaching Evolution and the Nature of Science*, a “guide for educators, policy makers, parents, and others that offers guidance on teaching about evolution and the nature of science,”<sup>78</sup> teaches that “scientists from many fields have examined these ideas [of creationism] and found them to be scientifically unsupportable.”<sup>79</sup> The NAS’s most recent commentary, *Science, Evolution, and Creationism*, claims that ID is “based on a religious conviction”<sup>80</sup> and “is not a scientific concept because it cannot be empirically tested.”<sup>81</sup> But the document then contends that “‘Intelligent Design’ creationism is not supported by scientific evidence”<sup>82</sup> and asserts that “the claims of intelligent design creationists are disproven by the findings of modern biology.”<sup>83</sup> The NAS concludes that ID is refuted because “Biologists have examined each of the molecular systems claimed to be the products of design and have shown how they could have arisen through natural processes.”<sup>84</sup>

The fallacy in this style of argument is captured by pro-ID molecular biologist Jonathan Wells, who recounts how some critics allege that “ID isn’t science because it isn’t testable, and, besides, it has been tested and proven false.”<sup>85</sup> Wells aptly observes that this argument “collapses into a contradiction.”<sup>86</sup> The fallacious unfalsifiable/false argument has constitutional ramifications: critics want ID to be untestable and thereby unscientific and religious, but they do not want students or others believing

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76. NATIONAL ACADEMY OF SCIENCES, *supra* note 75, at ix.

77. *Id.* at 21.

78. NATIONAL ACADEMY OF SCIENCES, *SCIENCE, EVOLUTION, AND CREATIONISM* 56 (2008). For a response to the NAS, see Casey Luskin, *The Facts About Intelligent Design: A Response to the National Academy of Sciences’ Science, Evolution, and Creationism* (2008), <http://www.ideacenter.org/contentmgr/showdetails.php/id/1452>.

79. NATIONAL ACADEMY OF SCIENCES, *TEACHING ABOUT EVOLUTION AND THE NATURE OF SCIENCE* 55 (1998).

80. NATIONAL ACADEMY OF SCIENCES, *supra* note 78, at xiii (2008).

81. *Id.* at 42.

82. *Id.* at 40.

83. *Id.*

84. *Id.* Contrary to the NAS, credible biologists have expressed scientific support for ID arguments in the mainstream scientific literature. See sources cited *supra* note 67.

85. JONATHAN WELLS, *THE POLITICALLY INCORRECT GUIDE TO DARWINISM AND INTELLIGENT DESIGN* 140 (2006).

86. *Id.*

it, so they also make evidence-based arguments telling students that ID is empirically false. This philosophical predicament is analogous to the evolution lobby's legal predicament: they wish to posture ID as an unscientific religious viewpoint so it cannot be advocated in public school science classrooms, but they also want it to be subjected to various forms of critique, hostility, and disparagement in the classroom.

Given their zeal, it should come as no surprise that the NAS not only attacks ID and creationism as factually wrong, but even admits they believe that "'creation science' is actually a religious view."<sup>87</sup> The NAS follows by stating that, "[b]ecause public schools must be religiously neutral under the U.S. Constitution, the courts have held that it is unconstitutional to present creation science as legitimate scholarship . . . . [A] science curriculum should cover science, not the religious views of particular groups or individuals."<sup>88</sup> But if these critics actually believe that religion does not belong in the science classroom, why are they printing guides for teachers and students that attack those alleged "religious views"? In their zeal, evolution lobbyists wish both to have their cake and eat it too with respect to ID and creationism.<sup>89</sup>

Raven and Johnson's *Biology* does worse than merely promote contradictory arguments against ID and creationism. It goes on to mock belief in divine creation, stating that when "scientific creationism says 'Yes, but [G]od just made it look that way,'" it is "substituting religious dogma for a scientific explanation."<sup>90</sup>

Students who support scientific creationism would thus hear that their "set of religious beliefs" is not only an "arbitrary faith," but that they are not using their "God-given gifts to reason and to understand"<sup>91</sup> in the way God intended. While many might agree with such arguments, religious neutrality forbids the government from attacking, opposing, and disapproving of such a "set of religious beliefs" in this fashion.

Douglas J. Futuyma's 1998 textbook *Evolutionary Biology* is a widely used college-level textbook for students learning about evolution.<sup>92</sup> In the first pages of his 1998 textbook, Futuyma openly attacks religion, teaching

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87. NATIONAL ACADEMY OF SCIENCES, *supra* note 78, at 29.

88. *Id.*

89. It is the author's position that ID should be constitutional fair game for both advocacy and critique in public schools.

90. PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY 401* (3d ed. 1992).

91. *Id.*

92. The author used this textbook for an upper-division evolutionary biology course at the University of California at San Diego in 1999.

students that Darwin removed purpose and design from biology, making “theological or spiritual explanations of life superfluous”:

By coupling undirected, purposeless variation to the blind, uncaring process of natural selection, Darwin made theological or spiritual explanations of life superfluous. . . .

. . . .

The entire tradition of philosophical explanation by the purpose of things, with its theological foundation, was made completely superfluous by Darwin's theory of natural selection. The adaptation of organisms—long cited as the most conspicuous evidence of intelligent design in the universe—could now be explained by purely mechanistic causes. . . . The profound, and deeply unsettling, implication of this purely mechanical, material explanation for the existence and characteristics of diverse organisms is that *we need not invoke, nor can we find any evidence for, any design, goal, or purpose anywhere in the world, except for human behavior.*<sup>93</sup>

At the end of this textbook, Futuyma devotes an entire section to attacking ID and creationism, prefaced by the following:

Still other nonbelievers in evolution, including a very few scientists present supposedly rational arguments against evolution, and instead of specifically invoking the biblical account as an alternative, argue that the only possible explanation of biological phenomena is “intelligent design”—i.e., creation by an intelligent Creator. . . . Thus “creation science,” rather than providing positive evidence of creation consists entirely of attempts to demonstrate the falsehood or inadequacy of evolutionary science, and not show that biological phenomena must, by default, be the products of intelligent design. Here are some of the most commonly encountered creationist arguments, together with capsule counterarguments . . . .<sup>94</sup>

After introducing ID as an alleged religious viewpoint, the textbook goes on to offer various logical and scientific arguments against intelligent design

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93. DOUGLAS J. FUTUYMA, *EVOLUTIONARY BIOLOGY* 5, 8 (3d ed. 1998).

94. *Id.* ID proponents would counter that their views are based upon a strong positive argument. For details, see Stephen C. Meyer, *The Origin of Biological Information and the Higher Taxonomic Categories*, 117 *PROCEEDINGS OF THE BIOLOGICAL SOC'Y OF WASH.* 213 (2004); Minnich & Meyer, *supra* note 67.

and “creation science.” If these viewpoints are in fact religious, is it constitutional to oppose and inhibit them in this fashion?

Futuyma’s 2005 textbook *Evolution* faces similar problems. Making Raven and Johnson’s mistake, Futuyma claims that ID “generates no research ideas,” that science “cannot judge the validity of any hypotheses,”<sup>95</sup> and that ID “cannot be evaluated by the methods of science.”<sup>96</sup> He further argues that ID is a religious viewpoint because it is a “camouflage” for creationism, and “the designer must be a supernatural rather than a material being,”<sup>97</sup> also saying that ID refers to “a being equivalent to God.”<sup>98</sup> Futuyma equates ID with creationism, stating that legislators tried “to get creationism into school science curricula” through a bill requiring that “biological intelligent design shall be taught and given equal treatment.”<sup>99</sup> After observing that the U.S. Supreme Court forbade the teaching of creationism because it is a “religious viewpoint,”<sup>100</sup> Futuyma asserts that ID’s goal is “to replace naturalistic scientific methodology with a religiously framed version of science.”<sup>101</sup> Yet despite his claim that ID is untestable and religious, Futuyma devotes many pages to explicitly attempting to refute intelligent design.

Futuyma states outright that “Darwin and subsequent evolutionary biologists have described innumerable examples of biological phenomena that are hard to reconcile with beneficent intelligent design.”<sup>102</sup> “Darwin,” Futuyma writes, “made this particular theological argument passé” as he contends that “[o]nly evolutionary history can explain vestigial organs . . . .”<sup>103</sup> In a section titled “Failures of the argument from design,” Futuyma attacks arguments for intelligent design:

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95. DOUGLAS J. FUTUYMA, *EVOLUTION* 526 (2005).

96. *Id.* at 527.

97. *Id.* at 526.

98. *Id.* at 525.

99. *Id.*

100. *Id.*

101. *Id.* at 537.

102. *Id.* at 530.

103. *Id.* Some scientists have countered that classic examples of “vestigial” organs have turned out to have function and are not in fact vestigial. For example, extensive evidence of function has been found for the appendix. See R. Randal Bollinger et al., *Biofilms in the Large Bowel Suggest an Apparent Function of the Human Vermiform Appendix*, 249 J. THEORETICAL BIOLOGY 826 (2007); Duke University Medical Center, *Appendix Isn’t Useless at All: It’s a Safe House for Good Bacteria*, SCIENCE DAILY, Oct. 8, 2007, available at <http://www.sciencedaily.com/releases/2007/10/071008102334.htm>; Loren G. Martin, *What Is the Function of the Human Appendix?*, SCI. AM., Oct. 21, 1999, <http://www.scientificamerican.com/article.cfm?id=what-is-the-function-of-t>.

There are many examples, such as the eyes of vertebrates and cephalopod mollusks, in which functionally similar features actually differ profoundly in structure. Such differences are expected if structures are modified from features that differ in different ancestors, but are inconsistent with the notion that an omnipotent Creator, who should be able to adhere to an optimal design, provided them. . . . The “accidents” of evolutionary history explain many features that no intelligent engineer would be expected to design.<sup>104</sup>

Futuyma also argues that certain common religious views about design are false, stating that if life were designed, then it was designed by an “unkind, incompetent, or handicapped designer.”<sup>105</sup> He writes, “Nor can we rationalize why a beneficent designer would shape the many other selfish behaviors that natural selection explains, such as cannibalism, siblicide, and infanticide.”<sup>106</sup> Futuyma also argues against design on the grounds that too many species go extinct:

[M]ore than 99 percent of all species that have ever lived are extinct. Were they the products of an incompetent designer? Or

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Likewise, Futuyma mentions “pseudogenes” as an example of vestigial or fossil genes, but two leading evolutionary biologists found that “pseudogenes that have been suitably investigated often exhibit functional roles, such as gene expression, gene regulation, generation of genetic (antibody, antigenic, and other) diversity. Pseudogenes are involved in gene conversion or recombination with functional genes. Pseudogenes exhibit evolutionary conservation of gene sequence, reduced nucleotide variability, excess synonymous over nonsynonymous nucleotide polymorphism, and other features that are expected in genes or DNA sequences that have functional roles.” See Evgeniy S. Balakirev & Francisco J. Ayala, *Pseudogenes, Are They Junk or Functional DNA?*, 37 ANN. REV. GENETICS 123 (2003). For a pro-ID discussion of difficulties that evolutionists encounter when using vestigial organs or pseudogenes to argue for evolution, see WILLIAM DEMBSKI & JONATHAN WELLS, *THE DESIGN OF LIFE: DISCOVERING SIGNS OF INTELLIGENCE IN LIVING SYSTEMS* 131-36 (2008).

104. FUTUYMA, *supra* note 95, at 49. ID proponents have countered that the vertebrate eye is actually a very good design. See George Ayoub, *On the Design of the Vertebrate Retina*, 17 ORIGINS & DESIGN 19 (Winter 1996); Michael J. Denton, *Selected Excerpts: The Inverted Retina: Maladaptation or Pre-adaptation?*, 19 ORIGINS & DESIGN 14 (Winter 1999).

105. FUTUYMA, *supra* note 95, at 530. Futuyma mentions the panda’s thumb as an alleged example that is “poorly engineered,” but the panda’s thumb has in fact been reported to be an elegant design that “enabl[es] the panda to manipulate objects with great dexterity.” *Id.*; see Hideki Endo et al., *Role of the Giant Panda’s Pseudo-thumb*, 397 NATURE 309 (1999).

106. FUTUYMA, *supra* note 95, at 531.

one that couldn't foresee that species would have to adapt to changing circumstances?<sup>107</sup>

To ensure that students capture the significant religious implications of his arguments regarding the falsity of ID, Futuyma apparently feels it important to state that “[t]his argument from ‘design’ has been renewed in the ‘intelligent design’ version of creationism, and it is apparently the most frequently cited reason people give for believing in God.”<sup>108</sup>

When discussing scientific creationism, Futuyma states that “[s]cientists can test and falsify some specific creationist claims,”<sup>109</sup> and after lauding evolution as being “as much a scientific fact as the atomic constitution of matter or the revolution of the Earth around the Sun,”<sup>110</sup> states that creationists “deny not only evolution, but also most of geology and physics.”<sup>111</sup> He also claims that the presence of vestigial organs refutes creationism and falsifies the view that there is an “intelligent Creator”:

According to creationist thought, an intelligent Creator must have had a purpose, or design, in each element of His creation. Thus all features of organisms must be functional. . . . However, nonfunctional, imperfect, and even maladaptive structures are expected if evolution is true, especially if a change in an organism's environment or way of life has rendered them superfluous or harmful. As noted, organisms display many such features at both the morphological and molecular levels.<sup>112</sup>

Some of these examples were also seen in Futuyma's attack on intelligent design, where he writes:

Because natural selection consists only of differential reproductive success, it results in ‘selfish genes’ and genotypes, some of which have results that are inexplicable by intelligent design. We have seen that genomes are brimming with sequences such as transposable elements that increase their own numbers without benefitting the organism. . . . Such conflicts among genes in a genome are widespread. Are they predicted by intelligent design theory? Likewise, no theory of design can predict or explain features that we ascribe to sexual selection,

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107. *Id.* at 530.

108. *Id.*

109. *Id.* at 526.

110. *Id.* at 523.

111. *Id.* at 524.

112. *Id.* at 535.

such as males that remove the sperm of other males from the female's reproductive tract, or chemicals that enhance a male's reproductive success but shorten his mate's life span.<sup>113</sup>

Futuyma evidently does not actually believe that ID or creationism "cannot be evaluated by the methods of science," for his evaluations of these purported religious views repeatedly portray them as false; at one point, his latest textbook even cites a "refutation of the intelligent design position."<sup>114</sup> Those who consider ID or creationism to be religion are faced with the constitutional predicament of this textbook spending many pages attacking, opposing, and inhibiting those purported religious viewpoints.

Monroe Strickberger's 2000 edition of the textbook *Evolution* takes a direct attack upon religion, stating that "the variability by which selection depends may be random, but adaptations are not; they arise because selection chooses and perfects only what is adaptive. In this scheme a god of design and purpose is not necessary."<sup>115</sup> The textbook also gives an account of how Darwinian evolution has historically "replaced" and "contradicted" religious views about origins:

Many felt that evolutionary randomness and uncertainty had replaced a deity having conscious, purposeful, human characteristics. The Darwinian view that evolution is a historical process and present-type organisms were not created spontaneously but formed in a succession of selective events that occurred in the past, contradicted the common religious view that there could be no design, biological or otherwise, without an intelligent designer.<sup>116</sup>

Strickberger's textbook specifically takes aim at religion calling "Jehovah" an "arbitrary God,"<sup>117</sup> and stating:

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113. *Id.* at 531. For scientific views that counter the view that DNA is "selfish" or functionless junk, see James A. Shapiro and Richard Sternberg, *Why Repetitive DNA Is Essential to Genome Function*, 80 *BIOLOGICAL REV.* 227 (2005); Richard Sternberg & James A. Shapiro, *How Repeated Retroelements Format Genome Function*, 110 *CYTOGENETIC & GENOME RES.* 108 (2005); Richard Sternberg, *On the Roles of Repetitive DNA Elements in the Context of a Unified Genomic-Epigenetic System*, 981 *ANNALS N.Y. ACAD. SCI.* 154 (2002).

114. FUTUYMA, *supra* note 95, at 534 (citing a website that allegedly refutes the purported position of intelligent design proponents regarding the bombardier beetle).

115. MONROE W. STRICKBERGER, *EVOLUTION* 70 (3d ed. 2000).

116. *Id.*

117. *Id.* at 60.

The fear that Darwinism was an attempt to displace God in the sphere of creation was therefore quite justified. To the question, “Is there a divine purpose for the creation of humans?” evolution answers no. To the question “Is there a divine purpose for the creation of any living species?” evolution answers no.<sup>118</sup>

The textbook further states that evolution and science have “eroded” religion, which continues to survive only because it provides “solace” and “comfort”:

Religion has been bolstered by paternalistic social systems in which individuals depend on the beneficences of those more powerful than they are, as well as the comforting idea that humanity was created in the image of a god to rule over the world and its creatures. Religion provided emotional solace . . . . Nevertheless, faith in religious dogma has been eroded by natural explanations of its mysteries.<sup>119</sup>

The 2008 edition of *Strickberger’s Evolution* (written by different authors) expands this trend of attacking religion. It has an entire chapter titled “Belief, Religion and Evolution,” which states that “The Darwinian view . . . contradicted the common religious view of design by an intelligent designer.”<sup>120</sup> The textbook goes on to give various critiques of ID and creationism, at one point stating that, “Despite the overwhelming scientific evidence for evolution as a natural process, some religious groups adhering to creation have developed the notion of *intelligent design* as a purported alternative to evolution.”<sup>121</sup> The textbook commits the unfalsifiable/false fallacy, calling ID a “[r]eligious argument,” and then offering multiple pages of evidentiary critiques of ID and creationist arguments,<sup>122</sup> at one point concluding that “[h]umans are thus not a distinct creation”<sup>123</sup> and stating, “nothing in biology makes sense except in the light of evolution.”<sup>124</sup>

Like the 2000 edition, the textbook tries to explain the apparently unexpected “Persistence of Religion” in light of the fact that evolution purportedly undermines religion:

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118. *Id.*

119. *Id.* at 70-71.

120. BRIAN K. HALL & BENEDIKT HALLGRIMSSON, *STRICKBERGER’S EVOLUTION: THE INTEGRATION OF GENES, ORGANISMS, AND POPULATIONS* 659 (4th ed. 2008).

121. *Id.*

122. *See Responses to Creationist Arguments*, in HALL & HALLGRIMSSON, *supra* note 120, at 668-72.

123. *Id.* at 666.

124. *Id.* at 668 (quoting Theodosius Dobzhansky).

One might think that, through the evidence and closely reasoned arguments offered by biologists, evolution had successfully undermined one of religion's prime justifications for itself—the special creation of humans. The demise of religion should therefore have been just a matter of short time.<sup>125</sup>

The textbook thus argues that religion survived because it provided comfort and purpose:

Essential to the preservation of religion in the midst of the evolutionary bombardment was that religion answers a series of strong emotional needs such as purpose in life. . . . Evolution, in contrast, deals with many basic questions of life that are of concern to religion but as a science it did little to meet emotional needs.<sup>126</sup>

This textbook blatantly and unashamedly attacks not only intelligent design, but also religious views that run counter to Darwinian evolution. Can evolution lobbyists, who purport to uphold the separation of church and state, legitimately support the usage of such a textbook in public schools?

In the 2002 and 2005 editions of his textbook *Biological Science*, prominent textbook author and University of Washington biologist Scott Freeman incorrectly states that “advocates of ‘scientific creationism’ and ‘intelligent design theory’ lobby for a ban on teaching evolution in public schools”<sup>127</sup> and then equates these views with religion:

125. *Id.*

126. *Id.*

127. SCOTT FREEMAN, *BIOLOGICAL SCIENCE* 512 (2d ed. 2005) [hereinafter FREEMAN 2005]; SCOTT FREEMAN, *BIOLOGICAL SCIENCE* 426 (2002) [hereinafter FREEMAN 2002]. Leading proponents of intelligent design do not support banning evolution from the curriculum. For example, Phillip Johnson recommends:

Of course students should learn the orthodox Darwinian theory and the evidence that supports it, but they should also learn why so many are skeptical, and they should hear the skeptical arguments in their strongest form rather than in a caricature intended to make them look as silly as possible.

PHILLIP JOHNSON, *THE WEDGE OF TRUTH: SPLITTING THE FOUNDATIONS OF NATURALISM* 82 (1999). Likewise, Michael Behe contends that schools should “[t]each Darwin’s elegant theory[, b]ut also discuss where it has real problems accounting for the data, where data are severely limited . . . .” Michael Behe, *Teach Evolution and Ask Hard Questions*, N.Y. TIMES, Aug. 13, 1999, at A21. Jonathan Wells urges that “[s]tudents should be taught about Darwinian evolution because it is enormously influential in modern biology. But they should also be given the resources to evaluate the theory critically.” Jonathan Wells, *Give Students the Resources to Critique Darwin*, KANSAS CITY STAR, Aug. 1, 1999, at K4.

The U.S. Supreme Court has repeatedly ruled that legislation banning the teaching of evolution in public schools is unconstitutional on the basis of the First Amendment—the separation of church and state. The Court’s opinion is that scientific creationism and intelligent design theory promote a specific religious belief because they are founded on religious tenets codified in the Bible.<sup>128</sup>

While Freeman is incorrect to state that teaching ID has been banned—much less addressed—by the U.S. Supreme Court,<sup>129</sup> he clearly attempts to posture both ID and creationism as “religious belief[s]” that are “founded on religious tenets codified in the Bible.”<sup>130</sup> Freeman then immediately goes on the attack against common ID arguments, such as the argument of “irreducible complexity,” stating: “Proponents of this view downplay the importance of the many fossils with characteristics that show transitions between simpler and more complex traits.”<sup>131</sup>

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Finally, “Discovery Institute seeks to increase the coverage of evolution in textbooks. It believes that evolution should be fully and completely presented to students, and they should learn more about evolutionary theory, including its unresolved issues.” *Discovery Institute’s Science Education Policy* (June 17, 2008), <http://www.discovery.org/a/3164>.

128. FREEMAN 2005, *supra* note 127, at 513; FREEMAN 2002, *supra* note 127, at 426.

129. As of the publication of this Article, the only U.S. court to squarely address the constitutionality of teaching ID is from the lowest level of the federal courts, a federal trial court in *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005).

130. FREEMAN 2005, *supra* note 127, at 513; FREEMAN 2002, *supra* note 127, at 426. However, ID proponents explain that their theory is not based upon religious premises from the Bible:

The most obvious difference [between ID and scientific creationism] is that scientific creationism has prior religious commitments whereas intelligent design does not. . . . Intelligent design . . . has no prior religious commitments and interprets the data of science on generally accepted scientific principles. In particular, intelligent design does not depend on the biblical account of creation.

. . . Intelligent design begins with data that scientists observe in the laboratory and nature, identifies in them patterns known to signal intelligent causes and thereby ascertains whether a phenomenon was designed. For design theorists, the conclusion of design constitutes an inference from data, not a deduction from religious authority.

WILLIAM DEMBSKI, *THE DESIGN REVOLUTION: ANSWERING THE TOUGHEST QUESTIONS ABOUT INTELLIGENT DESIGN* 41-42 (2004).

131. FREEMAN 2005, *supra* note 127, at 513. For a pro-ID treatment of the irreducible complexity of the blood-clotting cascade, see MICHAEL J. BEHE, *DARWIN’S BLACK BOX: THE BIOCHEMICAL CHALLENGE TO EVOLUTION* 74-97 (1996).

Freeman's 2005 edition of *Biological Science* frames his explanation of the evidence for evolution as a refutation of creationism. He describes special creation as the view that life underwent "independent creation of living organisms by a supernatural being"<sup>132</sup> and then states that Darwin's view "was clearly a radical departure from the pattern of independently created and immutable species proposed by the theory of special creation."<sup>133</sup> Some of Freeman's specific attacks on special creation include:

- "Our planet and its species are dynamic—not static, (unchanging) as claimed by the theory of special creation."<sup>134</sup>
- "Darwin realized that this pattern—puzzling when examined as a product of special creation—made perfect sense when interpreted in the context of evolution."<sup>135</sup>
- "If species were created independently of one another, these types of similarities would not occur."<sup>136</sup>
- Descent "with modification was a more successful and powerful scientific theory because it explained observations—such as vestigial traits and the close relationships among species on neighboring islands—that special creation could not."<sup>137</sup>

Freeman goes on to argue that both creationism and ID have been deemed unconstitutional because they allegedly "promote a specific religious belief, [and] because they are founded on religious tenets codified in the Bible,"<sup>138</sup> and as in his earlier edition, he provides various arguments against those viewpoints.

Editions of Freeman's textbook *Evolutionary Analysis*, co-authored with Jon Herron, contrasts evolution as an explanation that opposes the religious view of special creation:

The Theory of Special Creation, for example, makes three statements of fact: (1) Species were created independently of one another, (2) They do not change through time, and (3) They were created recently. According to the Theory of Special Creation,

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132. FREEMAN 2005, *supra* note 127, at 495.

133. *Id.* at 496.

134. *Id.* at 497-98.

135. *Id.* at 498.

136. *Id.* at 500.

137. *Id.* at 502.

138. *Id.* at 513.

the process responsible for this pattern was a special, or supernatural, act of creation by God.

The goal of this chapter is to review evidence that supports an alternative statement of fact that Darwin called “descent with modification,” and which later came to be known as evolution.<sup>139</sup>

After observing that the U.S. Supreme Court ruled creationism to be “essentially a religious idea,”<sup>140</sup> the textbook devotes several pages to rebutting the arguments of creationists.<sup>141</sup> Freeman and Herron argue that “the presence of vestigial traits . . . is inexplicable under special creation,”<sup>142</sup> and concludes that “[s]everal lines of evidence argue that species were not created independently.”<sup>143</sup> The authors further contend that “curious similarities in structure and development unrelated to function” are “difficult to explain under the Theory of Special Creation, but easy to explain under the Theory of Evolution.”<sup>144</sup> Like Futuyma, they extensively cite “nonfunctional pseudogene[s]” as being “puzzling under the Theory of Special Creation, but readily understandable under the Theory of Evolution.”<sup>145</sup>

The textbook also devotes several pages to refuting the “Argument from Design,” which it defines as holding that “adaptations must result from the actions of a conscious entity,”<sup>146</sup> or “the work of a conscious designer.”<sup>147</sup>

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139. SCOTT FREEMAN & JON C. HERRON, *EVOLUTIONARY ANALYSIS* 26 (3d ed. 2004) [hereinafter FREEMAN & HERRON 3d ed.]; SCOTT FREEMAN & JON C. HERRON, *EVOLUTIONARY ANALYSIS* 22 (2d ed. 2001) [hereinafter FREEMAN & HERRON 2d ed.].

140. FREEMAN & HERRON 3d ed., *supra* note 139, at 96; FREEMAN & HERRON 2d ed., *supra* note 139, at 66.

141. FREEMAN & HERRON 3d ed., *supra* note 139, at 96-104; FREEMAN & HERRON 2d ed., *supra* note 139, at 68-70.

142. FREEMAN & HERRON 3d ed., *supra* note 139, at 39; FREEMAN & HERRON 2d ed., *supra* note 139, at 32.

143. FREEMAN & HERRON 2d ed., *supra* note 139, at 44.

144. FREEMAN & HERRON 3d ed., *supra* note 139, at 50. Freeman and Herron’s primary example is “similarity among vertebrate forelimbs,” but some have contended that these similarities are the result of functional constraints, and are not “unrelated to function.” See STEPHEN C. MEYER ET AL., *EXPLORE EVOLUTION: THE ARGUMENTS FOR AND AGAINST NEO-DARWINISM* 46-47 (2007) (“[T]here are only a limited number of skeletal patterns because of the functional requirements of organisms. These are the limits imposed by geometry, and the characteristics of bones and the way they grow.”).

145. FREEMAN & HERRON 3d ed., *supra* note 139, at 41, 54-57. For a discussion of evidence of function for pseudogenes, see *supra* note 103.

146. FREEMAN & HERRON 3d ed., *supra* note 139, at 97; FREEMAN & HERRON 2d ed., *supra* note 139, at 66-67.

147. FREEMAN & HERRON 3d ed., *supra* note 139, at 96.

The authors also observe that many take the existence of biological complexity to “infer the existence of a purposeful and perfect Creator.”<sup>148</sup> Yet they then devote several pages to critiquing the arguments for irreducible complexity put forth by Michael Behe.<sup>149</sup> To ensure that students do not accept these non-evolutionary views, the textbook emphasizes that “[n]othing in biology makes sense except in the light of evolution”<sup>150</sup> and calls evolution by natural selection “one of the best documented and most successful theories in the biological sciences.”<sup>151</sup>

A variety of other textbooks also attack and disparage ID or creationism. John Relethford’s textbook *The Human Species: An Introduction to Biological Anthropology* defines ID as “the idea that the biological world was created by an intelligent Creator,”<sup>152</sup> and contends that ID is religious because “the substance of intelligent design creationism is similar to that of biblical creation science.”<sup>153</sup> Relethford commits the unfalsifiable/false contradiction, claiming that “there are no testable hypotheses regarding the specific actions of a creator,” yet explicitly arguing against an “ultimate Creator”:

[W]hy do so many independent traits show the same pattern? One possibility, of course, is that they were designed by an ultimate Creator. The problem with this idea is that it cannot be tested. It is a matter of faith and not of science. *Another problem is that we must then ask ourselves why a Creator would use the same basic pattern for so many traits in different creatures.* Evolution, on the other hand, offers an explanation. Apes and humans share many characteristics because they evolved from a

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148. *Id.*

149. *Id.* at 99-102. Behe and other ID proponents have responded to many of these types of criticisms. See, e.g., Michael J. Behe, A Response to Critics of Darwin’s Black Box (Dec. 12, 2001), [http://www.iscid.org/papers/Behe\\_ReplyToCritics\\_121201.pdf](http://www.iscid.org/papers/Behe_ReplyToCritics_121201.pdf); William A. Dembski, Rebuttal to Reports by Opposing Expert Witnesses (May 14, 2005), [http://www.designinference.com/documents/2005.09.Expert\\_Rebuttal\\_Dembski.pdf](http://www.designinference.com/documents/2005.09.Expert_Rebuttal_Dembski.pdf); Casey Luskin, International Society for Complexity, Information, and Design Archives, Do Car Engines Run on Lugnuts? A Response to Ken Miller & Judge Jones’s Straw Tests of Irreducible Complexity for the Bacterial Flagellum (Apr. 27, 2006), [http://www.iscid.org/papers/Luskin\\_EngineLugnuts\\_042706.pdf](http://www.iscid.org/papers/Luskin_EngineLugnuts_042706.pdf).

150. FREEMAN & HERRON 3d ed., *supra* note 139, at 92 (quoting Theodosius Dobzhansky); FREEMAN & HERRON 2d ed., *supra* note 139, at 62 (same).

151. FREEMAN & HERRON 3d ed., *supra* note 139, at 103; FREEMAN & HERRON 2d ed., *supra* note 139, at 69.

152. JOHN H. RELETHFORD, *THE HUMAN SPECIES: AN INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY* 26 (6th ed. 2005).

153. *Id.*

common ancestor. . . . *If the python was created, then what purpose would there have been to give it a pelvis?*<sup>154</sup>

The text then attacks religion outright, stating that “the implications of evolution have sometimes frightened people,” explaining that a major source of conflict over evolution “lies in the implications evolution has for religious views.”<sup>155</sup> According to the textbook, those religious views include “the biblical view of creation” and “creation science.” He further asserts that “the proper forum for such discussions is probably a course in comparative religions.”<sup>156</sup> Yet regarding these religious views, the textbook states that “none of these [tenets of creation science are] supported by the scientific evidence.”<sup>157</sup> In particular, the textbook explains that “the fossil record . . . provides ample evidence to reject the Flood hypothesis.”<sup>158</sup> He concludes by disparaging creationism, stating that “the doctrines of ‘creation science’ attract many people” on merely an “emotional level.”<sup>159</sup>

Stein & Rowe’s textbook *Physical Anthropology* has a consistent tone that is hostile towards religion, opening its section on “Evolution and Creationism” by noting that “the captain of the *Beagle*, Robert Fitzroy, presented Charles Darwin with . . . a copy of the newly published *Principles of Geology*.”<sup>160</sup> The text then calls Fitzroy “a religious fundamentalist,” and speculates that as such, Fitzroy must have been anti-intellectual, arguing that “[h]ad Fitzroy read the book, he may have never given it to Darwin.”<sup>161</sup>

The textbook then frames the debate as one of evolution as fighting against religious belief: “*On the Origin of Species* became the focus of a controversy between those who believed in divine creation of life (creationists) and those who believed in a natural origin of life (evolutionists).”<sup>162</sup> The book later states that one scientist who “viewed the

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154. *Id.* at 21-22 (emphasis added). For a pro-ID discussion of shared similarities among living organisms, see WILLIAM DEMBSKI & JONATHAN WELLS, *THE DESIGN OF LIFE: DISCOVERING SIGNS OF INTELLIGENCE IN LIVING SYSTEMS* 112-44 (2008). For a critique of the methodology used to infer common descent based upon organismal similarities, see STEPHEN C. MEYER ET AL., *EXPLORE EVOLUTION: THE ARGUMENTS FOR AND AGAINST NEO-DARWINISM* 39-70 (2007). For a discussion of vestigial organs, see *supra* note 103.

155. RELETFORD, *supra* note 152, at 23.

156. *Id.* at 25.

157. *Id.* at 24.

158. *Id.* at 25.

159. *Id.*

160. PHILIP L. STEIN & BRUCE M. ROWE, *PHYSICAL ANTHROPOLOGY* 23 (8th ed. 2003).

161. *Id.*

162. *Id.*

complexity of life as a manifestation of divine design” had a view which was “a far cry from the vision of evolutionary change published by Charles Darwin.”<sup>163</sup>

*Physical Anthropology* notes that creationists have argued that “the biblical account of creation could be scientifically proved” but that teaching this view has been struck down by various courts because it is “a religious viewpoint.”<sup>164</sup> The book also observes that those who questioned the view that evolution is “a fact” have “received both media ridicule and criticism from scientific organizations including the National Academy of Sciences.”<sup>165</sup> It explicitly attacks creation-science as wrong by claiming that “[m]ainstream scientists, many religious leaders, and the Supreme Court discount any scientific value of ‘creation-science’ statements.”<sup>166</sup>

Regarding ID, *Physical Anthropology* calls it “essentially a religious, and not a scientific explanation.”<sup>167</sup> The textbook opposes ID by saying that “evolutionary biologists point out that simply because biological processes appear to be unexplainable in terms of today’s scientific knowledge, we do not have to assume the presence of a supernatural designer as the logical alternative.”<sup>168</sup> The textbook then equates ID with “divine creation” and expressly contends that this viewpoint is false, stating that “[e]volutionary biologists also point out that many complex biological systems exhibit major imperfections or design flaws that should not be present if a divine intelligence were responsible for that design.”<sup>169</sup> The textbook concludes, “Design flaws can best be explained as the natural outcome of gradual modification through time through natural selection rather than as the handiwork of a divine force.”<sup>170</sup>

Likewise, Barton et al.’s textbook *Evolution* teaches that “natural selection is an imperfect mechanism . . . . [E]vidence that natural selection is responsible for the appearance of design in the living world comes from characteristic imperfections in adaptation.”<sup>171</sup> The textbook concludes by explicitly arguing that these observations oppose theistic views: “adaptations in the natural world show just the kinds of imperfections that

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163. *Id.* at 131.

164. *Id.* at 23 (citing *Edwards v. Aguillard*, 482 U.S. 578 (1987)).

165. *Id.* at 25.

166. *Id.* at 23.

167. *Id.* at 25.

168. *Id.*

169. *Id.*

170. *Id.*

171. NICHOLAS H. BARTON ET AL., *EVOLUTION* 75 (2007).

we would expect from natural selection but not from an omnipotent designer.”<sup>172</sup>

Belk and Maier’s textbook *Biology: Science for Life* takes special aim at intelligent design, but also critiques creationism.<sup>173</sup> The third edition of their textbook opens with a discussion of the *Kitzmiller* case, noting that the plaintiffs argued for “their children’s right to a public education free from religious indoctrination.”<sup>174</sup> The textbook later quotes Judge Jones’ ruling, stating that “[t]he overwhelming evidence at trial established that [intelligent design] is a religious view, a mere re-labeling of creationism and not a scientific theory.”<sup>175</sup> Their textbook commits the unfalsifiable/false fallacy against intelligent design, claiming that it is “unfalsifiable”<sup>176</sup> and thus “intelligent design is not science,”<sup>177</sup> but after a lengthy discussion of the scientific evidence, the book concludes that “[s]cientists favor the theory of common descent because it is the best explanation for how modern organisms came about,”<sup>178</sup> and that “common descent (or evolution) is a fact.”<sup>179</sup> One edition of their textbook states that “The Argument from Design” has “major flaws” and thus “organisms appear to be ‘designed’ for their environment, but only because natural selection has favored the evolution of traits that increase survival and reproduction in that environment.”<sup>180</sup>

Regarding special creation, Belk and Maier call it the “static model” of origins, and state that “Darwin maintained that the hypothesis of evolution provided a better explanation for vestigial structures than did the hypothesis of special creation represented by the static model.”<sup>181</sup> After a lengthy discussion of the evidence allegedly refuting this model, the textbook attempts to ensure that students understand that these views are false, concluding that “[s]chool boards and legislatures do not serve their students

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172. *Id.* at 81.

173. COLLEEN BELK & VIRGINIA BORDEN MAIER, *BIOLOGY: SCIENCE FOR LIFE* (3d ed. 2009) [hereinafter BELK & MAIER 3d ed.]; COLLEEN BELK & VIRGINIA BORDEN MAIER, *BIOLOGY: SCIENCE FOR LIFE* (2d ed. 2007) [hereinafter BELK & MAIER 2d ed.].

174. BELK & MAIER 3d ed., *supra* note 173, at 225.

175. *Id.* at 250. Citing the *Kitzmiller* ruling, the textbook further makes the inaccurate statement that “[f]or now, intelligent design cannot be presented as a viable alternative to evolution in public schools,” even though Judge Jones’ ruling was from the lowest level of the federal courts and at most is only binding within the Middle District of Pennsylvania. *Id.*

176. *Id.*

177. *Id.* at 231.

178. *Id.* at 249.

179. *Id.* at 231.

180. BELK & MAIER 2d ed., *supra* note 173, at 232.

181. BELK & MAIER 3d ed., *supra* note 173, at 238.

well by arguing that 'alternative' scientific hypotheses that have been convincingly falsified through systematic observation should be included in their education."<sup>182</sup>

E.O. Wilson's famous textbook *Sociobiology* strongly promotes evolution while contending that "[t]he enduring paradox of religion is that so much of its substance is demonstrably false, yet it remains a driving force in all societies" because "[m]en would rather believe than know, have the void as purpose, as Nietzsche said, than be void of purpose."<sup>183</sup> Another textbook, *Life on Earth*, co-authored by Wilson and seven other authors, attacks an ID-like view, arguing concerning differences between species that "[n]o forethought or master planning is implied here, only two different life patterns, both of which confer a high survival value on their species. . . ."<sup>184</sup> Likewise, Neil R. Carlson's textbook *Physiology of Behavior* asserts that "an important difference exists between machines and organisms: Machines have inventors who had a purpose when they designed them, whereas organisms are the result of a long series of accidents."<sup>185</sup>

Various editions of Campbell's widely used textbook, *Biology*, state that "Darwin gave biology a sound scientific basis by attributing the diversity of life to natural causes rather than divine creation"<sup>186</sup> and conclude that "Darwin's book subverted a world view that had been taught for centuries."<sup>187</sup> More recent editions of Campbell's textbook likewise state that "[b]y attributing the diversity of life to natural causes rather than to supernatural creation, Darwin gave biology a sound, scientific basis,"<sup>188</sup> and "Darwin's book challenged a worldview that had been taught for

182. *Id.* at 250; see also BELK & MAIER 2d ed., *supra* note 173, at 253 ("School boards and legislatures do not serve their children well by arguing that 'alternative' scientific hypotheses that have been convincingly falsified through systematic observation should be included in their education as possible explanations for the diversity of life.").

183. EDWARD O. WILSON, *SOCIOBIOLOGY: THE NEW SYNTHESIS* 561 (1975) (2d prtng. 2000).

184. EDWARD O. WILSON ET AL., *LIFE ON EARTH* 9 (1973).

185. NEIL R. CARLSON, *PHYSIOLOGY OF BEHAVIOR* 8 (3d ed. 1986).

186. NEIL A. CAMPBELL, *BIOLOGY* 413 (4th ed. 1996) [hereinafter CAMPBELL 4th ed.]; NEIL A. CAMPBELL, *BIOLOGY* 431 (3d ed. 1993) [hereinafter CAMPBELL 3d ed.]; NEIL A. CAMPBELL, *BIOLOGY* 437 (2d ed. 1990) [hereinafter CAMPBELL 2d ed.]; NEIL A. CAMPBELL, *BIOLOGY* 431 (1987) [hereinafter CAMPBELL 1st ed.].

187. CAMPBELL 4th ed., *supra* note 186, at 400; CAMPBELL 3d ed., *supra* note 186, at 418; CAMPBELL 2d ed., *supra* note 186, at 424; CAMPBELL 1st ed., *supra* note 186, at 421.

188. NEIL A. CAMPBELL & JANE B. REECE, *BIOLOGY* 442 (6th ed. 2002); NEIL A. CAMPBELL, JANE B. REECE & LAWRENCE G. MITCHELL, *BIOLOGY* 426 (5th ed. 1999).

centuries.”<sup>189</sup> Likewise, a science book for teens, *The Facts on File Biology Handbook*, explains that Darwin’s work “was seen as overturning firmly held religious beliefs about the origins of life on Earth.”<sup>190</sup>

Another recent textbook, *Biology: Observation and Concept*, explains that during the debate over evolution, “ideas of special creation, spawned out of ignorance, were both welcome and desperately hard to eradicate even in the face of overwhelming evidence.”<sup>191</sup> Dott and Prothero’s textbook *Evolution of the Earth* observes that the Supreme Court called creationism “a religious belief” but then claims it has “no scientific credibility” and is equivalent to the views of the “Flat Earth Society.”<sup>192</sup> In one edition of Neil Campbell’s popular textbook *Biology*, influential evolutionary paleontologist Niles Eldredge asserts that “students may have such religious beliefs” as “creationism,” and goes on to protest creationists using his work to oppose evolution, characterizing them as “the enemy.”<sup>193</sup>

The textbook *Discover Biology* explains that “Darwin’s ideas on evolution and natural selection revolutionized biology and had a profound effect on many other fields, including literature, economics, and religion . . . [.]”<sup>194</sup> and explains that “gene mutations occur at random and are not directed toward any goal.”<sup>195</sup> The textbook describes evolution in a way that precludes an evolutionary process that is guided by intelligent design:

[T]here is an important and fundamental difference between biological evolution and, say, the evolution of hats. Hats change over time because of deliberate decisions made by their designers. . . . [B]iological evolution is not guided by a “designer” in nature. . . .<sup>196</sup>

Likewise, Stearns and Hoekstra’s *Evolution: An Introduction* observes that “[n]othing consciously chooses what is selected” because “[t]here is no

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189. CAMPBELL & REECE, *supra* note 188, at 429; CAMPBELL, REECE & MITCHELL, *supra* note 188, at 415.

190. THE DIAGRAM GROUP, *THE FACTS ON FILE BIOLOGY HANDBOOK* 135 (2000).

191. JAMES F. CASE & VERNON E. STIERS, *BIOLOGY: OBSERVATION AND CONCEPT* 428 (1971).

192. ROBERT H. DOTT & DONALD R. PROTHERO, *EVOLUTION OF THE EARTH* 69-70 (5th ed. 1994).

193. CAMPBELL 2d ed., *supra* note 186, at 420-21.

194. MICHAEL L. CAIN, HANS DAMMAN, ROBERT A LUE & CAROL KAESUK YOON, *DISCOVER BIOLOGY* 331 (2d ed. 2002).

195. *Id.* at 321.

196. *Id.* at 320.

long term goal, for nothing is involved that could conceive of a goal.”<sup>197</sup> Finally, Helena Curtis and N. Sue Barnes’s text *Invitation to Biology* explains to students that “[i]t is difficult to avoid the speculation that Darwin, as has been the case with others, found the implications of his theory difficult to confront.”<sup>198</sup> The implications described in this text are striking:

The real difficulty in accepting Darwin’s theory has always been that it seems to diminish our significance. Earlier, astronomy had made it clear that the earth is not the center of the universe or even of our own solar system. Now the new biology asked us to accept the proposition that, like all other organisms, we too are the products of a random process and that, as far as science can show, we are not created for any special purpose or as part of any universal design.<sup>199</sup>

To emphasize the inappropriateness of making these types of statements in a public school science classroom, imagine the uproar over a textbook that explicitly attacked the Christian doctrine of the virgin birth of Jesus Christ, or explicitly argued against the resurrection of Christ. Or imagine the outcry against a textbook denying that Mohammed was divinely inspired when writing the Koran. Along these very lines, the NCSE’s publication *Voices for Evolution* quotes The National Committee for Public Education and Religious Liberty offering analogous hypothetical situations, saying that “[t]o teach pupils that the account of Moses splitting the sea or Jesus walking on it is only a theory could hardly be reconciled with the Amendment’s ban on the inhibition of religion.”<sup>200</sup> Yet the NCSE and its cohorts in the evolution lobby advocate making far harsher critiques of ID or creationism – viewpoints they deem are religious. As will be discussed further in Part II.B, the NCSE even helped produce a website recommending that teachers inform students that ID is “without merit,”<sup>201</sup> asserting that backers of ID use deceitful tactics.<sup>202</sup> As noted earlier in this

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197. STEPHEN C. STEARNS & ROLF F. HOECKSTRA, *EVOLUTION: AN INTRODUCTION* (2d ed. 2005).

198. HELENA CURTIS & N. SUE BARNES, *INVITATION TO BIOLOGY* 474 (3d ed. 1981).

199. *Id.* at 475.

200. NAT’L CTR. FOR SCI. EDUC., INC., *VOICES FOR EVOLUTION* 201 (Carrie Sager ed., 2008).

201. University of California Museum of Paleontology, *Understanding Evolution*, [http://evolution.berkeley.edu/evolibrary/article/idbrief\\_01](http://evolution.berkeley.edu/evolibrary/article/idbrief_01) (last visited Dec. 16, 2008).

202. *Id.* (“Backers of intelligent design frequently misrepresent or disregard aspects of evolutionary theory, the results of evolutionary research, and the nature of science in order to

Article, the NCSE's president (who helped oversee production of that website) tells his fellow science educators that "no one with scientific or philosophical integrity is going to take [ID] seriously in [the] future."<sup>203</sup>

## 2. Judicial Bans on Inhibiting or Opposing Religion

The *Kitzmiller* plaintiffs, and the district court ruling they won that declared ID unconstitutional, relied heavily on the *Lemon* test, which requires that the "principal or primary effect" of a law "must be one that neither advances *nor* inhibits religion."<sup>204</sup> The *Lemon* test would seem to prohibit government inhibition of religion with the same measure of force with which it bans the advancement of religion, for "[t]he government neutrality required under the Establishment Clause is . . . violated as much by government disapproval of religion as it is by government approval of religion."<sup>205</sup> Yet few cases have applied the *inhibition of religion* doctrine; as one federal appellate court lamented, "because it is far more typical for an Establishment Clause case to challenge instances in which the government has done something that favors religion or a particular religious group, we have little guidance concerning what constitutes a primary effect of inhibiting religion."<sup>206</sup> Nonetheless, that same court observed that "[a]lthough *Lemon* is most frequently invoked in cases involving alleged governmental preferences to religion, the test also accommodates the analysis of a claim brought under a hostility to religion theory."<sup>207</sup>

The doctrine prohibiting government inhibition of religion can be traced through some significant U.S. Supreme Court cases. In the landmark case *School District of Abington Township v. Schempp*, the U.S. Supreme Court recognized that "the State may not establish a 'religion of secularism' in the sense of affirmatively opposing or showing hostility to religion, thus

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promote their agenda and sway public opinion against evolutionary biology."). For further discussion of this website, see *infra* notes 267-68 and accompanying text.

203. Kevin Padian & Nicholas J. Matzke, *Darwin, Dover, 'Intelligent Design' and Textbooks*, *BIOCHEMICAL J.* 29, 39 (2009).

204. *Lemon v. Kurtzman*, 403 U.S. 602, 612 (1971) (emphasis added). See also *Smith v. Bd. of Sch. Comm'rs of Mobile County*, 827 F.2d 684, 690, 692 (11th Cir. 1987) (equating "inhibiting religion" with exhibiting "an attitude antagonistic to theistic belief" or attempting to "discredit it").

205. *Vernon v. City of Los Angeles*, 27 F.3d 1385, 1396 (9th Cir. 1994).

206. *Vasquez v. Los Angeles ("LA") County*, 487 F.3d 1246, 1256 (9th Cir. 2007) (citing *Am. Family Ass'n., Inc. v. City & County of San Francisco*, 277 F.3d 1114, 1122 (9th Cir. 2002), *cert. denied*, 537 U.S. 886 (2002)).

207. *Id.* at 1255 (citations and internal quotation marks omitted).

'preferring those who believe in no religion over those who do believe.'<sup>208</sup> As noted, in *Epperson* the Court likewise held that "the State may not adopt programs or practices in its public schools or colleges which 'aid or oppose' any religion. *This prohibition is absolute.*"<sup>209</sup> Consistent with this principle, in *Board of Education of the Westside Community Schools v. Mergens*, the Court ruled state action is impermissible when it "would demonstrate not neutrality but hostility toward religion."<sup>210</sup> Likewise, the endorsement test prohibits "disapproval" of religion.<sup>211</sup>

Assuming *ad arguendo* that ID's critics are correct in holding that ID is a religious viewpoint, then it should not only be unconstitutional for the government to "advance" ID, but also to "inhibit" ID. If ID is a religious viewpoint, the government may not violate the "absolute" prohibition against opposing it or showing hostility or disapproval towards it. Jay Wexler argues that public school teachers could send a message of disapproval towards religious views on origins if they suggest that "such beliefs are irrational or primitive compared with scientific views" or "make explicit first-person statements disapproving of religious viewpoints. . . ."<sup>212</sup>

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208. *Sch. Dist. of Abington Twp. v. Schempp*, 374 U.S. 203, 225 (1963) (citations and internal quotation marks omitted).

209. *Epperson v. Arkansas*, 393 U.S. 97, 106 (1968) (emphasis added) (citations and internal quotation marks omitted).

210. *Bd. of Educ. of Westside Cmty. Schs. v. Mergens*, 496 U.S. 226, 248 (1990). *See also* *Van Orden v. Perry*, 545 U.S. 677, 683-84 (2005) (stating that the First Amendment "requires that we neither abdicate our responsibility to maintain a division between church and state nor evince a hostility to religion by disabling the government from in some ways recognizing our religious heritage"); *Rosenberger v. Rector and Visitors of Univ. of Va.*, 515 U.S. 819, 845-46 (1995) (warning against state actions that "would risk fostering a pervasive bias or hostility to religion, which could undermine the very neutrality the Establishment Clause requires").

211. *Lynch v. Donnelly*, 465 U.S. 668, 690 (1984) (O'Connor, J., concurring). *See also* *Mergens*, 496 U.S. at 249 ("the Act's purpose was not to 'endorse or disapprove of religion'") (quoting *Wallace v. Jaffree*, 472 U.S. 38, 56 (1985)).

212. Jay D. Wexler, *Darwin, Design, and Disestablishment: Teaching the Evolution Controversy in Public Schools*, 56 VAND. L. REV. 751, 792 (Apr. 2003). Other scholars have suggested that if ID is religion, then banning the teaching of ID, much less critiquing it, could be unconstitutional. *See, e.g.*, Arnold H. Loewy, *The Wisdom and Constitutionality of Teaching Intelligent Design in Public Schools*, 5 FIRST AMEND. L. REV. 82, 83 (Fall 2006) ("[t]o allow all ideas about the origin of man that do not presuppose an intelligent designer, but forbid all theories that explore the possibilities of such a designer, expresses hostility, not neutrality, towards religion"); Johnny Rex Buckles, *The Constitutionality of the Monkey Wrench: Exploring the Case for Intelligent Design*, 59 OKLA. L. REV. 527, 589 (2007) ("A school board's secular public justification for a decision to forbid the teaching of intelligent design may well constitute a thinly veiled attempt to suppress religiously grounded beliefs about human origins.").

Many of the textbooks discussed in Part III.A.1, *supra*, would certainly meet such a standard of disapproval.<sup>213</sup> Yet ID's critics have expressed no apparent qualms about public schools showing such hostility towards ID. In fact, the *Kitzmiller* complaint explicitly lamented to the judge that under Dover's ID policy, "[s]tudents will not be told of any flaws or weaknesses in intelligent design, much less that the scientific community does not consider it valid science."<sup>214</sup> Apparently, the *Kitzmiller* plaintiffs saw no negative constitutional ramifications of teaching public school students about the "flaws or weaknesses" in the alleged "specific religious viewpoint and beliefs encompassed by the assertion or argument of intelligent design."<sup>215</sup> Would such instruction be constitutional?

One lower court has attempted to address this question with respect to the critique of creationism (which is different from ID) in a public school. In the spring of 2009, a federal district court in Southern California issued a ruling in *C.F. v. Capistrano Unified School District* where student-parent plaintiffs "Farnan" filed suit after a history teacher, "Corbett," made various statements during in-class instruction that Farnan found objectionable, including some instruction that allegedly disparaged creationism.<sup>216</sup>

In balancing the interests of the parties, Judge James E. Selna recognized the complexity of the question, which reflected a "tension between the constitutional rights of a student and the demands of higher education as reflected in the Advanced Placement European History course in which Farnan enrolled."<sup>217</sup> The judge continued:

It also reflects a tension between Farnan's deeply-held religious beliefs and the need for government, particularly schools, to carry out their duties free of the strictures of any particular religious or philosophical belief system. The Constitution recognizes both sides of the equation.<sup>218</sup>

Regarding Corbett's free speech rights as a teacher, the court noted that "[t]o the extent that Farnan is arguing that Corbett may not put forth secular ideas because he would be creating a 'secular religion,' Farnan's argument fails."<sup>219</sup> The court stated that its ruling therefore "reflects the

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213. *See supra* Part III.A.

214. Complaint at 19-20, *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005) (No. 4:CV 04-2688).

215. *Id.* at 19.

216. *C.F. v. Capistrano Unified Sch. Dist.*, 615 F. Supp. 2d 1137 (C.D. Cal. 2009).

217. *Id.* at 1155.

218. *Id.*

219. *Id.* at 1141 n.2.

constitutionally-permissible need for expansive discussion even if a given topic may be offensive to a particular religion or if a particular religion takes one side of a historical debate” but that “[t]he decision also reflects that there are boundaries” to the permissibility of such district-sponsored speech.<sup>220</sup>

As to Farnan’s rights, the court observed that “the state may not affirmatively show hostility to religion”<sup>221</sup> and stated that its task was therefore to “apply the *Lemon* test to determine whether Corbett made statements in class that were improperly hostile to or disapproving of religion in general, or of Christianity in particular.”<sup>222</sup> The court’s analysis thus asked “whether, when looking at the context as a whole, a reasonable observer would perceive the primary effect of Corbett’s statements as disapproving of religion in general or of Christianity in particular.”<sup>223</sup>

Some of Corbett’s controversial statements regarding creationism included:

- (1) “I will not leave John Pelozza alone to propagandize kids with this religious, superstitious nonsense.”<sup>224</sup>
- (2) “[T]here is as much evidence that God did it as there is that there is a gigantic spaghetti monster living behind the moon who did it. Therefore, no creation, unless you invoke magic. Science doesn’t invoke magic. If we can’t explain something, we do not uphold that position. It’s not, ooh, then magic. That’s not the way we work. Contrast that with creationists. They never try to disprove creationism. They’re all running around trying to prove it. That’s deduction. It’s not science. Scientifically, it’s nonsense.”<sup>225</sup>

The court held that statement (1) ran afoul of the Establishment Clause, but that statement (2) was constitutionally permissible. When Corbett stated “an unequivocal belief that creationism is ‘superstitious nonsense’,”<sup>226</sup> the court found this “primarily sends a message of disapproval of religion or creationism”<sup>227</sup> and “therefore constitutes improper disapproval of religion

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220. *Id.* at 1156.

221. *Id.* at 1141 n.2.

222. *Id.* at 1141.

223. *Id.* at 1148.

224. *Id.* at 1146.

225. *Id.* at 1152.

226. *Id.* at 1146.

227. *Id.*

in violation of the Establishment Clause.”<sup>228</sup> The court found that Corbett could have criticized the other teacher who had taught creationism “without disparaging those views.”<sup>229</sup> *At the very least*, then, it seems unconstitutional to critique religious viewpoints when the statements entail disparagement that is unnecessary or superfluous to the academic critique itself.

While the holding in *C.F.* in some sense validates this Article’s contention that there comes a point where critique of creationism is no longer constitutional, there is much room for criticism of the ruling. As noted, the court found that calling creationism “superstitious nonsense” is unconstitutional, but calling it “scientifically . . . nonsense” is permissible. Is this a distinction without a difference? The court found that statement (2) was permissible because in its context, Corbett was merely seeking “to distinguish generally accepted scientific reasoning from religious belief”<sup>230</sup> and showing “that generally accepted scientific principles do not logically lead to the theory of creationism.”<sup>231</sup> In essence, the court held that statement (2) was permissible because Corbett was merely explaining why creationism is not scientific. Such instruction undoubtedly should be considered a legitimate endeavor for a public school teacher, for one can explain why a viewpoint is unscientific and religious without taking a position on the “ultimate veracity” of that view, or without critiquing that view as false.<sup>232</sup>

In this regard, Corbett’s instruction in statement (2) might have been constitutional had it actually fit the court’s description. But when allegedly trying to convey that creationism is unscientific and religious, Corbett equated belief in creationism with belief in “magic” or “a gigantic spaghetti monster living behind the moon,” and then called creationism “scientifically . . . nonsense.” Was all of this necessary? When a public school teacher compares a religious viewpoint to such outlandishly false and nonsensical fictions, whatever the purpose, the objective reasonable observer would undoubtedly perceive a primary effect that is disapproving.

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228. *Id.*

229. *Id.* at 1149.

230. *Id.* at 1152.

231. *Id.*

232. *See* *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 745-46 (M.D. Pa. 2005) (“To conclude and reiterate, we express no opinion on the ultimate veracity of ID as a supernatural explanation. However, we commend to the attention of those who are inclined to superficially consider ID to be a true ‘scientific’ alternative to evolution without a true understanding of the concept the foregoing detailed analysis. . . . ID is an interesting theological argument, but . . . it is not science.”).

Corbett's statement (2) seems to entail superfluous disparagement that is unnecessary for the critique itself, and certainly seems to meet Wexler's standard of denigrating religious beliefs as "irrational or primitive compared with scientific views."<sup>233</sup> At the very least, Corbett could have easily explained why creationism is unfalsifiable and thereby unscientific, "without disparaging those views."<sup>234</sup> By placing creationism on par with obviously false and nonsensical viewpoints, Corbett was not only portraying it as unfalsifiable but also implying creationism is false, in effect employing the "unfalsifiable/false" fallacy which plagues so many other treatments of creationism in public school curricula described in Part III.A.1, *supra*.

But there is a deeper concern here beyond the *C.F.* court's apparent failure to properly analyze all of the facts under its interpretation of the law. As noted in Part II.H, courts have consistently held that advocating creationism in public schools is unconstitutional. In this regard, this present author agrees with courts that there are certain core tenets of creationism—namely its adherence to supernatural or divine forces—which make it an unscientific and untestable religious viewpoint that cannot be constitutionally advocated in public schools. That having been said, there is a glaring asymmetry in the law when courts hold on the one hand that creationism cannot be advocated in public schools because it is not science, but on the other hand that it can be disparaged as "scientifically . . . nonsense," also because it is not science. To put it another way, those who desire legal symmetry will find the law sorely lacking if advocating creationism is prohibited on the grounds that it is religion, but nonetheless courts permit public schools to critique, attack, and oppose these views as false. When the government takes an affirmative position on the truth or falsity of a religious viewpoint, it is on dangerous constitutional ground. As the U.S. Supreme Court unequivocally held, "If there is any fixed star in our constitutional constellation, it is that no official, high or petty, can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion. . . ." <sup>235</sup> In other words, it is one thing to explain why a

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233. Wexler, *supra* note 212, at 792; *see also* sources cited *supra* note 212.

234. *C.F.*, 615 F. Supp. 2d at 1149.

235. *W. Va. State Bd. of Educ. v. Barnette*, 319 U.S. 624, 642 (1943); *see also* *United States v. Ballard*, 322 U.S. 78, 86-87 (1944):

The law knows no heresy, and is committed to the support of no dogma, the establishment of no sect. . . . Freedom of thought, which includes freedom of religious belief, is basic in a society of free men. It embraces the right to maintain theories of life and of death and of the hereafter which are rank heresy to followers of the orthodox faiths. Heresy trials are foreign to our Constitution.

(purported) religious viewpoint is unfalsifiable (and thereby unscientific), but quite another to state or imply that the viewpoint is objectively and scientifically false. Yet as documented above in Part III.A.1, this latter offense is precisely what many textbooks do with regards to intelligent design or creationism.

Courts cannot treat these viewpoints like religion in order to strike down their advocacy, but then treat them like science (or ignore thinly veiled attempts like Corbett's to paint them as false) when they are being critiqued in order to sanction their disapproval. Either a viewpoint is religious and thereby unconstitutional to advocate as correct or critique as false in public schools, or it is scientific and fair game for both advocacy and critique in public schools. In this present author's view, creationism should be considered a religious viewpoint that can be neither advocated as true nor critiqued as false in public schools, and intelligent design should be considered a scientific viewpoint that is fair game for both advocacy and critique in public schools. Whatever the solution is, there is presently a gross lack of legal symmetry, and an overabundance of jurisprudential hypocrisy, if a public school teacher cannot legally say that creationism or intelligent design are scientifically correct, but can call these views scientifically incorrect, or "nonsense."

If selective enforcement of the law is a hallmark of tyranny, then we should be exceedingly troubled by both the constitutional implications and hypocrisy of the evolution lobby – behavior that opposes advocating ID and creationism on the grounds they are religious viewpoints, but expressly endorses public schools inhibiting, opposing, and disapproving of those purported religious viewpoints.

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Men may believe what they cannot prove. They may not be put to the proof of their religious doctrines or beliefs. Religious experiences which are as real as life to some may be incomprehensible to others. Yet the fact that they may be beyond the ken of mortals does not mean that they can be made suspect before the law. . . . The religious views espoused by respondents might seem incredible, if not preposterous, to most people. But if those doctrines are subject to trial before a jury charged with finding their truth or falsity, then the same can be done with the religious beliefs of any sect. When the triers of fact undertake that task, they enter a forbidden domain. The First Amendment does not select any one group or any one type of religion for preferred treatment. It puts them all in that position.

*Id.* (citations and internal quotation marks omitted).

B. *Preferring Pro-Evolution Theistic Religious Denominations in Public Schools*

1. General Use of Religion to Advocate Evolution

In his 1949 book *The Meaning of Evolution*, the influential Harvard zoologist George Gaylord Simpson noted the incompatibility between evolution and many types of religion, stating that “some beliefs . . . labeled as religious and involved in religious emotions . . . are flatly incompatible with evolution.”<sup>236</sup> Simpson calls these beliefs “intellectually untenable in spite of their emotional appeal” but explains that “evolution and *true* religion are compatible.”<sup>237</sup>

But what is this “*true* religion” that Simpson describes? The respected historian of evolution, Peter J. Bowler, admits that many theists who reconcile evolution with religion understand that “the openness of Darwinian evolution” implies that “the result is *not preordained*,” and they therefore “see God not as the Creator who designed everything from the start, but as a Power *struggling* to articulate its purpose within the world.”<sup>238</sup> Stephen Jay Gould recognizes that his view that science and religion are wholly separate is only safe among those who believe “that God works through [the] laws of evolution.”<sup>239</sup> The leading scholar of science and religion, Holmes Rolston, concludes that under evolution “[t]here is no place for a supernatural God, intervening in nature,” forcing traditional monotheism to be “steadily pushed toward deism.”<sup>240</sup> Cornell evolutionary biologist William Provine goes so far as to contend that “[o]ne can have a religious view that is compatible with evolution only if the religious view is indistinguishable from atheism.”<sup>241</sup>

Some are not so pessimistic about evolution’s impact upon religion. In 2007, *Newsweek* promoted the book *Thank God for Evolution: How the Marriage of Science and Religion will Transform Your Life and Our World*, by Michael Dowd, a pastor with the United Church of Christ and self-

236. GEORGE GAYLORD SIMPSON, *THE MEANING OF EVOLUTION* 5 (1949).

237. *Id.*

238. PETER J. BOWLER, *EVOLUTION: THE HISTORY OF AN IDEA* 380 (3d ed. 2003) (emphasis added).

239. STEPHEN JAY GOULD, *ROCKS OF AGES* 127 (1999) (citations omitted).

240. *Id.*; see also Holmes Rolston III, *Science, Religion, and the Future*, in *RELIGION AND SCIENCE: HISTORY, METHOD, DIALOGUE* 61, 70 (W. Mark Richardson & Wesley J. Wildman eds., 1996).

241. William B. Provine, *No Free Will*, in *CATCHING UP WITH THE VISION* S117, S123 (Margaret W. Rossiter ed., 1999).

described “Evolutionary Evangelist,”<sup>242</sup> as showing how “understanding evolution can deepen and strengthen faith.”<sup>243</sup> Dowd’s book preaches that salvation is effectively gained through believing in evolution: “Time and again, I have watched young people experience salvation by learning about their evolutionary heritage—that they are the way they are because those drives served their ancient ancestors. Halleluiaah!”<sup>244</sup>

Other theistic evolutionists eagerly use religion to support evolution and oppose intelligent design on the grounds that ID is bad religion. Astronomer George Coyne argues that ID “belittles God”<sup>245</sup> and evolutionary biologist Francisco Ayala has argued that “the theory of evolution is better for religion than intelligent design.”<sup>246</sup> Likewise, Jack Maze, emeritus professor of botany at the University of British Columbia, argues that “ID, as a God of the gaps argument, leads inevitably to idolatry, and violation of the First Commandment.”<sup>247</sup>

Coyne has made clear the precise contours of his theistic evolutionist religious views. In 2006, Coyne was featured at a major conference on evolution and religion sponsored by the American Association for the Advancement of Science (AAAS), where he was quoted saying, “The God of religious faith is a god of love. He did not design me,”<sup>248</sup> implying that ID proponents cannot believe in a loving God.<sup>249</sup> Coyne later gave a talk

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242. Michael Dowd, *My Road to Damascus: The Making of an Evolutionary Evangelist*, <http://www.evolutionarychristianity.org/Damascus.pdf> (last visited Mar. 9, 2009).

243. Sharon Begley, *Can God Love Darwin, Too?*, NEWSWEEK, Sept. 10, 2007, at 45, available at <http://www.newsweek.com/id/40907>.

244. MICHAEL DOWD, THANK GOD FOR EVOLUTION 203 (2007).

245. Kerry Fiallo, *Priest Doubts Accuracy of Creationism*, THE SIGNAL, Sept. 10, 2008, available at <http://media.www.signal-online.net/media/storage/paper771/news/2008/09/10/News/Priest.Doubts.Accuracy.Of.Creationism-3421726.shtml>.

246. Patrick Ross, *Biology Professor Addresses Evolution and its Opponents*, NEW UNIVERSITY, May 5, 2008, available at [http://www.newuniversity.org/main/article?slug=biology\\_professor\\_addresses\\_evolution152](http://www.newuniversity.org/main/article?slug=biology_professor_addresses_evolution152).

247. Jack Maze, *quoted in Mazur/Farias: Natural Selection & Nat’l Security*, The Jeff Farias Show, <http://www.scoop.co.nz/stories/HL0812/S00295.htm> (Dec. 16, 2008).

248. AAAS.org, *Science, Teachers and Clergy Strengthen Bonds at AAAS Evolution Event*, <http://www.aaas.org/news/releases/2006/0220evo.shtml> (last visited Mar. 10, 2009). The news release describes the conference, saying, “Leaders from education, religion and science convened with 400 educators and others here Sunday for a frank look at the challenges educators face in teaching evolution and defending the integrity of science in their classrooms.”

249. Indeed, some theistic evolutionists take a different perspective, such as Terry M. Gray, who writes, “As for the problem of evil, I am not convinced that the Scriptures would have us sacrifice the sovereignty of God in order to preserve his reputation.” Terry M. Gray,

before the AAAS entitled “The Dance of the Fertile Universe: Chance and Destiny Embrace.” His online notes for a talk by that same title state that “[i]f we take the results of modern science seriously, it is difficult to believe that God is omnipotent and omniscient.”<sup>250</sup> Coyne continues, “If we truly accept the scientific view that, in addition to necessary processes and the immense opportunities offered by the universe, there are also chance processes, then it would appear that not even God could know the outcome with certainty.”<sup>251</sup>

Like Coyne, Brown University biologist Kenneth Miller writes in his book, *Finding Darwin's God*, how he believes evolution coheres with his Catholic faith: “Given evolution’s ability to adapt, to innovate, to test, and to experiment, sooner or later it would have given the Creator exactly what He was looking for—a creature who, like us, could know Him, and love Him . . . .”<sup>252</sup> Miller also seems to explicitly endorse the common evolutionary view that “personal existence might not have been preordained by God”<sup>253</sup> and that “mankind’s appearance on this planet was not preordained, that we are here not as the products of an inevitable procession of evolutionary success, but as an afterthought, a minor detail, a happenstance in a history that might just as well have left us out.”<sup>254</sup>

Unlike Miller and Coyne, some theistic evolutionists purport to take a more traditional religious view that attempts to retain the omniscience and omnipotence of God. In his volume *Perspectives on an Evolving Creation*, evolutionary paleontologist and evangelical Christian Keith Miller writes, “Seeing the history of life unfolding with each new discovery is exciting to me. How incredible to be able to look back through the eons of time and see the panorama of God’s evolving creation! God has given us the ability to see into the past and watch his creative work unfold.”<sup>255</sup> Similarly, Olivet Nazarene University professor of biology Richard Colling makes the following statements at various points in his book *Random Designer: Created from Chaos to Connect with the Creator*:

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*Biochemistry and Evolution*, in PERSPECTIVES ON AN EVOLVING CREATION 256, 286 (Keith B. Miller ed., 2003).

250. George Coyne, *God's Chance Creation*, THE TABLET, Aug. 6, 2006, available at <http://www.thetablet.co.uk/articles/1027/>.

251. *Id.*

252. KENNETH R. MILLER, FINDING DARWIN'S GOD: A SCIENTIST'S SEARCH FOR COMMON GROUND BETWEEN GOD AND EVOLUTION 238-39 (1999).

253. *Id.* at 239 (emphasis omitted).

254. *Id.* at 272 (emphasis omitted).

255. Keith B. Miller, *Worshipping the Creator of the History of Life*, in PERSPECTIVES ON AN EVOLVING CREATION 205, 205 (Keith B. Miller ed., 2003).

Every life form from the very beginning of time has developed in strict obedience to the fundamental rules of nature dictated by the Random Designer. Error, mutation, variation, and selection are all part of these rules around which life revolves. . . .

. . . .

Within the parameters of His natural laws, the Random Designer does not limit His options. He is apparently willing to try all possibilities in order to accomplish His predetermined purposes.

. . . .

. . . Most amazingly of all, from the random forces and elements of nature He has mysteriously fashioned productive pathways and created us from clay. And now, after eons of preparation, He extends an offer to connect with Him through the vehicle of our conscious minds and to experience Him in the closeness and intimacy of a mystical, yet intensely personal relationship.<sup>256</sup>

Geneticist Francis Collins, the former director of the Human Genome Project, argues for the theistic evolution position on the grounds that it allows for increased religious fulfillment:

The theistic evolution position . . . has provided for legions of scientist-believers a satisfying, consistent, enriching perspective that allows both the scientific and spiritual worldviews to coexist happily within us. This perspective makes it possible for the scientist-believer to be intellectually fulfilled and spiritually alive, both worshiping God and using the tools of science to uncover some of the awesome mysteries of His creation.<sup>257</sup>

It seems evident that advocates of evolution have a long-standing tradition of using religion to support evolution and explain the meaning and importance of evolution in religious terms. The expression and advocacy of these theistic evolutionary viewpoints, of course, is perfectly legal when done through private speech that is not endorsed by the government.<sup>258</sup>

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256. RICHARD G. COLLING, *RANDOM DESIGNER: CREATED FROM CHAOS TO CONNECT WITH THE CREATOR* 90, 68, 190 (2004).

257. FRANCIS COLLINS, *THE LANGUAGE OF GOD: A SCIENTIST PRESENTS EVIDENCE FOR BELIEF* 201 (2006).

258. *See Bd. of Educ. of Westside Cmty. Schs. v. Mergens*, 496 U.S. 226, 250 (1990) (“[T]here is a crucial difference between government speech endorsing religion, which the

However, prominent voices within the evolution lobby are encouraging teachers to endorse and prefer these religious viewpoints within the public school science classroom.

## 2. Examples of Preferring Pro-Evolution Theistic Religious Viewpoints in Public Schools

Part III.A of this Article noted that NCSE spokesperson Susan Spath opposed teaching ID on the grounds that it is a religious viewpoint. Spath later said, "It's not fair to privilege one religious viewpoint by calling it the other side of evolution."<sup>259</sup> Spath is absolutely correct—not only is it unfair for the government to privilege a religious viewpoint, but it is also unconstitutional. Yet granting "privilege" to certain pro-evolution religious viewpoints in the science classroom is precisely what Spath's organization has advocated.

### a. *Caldwell v. Caldwell*

In 2005, Jeanne Caldwell, a parent of public school students in Roseville, California, filed suit against the director of UC Berkeley's Museum of Paleontology, who oversaw the production of a website for teachers called "Understanding Evolution." Caldwell's complaint alleged that "[o]ne intent of the Understanding Evolution Website is to use classroom instruction in science classes to modify the religious beliefs of public school science students so that they will be more willing to accept evolutionary theory as being true."<sup>260</sup> As a result, the complaint contended that the website "advocat[es] that teachers use public school science classrooms to proselytize minor students to adopt the government's preferred religious beliefs and doctrines regarding evolutionary theory."<sup>261</sup>

The Understanding Evolution website was funded with a \$500,000+ government-sponsored National Science Foundation grant awarded to UC Berkeley staff, with various NCSE staff members working to develop the site.<sup>262</sup> The site itself states that it is "a collaborative project of the

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Establishment Clause forbids, and private speech endorsing religion, which the Free Speech and Free Exercise Clauses protect.") (emphasis omitted).

259. Elisabeth Bumiller, *Bush Remarks Roil Debate on Teaching of Evolution*, N.Y. TIMES, Aug. 3, 2005, at A14, available at <http://www.nytimes.com/2005/08/03/politics/03bush.html>.

260. Complaint at 4, *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006) (No. 3:05 Civ. 04166).

261. *Id.* at 8.

262. *Id.* at 4; see also University of California Museum of Paleontology, Understanding Evolution, <http://evolution.berkeley.edu/evolibrary/credits.php> (last visited Mar. 9, 2009).

University of California Museum of Paleontology and the National Center for Science Education.”<sup>263</sup> The grant proposal lists two individuals as “senior personnel” for overseeing the project: Kevin Padian, president of the NCSE and Eugenie Scott, executive director of the NCSE.<sup>264</sup>

The proposal gives the stated purpose of the project as “improv[ing] teacher understanding of the nature of science, the patterns and process of evolution, and the history of evolutionary thought,” which entails helping teachers to realize that “[d]ebates over these processes are ongoing, but they do not question evolution itself.”<sup>265</sup> At one point, the proposal calls evolution a “fact” and asserts that “most ‘challenges’ to evolution and to teaching evolution are based on misconceptions.”<sup>266</sup>

Regarding these “misconceptions,” the Understanding Evolution website states that it is a “misconception” to believe that “[e]volution and religion are incompatible” or that “one always has to choose between [evolution] and religion.”<sup>267</sup> Clearly preferring religious sects that accept evolution, the site asserts that “[m]ost Christian and Jewish religious groups have no conflict with the theory of evolution . . . .”<sup>268</sup> The *Caldwell* complaint also lists the example that “the ‘Misconceptions’ web page includes a cartoon depicting a scientist shaking hands with a religious pastor holding a Bible with a cross on it, intended to convey the message that there is no conflict between religious beliefs and the theory of evolution.”<sup>269</sup>

The Understanding Evolution website links to pages discussing theology and evolution. One link directs users to a page on the NCSE website listing various religious organizations that have issued statements regarding evolution. The list only contains statements from religious organizations that *support* pro-evolution theology, showing an agenda to prefer a

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263. University of California Museum of Paleontology, *supra* note 262.

264. Ex. K to Federal Defendants’ Motion to Dismiss for Lack of Subject Matter Jurisdiction at 14, *Caldwell*, 420 F. Supp. 2d. 1102 (N.D. Cal.) (No. 3:05 Civ. 04166).

265. Ex. B to Federal Defendants’ Motion to Dismiss for Lack of Subject Matter Jurisdiction at 3, 5, *Caldwell*, 420 F. Supp. 2d. 1102 (N.D. Cal.) (No. 3:05 Civ. 04166).

266. *Id.* at 5-6.

267. UnderstandingEvolution.com, Misconceptions About Evolution and the Mechanisms of Evolution, <http://understandingevolution.com/evosite/misconcepts/IVAandreligion.shtml> (last visited Dec. 16, 2008).

268. *Id.* The site has since been modified to read “most religious groups,” instead of “most Christian and Jewish religious groups.”

269. Complaint at 4, *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006) (No. 3:05 Civ. 04166).

particular brand of theology in the classroom.<sup>270</sup> As the *Caldwell* complaint alleged:

The “Misconceptions” web page also includes a link to an NCSE web page entitled “Voices for Evolution” on the NCSE website that includes seventeen purported religious doctrinal statements on the theory of evolution by a number of religious organizations, including the Roman Catholic Church, the Presbyterian Church, and the United Church of Christ, all of which are offered in support of the government’s endorsed religious position that “most Christian and Jewish religious groups have no conflict with the theory of evolution.” The blatantly religious content of these doctrinal statements are [sic] exemplified by a United Church of Christ doctrinal statement on evolution entitled “UNITED CHURCH BOARD FOR HOMELAND MINISTRIES: Creationism, the Church, and the Public School”, which states in part:

“Purpose of the document:

[F]or the United Church Board to work with members of the United Church of Christ and others to understand this issue from the perspective of our religious and educational traditions.

## II. Affirmations

1) We testify to our belief that the historic Christian doctrine of the Creator God does not depend upon any particular account of the origins of life for its truth and validity. The effort of the creationists to change the book of Genesis into a scientific treatise dangerously obscures what we believe to be the theological purpose of Genesis, viz., to witness to the creation, meaning, and significance of the universe and of human existence under the governance of God. The assumption that the Bible contains scientific data about origins misreads a literature which emerged in a pre-scientific age.

2) We acknowledge modern evolutionary theory as the best present-day scientific explanation of the existence of

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270. The link is found at [http://evolution.berkeley.edu/evolibrary/misconceptions\\_faq.php#d1](http://evolution.berkeley.edu/evolibrary/misconceptions_faq.php#d1), *redirect to* [http://www.ncseweb.org/resources/articles/5025\\_statements\\_from\\_religious\\_orga\\_12\\_19\\_2002.asp](http://www.ncseweb.org/resources/articles/5025_statements_from_religious_orga_12_19_2002.asp).

life on earth; such a conviction is in no way at odds with our belief in a Creator God, or in the revelation and presence of that God in Jesus Christ and the Holy Spirit.<sup>271</sup>

By expressly promoting certain religious viewpoints that are pro-evolution, and portraying them as the sectarian views compatible with the scientific “facts” ardently promoted by this website, Understanding Evolution comprises an express attempt to privilege, favor, prefer, advance, and endorse particular religious viewpoints. Public school teachers following the methods recommended by this website would do precisely the same in the classroom. No decision was reached on the merits of this case; the district court dismissed the suit on the grounds that the parent lacked standing to bring the suit, a decision that was summarily affirmed by the Ninth Circuit.<sup>272</sup>

b. Eugenie Scott’s Lesson Plan

One link from the Understanding Evolution website points to a lesson plan developed by Eugenie Scott encouraging teachers to aggressively promote pro-evolution theology in the classroom through classroom exercises. Scott’s lesson plan recommends sending students into the local community to interview religious leaders about religious viewpoints on evolution. Students then bring their interviews back to school in order to discuss the religious views of local ministers *in the science classroom*. The lesson plan’s intent is clearly to favor and endorse religious viewpoints that support evolution. When Scott described the lesson plan, she praised one teacher who performed the exercise so as to promote pro-evolution theology:

[O]ne teacher presented students with a short quiz wherein they were asked, “Which statement was made by the Pope?” or “which statement was made by an Episcopal Bishop?” and given an “a, b, c” multiple choice selection. *All the statements from theologians, of course, stressed the compatibility of theology with the science of evolution. . . . By making the students aware of the diversity of opinion towards evolution extant in Christian*

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271. Complaint at 6-7, *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006) (No. 3:05 Civ. 04166) (emphasis omitted).

272. *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006), *aff’d*, 545 F.3d 1126 (9th Cir. 2008), *cert. denied*, 129 S. Ct. 1617 (2009).

*theology, the teacher helped them understand that they didn't have to make a choice between evolution and religious faith.*<sup>273</sup>

If there are any doubts as to whether Scott aims to promote a particular brand of theology in the science classroom, consider her warning that “[t]he survey-of-ministers approach *may not work if the community is religiously homogeneous, especially if that homogeneity is conservative Christian.*”<sup>274</sup> Scott writes about the ideal outcome of such an exercise:

[Students] came back somewhat astonished, “Hey! Evolution is OK!” Even when there was diversity in opinion, with some religious leaders accepting evolution as compatible with their theology and others rejecting it, it was educational for the students to find out for themselves that there was no single Christian perspective on evolution.<sup>275</sup>

Scott’s article was housed on the UC Berkeley website and was related to the Understanding Evolution website. As a result, Caldwell’s complaint alleged that the Understanding Evolution website sought to proselytize individuals

[b]y telling citizens that “thousands of scientists” are “devoutly religious” and find no conflict between their religious belief and evolutionary theory, and by stating the corollary that almost no “professional scientists” hold the religious belief and viewpoint that religion is in conflict with evolutionary theory, as a further effort to proselytize citizens to adopt the government’s preferred religious belief and viewpoint on evolutionary theory.<sup>276</sup>

Scott has elsewhere asserted that the NCSE’s “goals are not to promote disbelief” but rather that her organization’s “goals are to help people understand evolution and hopefully accept it.”<sup>277</sup> Given that Scott believes that “if your view is a human exceptionalism kind of view, that humans are separate from nature and special—especially if they are special to God as in some Christian traditions, then evolution is going to be threatening to

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273. Eugenie Scott: Dealing with Antievolutionism, <http://www.ucmp.berkeley.edu/fosrec/Scott2.html> (last visited Mar. 9, 2009) (emphasis added).

274. *Id.* (emphasis added).

275. *Id.*

276. Complaint at 10, *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006) (No. 3:05 Civ. 04166).

277. Eugenie Scott, Interview with Minnesota Atheist Radio, [http://mnatheists.org/atheist\\_talk/atheists\\_talk\\_068\\_05\\_03\\_2009.mp3](http://mnatheists.org/atheist_talk/atheists_talk_068_05_03_2009.mp3), at 17:10-17:30.

you,”<sup>278</sup> her lesson plan seems to fit her stated goal of getting students to “accept” evolution while not promoting “disbelief” in religion, by encouraging students to abandon religious viewpoints that are incompatible with evolution. In light of Scott’s lesson plan, it is difficult to take seriously the NCSE’s purported distaste for government attempts “to privilege one religious viewpoint.”

c. Educational Authorities Promoting Theistic Evolution

Eugenie Scott is not the only leading proponent of evolution who encourages teachers to discuss pro-evolution theology in the science classroom. Various influential educational authorities have made similar recommendations for teachers.

In 2007, PBS-NOVA published a “Briefing Packet for Educators” aiming to provide teachers with “easily digestible information to guide and support [them] in facing challenges to evolution.”<sup>279</sup> Yet the guide instructs teachers to discuss religion in the science classroom by posing questions like “Can you accept evolution and still believe in religion?” and answering “Yes. The common view that evolution is inherently antireligious is simply false.”<sup>280</sup> Like the Understanding Evolution website, the PBS-NOVA guide provides statements from religious groups on evolution, but only lists statements from those that support evolution.<sup>281</sup> A teacher following this guidebook would undoubtedly prefer religious views that support evolution.

Likewise, in its booklet *Science, Evolution, and Creationism*, also a guide intended for teachers, the NAS teaches that “the evidence for evolution can be fully compatible with religious faith,”<sup>282</sup> even endorsing religious viewpoints that accept evolution:

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278. According to Scott, certain Christian religious viewpoints are incompatible with evolution as follows:

Evolution is the scientific explanation that has the most repercussions, shall we say, for people’s worldview and religious perspective. Evolution tells you that humans share kinship with all other creatures. For some, that’s a very liberating and exciting idea, and it makes them feel one with nature and it’s empowering and so forth. For others, it’s threatening. If your view is a human exceptionalism kind of view, that humans are separate from nature and special—especially if they are special to God as in some Christian traditions, then evolution is going to be threatening to you.

*Id.* at 48:05-48:50.

279. NOVA, Judgment Day: Intelligent Design on Trial: Briefing Packet for Educators, at 2, <http://www.pbs.org/wgbh/nova/id/media/nova-id-briefing.pdf>.

280. *Id.* at 9, 17.

281. *Id.* at 17.

282. NAT’L ACAD. OF SCI., SCIENCE, EVOLUTION, AND CREATIONISM xiii (2008).

Today, many religious denominations accept that biological evolution has produced the diversity of living things over billions of years of Earth's history. Many have issued statements observing that evolution and the tenets of their faiths are compatible. Scientists and theologians have written eloquently about their awe and wonder at the history of the universe and of life on this planet, explaining that they see no conflict between their faith in God and the evidence for evolution. Religious denominations that do not accept the occurrence of evolution tend to be those that believe in strictly literal interpretations of religious texts.<sup>283</sup>

The booklet then observes that “[m]any religious denominations and individual religious leaders have issued statements acknowledging the occurrence of evolution and pointing out that evolution and faith do not conflict,”<sup>284</sup> providing and endorsing statements from various Christian and Jewish organizations and individuals that accept evolution, and making no mention of those that oppose evolution. Such statements from the nation's leading scientific organization are apparently acceptable, but imagine the outcry if the government promoted and endorsed statements from Christian and Jewish organizations explaining that evolution and faith “do conflict.”

An earlier NAS booklet on the subject, *Teaching About Evolution and the Nature of Science*, also addresses the question, “Can a person believe in God and still accept evolution?” by apparently suggesting that teachers endorse pro-evolution religious views, while attacking those that oppose evolution as having a “misunderstanding”:

Most religions of the world do not have any direct conflict with the idea of evolution. Within the Judeo-Christian religions, many people believe that God works through the process of evolution. That is, God has created both a world that is ever-changing and a mechanism through which creatures can adapt to environmental change over time.

At the root of the apparent conflict between some religions and evolution is a misunderstanding of the critical difference between religious and scientific ways of knowing . . . .

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283. *Id.* at 12.

284. *Id.* at 13-15.

No one way of knowing can provide all of the answers to the questions that humans ask. Consequently, many people, including many scientists, hold strong religious beliefs and simultaneously accept the occurrence of evolution.<sup>285</sup>

The NAS's teacher's guide also provides teachers with the National Science Teachers Association's (NSTA) "Position Statement on the Teaching of Evolution," a statement which attacks ID and creationism because their "claims have been discredited by the available evidence."<sup>286</sup> The NSTA statement then explicitly endorses theistic evolutionist religious viewpoints:

[S]pecial creation is derived from a literal interpretation of Biblical Genesis. It is a specific, sectarian religious belief that is not held by all religious people. Many Christians and Jews believe that God created through the process of evolution. Pope John Paul II, for example, issued a statement in 1996 that reiterated the Catholic position that God created, but that the scientific evidence for evolution is strong.<sup>287</sup>

Having portrayed the pro-evolution viewpoint as the normative Christian view,<sup>288</sup> the NAS's guide further tells teachers that "courts have ruled that 'creation science' is actually a religious view. Because public schools must be religiously neutral under the U.S. Constitution, the courts have held that it is unconstitutional to present creation science as legitimate scholarship."<sup>289</sup> But if teachers follow the proscriptions of educational authorities aligned with the evolution-lobby (such as the NAS, NSTA, PBS and others), then teachers will be not only denigrating and disparaging that

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285. WORKING GROUP ON TEACHING EVOLUTION, NAT'L ACAD. OF SCI., TEACHING ABOUT EVOLUTION AND THE NATURE OF SCIENCE 58 (1998), available at <http://www.nap.edu/catalog/5787.html>.

286. *Id.* app. C, at 125.

287. *Id.*

288. Jay Wexler observes that there could be constitutional implications of wrongly characterizing the religious beliefs of certain religious groups. Wexler, *supra* note 212, at 795-96 ("[D]ifferent Buddhist sects have different interpretations of the Lotus Sutra; contrary to other schools, the Tendai sect has interpreted the text to mean that striving to fulfill desires while on earth is not significantly different from a state of enlightenment. It would be inaccurate, then, for somebody teaching Buddhism to say that the Lotus Sutra teaches that earthly striving is fundamentally different from enlightenment. Such a message would take the non-Tendai view as normative; it would privilege non-Tendai interpretations relative to Tendai ones.").

289. NAT'L ACAD. OF SCI., *supra* note 285, at 58.

particular “religious view” of creation science, but in its place advocating evolution-friendly theistic evolutionist religious viewpoints in science classrooms. Who now is preventing schools from remaining “religiously neutral”?

d. Pro-theistic Evolution Textbooks

Following the proscriptions of the NAS, NSTA, NCSE, and PBS, a variety of biology textbooks explicitly endorse, advocate, and prefer pro-evolution religious viewpoints.

As noted, John Relethford’s textbook, *The Human Species: An Introduction to Biological Anthropology*, states that “the implications of evolution have sometimes frightened people,” and explains that a major source of conflict over evolution “lies in the implications evolution has for religious views.”<sup>290</sup> Relethford offers religious students a way out of this tension by discussing pro-evolution theological views, advocating and endorsing “theistic evolution”:

You can be religious and believe in God and still accept the fact of evolution and evolutionary theory. Only if you take the story of Genesis as literal, historical account does a conflict exist. Many people, including some scientists, look to the evolutionary process as evidence of God’s work, an idea known as *theistic evolution*. As such, many religions support the teaching of evolution in science education rather than creation science. . . . It is no surprise that many ministers, priests, and rabbis have joined the fight against creationism.<sup>291</sup>

Relethford’s textbook even cites the NCSE’s website in the site’s listing various religious groups that support evolution, including the American Jewish Congress, the Lutheran World Federation, the General Convention of the Episcopal Church, and the Unitarian Universalist Association.<sup>292</sup>

Scott Freeman & Jon C. Herron’s *Evolutionary Analysis* similarly endorses the theistic evolutionist viewpoint:

Many scientists see no conflict between evolution and religious faith, and many Christians agree. In 1996, for example, Pope John Paul II acknowledged that Darwinian evolution was a firmly established scientific result, and stated that accepting

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290. JOHN H. RELETHFORD, *THE HUMAN SPECIES: AN INTRODUCTION TO BIOLOGICAL ANTHROPOLOGY* 23 (6th ed. 2005).

291. *Id.*

292. *Id.* at 26.

Darwinism was compatible with traditional Christian understandings of God.

If the fact of evolution and the validity of natural selection are utterly uncontroversial, and if belief in evolution is compatible with belief in God, then why does the creationist debate continue?<sup>293</sup>

Freeman's 2005 edition of *Biological Science* likewise teaches students that the controversy over evolution "is puzzling, given that there is no inherent conflict between accepting the validity of the theory of evolution by natural selection and believing in God."<sup>294</sup> Freeman goes on to endorse particular religious denominations that support evolution:

Pope John Paul II has stated that evolution by natural selection is compatible with traditional Christian understandings of God, and mainstream Protestant denominations have issued resolutions agreeing with this view.

Science and religion are compatible because they address different types of questions.<sup>295</sup>

Freeman concludes by favorably posturing the "many religious leaders as well as many scientists [who] see no conflict between evolution and religious faith."<sup>296</sup>

Barton et al.'s textbook, *Evolution*, teaches students that "Darwinian evolution is consistent with deism, in which God works through regular laws rather than by miracle."<sup>297</sup> Similarly, Douglas Futuyma's 2005 textbook, *Evolution*, prefers theistic evolutionary religious viewpoints:

Many deeply religious people believe in evolution, viewing it as the natural mechanism by which God has enabled creation to proceed. Some religious leaders have made clear their acceptance of the reality of evolution. For example, Pope John Paul II affirmed the validity of evolution in 1996 and emphasized that there is no conflict between evolution and the Catholic Church's theological doctrines. . . . The Pope's position

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293. SCOTT FREEMAN & JON C. HERRON, *EVOLUTIONARY ANALYSIS* 69-70 (2d ed. 2001) (citations omitted).

294. SCOTT FREEMAN, *BIOLOGICAL SCIENCE* 512 (2d ed. 2005).

295. *Id.* at 512-13.

296. *Id.* at 513.

297. NICHOLAS H. BARTON ET AL., *EVOLUTION* 20-21 (2007); *see also id.* at 82.

was close to the argument generally known as theistic evolution, which holds that God established natural laws (such as natural selection) and then let the universe run on its own, without further supernatural intervention.<sup>298</sup>

In case there is any question about which sort of religious viewpoint Futuyma's textbook prefers, he explicitly states that evolution is a "fact":

So is evolution a fact or a theory? In light of these definitions, evolution is a scientific fact. That is, the descent of all species, with modification, from common ancestors is a hypothesis that in the last 150 years or so has been supported by so much evidence, and has so successfully resisted all challenges, that is [sic] has become a fact.<sup>299</sup>

Raven & Johnson's 1992 edition of *Biology* prefers pro-evolution religious views through an exhortation to students that those who use their "God-given gifts to reason" will accept evolution because "[t]he future of the human race depends" on it:

The future of the human race depends largely on our collective ability to deal with the science of biology and all the phenomena that it comprises. . . . We cannot afford to discard the advantages that this knowledge gives us because some of us wish to do so as an act of what we construe as religious faith. Instead, we must use all of the knowledge that we are able to gain for our common benefit. With its help, we can come to understand ourselves and our potentialities better. In no way should such rational behavior be taken as denial of the existence of a Supreme Being; it should rather be considered by those who do have religious faith as a sign that they are using their God-given gifts to reason and to understand.<sup>300</sup>

Finally, the 2008 edition of *Strickberger's Evolution* states that after evolution's "bombardment" of religion, "various theologians placed more emphasis on reinterpreting the Judeo-Christian Bible by either ignoring the creation story in Genesis or by describing it as allegorical or mythical."<sup>301</sup> The textbook explains that "[t]his enabled scientists and intellectuals who

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298. DOUGLAS J. FUTUYMA, *EVOLUTION* 524 (2005).

299. *Id.* at 527.

300. PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY 401* (3d ed. 1992).

301. BRIAN K. HALL & BENEDIKT HALLGRIMSSON, *STRICKBERGER'S EVOLUTION* 664 (4th ed. 2008).

maintained religious affiliations ('theistic evolutionists') to insist that one could believe in both evolution and religion."<sup>302</sup> The textbook then goes on to explicitly laud the "rationality" of the theistic evolutionist religious position:

The position of the Roman Catholic Church as enunciated by several recent Popes illustrates one type of accommodation between religion and evolution, namely acceptance of scientific findings when the evidence is incontrovertible. . . . [Pope John Paul II] . . . declared that scientific findings show that evolution is more than a hypothesis[;] it is "an effectively proven fact." Pope John Paul's acceptance was rational, predicated as it was on the basis that "truth cannot contradict truth." Such rationality makes the beliefs and arguments of creationists more difficult to comprehend.<sup>303</sup>

The textbook's chapter on "Belief, Religion and Evolution" ends with a blatant contradiction and striking example of preference for certain religious viewpoints. After extensively attacking ID and creationism on scientific grounds, it attacks creationism on theological grounds, clearly preferring evolutionist concepts of God:

Evolutionist Response: Among the different concepts of God that exist, the most developed form is a universal God who provided the laws of nature that account for all subsequent events – laws and events that can be investigated by science. The religion that creationists foster is of a more primitive God who fabricates unexplainable mysterious events and miraculous creations that violate natural laws. Evolutionists can oppose this creationist concept of God, yet still accept God concepts that accommodate belief in natural laws and evolutionary events.<sup>304</sup>

In a twist of irony that is attributable to evolutionist zeal, this textbook on the very same page purports to advocate the position that "[a] science classroom is not the place for an idea that is revered as holy."<sup>305</sup> If only the textbook's authors actually believed that were true.

Given the aforementioned attacks that authors such as Relethford, Freeman, Futuyma, and Strickberger make against the alleged religious

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302. *Id.*

303. *Id.* at 665.

304. *Id.* at 672.

305. *Id.* (quoting Richard D. Alexander).

viewpoints of ID and creationism,<sup>306</sup> it is difficult to imagine more blatant examples of textbooks engaging in “denominational preference.”

### 3. Judicial Prohibitions on Denominational Preference

As noted, Caldwell’s lawsuit was dismissed because the plaintiff lacked standing to bring the suit, and no decision was reached on the merits of the case. However, legal precedent offers good reasons to suspect that if the merits of Caldwell’s case or a similar case were ever reached, a court would strike down such government endorsement of pro-evolution religious viewpoints as unconstitutional.

#### a. Analysis Under the *Lemon* Test and Endorsement Test

Since its formulation in 1971, the disjunctive *Lemon* test has been the primary judicial vehicle for determining whether the government has established religion in public schools.<sup>307</sup> The first “prong” of the *Lemon* test requires that the purpose behind a law be predominantly secular.<sup>308</sup> Proponents of the teaching methods discussed above<sup>309</sup> might argue that the purpose behind these methods is not to endorse pro-evolution religious views, but that they simply have a secular purpose to increase the likelihood that students will accept the scientific theory of evolution or be willing to learn about evolution. Such a purpose could be called a “sham,”<sup>310</sup> because even if acceptance of evolution or mere enhancement of evolution-instruction were the ultimate goal, the proximate purpose in achieving that goal still would be, as *Caldwell* asserted, “to use classroom instruction in science classes to modify the religious beliefs of public school science students so that they will be more willing to accept evolutionary theory.”<sup>311</sup>

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306. See *supra* Part III.A.

307. See *Lee v. Weisman*, 505 U.S. 577, 603 n.4 (1992) (Blackmun, J., concurring) (“Since 1971, the Court has decided 31 Establishment Clause cases. In only one instance, the decision of *Marsh v. Chambers*, has the Court not rested its decision on the basic principles described in *Lemon*.”) (citation omitted).

308. *Lemon v. Kurtzman*, 403 U.S. 602, 612 (1971) (“the statute must have a secular legislative purpose”); see also *Edwards v. Aguillard*, 482 U.S. 578, 599 (1987) (Powell, J., concurring) (“A religious purpose alone is not enough to invalidate an act of a state legislature. The religious purpose must predominate.”).

309. See *supra* Part II.B.

310. *Edwards*, 482 U.S. at 586-87 (“While the Court is normally deferential to a State’s articulation of a secular purpose, it is required that the statement of such purpose be sincere and not a sham.”)

311. Complaint at 4, *Caldwell v. Caldwell*, 420 F. Supp. 2d 1102 (N.D. Cal. 2006) (No. 3:05 Civ. 04166).

Alternatively, a school district might assert that it is simply trying to educate students about various religious views related to origins, “so that students can at least understand the perspective of religious people when they reject scientific theories like evolution that conflict with religious claims,” and to allow students to appreciate various viewpoints, so they can engage in “meaningful discourse over origins and education about origins.”<sup>312</sup> While this is perhaps a noble goal, it too would be a “sham,” because the teaching methods discussed in this Part do not further this goal. For example, Eugenie Scott’s lesson plan recommends not performing the exercise if the community is predominantly conservative Christian, but where is her similar warning if the community is predominantly liberal Christian or pro-theistic evolution? The intent of the exercise seems concerned only with introducing students to pro-evolution religious viewpoints. The teaching strategies described here are not intended simply to educate students about existing religious viewpoints; rather, they patently prefer a pro-evolution religious viewpoint as the viewpoint that properly comports with the scientific evidence. Were a district to embark on a bona fide project to teach students about varying religious viewpoints related to origins, not only would such a discussion best take place outside the science classroom (where students could learn about religious viewpoints without prejudice for their purported degree of compatibility with the scientific data), but many more religious viewpoints would also need to be discussed beyond the pro- and anti-evolution sects of Christianity or Judaism. The context of the teaching methods discussed in this Part is patently designed to encourage students to accept evolution, not to educate them about religion.

Even if these activities somehow passed the purpose prong of the *Lemon* test, it seems less likely that they would pass the *Lemon* test’s requirement that the “principal or primary effect” of a law be “one that neither advances nor inhibits religion.”<sup>313</sup> By portraying pro-evolution religious viewpoints to students in a highly positive light (and negatively portraying anti-evolution religious viewpoints), the teaching methods described above would have the primary effect of advancing certain pro-evolution religious viewpoints in the science classroom.

Despite *Lemon*’s significance, a variety of cases dealing with the proper role of religion in the public square—particularly recent cases dealing with the teaching of origins in public schools—have employed the “endorsement

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312. Wexler, *supra* note 212, at 785-86.

313. *Lemon*, 403 U.S. at 612.

test.”<sup>314</sup> Justice Sandra Day O’Connor explains how the endorsement test meshes with the *Lemon* test:

The purpose prong of the *Lemon* test asks whether government’s actual purpose is to endorse or disapprove of religion. The effect prong asks whether, irrespective of government’s actual purpose, the practice under review in fact conveys a message of endorsement or disapproval. An affirmative answer to either question should render the challenged practice invalid.<sup>315</sup>

The United States Supreme Court has emphasized that “endorsement” is analogous to showing “favoritism,” or “promotion” of a religion, where “at the very least, [the Establishment Clause] prohibits government from appearing to take a position on questions of religious belief or from ‘making adherence to a religion relevant in any way to a person’s standing in the political community.’”<sup>316</sup> This seems to be precisely what would occur during the teaching activities described above: students would learn that certain religious viewpoints are deemed incompatible with the predominant scientific evidence, whereas others are expressly favored because they comport with the scientific views being presented in the classroom as fact.

When first describing the endorsement test, Justice O’Connor explained that government policies endorse religion when they cause some religious groups to feel like “outsiders”:

The second and more direct infringement is government endorsement or disapproval of religion. Endorsement sends a message to nonadherents that they are outsiders, not full members of the political community, and an accompanying message to adherents that they are insiders, favored members of the political community. Disapproval sends the opposite message.<sup>317</sup>

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314. *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337 (5th Cir. 1999), *cert. denied*, 530 U.S. 1251 (2000); *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707 (M.D. Pa. 2005); *Selman v. Cobb County Sch. Dist.*, 390 F. Supp. 2d 1286 (N.D. Ga. 2005), *vacated and remanded*, 449 F.3d 1320 (11th Cir. 2006).

315. *Lynch v. Donnelly*, 465 U.S. 668, 690 (1984) (O’Connor, J., concurring).

316. *County of Allegheny v. ACLU*, 492 U.S. 573, 593-94 (1989) (quoting *Lynch*, 465 U.S. at 687 (O’Connor, J., concurring)) (citations and internal quotation marks omitted).

317. *Lynch*, 465 U.S. at 688 (O’Connor, J., concurring).

Textbooks and other teaching activities that imply “a god of design and purpose is not necessary,”<sup>318</sup> or that praise the Pope’s acceptance of evolution as “rational, predicated as it was on the basis that ‘truth cannot contradict truth,’”<sup>319</sup> would cause students who accept ID or creationism to feel like political outsiders, while causing students who hold theistic evolutionary viewpoints to feel like insiders.<sup>320</sup>

b. Analysis Under the Neutrality Doctrine

While the outcomes of legal challenges to the teaching methods described above seem clear under the *Lemon* test and the endorsement test, there is even stronger legal precedent for finding such activities unconstitutional under the neutrality doctrine’s long-standing prohibition of “denominational preference.”

Many legal doctrines enforcing the Establishment Clause have incurred criticism, and in fact the Court has indicated its “unwillingness to be confined to any single test or criterion in this sensitive area.”<sup>321</sup> Justice O’Connor cautioned that although it is “appealing to look for . . . a Grand Unified Theory that would resolve all the cases” dealing with religion, judicial realities require recognition that “the same constitutional principle may operate very differently in different contexts.”<sup>322</sup> Even when constructing the popular *Lemon* test, the Court critiqued the “separation of Church and State” doctrine, stating that the Establishment Clause erects merely a “line of separation, far from being a ‘wall,’ [which] is a blurred, indistinct, and variable barrier depending on all the circumstances of a particular relationship.”<sup>323</sup> The Court emphasized that “we can only dimly perceive the lines of demarcation in this extraordinarily sensitive area of constitutional law.”<sup>324</sup> In various contexts, other tests proposed or employed by Supreme Court justices since the advent of the *Lemon* test have included the coercion test,<sup>325</sup> the endorsement test,<sup>326</sup> and the modified

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318. MONROE W. STRICKBERGER, *EVOLUTION* 70 (3d ed. 2000).

319. HALL & HALLGRIMSSON, *supra* note 301, at 665.

320. *See C.F. v. Capistrano Unified Sch. Dist.*, 615 F. Supp. 2d 1137 (C.D. Cal. 2009).

321. *Lynch*, 465 U.S. at 679.

322. *Bd. of Educ. of Kiryas Joel Village Sch. Dist. v. Grumet*, 512 U.S. 687, 718 (1994) (O’Connor, J., concurring).

323. *Lemon v. Kurtzman*, 403 U.S. 602, 614 (1971).

324. *Id.* at 612.

325. *County of Allegheny v. ACLU*, 492 U.S. 573, 659-60 (1989) (Kennedy, J., dissenting) (proposing a 2-part “coercion test”); *see also Lee v. Weisman*, 505 U.S. 577 (1992) (majority finding that the coercive nature and environment of a nonsectarian benediction given at a graduation ceremony made it unconstitutional).

*Lemon* test, combining the second and third prongs into a single prong.<sup>327</sup> Yet the neutrality test has been consistently applied and upheld in many influential Supreme Court rulings.

In the landmark 1947 case of *Everson v. Board of Education*, the Supreme Court famously endorsed Thomas Jefferson's call to "erect a wall of separation between church and State"<sup>328</sup> and simultaneously announced that the First Amendment "requires the state to be a neutral in its relations with groups of religious believers and non-believers; it does not require the state to be their adversary. State power is no more to be used so as to handicap religions than it is to favor them."<sup>329</sup> Soon thereafter, in 1952, the Court held that "[t]he government must be neutral when it comes to competition between sects."<sup>330</sup>

Again in 1963, in *School District of Abington Township v. Schempp*, the Court stated that "the ideal of our people as to religious freedom [is] one of 'absolute equality before the law, of all religious opinions and sects . . . . The government is neutral, and, while protecting all, it prefers none, and it *disparages* none."<sup>331</sup> The Court proceeded to explain that "neutrality" was fundamentally intended to guard against government endorsement of particular religious groups:

The wholesome "neutrality" of which this Court's cases speak thus stems from a recognition of the teachings of history that powerful sects or groups might bring about a fusion of governmental and religious functions or a concert or dependency of one upon the other to the end that official support of the State or Federal Government would be placed behind the tenets of one or of all orthodoxies.<sup>332</sup>

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326. *Lynch*, 465 U.S. at 688-90 (O'Connor, J., concurring) (proposing that government endorsement of religion be the standard to find that a municipally-erected Nativity scene was not unconstitutional).

327. See *Agostini v. Felton*, 521 U.S. 203 (1997) (employing a modified *Lemon* test requiring that the law does not result in governmental indoctrination, does not define its recipients by reference to religion, and does not create excessive entanglement).

328. *Everson v. Bd. of Educ.*, 330 U.S. 1, 16 (1947) (internal quotation marks omitted).

329. *Id.* at 18.

330. *Zorach v. Clauson*, 343 U.S. 306, 314 (1952).

331. *Sch. Dist. of Abington Twp. v. Schempp*, 374 U.S. 203, 215 (1963) (emphasis added) (alteration in original) (quoting *Minor v. Bd. of Educ.*, (not reported; published under the title, *THE BIBLE IN THE COMMON SCHOOLS* (Cincinnati, Robert Clarke & Co. 1870)) (Taft, J., dissenting)).

332. *Id.* at 222.

Two concurring justices (Goldberg and Harlan) further emphasized the fundamental nature of this rule, asserting that “[t]he fullest realization of true religious liberty requires that government neither engage in nor compel religious practices, that it effect no favoritism among sects or between religion and nonreligion, and that it work deterrence of no religious belief.”<sup>333</sup>

Five years later, in *Board of Education v. Allen*, the Court essentially equated the quest for “separation of church and state” with achieving religious neutrality: “*Everson* and later cases have shown that the line between state neutrality to religion and state support of religion is not easy to locate. ‘The constitutional standard is the separation of Church and State. The problem, like many problems in constitutional law, is one of degree.’”<sup>334</sup> That same year, the Court decided *Epperson v. Arkansas*, with a forceful prohibition of governmental preference of particular religious viewpoints:

Government in our democracy, state and national, must be neutral in matters of religious theory, doctrine, and practice. It may not be hostile to any religion or to the advocacy of no-religion; and it may not aid, foster, or promote one religion or religious theory against another or even against the militant opposite. The First Amendment mandates governmental neutrality between religion and religion, and between religion and nonreligion.

. . . .

. . . Neither [a State nor the Federal Government] can pass laws which aid one religion, aid all religions, or prefer one religion over another.

. . . [T]he State may not adopt programs or practices in its public schools or colleges which aid or oppose any religion. This prohibition is absolute. It forbids alike the preference of a religious doctrine or the prohibition of theory which is deemed antagonistic to a particular dogma.<sup>335</sup>

*Epperson* emphatically applied this rule to public school curricula, stating that “[t]here is and can be no doubt that the First Amendment does

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333. *Id.* at 305 (Goldberg, J., concurring).

334. *Bd. of Educ. v. Allen*, 392 U.S. 236, 242 (1968) (quoting *Zorach*, 343 U.S. at 314).

335. *Epperson v. Arkansas*, 393 U.S. 97, 103-04, 106-07 (1968) (citations and internal quotation marks omitted).

not permit the State to require that teaching and learning must be tailored to the principles or prohibitions of any religious sect or dogma.”<sup>336</sup>

Despite this apparent lack of judicial consensus within Establishment Clause jurisprudence, the Court has emphatically affirmed the neutrality doctrine time and time again,<sup>337</sup> even declaring in *Larson v. Valente* that “[t]he clearest command of the Establishment Clause is that one religious denomination cannot be officially preferred over another.”<sup>338</sup> In *Larson*, the Court traced the roots of this doctrine back to the “Revolutionary generation,” noting that the founders “applied the logic of secular liberty to the condition of religion and the churches.”<sup>339</sup> The Court gave further guidance regarding the treatment of laws that permit “denominational preference,” stating that “when we are presented with a state law granting a denominational preference, our precedents demand that we treat the law as suspect and that we apply strict scrutiny in adjudging its constitutionality.”<sup>340</sup> A little over a decade later, the Court again stated that “a principle at the heart of the Establishment Clause [is] that government should not prefer one religion to another, or religion to irreligion.”<sup>341</sup>

Some recent decisions have applied the line of cases expounding the neutrality doctrine to fact patterns that can be seen as highly analogous to teachers preferring pro-evolution religious viewpoints in the classroom. In these cases, lower courts ruled against public school districts whose curricula endorsed pro-homosexual religious viewpoints.

In *Hansen v. Ann Arbor Public Schools*, a high school student, her mother, and the parent of an additional student filed suit against the Ann Arbor Public School district after the district sponsored a “Religion and Homosexuality” panel.<sup>342</sup> During the event, the pro-homosexual religious viewpoint was “in one manifestation, presented to students as religious doctrine by six clerics (some in full garb) quoting from religious

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336. *Id.* at 106.

337. *Larson v. Valente*, 456 U.S. 228, 246 (1982) (“[The] principle of denominational neutrality has been restated on many occasions.”). Even in recent years, the neutrality doctrine has not fallen by the wayside. In *Zelman v. Simmons-Harris* in 2002, the Supreme Court’s majority invoked the principle of neutrality to find that school vouchers used by students attending religious schools were not unconstitutional. *Zelman v. Simmons-Harris*, 536 U.S. 639 (2002); *see also* *County of Allegheny v. ACLU*, 492 U.S. 573 (1989).

338. *Larson*, 456 U.S. at 244 (emphasis added).

339. *Id.* at 244-45 (internal quotation marks omitted).

340. *Id.* at 246.

341. *Bd. of Educ. of Kiryas Joel Village Sch. Dist. v. Grumet*, 512 U.S. 687, 703 (1994) (emphasis added).

342. *Hansen v. Ann Arbor Pub. Schs.*, 293 F. Supp. 2d 780, 783, 785 (E.D. Mich. 2003).

scripture.”<sup>343</sup> Students were prevented from presenting countering religious views that suggested that some “sexual ideas or actions,” such as homosexuality, “are wrong.”<sup>344</sup> Instead, “[p]anelists discussed the Bible and Sacred Scripture, explaining how passages referring to homosexuality had been misunderstood or mistranslated by others to mean that homosexuality was immoral or sinful or incompatible with Christianity.”<sup>345</sup> According to the court, “[o]ne of the panelists suggested that students read a book entitled, *Rescuing the Bible from Fundamentalism*, in order to get a better understanding of what Sacred Scripture meant, particularly with regard to homosexuality.”<sup>346</sup>

In its analysis of the Establishment Clause claims, the court observed, “*Neutrality is the fundamental requirement of the Establishment Clause, which prohibits the government from either endorsing a particular religion or promoting religion generally.*”<sup>347</sup> Even though the district argued that the panel had the secular purpose “to inform students that some religious congregations are open and affirming of gays, in order to promote and endorse tolerance of a minority viewpoint,” the court found that the panel’s “overtly religious character” caused it to lack a secular purpose.<sup>348</sup>

The court then conducted an inquiry into the effect of the law, aiming to “measure whether the principal effect of government action is to suggest government preference for a particular religious view, or for religion in general.”<sup>349</sup> The court found that since “the panel was created to convey only one religious view regarding the issue of homosexuality” and “[a]ny contrary or differing religious view was deemed ‘negative,’ and summarily excluded from the panel” that therefore, “the principal effect of the panel was to suggest preference for a particular religious view.”<sup>350</sup> Importantly, the court held that “even if more than one religious view were conveyed by the panel,” the primary effect would advance religion “because the panel would still have shown a preference for religion in general.”<sup>351</sup> Such a fact pattern closely resembles the pro-theistic evolution teaching methods

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343. *Id.* at 783.

344. *Id.* at 792.

345. *Id.* at 791.

346. *Id.*

347. *Id.* at 804 (emphasis added).

348. *Id.* at 805 (internal quotation marks omitted).

349. *Id.* (quoting *Mellen v. Bunting*, 127 F.3d 355, 375 (4th Cir. 2003)).

350. *Id.*

351. *Id.*

described in this section in which it seems likely that “the principal effect” would “suggest preference for a particular religious view.”<sup>352</sup>

*Hansen* had unique facts that pointed to a specific preference for pro-homosexual religious viewpoints in a public school setting. In a slightly different context, the court in *Citizens for a Responsible Curriculum (CRC) v. Montgomery County Public Schools* issued a preliminary injunction barring a district from simply using a curriculum that preferred pro-homosexual religious viewpoints.<sup>353</sup>

In *CRC*, the Montgomery County School District adopted a sexual education curriculum that explicitly preferred pro-homosexual religious viewpoints.<sup>354</sup> According to the court, the curriculum “paints certain Christian sects, notably Baptists, which are opposed to homosexuality, as unenlightened and Biblically misguided.”<sup>355</sup> The court observed that the curriculum “notes that fundamentalists and evangelicals are more likely than other religions to have negative attitudes about gay people [. . . and] contrasts this view with the views of ‘more tolerant religious backgrounds.’”<sup>356</sup> The court was also troubled that the curriculum “implies that the Baptist Church’s position on homosexuality is theologically flawed” and “juxtaposes this portrait of an intolerant and Biblically misguided Baptist Church against other, preferred Churches, which are more friendly towards the homosexual lifestyle.”<sup>357</sup> In granting a motion for a temporary restraining order barring implementation of the curriculum, the court held:

The Court is extremely troubled by the willingness of Defendants to venture—or perhaps more correctly bound—into the crossroads of controversy where religion, morality, and homosexuality converge. The Court does not understand why it is necessary, in attempting to achieve the goals of advocating tolerance and providing health-related information, Defendants must offer up their opinion on such controversial topics as whether homosexuality is a sin, whether AIDS is God’s judgment on homosexuals, and whether churches that condemn homosexuality are on theologically solid ground. As such, the

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352. *Id.*

353. *Citizens for a Responsible Curriculum v. Montgomery County Pub. Schs.*, No. Civ.A. AW-05-1194, 2005 WL 1075634 (D. Md. May 5, 2005).

354. *Id.* at \*2-5.

355. *Id.* at \*10.

356. *Id.* at \*10 n.3.

357. *Id.* at \*11.

Court is highly skeptical that the Revised Curriculum is narrowly tailored to serve a compelling government interest, and finds that Plaintiffs' Establishment Clause claim certainly merits future and further investigation.<sup>358</sup>

Thus, according to *CRC*, a curriculum that “paints certain Christian sects, notably Baptists, which are opposed to homosexuality, as unenlightened and Biblically misguided”<sup>359</sup> but then “juxtaposes this portrait of an intolerant and Biblically misguided Baptist Church against other, preferred Churches, which are more friendly towards the homosexual lifestyle”<sup>360</sup> would likely violate the Establishment Clause. Substitute the word “evolution” for “homosexual” or “homosexual lifestyle” and one has a fact pattern that is highly analogous to a teacher implementing many of the teaching activities described in this Part.

The U.S. Supreme Court has spoken as clearly as it can, even in this “dimly perceive[d]”<sup>361</sup> area of the law, that it is unconstitutional for the government to prefer certain religious viewpoints. Lower courts have interpreted these rulings as prohibiting school districts from preferring particular religious viewpoints, even when they support the curriculum.<sup>362</sup> Yet, as seen in the teaching methods described above, this is precisely what leading evolutionists are recommending that public school teachers do when teaching evolution: prefer religious viewpoints that support evolution. Such actions could not withstand judicial scrutiny.

*C. Preferring Pro-Evolution Non-Theistic or Atheistic Religious Viewpoints in Public Schools.*

Recent years have seen an increase in the public advocacy of atheism. A November 2006 article in *Wired* magazine reported that the world's most famous evolutionary biologist, Richard Dawkins, is leading a “crusade against religion” called the “New Atheism movement,”<sup>363</sup> which contends that “[r]eligion is not only wrong, it's evil.”<sup>364</sup> That same month, the *New York Times* science desk covered a “Beyond Belief” conference of dozens of leading scientists gathered at a prestigious biotech mecca, the Salk

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358. *Id.*

359. *Id.* at \*10.

360. *Id.* at \*11.

361. *Lemon v. Kurtzman*, 403 U.S. 602, 612 (1971).

362. *See, e.g., Citizens for a Responsible Curriculum; Hansen v. Ann Arbor Pub. Schs.*, 293 F. Supp. 2d 780, 783, 785 (E.D. Mich. 2003).

363. Gary Wolf, *The Church of the Non-Believers*, *WIRED*, Nov. 2006, at 182-93.

364. *Id.*

Institute for Biological Studies in La Jolla, California. The *Times* reported a striking agenda on the part of scientists at the conference to stifle the influence of religion: “one speaker after another called on their colleagues to be less timid in challenging teachings about nature based only on scripture and belief.”<sup>365</sup> The scientists were worried that evolution by natural selection and other views were “losing out in the intellectual marketplace,” and one scientist sarcastically summarized the viewpoints expressed at the meeting by asking “Should we bash religion with a crowbar or only with a baseball bat?”<sup>366</sup> Given the increasingly loud voice of scientific atheists, it comes as little surprise that the most popular science blog on the internet<sup>367</sup> describes itself as providing “[e]volution, development, and random biological ejaculations from a godless liberal.”<sup>368</sup>

The precise views of atheists or secular humanists may vary, but some of their core beliefs are well-illustrated by various “manifestos” published by leading atheist and secular humanist organizations. These manifestos consistently indicate that belief in an unguided, purposeless, and thoroughly naturalistic evolutionary origin of life is at the core of the atheist or secular humanist worldview.

According to *Humanist Manifesto III*, the tenets of secular humanism include belief in “a progressive philosophy of life that, without supernaturalism,” strongly upholds that “[h]umans are an integral part of nature, the result of unguided evolutionary change.”<sup>369</sup> The manifesto declares that “[h]umanists recognize nature as self-existing.”<sup>370</sup> *Humanist Manifesto II*, published in 1973, exhibits an even stronger adherence to belief in unguided evolution, in opposition to religious explanations of human life:

But we can discover no divine purpose or providence for the human species. While there is much that we do not know, humans are responsible for what we are or will become. No deity will save us; we must save ourselves. . . . Promises of immortal

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365. George Johnson, *A Free-for-All on Science and Religion*, N.Y. TIMES, Nov. 21, 2006, at F1 (emphasis added), available at 2006 WLNR 20163948 (last visited Aug. 19, 2009).

366. *Id.*

367. See Top Five Science Blogs, NATURE, July 5, 2006, <http://www.nature.com/news/2006/060703/full/442009a.html> (last visited August 29, 2006); Pharyngula, <http://scienceblogs.com/pharyngula/about.php> (last visited August 29, 2006).

368. See Pharyngula, *supra* note 367.

369. Am. Humanist Ass’n., *Humanist Manifesto III*, Humanism and Its Aspirations, [http://www.americanhumanist.org/who\\_we\\_are/about\\_humanism/Humanist\\_Manifesto\\_III](http://www.americanhumanist.org/who_we_are/about_humanism/Humanist_Manifesto_III).

370. *Id.*

salvation or fear of eternal damnation are both illusory and harmful. They distract humans from present concerns, from self-actualization, and from rectifying social injustices. Modern science discredits such historic concepts as the “ghost in the machine” and the “separable soul.” Rather, science affirms that the human species is an emergence from natural evolutionary forces. As far as we know, the total personality is a function of the biological organism transacting in a social and cultural context. There is no credible evidence that life survives the death of the body.<sup>371</sup>

Likewise, *Humanist Manifesto I* (published in 1933) listed as its first two tenets the view of “the universe as self-existing and not created” and “man is a part of nature and that he has emerged as a result of a continuous process.”<sup>372</sup> The *Manifesto* went on to state that “the nature of the universe depicted by modern science makes unacceptable any supernatural or cosmic guarantees of human values.”<sup>373</sup>

Richard Dawkins, who is often called the “pope of atheism,” captured this view of origins in his book *River out of Eden: A Darwinian View of Life*, where he argues that our universe merely has “blind physical forces and genetic replication,” and thus “[t]he universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind, pitiless indifference.”<sup>374</sup> More famously, Dawkins wrote in his popular book *The Blind Watchmaker* that “Darwin made it possible to be an intellectually fulfilled atheist.”<sup>375</sup>

Dawkins is neither an obscure academic nor an armchair atheist. He is an influential evolutionary biologist and former Chair for the Public Understanding of Science at Oxford University.<sup>376</sup> Anthropologist Jonathan Marks calls him “a leading spokesman for science,”<sup>377</sup> and one edition of Campbell’s *Biology* praises Dawkins as one of “the very few scientists”

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371. Am. Humanist Ass’n., *Humanist Manifesto II*, [http://www.americanhumanist.org/who\\_we\\_are/about\\_humanism/Humanist\\_Manifesto\\_II](http://www.americanhumanist.org/who_we_are/about_humanism/Humanist_Manifesto_II).

372. Am. Humanist Ass’n., *Humanist Manifesto I*, [http://www.americanhumanist.org/who\\_we\\_are/about\\_humanism/Humanist\\_Manifesto\\_I](http://www.americanhumanist.org/who_we_are/about_humanism/Humanist_Manifesto_I).

373. *Id.*

374. RICHARD DAWKINS, *RIVER OUT OF EDEN: A DARWINIAN VIEW OF LIFE* (1995).

375. RICHARD DAWKINS, *THE BLIND WATCHMAKER* 6 (1986).

376. Simonyi Univ., The Simonyi Professorship Home Page, <http://www.simonyi.ox.ac.uk/previous-holders-simonyi-professorship> (last visited Jan. 30, 2010).

377. JONATHAN MARKS, *WHAT IT MEANS TO BE 98% CHIMPANZEE* 266 (2002).

who can “engag[e] and challeng[e] nonscientists.”<sup>378</sup> Yet one of this spokesman’s primary arguments is that Darwinian evolution effectively eliminates “the god hypothesis”:

We explain our existence by a combination of the anthropic principle and Darwin’s principle of natural selection. That combination provides a complete and deeply satisfying explanation for everything that we see and know. Not only is the god hypothesis unnecessary. It is spectacularly unparsimonious. Not only do we need no God to explain the universe and life. God stands out in the universe as the most glaring of all superfluous sore thumbs. We cannot, of course, disprove God, just as we can’t disprove Thor, fairies, leprechauns and the Flying Spaghetti Monster. But, like those other fantasies that we can’t disprove, we can say that God is very[,] very improbable.<sup>379</sup>

While Dawkins obviously has every right to hold and advocate these views as an individual, such close linkages between atheism and evolution have troubled leading evolutionists concerned with the constitutionality of teaching evolution in American public schools. In 2007, prominent Darwinian philosopher of science Michael Ruse at Florida State University proposed that atheist attacks upon religion could have constitutional implications for teaching evolution:

A major part of the atheist attack is that science has shown that the God hypothesis is silly. Suppose this is true—that if you are a Darwinian, then you cannot be a Christian. How then does one answer the creationist who objects to the teaching of Darwinism in schools? Sauce for the goose is sauce for the gander. If theism cannot be taught in schools (in America) because it violates the separation of church and state, why then should Darwinism be permitted? If Darwinism leads to atheism, does this not also violate the separation of church and state? At the very least, Dawkins and company should be showing more responsibility. If they are right, then so be it. I would not want to conceal the fact. But let us face the consequences of the arguments. Explain to us

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378. NEIL A. CAMPBELL, JANE B. REECE, & LAWRENCE G. MITCHELL, *BIOLOGY 412* (5th ed. 1999).

379. Richard Dawkins, *Why There Almost Certainly Is No God*, HUFFINGTON POST, Oct. 23, 2006, available at [http://www.huffingtonpost.com/richard-dawkins/why-there-almost-certainl\\_b\\_32164.html](http://www.huffingtonpost.com/richard-dawkins/why-there-almost-certainl_b_32164.html) (last accessed Oct. 23, 2006).

on what grounds one can now legitimately teach evolution in schools.<sup>380</sup>

Likewise, renowned historian of the evolution debate, American Association for the Advancement of Science fellow Ronald Numbers, has stated his belief that teaching atheism alongside evolution could have severe constitutional ramifications:

In the United States, our public schools are supposed to be religiously neutral. If evolution is in fact inherently atheistic, we probably shouldn't be teaching it in the schools. And that makes it very difficult when you have some prominent people like Dawkins, who's a well-credentialed biologist, saying, 'It really is atheistic.' He could undercut — not because he wants to — but he could undercut the ability of American schools to teach evolution.<sup>381</sup>

In 1995, the fears of Ruse and Numbers nearly became reality. The National Association of Biology Teachers (NABT) had adopted a statement on teaching evolution that described evolution as “an unsupervised, impersonal, unpredictable and natural process.”<sup>382</sup> Only after pressure was placed upon the board by prominent scholars of science and religion did the NABT remove the “unsupervised” and “impersonal” language from its definition of evolution.<sup>383</sup> Eugenie Scott praised the NABT for removing this language and “responding in a responsible manner to a perception on the part of religious Americans . . . that it was making an antireligious statement,” and she admitted that “referring to evolution as ‘unsupervised’ and ‘impersonal’ is venturing outside of what science can tell us.”<sup>384</sup>

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380. Michael Ruse, *Review of Richard Dawkins, The God Delusion*, 98(4) ISIS BOOK REVIEWS 814-16 (2007).

381. Steve Paulson, *Seeing the Light – of Science: Ronald Numbers—a Former Seventh-day Adventist and Author of “The Definitive History of Creationism”—Discusses His Break with the Church, Whether Creationists Are Less Intelligent and Why Galileo Wasn't Really a Martyr*, SALON, Jan. 2, 2007, <http://www.salon.com/books/int/2007/01/02/numbers/print.html> (last visited Jan. 2, 2007).

382. *NABT Unveils New Statement on Teaching Evolution*, 58(1) AM. BIOLOGY TEACHER 61-62 (Jan. 1996).

383. JOHN G. WEST, *DARWIN DAY IN AMERICA: HOW POLITICS AND CULTURE HAVE BEEN DEHUMANIZED IN THE NAME OF SCIENCE* 221-23 (2007). See also KARL GIBERSON & DONALD A. YERXA, *SPECIES OF ORIGINS: AMERICA'S SEARCH FOR A CREATION STORY* 7 (2002).

384. Eugenie Scott, *Eugenie Scott's Reply to the Open Letter*, <http://www.asa3.org/ASA/education/origins/scottreply.htm>.

However, William Corben later observed in the journal *Science and Education* that the NABT's modification provided an empty remedy because "[t]he problem is that 'unsupervised and impersonal' describes what many evolutionary biologists believe about the universe and they take this as a granted part of science."<sup>385</sup> (Indeed, the extent to which Scott actually believes that science does not imply an "unsupervised and impersonal" evolutionary process is not clear: not only did she oppose the NABT's definition of evolution at least partly because it merely posed a "public relations problem,"<sup>386</sup> but she herself is a signer of the Third Humanist Manifesto which, as noted, holds that humans arose via "unguided evolutionary change."<sup>387</sup>) If there is any doubt that Corben was correct, in the wake of the NABT's removal of the "unsupervised" and "impersonal" language, over seventy biologists, including influential evolutionary scientists such as Richard Lewontin, John Lynch, and Niall Shanks, sent a letter to the NABT protesting that "evolution indeed is, to the best of our knowledge, an impersonal and unsupervised process."<sup>388</sup> Also attacking theistic evolutionists, the letter claimed that the position that some intelligence is "supervising evolution in a way to perfectly mimic an unsupervised, impersonal process" is a viewpoint that "has been repeatedly invalidated on philosophical grounds ever since David Hume and well before Darwin."<sup>389</sup> They harshly criticized the NABT's removal of the "unsupervised" descriptor for evolution:

Science is based on a fundamental assumption: that the world can be explained by recurring only to natural, mechanistic forces. . . . [T]his is a philosophical position. . . . The NABT leaves open the possibility that evolution is in fact supervised in a personal manner. *This is a prospect that every evolutionary biologist should vigorously and positively deny.*<sup>390</sup>

This view of evolution has apparently not dissipated. In 2005, thirty-nine Nobel Laureates wrote the Kansas State Board of Education to inform them that "evolution is understood to be the result of an unguided,

385. William Corben, *The Nature of Science and the Role of Belief*, 9 SCIENCE AND EDUCATION 219, 239 (2000).

386. Scott, *supra* note 384.

387. Am. Humanist Ass'n., Notable Signers, <http://www.americanhumanist.org/3/HMSigners.htm>. For further discussion, see WEST, *supra* note 383, at 223.

388. Open Letter to NABT, NCSE, and AAAS, <http://www.asa3.org/asa/education/ORIGINS/openletter.htm> (last visited Aug. 19, 2009).

389. *Id.*

390. *Id.* (emphasis added).

unplanned process of random variation and natural selection.”<sup>391</sup> As recent as January 2009, the NCSE released a set of talking points encouraging activists to testify before the Texas State Board of Education that science denies that supernatural forces “exist”:

Science posits that there are no forces outside of nature. Science cannot be neutral on this issue. The history of science is a long comment denying that forces outside of nature exist, and proving that this is the case again and again. There is simply zero scientific evidence for forces outside of the natural world. Scientific experiments do not rely on “magic” in order to explain their results. Magic—as magicians Penn & Teller and James Randi hasten to point out—does not exist. . . . By implying that there exist explanations outside of nature, [a scientist skeptical of Darwinism] posits supernatural, mystical phenomena. The assumption that “the only explanations that count are those that rely on nature” is indeed an important part of science; in fact, this is a foundational axiom for any rational thinking. . . . It needs to be said clearly: All educated people understand there are no forces outside of nature.<sup>392</sup>

If activists offered such testimony before the Texas State Board of Education, and the board proceeded to take the NCSE’s advice and adopt evolution standards stating that “[t]here are no forces outside of nature; science cannot be neutral on this issue; the only explanations that count are those that rely on nature; this view is a foundational axiom for any rational thinking,” what would be the constitutional implications? As will be discussed below, this express view that evolution proceeds in a wholly unsupervised and naturalistic fashion—a view which coheres tightly with fundamental tenets of atheism and secular humanism—is promoted in a variety of public school biology textbooks, and could have constitutional implications.

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391. The Elie Wiesel Foundation for Humanity: Nobel Laureates Initiative, [http://media.ljworld.com/pdf/2005/09/15/nobel\\_letter.pdf](http://media.ljworld.com/pdf/2005/09/15/nobel_letter.pdf) (last visited Aug. 21, 2006).

392. Steven Newton, Preparatory Materials for Speakers at the 21 January 2009 Texas SBOE Meeting, 32, 44, *available at* [http://skepchick.org/blog/wp-content/uploads/2009/01/prep\\_materials\\_21janmeeting1.pdf](http://skepchick.org/blog/wp-content/uploads/2009/01/prep_materials_21janmeeting1.pdf) (last visited Jan. 27, 2009), and *available at* <http://www.discovery.org/scripts/viewDB/filesDB-download.php?command=download&id=4411>.

### 1. Can Non-Theism or Atheism Qualify as Religious Viewpoints?

In *School District of Abington Township v. Schempp*, the U.S. Supreme Court recognized, as has been noted above,<sup>393</sup> that “the State may not establish a religion of secularism in the sense of affirmatively opposing or showing hostility to religion, thus preferring those who believe in no religion over those who do believe.”<sup>394</sup> Government advancement of non-theistic or atheistic religious viewpoints would thus presumably be subject to the same limitations of the Establishment Clause as the prohibition against endorsing traditional theistic religious viewpoints. Indeed, the U.S. Supreme Court has held that non-theistic viewpoints can qualify as religious when they “occupy the same place in [a person’s] life as the belief in a traditional deity holds,”<sup>395</sup> “occupy . . . ‘a place parallel to that filled by God’ in traditional religious persons,”<sup>396</sup> or comprise “an aspect of human thought and action which profoundly relates the life of man to the world in which he lives.”<sup>397</sup> In one case, the U.S. Supreme Court listed “Secular Humanism” as a religious viewpoint.<sup>398</sup>

In 2005, the Court reiterated its view that religion should not be defined narrowly,<sup>399</sup> and the Seventh Circuit likewise observed that “the [U.S. Supreme] Court has adopted a broad definition of ‘religion’ that includes non-theistic and atheistic beliefs, as well as theistic ones.”<sup>400</sup> The Seventh Circuit went on to note that “[t]he Supreme Court has recognized atheism as equivalent to a ‘religion’ for purposes of the *First Amendment* on numerous occasions[.] . . .”<sup>401</sup> Earlier, the Seventh Circuit had observed that “[i]f we think of religion as taking a position on divinity, then atheism is indeed a form of religion.”<sup>402</sup> Clearly, atheism can be a religion for the purpose of constitutional analyses. What follows are various textbooks that

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393. See *supra* note 208 and accompanying text.

394. *Sch. Dist. of Abington Twp. v. Schempp*, 374 U.S. 203, 225 (1963) (citations and internal quotation marks omitted) (explaining that a secular education is not per se unconstitutional).

395. *United States v. Seeger*, 380 U.S. 163, 187 (1965).

396. *Welsh v. United States*, 398 U.S. 333, 340 (1970).

397. *McGowan v. Maryland*, 366 U.S. 420, 461 (1961).

398. *Torcaso v. Watkins*, 367 U.S. 488, 495 n.11 (1961).

399. See generally *McCreary County, Ky. v. ACLU*, 545 U.S. 844 (2005). The majority wrote that “[t]he dissent says that the deity the Framers had in mind was the God of monotheism, with the consequence that government may espouse a tenet of traditional monotheism. This is truly a remarkable view.” *Id.* at 879.

400. *Kaufman v. McCaughtry*, 419 F.3d 678, 682 (7th Cir. 2005).

401. *Id.*

402. *Reed v. Great Lakes Cos.*, 330 F.3d 931, 934 (7th Cir. 2003).

promote atheism's core tenet of philosophical materialism and unguided evolutionary origins.

2. Textbooks that Prefer Pro-Evolution Non-Theistic or Atheistic Religious Viewpoints.

During the *Kitzmiller* trial, the plaintiffs' leadoff expert witness was Brown University biologist Dr. Kenneth Miller, who is also a prominent high school biology textbook author. Miller estimated that thirty-five percent of high school students use his textbooks,<sup>403</sup> as well as "more than 200 colleges and universities around the country."<sup>404</sup> Yet five editions of Miller's own textbook, *Biology*, described evolution as a purposeless, undirected process: "[E]volution works without either plan or purpose. . . . *Evolution is random and undirected.*"<sup>405</sup> Miller further admitted during cross-examination that his popular textbook's description of evolution would "requir[e] a conclusion about meaning and purpose that I think is beyond the realm of science."<sup>406</sup> At trial, Miller inaccurately testified that this theologically charged language "was not in the first edition of the book, it was not in the second edition, it was not in the fourth edition, [and] it was not in the fifth edition,"<sup>407</sup> when in fact it does appear in all five editions of his textbook.<sup>408</sup> Indeed, his own book *Finding Darwin's God* describes Darwinian processes as "blind, random, [and] undirected evolution,"<sup>409</sup> and other editions of Miller's textbook have used even harsher anti-religious language. Both the 1991 and 1994 editions of Miller & Levine's *Biology: The Living Science* left readers with a starkly materialist description of the implications of evolution:

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403. *Kitzmiller v. Dover Area Sch. Dist.: Trial Transcript: Day 1 (September 25), AM Session, Part I*, available at [www.talkorigins.org/faqs/dover/day1am.html](http://www.talkorigins.org/faqs/dover/day1am.html).

404. *Id.* at 41.

405. KENNETH R. MILLER & JOSEPH S. LEVINE, *BIOLOGY* 658 (1st ed. 1991); MILLER & LEVINE, *BIOLOGY* (2d ed. 1993); MILLER & LEVINE, *BIOLOGY* 658 (3d ed. 1995); MILLER & LEVINE, *BIOLOGY* 658 (4th ed. 1998); MILLER & LEVINE, *BIOLOGY, TEACHERS' ED.* (5th ed. 2000). For a detailed discussion of Miller's testimony on this topic, see Casey Luskin, Ken Miller's "Random and Undirected" Testimony, [http://www.evolutionnews.org/2006/07/ken\\_millers\\_random\\_and\\_undirec.html](http://www.evolutionnews.org/2006/07/ken_millers_random_and_undirec.html).

406. *Kitzmiller v. Dover Area Sch. Dist.: Trial Transcript: Day 2 (September 27), AM Session, Part I*, available at: <http://www.talkorigins.org/faqs/dover/day2am.html>.

407. *Id.*

408. See MILLER & LEVINE, *supra* note 405 (appearing in all five editions).

409. KENNETH R. MILLER, *FINDING DARWIN'S GOD: A SCIENTIST'S SEARCH FOR COMMON GROUND BETWEEN GOD AND EVOLUTION* 137 (1999).

Darwin knew that accepting his theory required believing in *philosophical materialism*, the conviction that matter is the stuff of all existence and that all mental and spiritual phenomena are its by-products. Darwinian evolution was not only purposeless but also heartless—a process in which the rigors of nature ruthlessly eliminate the unfit. Suddenly, humanity was reduced to just one more species in a world that cared nothing for us. The great human mind was no more than a mass of evolving neurons. Worst of all, there was no divine plan to guide us.<sup>410</sup>

With this definition of philosophical materialism in mind, Miller's widely used textbooks are by no means the only ones that describe human existence as the result of a thoroughly purposeless and naturalistic process.

Raven & Johnson's 2000 edition of their popular high school text, *Biology*, contains an interview with Stephen Jay Gould stating that "[h]umans represent just one tiny, largely fortuitous, and late-arising twig on the enormously arborescent bush of life."<sup>411</sup> Gould's own textbook, *A View of Life* (co-authored with Salvador Luria and Sam Singer), teaches students that natural selection is "a simple principle with broad and revolutionary consequences for our view of our place in nature."<sup>412</sup> This textbook's description of these consequences is striking:

Darwin's theory of natural selection has disturbed many people and exhilarated others by its insistence that the path of evolution and the harmony of nature is "purposeless." Offhand, everything seems to have its foreordained role in nature's harmony. . . . Darwin denied emphatically that any higher principle operates in nature. Natural selection is nothing more than the struggle of individuals to survive and perpetuate their genes in future generations. . . . Darwin held a strong allegiance to philosophical materialism—the notion that matter is the ground of all existence and that "spirit" and "mind" are the products or inventions of a material brain. Darwin advocated a thoroughly naturalistic account of life, thus denying one of the deepest traditions of Western thought[.] . . . Darwin did not set out to demolish

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410. JOSEPH S. LEVINE & KENNETH R. MILLER, *BIOLOGY: DISCOVERING LIFE* 152 (1st ed. 1992); LEVINE & MILLER, *BIOLOGY: DISCOVERING LIFE* 161 (2d ed. 1994) (emphasis in original).

411. Stephen J. Gould, *quoted in* PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY* 15 (5th ed., 1999); PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY* 16 (6th ed., 2000).

412. SALVADOR E. LURIA, STEPHEN JAY GOULD, & SAM SINGER, *A VIEW OF LIFE* 574 (1981).

anyone's religious convictions; he merely wished to assert that divine causes and attributes had no place in scientific investigations.<sup>413</sup>

The textbook goes on to explain how biology has contributed to the diminution of the status of humans as being created in the image of God:

First astronomy and physics showed us that we do not inhabit a body at the center of the universe, but a small planet circling an insignificant star at the periphery of one galaxy among millions. Then biology demonstrated that we were not created in the image of an all-powerful God but had evolved from monkeys by the same process that regulates the history of all organisms. . . . No man has contributed more to this sequential retreat from our cosmic arrogance than Darwin. In arguing that we are but one product of a natural process without purpose or inherent direction, Darwin forced us to seek meaning within ourselves, not in nature.<sup>414</sup>

The chapter on evolution concludes by saying that “Darwin’s principle of natural selection is a radical notion with many implications that do not square well with human hopes or Western cultural traditions.”<sup>415</sup>

Guttman’s *Biology* also teaches that all species—including our own—are the result of “chance,” which is dictated by the “cosmic dice”:

Of course, no species has ‘chosen’ a strategy. Rather, its ancestors—little by little, generation after generation—merely wandered into a successful way of life through the action of random evolutionary forces[.] . . . Once pointed in a certain direction, a line of evolution survives only if the cosmic dice continue to roll in its favor. . . . [J]ust by chance, a wonderful diversity of life has developed during the billions of years in which organisms have been evolving on earth.<sup>416</sup>

Haviland’s *Anthropology* likewise contends that the origin of humanity “was made possible only as a consequence of a whole string of historical accidents.”<sup>417</sup> In a section titled, “The Nondirectedness of Evolution,”<sup>418</sup> the

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413. *Id.* at 584-86.

414. *Id.* at 586-87.

415. *Id.* at 597.

416. BURTON S. GUTTMAN, *BIOLOGY* 36-37 (1st ed. 1999).

417. WILLIAM A. HAVILAND, *ANTHROPOLOGY* 124 (10th ed. 2003).

418. *Id.* at 123.

textbook teaches that an “essentially random event—the collision [of earth] with a comet or asteroid—made possible our own existence.”<sup>419</sup> The textbook goes on to quote Stephen Jay Gould’s explanation of the “fortuitous series of accidents” that led to human beings:

The history of any species is an outcome of many such contingencies. At any point in the chain of events, had any one element been different, the final result would be markedly different. As Stephen Jay Gould puts it, “All evolutionary sequences include . . . a fortuitous series of accidents with respect to future evolutionary success. Human brains did not evolve along a direct and inevitable ladder, but by a circuitous and tortuous route carved by adaptations evolved for different reasons, and fortunately suited to later needs.”<sup>420</sup>

Prentice Hall’s *Exploring Life Science* explains that “one of the driving forces behind evolution is mutations,” which are “chance events.”<sup>421</sup> The teacher’s guide encourages students to learn that evolutionary changes are “caused by chance mutations that just happened to better the animals to their environments” because “genetic variation is random.”<sup>422</sup> Campbell, Reece, and Mitchell’s popular text *Biology: Concepts & Connections* also attributes life to a series of chance events:

We have documented the role of change in shaping the vast diversity of life. We have also chronicled the role of chance. Chance has affected the evolutionary process in the generation of genetic diversity through mutation. Chance has also played a role at every major milestone in the history of life. Before life began, over 3.5 billion years ago, the chance union of certain small organic molecules ignited a chain of events that led to the first genes. Much later—about 65 million years ago—a chance collision between Earth and an asteroid may have caused mass extinctions. . . . One of the great wonders of our existence and of

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419. *Id.* at 124.

420. *Id.*

421. ANTHEA MATON, DAVID LAHART, JEAN HOPKINS, SUSAN JOHNSON, MARYANNA QUON WARNER & JILL D. WRIGHT, *EXPLORING LIFE SCIENCE* 640 (1995).

422. *Id.* at 640-41.

life itself is that it has all arisen through a combination of evolutionary processes and chance events.<sup>423</sup>

An early edition of Campbell's textbook *Biology* has an interview with Stephen Jay Gould arguing that "[c]ontingency doesn't just apply to the big changes; it is equally strong for detail of life's history, and we're a detail."<sup>424</sup> A later edition of Campbell's *Biology* includes an interview with Richard Dawkins explaining that "the whole of life" is the result of natural selection, a blind process wherein "selfish genes" generated "our bodies and brains":

The "blind" watchmaker is natural selection. Natural selection is totally blind to the future. . . . Humans are fundamentally not exceptional because we came from the same evolutionary source as every other species. It is natural selection of selfish genes that has given us our bodies and our brains. . . . Natural selection is a bewilderingly simple idea. And yet what it explains is the whole of life, the diversity of life, the complexity of life, the apparent design of life.<sup>425</sup>

Nicholas Barton et al.'s textbook *Evolution* offers a striking emphasis upon the randomness of Darwinian evolution, asserting that there is "extreme randomness [in] the evolutionary process,"<sup>426</sup> and the book "begin[s] [its] consideration of the processes [responsible] for evolution by emphasizing the randomness of evolution."<sup>427</sup> The text goes on to explain that evolution involves factors such as "random genetic drift,"<sup>428</sup> "random mutation,"<sup>429</sup> "random variation,"<sup>430</sup> "random . . . individual fitness,"<sup>431</sup> "random reproduction,"<sup>432</sup> and the "[r]andom growth of a sexual population" stemming from "the random number of offspring from each

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423. NEIL A. CAMPBELL, LAWRENCE G. MITCHELL & JANE B. REECE, *BIOLOGY: CONCEPTS AND CONNECTIONS* 396 (2d ed. 1997); NEIL A. CAMPBELL, LAWRENCE G. MITCHELL & JANE B. REECE, *BIOLOGY: CONCEPTS AND CONNECTIONS* 390 (1st ed. 1994).

424. NEIL A. CAMPBELL, *BIOLOGY* 502 (3d ed. 1993).

425. Richard Dawkins, *quoted in* NEIL A. CAMPBELL, JANE B. REECE & LAWRENCE G. MITCHELL, *BIOLOGY* 412-13 (5th ed. 1999).

426. *Id.* at 435.

427. *Id.* at 413.

428. *Id.*

429. *Id.* at 415.

430. *Id.* at 437.

431. *Id.* at 419.

432. *Id.* at 414.

individual.<sup>433</sup> The textbook summarizes “Darwin’s view of evolution” as teaching that “there is no overall tendency for progress towards ‘higher’ forms and man has no special place in nature.”<sup>434</sup> The textbook notes the larger philosophical implications of these views, observing that “natural selection [which] is based on random death and extinction” has been “widely felt to be an unacceptable mechanism.”<sup>435</sup>

Advancing a similar argument, Robert Ornstein’s text *The Evolution of Consciousness* explains that mutations “are accidents” and “happen by random generation.”<sup>436</sup> Ornstein concludes that we are the result of “countless historical accidents”:

So here we are now, courtesy of countless historical accidents. If Australopithecus had not stood up, if the brain had not grown so rapidly . . . we’d not be here. . . . But however we got here, all our history, all our evolution, all the accidents that led to us are all over.<sup>437</sup>

Perhaps the most blatant example of promoting philosophical materialism in textbooks is found in Douglas Futuyma’s aforementioned textbook *Evolutionary Biology*, which candidly admits that Darwinian evolution promotes materialistic philosophy:

But it was Darwin’s theory of evolution, followed by Marx’s materialistic (even if inadequate or wrong) theory of history and society and Freud’s attribution of human behavior to influences over which we have little control, that provided a crucial plank to the platform of mechanism and materialism—in short, of much of science—that has since been the stage of most Western thought.<sup>438</sup>

The author uses Darwinism to attack theistic religious views, stating that “Darwinism posed further threats to Western religion by suggesting that biological relationships, including the origin of humans and of all species,

433. *Id.*

434. *Id.* at 20.

435. *Id.* at 21.

436. ROBERT ORNSTEIN, *THE EVOLUTION OF CONSCIOUSNESS: OF DARWIN, FREUD, AND CRANIAL FIRE – THE ORIGINS OF THE WAY WE THINK* 115 (1990).

437. *Id.* at 267.

438. DOUGLAS J. FUTUYMA, *EVOLUTIONARY BIOLOGY* 5 (3d ed. 1998).

could be explained by natural selection without the intervention of a god.”<sup>439</sup> The textbook engages in an all-out attack on religion:

Acceptance by individuals of religious explanations has been eroded further as we discover more and more natural explanations for the origin and modification of Earth and its inhabitants, recognize that ethics and morality can differ between different human societies, and that changes in such values need not depend on religious beliefs.<sup>440</sup>

Strickberger’s 2008 edition combines attacks on theistic religion with promotion of atheistic views of evolution, stating that “evolutionary randomness and uncertainty replaced a deity having conscious, purposeful, human characteristics.”<sup>441</sup> According to the textbook: “To Darwinians, all biology has had an accidental origin in the sense that hereditary variables arose at first randomly without purposeful foresight.”<sup>442</sup> The chapter postures evolution as being at war with religion and explains how Darwinian evolution challenged religion:

In the most sensitive area of all—life itself—Darwinian evolution offered different answers to religion’s claims of why life’s important events occur. Darwin’s works made clear that people no longer needed to believe that only the actions of a supernatural creator could explain biological relationships. . . . Darwin presented the concept that nature entails continued change, unpredictable chance events, an unrelenting struggle for survival among living creatures and no obvious guidance. *By viewing life as a continually expendable commodity rather than a divinely premeditated and consecrated goal*, Darwin replaced what many had seen as an understandable view of nature—the creativity of a human-like God—with the most heretical concepts of randomness and uncertainty and the fear that no one could understand the source and purpose of any natural event or design.<sup>443</sup>

To reiterate an earlier quote, Strickberger’s 2000 edition likewise offers a stark description of Darwinism as “an attempt to displace God”:

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439. BRIAN K. HALL & BENEDIKT HALLGRIMSSON, STRICKBERGER’S EVOLUTION: THE INTEGRATION OF GENES, ORGANISMS, AND POPULATIONS 659 (4th ed. 2008).

440. *Id.* at 660.

441. *Id.* at 659.

442. *Id.* at 60.

443. *Id.* at 665-66 (emphasis added).

The fear that Darwinism was an attempt to displace God in the sphere of creation was therefore quite justified. To the question, “Is there a divine purpose for the creation of humans?” evolution answers no. To the question “Is there a divine purpose for the creation of any living species?” evolution answers no.<sup>444</sup>

Thus, according to various leading contemporary biology textbooks, evolution is described as a “random,<sup>445</sup> “blind,<sup>446</sup> “uncaring,<sup>447</sup> “heartless,<sup>448</sup> “undirected,<sup>449</sup> “purposeless,<sup>450</sup> “chance<sup>451</sup> process that acts “without plan” or “any ‘goals’<sup>452</sup> and requires accepting “materialism<sup>453</sup> because we are “not created for any special purpose or as part of any universal design.<sup>454</sup> In addition, “a god of design and purpose is not necessary<sup>455</sup> because “Darwin replaced what many had seen as an understandable view of nature—the creativity of a human-like God—with the most heretical concepts of randomness and uncertainty<sup>456</sup>—a thoroughly purposeless and naturalistic origin of life. At the very least, an

444. MONROE W. STRICKBERGER, *EVOLUTION* 60 (3d ed. 2000).

445. GUTTMAN, *supra* note 416, at 36; KENNETH R. MILLER & JOSEPH S. LEVINE, *BIOLOGY* 658 (4th ed. 1998); KENNETH R. MILLER & JOSEPH S. LEVINE, *BIOLOGY* 658 (3d ed. 1995); KENNETH R. MILLER & JOSEPH S. LEVINE, *BIOLOGY* 658 (1st ed. 1991); MONROE W. STRICKBERGER, *EVOLUTION* 70 (3d ed. 2000).

446. Richard Dawkins, *quoted in* NEIL A. CAMPBELL, JANE B. REECE & LAWRENCE G. MITCHELL, *BIOLOGY* 412-13 (5th ed. 1999); DOUGLAS J. FUTUYMA, *EVOLUTIONARY BIOLOGY* 5 (3d ed. 1998); DOUGLAS J. FUTUYMA, *EVOLUTIONARY BIOLOGY* 2 (2d ed. 1985); DOUGLAS J. FUTUYMA, *EVOLUTIONARY BIOLOGY* 4 (1st ed. 1979).

447. *See* FUTUYMA, *supra* note 93, and accompanying text.

448. JOSEPH S. LEVINE & KENNETH R. MILLER, *BIOLOGY: DISCOVERING LIFE* 161 (2d ed. 1994); JOSEPH S. LEVINE & KENNETH R. MILLER, *BIOLOGY: DISCOVERING LIFE* 152 (1st ed. 1992).

449. *See* FUTUYMA, *supra* note 446 (appearing in all editions therein); MILLER & LEVINE, *supra* note 405 (appearing in all editions therein).

450. MILLER & LEVINE, *supra* note 405 (appearing in all editions therein) (describing organisms as having apparent, but no actual, “purpose”); *see also* FUTUYMA, *supra* note 446 (appearing in all editions therein) (describing evolution as lacking “purpose”).

451. *See* GUTTMAN, *supra* note 416, at 37.

452. WILLIAM D. PURVES ET AL., *LIFE: THE SCIENCE OF BIOLOGY* 3 (6th ed. 2001); *see also* MILLER & LEVINE, *supra* note 405 (appearing in all editions therein) (suggesting that evolution has no “goal of perfection”).

453. FUTUYMA, *supra* note 446; MILLER & LEVINE, *supra* note 405 (appearing in all editions therein).

454. CURTIS & BARNES, *supra* note 198, at 475.

455. STRICKBERGER, *supra* note 115, at 70.

456. HALL & HALLGRIMSSON, *supra* note 120, at 666.

analysis of the constitutionality of the teaching of such views in public schools seems warranted.

### 3. Analysis Under Current Establishment Clause Legal Doctrines

The fact that a public school textbook describes evolution as a random, blind, uncaring, heartless, undirected, unguided, purposeless, chance, or unsupervised process might not necessarily violate the Establishment Clause simply because those descriptions cohere with the fundamental tenets of atheism, secular humanism, or philosophical materialism. As Jay Wexler observes, “it is not clear that the government could function if it were prohibited from acting in ways that offend religious believers.”<sup>457</sup> Likewise, the U.S. Supreme Court has noted that “the state has no legitimate interest in protecting any or all religions from views distasteful to them[,]”<sup>458</sup> for “the First Amendment does not permit the State to require that teaching and learning must be tailored to the principles or prohibitions of any religious sect or dogma.”<sup>459</sup> Moreover, if atheism is treated as a religion, as three concurring U.S. Supreme Court justices observed in the 1987 case of *Edwards v. Aguillard*, “[a] decision respecting the subject matter to be taught in public schools does not violate the Establishment Clause simply because the material to be taught ‘happens to coincide or harmonize with the tenets of some or all religions.’”<sup>460</sup> However, it must be noted that these concurring justices were quoting from the Court’s majority ruling in *Harris v. McRae* six years earlier, which provided an important guiding qualification on the application of this rule:

*Although neither a State nor the Federal Government can constitutionally pass laws which aid one religion, aid all religions, or prefer one religion over another, it does not follow that a statute violates the Establishment Clause because it happens to coincide or harmonize with the tenets of some or all religions.*<sup>461</sup>

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457. Wexler, *supra* note 212, at 792.

458. *Epperson v. Arkansas*, 393 U.S. 97, 107 (1968) (citing *Joseph Burstyn, Inc. v. Wilson*, 343 U.S. 495, 505 (1952)).

459. *Id.* at 106.

460. *Edwards v. Aguillard*, 482 U.S. 578, 605 (1987) (Powell, J., concurring) (joined by O’Connor, J.) (quoting *Harris v. McRae*, 448 U.S. 297, 319 (1980) and *McGowan v. Maryland*, 366 U.S. 420, 442 (1961)).

461. *Harris*, 448 U.S. at 319 (emphasis added) (citations and internal quotation marks omitted).

Thus, it seems apparent that when state policies coincide or harmonize with the tenets of a religion, this becomes a constitutional problem at the very least when that policy places that religious viewpoint in preference over other religious viewpoints. In this regard, this Part has discussed various textbooks that expressly favor “materialism” and/or use the core tenets of atheism and secular humanism (*e.g.*, the view that life arose via entirely unguided and purposeless natural processes) over other non-evolutionary religious viewpoints. As Part II.A of this Article showed, there are many examples of textbooks that show express hostility and disapproval towards purported religious viewpoints that oppose evolution. The use of textbooks in public school or public university curricula that couple their language of purposeless and naturalistic origins with explicit preference or endorsement of “materialism,” or explicit attacks on particular religious viewpoints, would likely fail the neutrality test.<sup>462</sup> Such texts would send a message to theists who believe in a divine creator that they “are outsiders, not full members of the political community” and communicate to non-theists and atheists that “they are insiders, favored members of the political community.”<sup>463</sup>

Those who are skeptical of this argument should keep in mind that this Article does *not* argue that teaching evolution should be considered *per se* unconstitutional, nor does it hold that teaching evolution favorably in schools is necessarily the equivalent of advocating atheism. Additionally, this Article does not claim that all biology textbooks are unconstitutional for use in public schools—many biology textbooks promote evolution, but do not do so alongside atheistic or secular humanist religious claims. But some do. Given that *Epperson* emphatically held that “the vigilant protection of constitutional freedoms is nowhere more vital than in the community of American schools”<sup>464</sup> and that therefore there is an “absolute” prohibition on the state to “adopt programs or practices . . . which aid or oppose any religion,”<sup>465</sup> it seems likely that using many of these textbooks would fail the neutrality test on the grounds that they aid atheism and/or oppose religious views that conflict with evolution. The Court in *Edwards* likewise observed:

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462. One ideal example of such a textbook is Strickberger’s 2008 textbook *EVOLUTION*. See *supra* note 115.

463. *County of Allegheny v. ACLU*, 492 U.S. 573, 595 (1989) (quoting *Lynch v. Donnelly*, 465 U.S. at 688 (O’Connor, J. concurring)) (citations and internal quotation marks omitted).

464. *Epperson*, 393 U.S. at 104 (quoting *Shelton v. Tucker*, 364 U.S. 479, 487 (1960)).

465. *Id.* at 106 (citations and internal quotation marks omitted).

Families entrust public schools with the education of their children, but condition their trust on the understanding that the classroom will not purposely be used to advance religious views that may conflict with the private beliefs of the student and his or her family. Students in such institutions are impressionable and their attendance is involuntary. The State exerts great authority and coercive power through mandatory attendance requirements, and because of the students' emulation of teachers as role models and the children's susceptibility to peer pressure.<sup>466</sup>

Such language offers all the more justification for a court to find that the aforementioned textbooks unconstitutionally advance non-theistic religion under the *Lemon* test, or cause certain atheists or secular humanists to feel like political insiders, thereby endorsing their religious viewpoints.

Though surely not all mainstream biology textbooks promote evolution in an unconstitutional fashion, a court faced with the state use of many of the textbooks covered here would have ample precedent for finding violations of the Court's clearly articulated rule in *Schempp*: "[t]he State may not establish a religion of secularism in the sense of affirmatively opposing or showing hostility to religion, thus preferring those who believe in no religion over those who do believe."<sup>467</sup>

#### IV. CONCLUSION

In the public controversy over evolution, the common stereotype holds that Darwin's defenders are the ones guarding public school curricula against unconstitutional entanglement with religion. The evidence cited in this Article shows this stereotype is wrong: Zeal for Darwin causes his latter-day defenders to encourage public schools to attack, inhibit, oppose, and disapprove of purported religious views that dissent from evolution, and to prefer both theistic and non-theistic religious viewpoints that support evolution. The hypocrisy of the evolution lobby is untenable, for it will lead to violations of the U.S. Supreme Court's unequivocal ban on "denominational preference" in public schools.

To be sure, a few evolution lobbyists, such as NCSE Executive Director Eugenie Scott, have spoken out against policies that might advocate philosophical materialism in public schools. Unfortunately, Scott and her colleagues at the NCSE nonetheless advocate that public schools express

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466. *Edwards v. Aguillard*, 482 U.S. 578, 584 (1987) (citations omitted).

467. *Sch. Dist. of Abington Twp. v. Schempp*, 374 U.S. 203, 225 (1963) (citations and internal quotation marks omitted).

hostility towards ID and creationism—viewpoints they expressly contend are religious—and also recommend that teachers prefer and advocate religious viewpoints that support evolution in the classroom. Meanwhile, behind the scenes, Scott's organization is apparently issuing talking points encouraging activists to tell state boards of education that “[s]cience posits that there are no forces outside of nature,” and that “‘the only explanations that count are those that rely on nature’ is . . . a foundational axiom for any rational thinking.”<sup>468</sup> Additionally, overzealous pro-evolution textbook authors continue to promote evolution in a fashion that advocates non-theistic religious viewpoints in preference to traditional religious viewpoints. The silence from the Darwin lobby toward these religiously non-neutral textbooks is deafening.

In making these arguments, it cannot be overemphasized that this paper does *not* argue that teaching evolution is generally unconstitutional or that teaching evolution is equivalent to teaching atheism or secular humanism. Far from it. Having studied evolutionary biology in public schools at the high school, undergraduate, and graduate levels, the present author is firmly convinced that modern evolutionary theory, whether basically correct or deeply flawed, *can be taught and advocated as a science without the unconstitutional religious baggage found in many of the textbooks and other sources discussed in this Article*. As established in Part I, the present author makes no protest against the general teaching of evolution. As argued in Part II, the contention is only against those who use the teaching of evolution as an occasion to prefer certain theistic or non-theistic religious viewpoints, or to inhibit certain would-be religious viewpoints.

If anything, this Article's purpose is to encourage evolution education to proceed in a scientific fashion so that students can learn about this fascinating scientific debate in an environment that truly keeps religion out of the science classroom. If the evolution lobby can redirect its zeal towards encouraging wholly constitutional methods of teaching evolution, then perhaps families will one day truly be able to “entrust public schools with the education of their children . . . on the understanding that the classroom will not purposely be used to advance religious views that may conflict with the private beliefs of the student and his or her family.”<sup>469</sup>

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468. Newton, *supra* note 392.

469. Edwards, 482 U.S. at 584 (citations omitted).

