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# WHY IT MATTERED TO DOVER THAT INTELLIGENT DESIGN ISN'T SCIENCE

RICHARD B. KATSKEE \*

## INTRODUCTION

What if you were a consumer concerned about the wholesomeness of a product you were contemplating buying, and, in the highest profile consumer-fraud case in two decades, a court hearing claims against the product's manufacturer issued a decision without looking at the item being sold or the marketing strategy being used? Would you conclude that the court was adequately enforcing the law to protect the public interest? Or what if you were that manufacturer, and the court held you liable for fraud without even considering your proffered defenses? Would you feel that the court had treated you justly?

In *Kitzmiller v. Dover Area School District*,<sup>1</sup> the Dover school board and the intelligent-design movement as a whole stood trial on the claim that they were trying to pass off a religious view as though it were a scientific theory, so that they could market it to students in public-school science classrooms. They defended themselves by saying that they were doing nothing dishonest, much less unconstitutional, because intelligent design is a scientific theory that belongs in science classes. They presented the best expert witnesses they could find to support their position. And they demanded that the court consider their evidence and arguments. The plaintiffs, for their part, met those arguments head on, offered their own expert witnesses to refute the defendants' assertions that intelligent design is science, and demonstrated that the defendants and their experts were being disingenuous in claiming otherwise. Meanwhile, the people of Dover, parents and school officials across the country, and observers around the world all waited expectantly for Judge

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1. 400 F. Supp. 2d 707 (M.D. Pa. 2005).

John E. Jones III to determine, once and for all, whether what the intelligent-design movement and the Dover school board were selling as science was the genuine article. And everyone knew that other communities would look to the court's decision to see whether they might lawfully follow the path that the Dover Area School District had charted. Under those circumstances, could there really be anything wrong with the court's deciding the central question that the parties posed, the experts on both sides illuminated, and the public desperately wanted answered?

Law professors Jay Wexler and Arnold Loewy both think that there is. Although their particular critiques of the *Kitzmiller* decision may differ on the surface, each reduces to the view that the court could, and therefore should, have decided the case without ever touching on whether intelligent design is science.<sup>2</sup> Wexler agrees with Judge Jones' overall holding—that incorporating intelligent design into a public school's science curriculum violates the Establishment Clause, both under the endorsement test and under the *Lemon* test—and he applauds most of the court's analysis.<sup>3</sup> But he nonetheless complains that federal judges lack the institutional competence to address whether intelligent design is science, and contends that, in all events, the court need not have undertaken that supposedly difficult and controversial inquiry in order to decide the case.<sup>4</sup> Loewy, on the other hand, attacks the *Kitzmiller* opinion wholesale. Although he acknowledges that the Dover school board acted with an unconstitutional purpose, he argues that the district court exhibited unconstitutional hostility toward religion by prohibiting the public schools from teaching what he regards as a scientific theory that just happens to accord with a religious view.<sup>5</sup>

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2. See Jay D. Wexler, *Kitzmiller and the "Is it Science?" Question*, 5 FIRST AMEND. L. REV. 91, 92-95 (2006); Arnold H. Loewy, *The Wisdom and Constitutionality of Teaching Intelligent Design in Public Schools*, 5 FIRST AMEND. L. REV. 82, 83-84 (2006).

3. Wexler, *supra* note 2, at 92.

4. *Id.* at 99-100, 103-07.

5. Loewy, *supra* note 2, at 83, 88. Loewy adds that, in barring intelligent design from the science classroom, the *Kitzmiller* court violated the Free Speech Clause by limiting students' access to ideas. *Id.* at 89. In so doing, Loewy conflates access to ideas—the right not to be prevented by public officials from engaging in intellectual exploration—with government speech. He relies on *Board of Education, Island Trees Union Free School District No. 26 v. Pico*, 457 U.S. 853 (1982), in which four justices (in two opinions) reasoned—correctly, in my view—that a

In arguing that the court need not have addressed the question whether intelligent design is science, Loewy and Wexler share the view that intelligent design as a body of thought, as a political strategy, and as a cultural movement, can and should be divorced from the conduct of the school officials in Dover who embraced it.<sup>6</sup> In reaching that conclusion, however, they also reveal fundamental misunderstandings about intelligent design, about science, and ultimately about the nature of the inquiry that, as both a doctrinal and a jurisprudential matter, the *Kitzmiller* court had a duty to perform.

Loewy and Wexler go awry in part because each is misled into thinking that there is something fishy about the court's conclusion that intelligent design is not science, with Loewy succumbing to the basic deceit at the heart of intelligent design itself, and Wexler misunderstanding the practical effect of a debate within the philosophy of science that has no bearing on intelligent design's status. That scholars who should know better have been deceived into doubting the *Kitzmiller* court's painstaking analysis on this score is unfortunate; but it is also understandable. For the intelligent-design movement has carefully (albeit superficially) crafted its beliefs to look like science, in

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school board could not remove books from public-school-library shelves in order to deny students access to ideas that the school-board members disfavored. *Id.* at 868-69 (plurality opinion) (explaining that the school library is "the principal locus" of students' freedom "to inquire, to study and to evaluate, to gain new maturity and understanding" (citations omitted)); *id.* at 879-80 (Blackmun, J., concurring in part and concurring in judgment) ("[S]chool officials may not remove books for the purpose of restricting access to the political ideas or social perspectives discussed in them, when that action is motivated simply by the officials' disapproval of the ideas involved.") (alteration added). Loewy apparently reads *Island Trees* as standing for the proposition that students have a right not just to explore intelligent design on their own, and not just to be free from state censorship of intelligent-design materials, but also to have their science teachers present the view to them in classroom lessons. Not only is that claim a gross distortion of *Island Trees*, but, in the Establishment Clause context, it is tantamount to saying that, because a public-school library could lawfully stock a Bible on its shelf for students' use (so long as its purpose for doing so was secular), students have a constitutional right to insist that their teachers read it to them, and all their classmates, as part of their regular classroom lessons—or even that school boards have the right to force Bible readings on students notwithstanding the students' or their parents' objections. That Big Brotheresque view of public education is as irreconcilable with the Free Speech Clause as it is with the Establishment Clause.

6. See Loewy, *supra* note 2, at 86; Wexler, *supra* note 2, at 97-98.

an effort to distinguish them from creationism and so-called creation science—the precursors to intelligent design that the U.S. Supreme Court and the lower federal courts long ago recognized as religious views that the Establishment Clause forbids public schools to promote.<sup>7</sup> By repackaging these views in less obviously religious terminology without changing their essential character, the movement has thus exploited the public's scientific illiteracy (which leads most of us, unreflectively, to regard any view dressed in the lab coat of pseudoscientific terminology as wearing the cloak of scientific authority).

More fundamentally, Loewy and Wexler both fail to grasp that deciding whether intelligent design is science was critical to the *Kitzmiller* court's fulfilling its jurisprudential obligation both to the defendants and to the public at large. They each recognize that the Dover School District interjected intelligent design into its ninth-grade-biology curriculum because the school-board members wanted to promote their preferred religious view and believed that introducing students to intelligent design would accomplish that aim. But because the Board sought to defend its policy by arguing that intelligent design is science, and hence that both the purpose and the effect of introducing it in science classes would necessarily be to enhance science education rather than to advance religion, determining the Board's primary purpose—just like ascertaining the policy's primary effect—required the court to figure out what intelligent design actually is and what it was designed to do. Because Wexler and Loewy each ignore this connection between the intelligent-design movement's aims and those of the Dover Board, they do not see that the constitutionally-mandated purpose inquiry—as much as the effect and endorsement tests—ultimately required the court to consider the nature and character of intelligent design both as a truth claim and as a cultural movement.

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7. See generally, e.g., *Edwards v. Aguillard*, 482 U.S. 578 (1987) (striking down Louisiana law forbidding public schools to teach evolution without also teaching creation science); *Freiler v. Tangipahoa Parish Bd. of Educ.*, 185 F.3d 337 (5th Cir. 1999) (invalidating a school-board policy mandating reading of disclaimer before the teaching of evolution); *Daniel v. Waters*, 515 F.2d 485 (6th Cir. 1975) (invalidating Tennessee statute requiring that textbooks teaching evolution contain disclaimers and equal treatment of competing theories of the origins of humans, including creationism); *McLean v. Ark. Bd. of Educ.*, 529 F. Supp. 1255 (E.D. Ark. 1982) (finding that Arkansas statute requiring balanced treatment of evolution and creation science in public schools violated the Establishment Clause).

In answering Wexler's and Loewy's critiques of the opinion, I will show that the connection between intelligent design and the Dover Board's purpose for introducing its intelligent-design policy is more than guilt by association. It is a doctrinal as well as a logical imperative. For the Board did not invent the idea to inject intelligent design into high-school-biology classes and thereby proselytize students in the Board's preferred form of Christianity. Rather, the Board picked intelligent design off the shelf as a heat-and-eat lesson in creationism—an appealing choice from the board members' perspective because the leaders of the intelligent-design movement had designed it for that use, notwithstanding its pedagogic unwholesomeness for high-school science students. And the Board premised all its defenses at trial on the claim that intelligent design is science—again a logical choice, given the Board's aims, because the intelligent-design movement's leaders had fashioned their pseudoscience from the very beginning to support that litigation strategy whenever they managed to find public-school officials with sufficient chutzpah to give the subterfuge a try. So understanding what the Board was trying to do in Dover meant also understanding the intelligent-design movement's basic aim and strategic plan.

Perhaps more importantly, if the *Kitzmiller* court had dodged the question whether intelligent design is science, as both Loewy and Wexler seem to think that it should have, the Dover school board and the intelligent-design movement for which it carried the banner would have complained that the court never gave them a fair hearing. Because in that case, the court would have failed even to consider the core claim on which the Board, in accordance with the intelligent-design movement's plan, had premised all its legal defenses. Judge Jones recognized that the defendants, the people of Dover, and the whole country had a right to expect him to issue a decisive ruling that would not only resolve the dispute in Dover, but also give guidance to other public-school officials elsewhere, and in the process forge a common understanding that would begin to heal the religiously based political and social divides that the school board had wrought in Dover and the intelligent-design movement was attempting to export to other communities across the country.

To my mind, Judge Jones amply supported his holdings that the Dover Board's intelligent-design policy failed the Establishment Clause's purpose, effect, and endorsement tests, so I see no need to try to bolster his conclusions or to reprove the plaintiffs' case. Rather, I wish to focus more narrowly on Wexler's and Loewy's challenges that the

court could have stopped short of deciding whether intelligent design is science and yet still adequately resolved the case based on the Board's unconstitutional religious purpose. In doing so, I will show, first, that the court was required as a doctrinal matter to consider the "is it science?" question even under *Lemon*'s purpose test; second, that the court had ample justification, both as a matter of judicial praxis and as a philosophical matter, to distinguish religion from science and to identify intelligent design as the former (notwithstanding its architects' loud protestations that it is the latter); third, that the threat to constitutionally protected religious freedom from the intelligent-design movement's successfully misrepresenting religious beliefs as science provided yet more reason why the court needed to expose the ruse; and finally, that the court had a jurisprudential responsibility to justify its decision to the defendants, to the Dover community, and to the public in general by explaining what intelligent design really is and why it does not belong in a public-school science curriculum. Wexler's and Loewy's criticisms notwithstanding, I believe that those reasons for seriously evaluating and publicly answering the school board's and the intelligent-design movement's defenses of the Dover policy amply explain why the *Kitzmiller* court would have been wrong to pawn off to future courts the hard work of deciding the "is it science?" question. And at a more basic level, they show why the opinion, as Judge Jones wrote it, properly fulfilled the court's obligation to resolve a bitterly divisive political and social controversy—the institutional role that the federal courts were, after all, intelligently designed to perform.

#### I. THE DEVIL IS IN THE DETAILS.

Wexler and Loewy agree that the *Kitzmiller* court reached the right result under *Lemon v. Kurtzman*'s purpose test:<sup>8</sup> The Dover school board violated the Establishment Clause by implementing its intelligent-design policy in order to promote religion in its biology classrooms. But both treat the School District's defense that intelligent design is science, not religion, as irrelevant to the court's analysis of the Board's purpose.<sup>9</sup>

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8. See 403 U.S. 602, 612 (1971).

9. Wexler does so explicitly, see Wexler, *supra* note 2, at 97-99, while Loewy does so only implicitly, see Loewy, *supra* note 2, at 86-87 (approving court's purpose ruling before going on to treat intelligent design as scientific theory).

As the Eleventh Circuit recently reminded, however, in Establishment Clause cases the “devil is in the details.”<sup>10</sup> Courts cannot determine whether a violation has occurred unless they consider the challenged governmental conduct in light of all the circumstances that led or contributed to it.<sup>11</sup> By employing the intelligent-design movement’s strategy to present intelligent design as though it were a scientific theory not subject to the constitutional prohibition against teaching a religious view in public schools, the Dover Board carved out the space to argue not just that teaching intelligent design would improve students’ science education—a valid secular effect—but also that, in pursuing that objective, the Board was acting with a constitutionally permissible secular purpose. In so doing, the School District also invited—indeed, obligated—the *Kitzmiller* court to examine whether the Board’s claims about intelligent design were genuine and accurate.

To be sure, the *Kitzmiller* court could have tried to determine the Board’s purpose without referring either to the content of intelligent design or to the aims of the intelligent-design movement. But had the court donned those judicial blinders, it would have had a hard time distinguishing among the Board’s avowed purposes, its actual but merely secondary or tangential purposes, and its primary purpose for incorporating intelligent design into the Dover High School science curriculum. For only by evaluating whether the policy that the School District was implementing furthered the Board’s proffered secular justification could the court have fairly decided whether to take the School District at its word that it was acting to improve science education.

In the first instance, the court was destined to confront the “is it science?” question because the School District premised all its arguments for the intelligent-design policy—including its purpose arguments—on the claim that intelligent design is science. The Board members argued that they had adopted the intelligent-design policy in order to enhance Dover students’ education by adding more scientific content to biology

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10. *Selman v. Cobb County Sch. Dist.*, 449 F.3d 1320, 1322 (11th Cir. 2006) (vacating and remanding decision in Georgia textbook-sticker case on basis that factual record was inadequate to permit court to determine whether sticker was religiously based assault on teaching of evolution); *see also* *McCreary County v. ACLU of Ky.*, 125 S. Ct. 2722, 2738 (2005) (“under the Establishment Clause detail is key”).

11. *See, e.g., Santa Fe Indep. Sch. Dist. v. Doe*, 530 U.S. 290, 315 (2000).



classes.<sup>12</sup> Going a step further, the School District argued, and had its expert witnesses testify, that the policy would in fact improve science instruction (a valid secular effect) by introducing biology students to the full panoply of scientific explanations for the development of biological organisms.<sup>13</sup> According to the School District, the students would thereby engage with course materials critically, discover how the scientific community deals with unsettled or controversial questions, and ultimately decide for themselves whether evolution or intelligent design is better science.<sup>14</sup> Boiled to its essence, the School District's defense under *Lemon*'s purpose test was that because intelligent design is science, the Board had good reason to want to introduce students to the concept as a way to enhance their biology lessons.

That legal strategy had its roots in a longstanding creationist program to exploit language in the Supreme Court's decision in *Edwards v. Aguillard*<sup>15</sup> to circumvent *Edwards*' holding barring the teaching of biblical creationism dressed up as so-called creation science. The *Edwards* Court struck down a Louisiana balanced-treatment law, which required public schools to teach creation science if they taught evolution, on the ground that the state legislature's primary purpose for enacting the law was to "advance a particular religious belief."<sup>16</sup> In reaching that decision, the Court explained: "We do not imply that a legislature could never require that scientific critiques of prevailing scientific theories be taught. . . . [T]eaching a variety of scientific theories about the origins of humankind to schoolchildren might be validly done with the clear secular intent of enhancing the effectiveness of science instruction."<sup>17</sup> Using that dicta as their playbook, the Dover School District and its attorneys sought to show that intelligent design is a genuine scientific theory

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12. See, e.g., *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 750, 762 (M.D. Pa. 2005).

13. E.g., *id.* at 750, 762-63.

14. See, e.g., *id.* at 750 ("Defendants have asserted that the ID Policy has the secular purposes of promoting critical thinking and improving science education . . ."); *id.* at 762 ("Defendants attempt to persuade this Court that each Board member who voted for the biology curriculum change did so for the secular purpose of improving science education and to exercise critical thinking skills . . .").

15. 482 U.S. 578 (1987).

16. *Id.* at 593.

17. *Id.* at 593-94 (alteration added).

because they knew that if they were successful, the School District's claim to be introducing students to intelligent design for valid secular pedagogic reasons would appear at least facially plausible.<sup>18</sup>

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18. More accurately, the playbook is David K. DeWolf, Steven C. Meyer & Mark Edward DeForrest, *Teaching the Origins Controversy: Science, or Religion, or Speech?*, 2000 UTAH L. REV. 39 (2000), an earlier form of which appeared as DAVID K. DEWOLF, STEVEN C. MEYER & MARK EDWARD DEFORREST, INTELLIGENT DESIGN IN PUBLIC SCHOOL SCIENCE CURRICULA: A LEGAL GUIDEBOOK (1999), available at <http://www.arn.org/docs/dewolf/guidebook.htm>. Meyer is the program director for the Discovery Institute's Center for Science and Culture (the intelligent-design think-tank); he was designated as one of the School District's expert witnesses in *Kitzmiller* but dropped out before trial. DeWolf is a Senior Fellow at the Center for Science and Culture; he filed two *amicus* briefs in *Kitzmiller*, one on behalf of the Discovery Institute itself, see Brief for the Discovery Institute as Amicus Curiae Supporting Defendants, *Kitzmiller*, 400 F. Supp. 2d 707 (No. 04cv2688) (available at <http://www.discovery.org/scripts/viewDB/filesDB-download.php?command=download&id=646>), and the other on behalf of individual intelligent-design proponents, see Brief for Biologists and Other Scientists as Amici Curiae Supporting Defendants, *Kitzmiller*, 400 F. Supp. 2d 707 (No. 04cv2688) (available at <http://www.discovery.org/scripts/viewDB/filesDB-download.php?command=download&id=558>). In *Teaching the Origins Controversy*, they declare the intelligent-design movement's agenda for circumventing the Supreme Court's holding in *Edwards*:

[N]othing in the *Edwards* decision justifies excluding consideration of design theory in the biology curriculum, unless it could be established that design theory like creation science constitutes a religious belief. Quite the contrary, the Court made clear that "teaching a variety of scientific theories about the origins of humankind to schoolchildren might be validly done with the clear secular intent of enhancing the effectiveness of science instruction."

DeWolf, Meyer & DeForrest, *supra*, at 108 (quoting *Edwards*, 482 U.S. at 593-94) (footnote omitted) (alteration added). The first sentence effectively recognizes the need for judicial scrutiny to determine whether intelligent design is a religious belief; and the second similarly acknowledges the need for judicial scrutiny to determine whether it is science.

In an American Enterprise Institute symposium on intelligent design held during the *Kitzmiller* trial, Richard Thompson, the chief counsel at the faith-based law firm that represented the Dover School District, reasonably took the Discovery Institute to task for its "strategy" of "push[ing] school boards to go in with intelligent design, and as soon as there's a controversy, . . . back[ing] out for the compromise," thus "victimiz[ing]" the Dover school board and the other educational officials across the country who have followed the Discovery Institute's roadmap for

But, of course, a plausible inference of secular purpose would not have been enough. Under settled Establishment Clause jurisprudence, the *Kitzmiller* court also had to evaluate whether the Board's proffered secular purpose was "genuine, not a sham, and not merely secondary to a religious objective."<sup>19</sup> And to conduct that analysis, the court had to look behind the board members' protestations of innocent motives to see whether the Board's actions were consistent with the School District's proffered justifications.

The Supreme Court first systematically explained the sham-purpose analysis in *Stone v. Graham*.<sup>20</sup> *Stone* was a challenge to a Kentucky statute requiring public schools to post the Ten Commandments in every classroom. The state argued that the statute's secular purpose was to teach students about the Decalogue's role as "the fundamental legal code of Western Civilization and the Common Law of the United States."<sup>21</sup> State legislators had gone to great lengths to set up that defense, not just by writing their supposed secular purpose into the statute's text, but also by requiring that it be stamped on every schoolroom posting.<sup>22</sup> The Supreme Court held, however, that the Establishment Clause requires reviewing courts to look beneath a state's "avowed" secular purpose to ascertain whether the real reason for the law was religious or secular.<sup>23</sup> And in conducting that sham-purpose inquiry, the Court found it necessary to examine the Decalogue's contents and meaning. Determining that "[t]he Commandments do not confine themselves to arguably secular matters, such as honoring one's parents, killing or murder, adultery, stealing, false witness, and

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incorporating intelligent design into their science curricula. Richard Thompson, Panel Discussion at American Enterprise Institute Symposium: Science Wars: Should Schools Teach Intelligent Design? (Oct. 21, 2005) (alterations added) (transcript available at <http://www.aei.org/events/filter.all,eventID.1169/transcript.asp>). Thompson made those comments in response to Discovery Institute vice president Mark Ryland's disingenuous statement that the organization had never advocated teaching intelligent design in public schools. See *id.*

19. *McCreary County v. ACLU of Ky.*, 125 S. Ct. 2722, 2735 (2005); see also, e.g., *Santa Fe Indep. Sch. Dist. v. Doe*, 530 U.S. 290, 308 (2000); *Edwards*, 482 U.S. at 586-87, 590, 594 (1987).

20. 449 U.S. 39 (1980).

21. *Id.* at 41.

22. *Id.*

23. *Id.*

covetousness,”<sup>24</sup> but instead specify “religious duties of believers: worshipping the Lord God alone, avoiding idolatry, not using the Lord’s name in vain, and observing the Sabbath Day,”<sup>25</sup> the Court reasoned that the Decalogue is inherently religious, that it is “undeniably a sacred text in the Jewish and Christian faiths, and [therefore that] no legislative recitation of a supposed secular purpose can blind us to that fact.”<sup>26</sup> The Court then went on to employ a kind of *res ipsa* logic: It asked whether, in light of both the Decalogue’s inherently religious nature and the use that the legislature was prescribing for the Commandments, a primarily secular purpose for the challenged statute could plausibly be inferred. And because the only credible explanation that the Court could see for the classroom-posting requirement actually enacted was that the Kentucky legislature had been trying to advance religion, the Court attributed that unconstitutional purpose to the state—notwithstanding the state’s protestations that it was pursuing secular pedagogic goals.<sup>27</sup>

In *Kitzmiller*, the Dover School District essentially argued *Stone*’s converse. Because intelligent design is a scientific theory, the argument went, the most natural reason for the school board to have added it to the Dover High School biology curriculum was to improve science education. And hence, the District argued, the court should discount evidence of board members’ religious aims as reflecting what was at most only a secondary or incidental religious purpose for the intelligent-design policy.<sup>28</sup> So in determining whether the Dover Board’s asserted secular purposes were genuine, the *Kitzmiller* court had to follow the Supreme Court’s lead in *Stone*, scrutinizing whether the School District’s asserted secular purposes for altering the high-school-biology curriculum could be reconciled with the content of the policy

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24. *Id.* at 41-42 (alteration added).

25. *Id.* at 42.

26. *Id.* at 41 (alteration added).

27. *See id.* at 41-42.

28. Indeed, in the passage from *Edwards* setting the intelligent-design movement’s agenda, *see supra* notes 17-18 and accompanying text, the Court specifically mentioned *Stone*, opening the door to the argument that the Dover School District made by acknowledging the possibility of valid secular uses even for the inherently religious Ten Commandments. *Edwards v. Aguillard*, 482 U.S. 578, 593 (1987).

that the Board actually adopted.<sup>29</sup> And that in turn required determining what intelligent design is, what the Board members knew about it, and what they reasonably understood it to be.<sup>30</sup>

Although no one now seriously disputes the *Kitzmiller* court's finding that the Dover Board adopted its intelligent-design policy in the hope that it could thus indoctrinate students in the board members' creationist religious beliefs,<sup>31</sup> the Board, like the legislature in *Stone*, made every effort to thwart the plaintiffs' and the court's attempts to uncover its true purpose. As the *Kitzmiller* court noted—not just once, but at least six times—school-board members did not just proclaim their secular aims loudly and often; they repeatedly lied under oath to try to hide the fact that they were seeking to advance a sectarian religious agenda.<sup>32</sup> But the Board could not hide the content of intelligent design

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29. See, e.g., *McCreary County v. ACLU of Ky.*, 125 S. Ct. 2722, 2734-35 (2005).

30. Similarly, if the court had not considered whether intelligent design is science, it would have been unable to conduct the analyses required under the effect and endorsement tests. Specifically, if intelligent design were genuine science, as the School District was contending, there would be a strong presumption that the principal effect of teaching it would be to enhance biology lessons rather than to advance religion. And if one who took the time to discover intelligent design's content and true nature would determine that it was a scientific theory, then the hypothetical reasonable observer—to whom that knowledge would be imputed—might well conclude that the message conveyed to students and the community by a school district's decision to teach intelligent design was that school officials valued science education, not that they were placing official imprimatur on a religious view.

31. As one of the principal attorneys for the eleven parents who sued the School District in *Kitzmiller*, I take pride in the fact that the case we presented was, in the end, so compelling that even intelligent design's architects and staunchest supporters now all rush to distance themselves from the Dover Board's actions. Notably, the Discovery Institute—intelligent design's chief producer and advertising agency—has been quick to concede the Dover school board's wrongdoing, though it has been equally quick to claim that the Board's motives bear no relation to those of the intelligent-design movement or its leaders, much less to the content of intelligent design itself. See, e.g., DAVID K. DEWOLF ET AL., *TRAIPSING INTO EVOLUTION: INTELLIGENT DESIGN AND THE DOVER DECISION* 73-74 (2006).

32. See *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 727 n.7 (M.D. Pa. 2005) (the board members' testimony was "marked by selective memories and outright lies under oath . . ."); *id.* at 749 (the board president "repeatedly failed to testify in a truthful manner"); *id.* at 752 (board members "either testified inconsistently or lied outright under oath on several occasions . . ."); *id.* at 756 ("[T]he inescapable truth is that [two board members] lied at their . . . depositions . . . . This mendacity was a clear and deliberate attempt to hide the

itself, so it could not forestall the plaintiffs' scientific experts' illuminating the mismatch between what the School District claimed at trial that it had been doing, on the one hand, and what the Board's chosen policy actually involved, on the other.

To be sure, the *Kitzmiller* court had a duty under the Establishment Clause to consider the Dover Board's stated reasons for adopting its intelligent-design policy;<sup>33</sup> and the court did that.<sup>34</sup> But under *Stone*, the court also had to take the extra step to determine intelligent design's actual content—just as the Supreme Court determined the Decalogue's contents—so that it could then evaluate whether the School District's purported secular objectives were both plausible and sincere explanations for the Board's actions.<sup>35</sup> And after

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source of the donations [used to purchase intelligent-design textbooks]. . . . We are accordingly presented with further compelling evidence that [two board members] sought to conceal the blatantly religious purpose behind the ID Policy.”) (alterations added); *id.* at 763 (“Defendants’ . . . flagrant and insulting falsehoods to the Court provide sufficient and compelling evidence for us to deduce that any allegedly secular purposes that have been offered in support of the ID Policy are equally insincere.”); *id.* at 765 (“The citizens of the Dover area were poorly served by the members of the Board who voted for the ID policy. It is ironic that several of these individuals, who so staunchly and proudly touted their religious convictions in public, would time and again lie to cover their tracks and disguise the real purpose behind the ID policy.”). After the trial ended, the Pennsylvania U.S. Attorney’s office began investigating, at the court’s request, whether to prosecute any of the board members for perjury. See John Beauge & Bill Sulon, *Prosecutor Seeks Perjury Evidence*, HARRISBURG PATRIOT-NEWS, Dec. 22, 2005, at A1. So far as I am aware, no charges have yet been brought.

33. See, e.g., *Santa Fe Indep. Sch. Dist v. Doe*, 530 U.S. 290, 308-09 (2000) (“When a governmental entity professes a secular purpose for an arguably religious policy, the government’s characterization is, of course, entitled to some deference. But it is nonetheless the duty of the courts to ‘distinguish a sham secular purpose from a sincere one.’” (quoting *Wallace v. Jaffree*, 472 U.S. 38, 75 (1985) (O’Connor, J., concurring))); *Edwards v. Aguillard*, 482 U.S. 578, 586-87 (1987) (“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.”).

34. See, e.g., *Kitzmiller*, 400 F. Supp. 2d at 762-63.

35. As noted above, see *supra* text accompanying notes 12-14, the School District also advanced its “intelligent design is science” argument as its defense to the claims that its policy violated the Establishment Clause under *Lemon*’s effect test and under the endorsement test, thereby rendering the “is it science?” question critical to the remaining aspects of the court’s constitutional analysis as well. I focus here only on the relationship between the “is it science?” question and the purpose

carefully conducting that analysis and getting to the heart of intelligent design, the court properly concluded that the Dover Board's stated reasons for its curriculum change could not be squared with its putative secular objective, thus warranting the judicial inference that the intelligent-design policy was not reasonably geared to serve any legitimate secular purpose. Both Wexler and Loewy thus err doctrinally in divorcing the Board's purpose from the question whether intelligent design is science because ascertaining what the Board was trying to accomplish required, among other things, looking carefully at what it was actually doing.

## II. WHAT THE "IS IT SCIENCE?" QUESTION REALLY MEANS

### A. *Two sides of the same coin*

Wexler is correct, of course, that whether intelligent design is science was not the *ultimate* question in *Kitzmiller*.<sup>36</sup> What really mattered was whether intelligent design is religion, and whether its incorporation into the high-school curriculum was religiously motivated. For even if the Board had shown that intelligent design is in fact a scientific theory, the School District's policy would not have been fully insulated from the plaintiffs' constitutional challenge. The policy would also have been unconstitutional—even if intelligent design were a wholly secular, scientific theory—if the principal reason that the Board members had chosen to insert it into the Dover High School biology curriculum was that they had perceived it to be a God-friendly or Christianity-

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inquiry because my aim is not to re-prove the plaintiffs' case, but simply to show why Wexler, Loewy, and the Discovery Institute (in its self-published attack on the decision, see DEWOLF ET AL., TRAIPSING, *supra* note 31) are wrong to critique the *Kitzmiller* court's analysis of the "is it science?" question as judicial frolic irrelevant to a decision for the plaintiffs under *Lemon*'s purpose test.

36. See Wexler, *supra* note 2, at 92-93, 97. Nor, Wexler might have added, was the ultimate question whether intelligent design is *good* science. Public schools all too often teach bad science, just as they often teach poor grammar, bad writing, and poor sportsmanship. The U.S. Constitution affords no special protections to science instruction; and it provides no remedy for educational malpractice (although whether certain state constitutions would allow for that cause of action is a different question). Cf. *Bush v. Holmes*, 919 So. 2d 391 (Fla. 2006) (holding that Florida constitution's guarantee of high-quality public education barred state from seeking to remedy poor public schooling by paying for children to attend private schools).

friendly concept.<sup>37</sup> But given the defining features of intelligent design, the “is it science?” and “is it religion?” questions amount to the same thing.

In striking down statutory prohibitions against teaching evolution in *Epperson v. Arkansas*<sup>38</sup> and invalidating legal mandates to teach creation science in *Edwards*,<sup>39</sup> the Supreme Court expressly declared that “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>40</sup> That strict rule would bar picking and choosing what to teach, even from among genuine scientific theories, in order to promote a concept thought to fit more comfortably with an officially preferred faith than other, competing concepts do. Public schools remain free as a constitutional matter, though, to teach all sorts of subjects that do not meet the definition of science, and they routinely do just that—as any student sitting in an English, social-studies, or art class can attest. So long as a public school’s primary purpose in making a curriculum choice is secular, the Constitution requires only that, both on its face and as actually implemented, the curriculum may not endorse religion generally or favor any set of religious beliefs in particular.<sup>41</sup> Thus, if intelligent design were something other than religion, Wexler would be right that, in an important sense, it would not matter what that something was: Teaching intelligent design to students in a public high school would be constitutionally permissible as long as

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37. Again, I limit myself to the purpose inquiry in order to focus on why Wexler and Loewy are wrong to argue that the court should or even could have avoided the “is it science?” question in finding that the Board adopted its intelligent-design policy to advance and endorse a particular religious view.

38. 393 U.S. 97, 109 (1968).

39. *Edwards v. Aguillard*, 482 U.S. 578, 597 (1987).

40. *Epperson*, 393 U.S. at 106; accord *Edwards*, 482 U.S. at 585, 591; *id.* at 608 (Powell, J., concurring); see also *id.* at 590-91 (“[T]here can be no legitimate state interest in protecting particular religions from scientific views ‘distasteful to them . . .’” (quoting *Epperson*, 303 U.S. at 107) (alteration added)).

41. See, e.g., *Bd. of Educ. v. Grumet*, 512 U.S. 687, 703 (1994) (recognizing that it is “a principle at the heart of the Establishment Clause, that government should not prefer one religion to another, or religion to irreligion”); *Epperson*, 393 U.S. at 103-04 (“Government in our democracy, state and national, must be neutral in matters of religious theory, doctrine, and practice. It may not . . . aid, foster, or promote one religion or religious theory against another or even against the militant opposite.”).



school officials' primary purpose for doing so was secular and the lessons did not send the message that the school was placing its stamp of approval on a religious view. And that would be true even if the material was scientifically invalid, the subject matter unreasonably complicated, or the lessons pedagogically unsound.<sup>42</sup>

But the mere fact that the Dover School District's intelligent-design policy could potentially have failed the purpose inquiry even if intelligent design had been a scientific theory does not mean that the "is it science?" question was irrelevant to the decision. For Wexler fails to recognize not only the relationship between the "is it science?" question and the court's purpose inquiry as a doctrinal matter, but also the relationship between that question and the "is it *religion*?" question as a philosophical matter. As it turns out, intelligent design's most important deficiency as a scientific claim is also the positive feature that qualifies it as a religious view, making the "is it science?" inquiry an entirely logical way to get at the constitutionally significant question whether intelligent design is a religious view.

The central feature of Wexler's critique is, as I see it, the charge that, in treating intelligent design's status with respect to science as relevant to the constitutional inquiry whether intelligent design is a religious view, Judge Jones simply assumed that if intelligent design is not science, it must be religion, and vice versa.<sup>43</sup> Wexler thus attempts to turn the tables on Judge Jones by trying to apply the same critique to the court's reasoning that Judge Jones applied to intelligent design—an interesting, but ultimately unsuccessful, challenge to the court's analytical framework. In making sense of intelligent design, Judge Jones drew on findings about intelligent design's forbear, creation science, by Judge William R. Overton of the U.S. District Court for the Eastern District of Arkansas in the pre-*Edwards* decision *McLean v. Arkansas Board of Education*.<sup>44</sup> As Judge Jones explained, Judge

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42. Loewy's objection to the *Kitzmiller* decision—that the Constitution does not forbid the public schools to incorporate intelligent design into their science curricula just because the view happens to coincide with some religious beliefs or to find particular favor in some religious communities' eyes—rests on essentially the same logic. Because he mistakenly concludes that intelligent design is science, however, Loewy erroneously assumes, as I explain in Part IV, that the primary effect of teaching it must also be secular, incidental religious effects notwithstanding.

43. See Wexler, *supra* note 2, at 97-98.

44. 529 F. Supp. 1255 (E.D. Ark. 1982).

Overton found in *McLean* that creation science “rested on a ‘contrived dualism’ that recognized only two possible explanations for life, the scientific theory of evolution and biblical creationism, treated the two as mutually exclusive[,] . . . and accordingly viewed any critiques of evolution as evidence that necessarily supported biblical creationism.”<sup>45</sup> The *Kitzmiller* court found that intelligent design employs this same “false dichotomy,”<sup>46</sup> regurgitating the thoroughly repudiated attacks against the scientific theory of evolution that the creation-science movement has for decades unsuccessfully leveled.<sup>47</sup> And just like creation science before it, intelligent design treats those disingenuous criticisms as affirmative evidence for supernatural design—despite the fact that the most that the criticisms could in principle do if they had any scientific merit (which they do not) would be to cast doubt on evolutionary theory, without affirmatively supporting any of the myriad possible alternatives to it.<sup>48</sup> Wexler argues, in essence, that the court’s willingness to undertake the “is it science?” inquiry was premised on a contrived dualism or false dichotomy between science and religion when there are many other things under the sun. But while that rhetorical strategy is clever, Wexler fails to understand that it is the intelligent-design movement, not the *Kitzmiller* court, that has constructed the false dichotomy; the court avoided the logical fallacy by taking seriously the actual relationship between science and religion rather than constructing a false one.

Theology and natural science are not, of course, the only two methods for understanding the world; nor are they the only two categories into which a viewpoint or conceptual framework might fall. So the bare fact that a concept is not scientific does not thereby make it religious. Nor did Judge Jones claim that it does. But some of the central features of intelligent design that place it outside the realm of science are also the ones that have led theologians<sup>49</sup>—and the *Kitzmiller* court—to conclude that intelligent design is a religious belief system. Most notably, the scientific community has for hundreds of years

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45. *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 717 (M.D. Pa. 2005) (quoting *McLean*, 529 F. Supp. at 1266) (alteration added).

46. *Id.* at 738.

47. *See id.* at 721-22, 738-42.

48. *See, e.g., id.* at 738-42.

49. *See Kitzmiller*, 400 F. Supp. 2d at 718.

regarded supernatural causation—i.e., divine intervention—as being outside science’s purview, just as theologians regard a view about the divine as being inherently theological. Because, as explained below, intelligent design’s core commitment is to the principle of divine intervention through acts of creation, the view fails to count as a scientific theory for the very same reason that it qualifies as a theological claim. So for that reason, the *Kitzmiller* court’s decision to address whether intelligent design is science made perfect sense as a way to explore the constitutionally significant question whether it is a religious view.

All the experts who testified at trial—on both sides—agreed that intelligent design does not satisfy the standard definitions of ‘science’ or ‘scientific theory.’<sup>50</sup> Indeed, they all agreed that the intelligent-design movement self-consciously seeks to change the ground rules of science, stretching the meaning of ‘scientific theory’ so that supernatural causation will count as a scientific explanation.<sup>51</sup> They disagreed only about the wisdom and propriety of changing the definition of science to encompass divine intervention. And because intelligent design’s proponents have embarked on that Humpty-Dumptyesque linguistic project not for methodological or epistemological reasons but for political ones—namely, to circumvent the Establishment Clause’s prohibition against teaching religious doctrines in public schools—the movement has endeavored to change the definition of science without any consistency or clear conceptual justification for the substitute

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50. See, e.g., *id.* at 720-21, 736-38; see also *infra* note 77 and accompanying text.

51. Indeed, the effort to change the definition of science to encompass religious views is the intelligent-design movement’s *raison d’être*. According to Paul Nelson—a Discovery Institute fellow, an avid young-earth creationist, and the principal historian working within the intelligent-design movement—the old attempts to circumvent the Supreme Court’s 1968 decision in *Epperson v. Arkansas* and get creationism into public-school science classrooms under the label ‘creation science’ had hit a dead end after the Court struck down balanced-treatment laws in *Edwards*. Paul A. Nelson, *Life in the Big Tent: Traditional Creationism and the Intelligent Design Community*, 24 CHRISTIAN RES. J. 2 (2002), available at <http://www.equip.org/free/DL303.pdf> (*Edwards* “seemed to shut the door permanently on creationism (at least as admissible dissent in public school science teaching)”). And those religiously motivated efforts would have foundered entirely, had criminal-law-professor Phillip Johnson not come up with the idea to redefine science “to exclude any conclusion we dislike or to include any we favor.” *Id.* at 3.

definitions that it offers. Hence, it has also done so without regard for what flotsam and jetsam might get swept along with intelligent design into science's purview.<sup>52</sup>

As the Discovery Institute (the intelligent-design movement's institutional home, its chief orchestrator, and its principal cheerleader) has elaborated, the movement's objective is to "reverse the stifling dominance of the materialistic worldview, and to replace it with a science consonant with Christian and theistic convictions"<sup>53</sup>—or, more simply, to "replace materialistic explanations with the theistic understanding that nature and human beings are created by God."<sup>54</sup> The basic insight—that instead of trying to make creationism qualify as genuine science, evolution's religiously motivated opponents could instead simply distort science to the point that it would allow for nonmaterial causes by a divine actor—reinvigorated a cultural movement that had up to that point proven itself unable to generate any legitimate scientific research or empirical data suitable to transform its religious dogma into testable claims bearing the features of valid science.<sup>55</sup> In failing to recognize and take seriously the intelligent-design movement's

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52. Thus, for example, biochemist Michael Behe (the leading scientist associated with the intelligent-design movement) testified at trial that in order to make room in the natural sciences for intelligent design, he would cast the net of 'scientific theory' so widely that even astrology would have to count as legitimate natural science no less than chemistry and physics do. See *Kitzmiller*, 400 F. Supp. 2d at 736 (describing Behe's testimony).

53. Discovery Institute Center for Renewal of Science and Culture, *The Wedge* at 2, available at <http://www.seattleweekly.com/news/0605/discovery-wedge.php#page2>. For a thorough account of the *Wedge* document's authenticity, see BARBARA FORREST & PAUL R. GROSS, CREATIONISM'S TROJAN HORSE: THE WEDGE OF INTELLIGENT DESIGN 25-33 (2004).

54. *The Wedge*, *supra* note 53, at 2.

55. The insight on which criminal-law-professor Phillip Johnson built the intelligent-design movement (that science could be redefined to make room for supernatural causation, thus making it a Christianity-reinforcing enterprise, see *supra* note 51) is, as science-writer Gordy Slack recently commented to me, a thoroughly postmodern strategy (manipulating language to control how we think about the world) in the service of a premodern idea (the view that revealed truth, unfiltered by interpretation or intersubjective understanding, flatly rebuts all apparently contrary empirical evidence). The irony is that Johnson chose to exploit a radical form of subjectivism—the insistence that words can mean whatever one wishes them to mean, and therefore that those who are bold enough to take control of language can also exercise social control—to reverse what he sees as widespread moral decay emanating from that very same relativism.

aims, Wexler blinds himself to the critical relationship between science and religion that justifies the *Kitzmiller* court's mode of analysis as a philosophical as well as a logical matter.

*B. Institutional Competence*

The same confusion also gives rise to Wexler's objection that the *Kitzmiller* court lacked the institutional competence to determine whether intelligent design is science.<sup>56</sup> For if one fails to appreciate the critical difference between religion and science, one cannot adequately determine whether intelligent design falls into one camp or the other—or even whether that question presupposes the false dichotomy that Wexler claims it does.

Wexler correctly recognizes that the logical starting point for evaluating institutional competence to undertake the “is it science?” inquiry is the *Daubert* test,<sup>57</sup> which federal judges routinely apply in considering whether proffered expert testimony bears sufficient indicia of scientific validity to justify admitting it as evidence.<sup>58</sup> But he argues that applying *Daubert* is not the same as determining whether intelligent design is science because *Daubert* is a legal standard grounded in a judge-made definition of ‘science’ as a legal term, and not in science as the scientific community defines it.<sup>59</sup> Because ‘science’ and ‘scientific theory’ were not statutory terms in *Kitzmiller*, Wexler argues, the court had no business trying to tell what they mean, much less deciding whether intelligent design meets the definitions.<sup>60</sup> The criticism is misguided for several reasons, both jurisprudential and practical.

First of all, Wexler is simply wrong to distinguish what Judge Jones did in *Kitzmiller* from what the Supreme Court did in *Daubert* based on the fact that the term ‘scientific’ appears in Federal Rule of Evidence 702. For the same thing is true in *Kitzmiller*. Although Wexler contends that ‘science’ and ‘scientific theory’ did not appear in any official policies or pronouncements from the Dover School District,<sup>61</sup> the

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56. See Wexler, *supra* note 2, at 103-106.

57. See *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592-95 (1993).

58. See Wexler, *supra* note 2, at 105-106.

59. *Id.*

60. See *id.*

61. *Id.* at 105.

school board in fact used both terms repeatedly in its official policy statements. In a special newsletter that it sent to the entire Dover community announcing and defending its intelligent-design policy, for example, the Board described “[t]he theory of intelligent design (ID) [a]s a scientific theory that differs from Darwin’s view . . . .”<sup>62</sup> The Board also declared that “[t]he theory of intelligent design involves science vs. science, where scientists looking at the same data come to different conclusions.”<sup>63</sup> And in both its curriculum change and the statement that it ordered read to biology students, the Board used the term ‘theory,’<sup>64</sup> plainly referring to ‘scientific theory.’ The court surely had the authority (as well as the intellectual wherewithal) to look at what the School District actually said in its officially enacted policy and its announcement of that policy (with the latter constituting, at minimum, part of the policy’s official legislative history), and to attempt to ascertain what the School District’s words actually meant. In that regard, the *Kitzmiller* court did nothing different, and certainly nothing more objectionable as a jurisprudential matter, than the Supreme Court did in *Daubert*.

The *Kitzmiller* court also had the duty in conducting its sham-purpose inquiry to determine, in the very same way that the Supreme Court did when it evaluated the official legislative statement of purpose in *Stone*, whether the Board was using ‘science’ and ‘theory’ honestly and correctly, or whether the Board was instead employing the intelligent-design movement’s distorted meanings for those terms in order to whitewash its efforts to proselytize students under the rubric of science instruction. At an even more basic level, both the School District’s official policy and the statement to be read to students used the term ‘intelligent design,’<sup>65</sup> thus requiring the court to determine what intelligent design actually is—a scientific theory, a religious view, or something else entirely—when evaluating whether introducing students to it in biology classes at Dover High School would have a primarily religious or secular effect.

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62. *Biology Curriculum Update*, DOVER AREA SCH. DIST. NEWS, (Dover School Board, Dover, Pa.), Feb. 2005, at 2, available at <http://www.aclupa.org/downloads/Dovernewsletter.pdf#search=%22dover%20newsletter%20intelligent%20design%22> (alterations added).

63. *Id.* at 1 (alteration added).

64. See *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 708-09 (M.D. Pa. 2005) (reproducing curriculum change’s language).

65. *Id.*

Wexler also errs, conversely, in treating the Supreme Court's definition of 'scientific' in *Daubert* as merely a legal construct, detached from the meaning that the scientific community ascribes to it, and then in chastising the *Kitzmiller* court for looking beyond legal usage for a definition.<sup>66</sup> In specifying how courts should go about determining whether putative scientific knowledge is admissible under Rule 702, the Supreme Court in *Daubert* did just what Judge Jones did in *Kitzmiller*: It looked to the definition of science that the scientific community itself employs.<sup>67</sup> The definition that Judge Jones drew from the expert testimony and the statements from leading scientific associations presented during the *Kitzmiller* trial is functionally indistinguishable from the one that the Supreme Court employed in *Daubert*—a similarity that should come as no surprise, since the Supreme Court based its definition principally on *amicus* briefs filed by some of the same scientific organizations whose official publications on the nature and meaning of science informed the *Kitzmiller* opinion.<sup>68</sup>

To be sure, courts ruling on *Daubert* motions most often speak in terms of distinguishing good science from junk science. But what they are really doing—and what the Supreme Court meant for them to be doing—is distinguishing between science *qua* science (i.e., empirical

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66. See Wexler, *supra* note 2, at 105-106.

67. In the Supreme Court's words:

The adjective "scientific" implies a grounding in the methods and procedures of science. Similarly, the word "knowledge" connotes more than subjective belief or unsupported speculation. . . . Of course, it would be unreasonable to conclude that the subject of scientific testimony must be "known" to a certainty; arguably, there are no certainties in science. But, in order to qualify as "scientific knowledge," an inference or assertion must be derived by the scientific method.

*Daubert v. Merrell Dow Pharm. Inc.*, 509 U.S. 579, 590 (1993) (citing, among other sources, Brief for American Association for the Advancement of Science et al. as Amici Curiae Supporting Respondent at 7-8, *Daubert*, 509 U.S. 579 (No. 92-102), 1993 WL 13006281 ("Science is not an encyclopedic body of knowledge about the universe. Instead, it represents a *process* for proposing and refining theoretical explanations about the world that are subject to further testing and refinement.")).

68. *Kitzmiller*, 400 F. Supp. 2d at 735-38 (providing definitions for 'science' and 'scientific theory' from National Academy of Sciences, American Association for Advancement of Science, and other scientific organizations, and describing those organizations' explanations why intelligent design does not meet the definitions).

inquiry that employs the scientific method) and nonscience (i.e., conclusions that are not testable, repeatable, or falsifiable using the methods of science). As a formal matter, *Daubert* proceedings ensure that proffered scientific expert testimony is reliable. For practical purposes, though, the reliability requirement translates into a test for whether the evidence is genuine science, because the features of repeatability, falsifiability, peer review, and the like that enter into the *Daubert* calculus are the same standards to which the scientific community holds itself. In the end, the *Kitzmiller* court's test for whether intelligent design is science and the Supreme Court's test for whether proffered expert scientific evidence is admissible amount to the same thing because both seek to measure reliability, in light of the scientific community's judgments about what science is and what it involves.

Even apart from *Daubert*, looking to what the scientific community identifies as science or as a scientific theory is entirely consistent with universally accepted modes of judicial inquiry.<sup>69</sup> When courts attempt to determine the meaning of a word, whether in a contract, in a statute, or in any other legal source, they generally look to the word's plain, recognized, accepted meaning.<sup>70</sup> But when the word is a term of art—as 'scientific' is, when the question is whether a claim constitutes a scientific theory—they instead consider the term's specialized meaning to those in the relevant field of expertise.<sup>71</sup> The

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69. Indeed, part of the jurisprudential pedigree that has led virtually every state to adopt the *Daubert* rule as its evidentiary standard is that the Supreme Court did nothing radical in deciding *Daubert*, but instead simply employed commonplace methods of judicial analysis.

70. See, e.g., *S.D. Warren Co. v. Maine Bd. of Envtl. Prot.*, 126 S. Ct. 1843, 1847 (2006) (because term in Clean Water Act was "neither defined in the statute nor a term of art, we are left to construe it 'in accordance with its ordinary or natural meaning'" (quoting *FDIC v. Meyer*, 510 U.S. 471, 476 (1994))); *Nix v. Hedden*, 149 U.S. 304, 306-07 (1893) (taking judicial notice of "ordinary meaning" of 'fruits' and 'vegetables' in challenge to tariff, as there was "no evidence that the words . . . have acquired any special meaning in trade or commerce"); *Hancock v. Am. Steel*, 203 F.2d 737, 740 (C.C.P.A. 1953) (noting that "[c]ourts take judicial notice of the meaning of words," and therefore looking to standard dictionary definitions to determine the "ordinary significance and meaning of words in issue" in trademark case (alteration added)).

71. See, e.g., *Utah v. Evans*, 536 U.S. 452, 467-68 (2002) (term 'sampling' in federal sampling statute was a "term of art with a technical meaning" that Court determined by consulting "technical literature" and expert testimony); *Edwards v.*



*Kitzmiller* court thus did nothing out of the ordinary when it concluded that “[s]cience cannot be defined differently for Dover students than it is defined in the scientific community,”<sup>72</sup> and therefore rejected defense-expert Steven Fuller’s advocacy for radically expanding the definition of science in Dover High School classrooms “as an affirmative action program . . . for a view that has been unable to gain a foothold within the scientific establishment.”<sup>73</sup> Quite the contrary; the court followed all the regular canons of statutory interpretation, which in turn required it to look to the scientific community’s own conception of science to determine whether the members of the Dover school board were being honest when they attempted to persuade their constituents that intelligent design is a scientific theory that belongs in public-school biology classes, rather than a religious view that has no lawful place there.<sup>74</sup>

### C. Fuzzy Boundaries

Wexler also takes the *Kitzmiller* court to task for even attempting to define any line between science and religion because, as he explains it, at least some philosophers of science question the attempt to establish strict criteria for distinguishing science from nonscience.<sup>75</sup> But while there may be a lively debate in the philosophy of science about where the precise line between science and nonscience falls, and while there may

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Aguillard, 482 U.S. 578, 611-13 & n.2 (1987) (Scalia, J., dissenting) (noting that “‘creation science’ is a ‘term of art,’” so “the popular dictionary definitions . . . are utterly irrelevant,” and criticizing lack of expert evidence to contradict claimed meaning of term by creation science’s proponents); *U.S. Indus. Chems. v. Carbide & Carbon Chems. Corp.*, 315 U.S. 668, 678 (1942) (“Although it is the duty of a court to determine for itself, by the examination of the original and the reissue [of a patent], whether they are for the same invention, it is permissible, and often necessary, to receive expert evidence to ascertain the meaning of a technical or scientific term or term of art . . . .”) (alteration added); *Integrated Health Prof’ls v. Pharmacists Mut. Ins. Co.*, 422 F. Supp. 2d 1223, 1228 (E.D. Wash. 2006) (refusing to allow insurer to dissect policy term ‘scope of employment’ and cobble together definitions of the individual words because phrase is an established term of art in agency law).

72. *Kitzmiller*, 400 F. Supp. 2d at 738 (alteration added).

73. *Id.*

74. *See id.* at 746-47, n.20 (because school board’s policy did not define intelligent design, ordinary canons of statutory interpretation required looking beyond policy’s bare text to ascertain what Board meant by that term).

75. Wexler, *supra* note 2, at 104.

even be a few philosophers of science who doubt that it is possible to specify rigid, universal demarcation criteria for science as a discipline, I have yet to encounter anything, even on the fringes of the philosophy of science, to suggest that intelligent design's core claim—that "God did it"—could ever plausibly constitute a scientific theory. Though there might, in other words, be disagreement about science's metes and bounds (and even, perhaps, about whether one can ever identify definitive, universal delimiters for a discipline that encompasses so many varied approaches to understanding aspects of the natural world), the so-called demarcation problem in the philosophy of science is not so hopeless as Wexler suggests.

If it were, the *Kitzmiller* decision would not be the only judicial ruling standing on shaky ground. *Daubert* itself, and any other decisions that tried to distinguish reliable science from fraud and chicanery, would be equally futile. And moving outside the courtroom, the antidemarcationist caricature that undergirds the objection to the *Kitzmiller* court's "is it science?" analysis would leave a radical, anything-goes relativism, in which all views are equal and science therefore has the same value as all other truth claims—from astrology to zoanthropy. The philosophers of science debating demarcation difficulties are, in reality, concerned primarily with Karl Popper's claim that falsifiability is the sole delimiter for science; none take things so far as Wexler's critique of the *Kitzmiller* opinion suggests.<sup>76</sup> The term 'science' is not utterly vacuous. And however indistinct science's borders might be, the fact that intelligent design has divine intervention as its first premise leaves it outside the realm of science, while placing it—not incidentally but by design—within the ambit of that other fuzzy concept, religion.

Nor has there been any dispute, either in the *Kitzmiller* case or in the scientific community at large, over whether the truth claim that "God did it" stands within or outside the realm of science, Wexler's anxieties about defining the discipline notwithstanding. As Judge Jones explained, the plaintiffs' experts, the school board's experts (including Michael Behe, the principal scientist associated with the intelligent-design

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76. For a thorough analysis of the demarcation debate and its irrelevance to whether intelligent design is science, see Robert T. Pennock, *Can't Philosophers Tell the Difference between Science and Religion?: Demarcation Revisited*, SYNTHESIS (forthcoming 2007).

movement), the intelligent-design movement's intellectual leaders, and the organizations representing the scientific community all agree that intelligent design does not satisfy the standard definitions of science because it invokes supernatural causation—a concept wholly outside science's purview.<sup>77</sup> Agreement among the parties' competing experts would, of course, normally be quite enough to establish a juridical fact.<sup>78</sup> But the *Kitzmiller* court went much further to ensure that it was not adopting a questionable definition of science or a debatable view about what constitutes a scientific theory. It looked to the National Academy of Sciences (the most distinguished scientific organization in the United States, if not the world), the American Association for the Advancement of Science (the largest scientific association in the world), and every other major scientific organization to have stated any position respecting intelligent design, thus ascertaining the scientific community's collective judgment about what science is and whether intelligent design can plausibly be called a scientific theory.<sup>79</sup> In the end, the court found that all those sources pointed to a single conclusion: Science, as the scientific community has for hundreds of years understood it, does not trade in the supernatural. For they all agree that, as the National Academy of Sciences has put it:

Science is a particular way of knowing about the world. In science, explanations are restricted to those that can be inferred from the confirmable

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77. *Kitzmiller*, 400 F. Supp. 2d at 720-21. As Judge Jones explained, looking to the school board's expert witnesses' testimony and the writings by the intelligent-design movement's intellectual leadership: Behe has written that intelligent design means design by a nonnatural entity acting outside the laws of nature, *id.*; defense-expert Scott Minnich testified that for intelligent design "to be considered science, the ground rules of science [would] have to be broadened so that supernatural forces can be considered," *id.* at 720 (alteration added); defense-expert Steven Fuller testified that "it is ID's project to change the ground rules of science to include the supernatural," *id.*; Phillip Johnson "has concluded that science must be redefined to include the supernatural if religious challenges to evolution are to get a hearing," *id.*; and William Dembski has conceded that "science is ruled by methodological naturalism [i.e., the scientific method,] and . . . that this rule must be overturned if ID is to prosper," *id.* at 720-21 (alteration added).

78. See, e.g., *Capricorn Power Co. v. Siemens Westinghouse Power Corp.*, 324 F. Supp. 2d 731, 744 (W.D. Pa. 2004) (had the "experts for all parties" agreed, an "undisputed material fact" would have been established).

79. *Kitzmiller*, 400 F. Supp. 2d at 737-38.

data—the results obtained through observations and experiments that can be substantiated by other scientists. Anything that can be observed or measured is amenable to scientific investigation. Explanations that cannot be based upon empirical evidence are not part of science.<sup>80</sup>

It is misguided, I think, to complain that the *Kitzmiller* court acted beyond the scope of its rightful authority in looking to this wide array of sources, relying not just on the parties' experts but also on the consistent positions stated by the entire scientific community in order to discern and then explain what science is. For the alternative would not, as a practical matter, have been to avoid the question entirely. It would have been to resolve the question, lawfully but perhaps less judiciously, on more limited information.

In all events, Wexler is wrong to suggest that demarcation-criteria debates within the philosophy of science cast any doubt whatsoever on the *Kitzmiller* court's determination that intelligent design is not a scientific theory. No one today disputes that some things clearly lie within the realm of science, as science has been understood for hundreds of years, while some clearly stand outside it. That truism explains why the intelligent-design movement has seen the need to adorn its religious doctrine with almost impenetrable techno-jargon so that the view will look like legitimate science (a point that is the subject of the next Part). Nor does anyone doubt that the essential feature of intelligent design—supernatural causation—is incommensurable with science.<sup>81</sup> So

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80. WORKING GROUP ON TEACHING EVOLUTION OF THE NATIONAL ACADEMY OF SCIENCES, TEACHING EVOLUTION AND THE NATURE OF SCIENCE 27 (1998), *quoted in Kitzmiller*, 400 F. Supp. 2d at 735-36.

81. To forestall the inevitable complaints from detractors: In saying that science and religion are incommensurable, I do not mean to suggest that faith and science are inherently in tension or that science precludes faith and vice versa. Rather, incommensurable concepts are simply those that lack a common measure or basis for direct comparison. See, e.g., WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 1143 (3d ed. 1993). Theological claims necessarily involve a leap of faith, while science proceeds on the principle that we try to explain everything in terms of natural causes. Cf. NAS, TEACHING EVOLUTION, *supra* note 80, at 25 (comparing claims based on "authority, revelation, or religious belief" to scientific theories and hypotheses, which "always remain[] subject to the possibility of rejection or modification in the light of new knowledge") (alteration added). Although there are better and worse theological arguments, just as there are valid

however difficult it might be to define science at the margins, determining whether intelligent design is science turns out to be a simple task leading to an unobjectionable conclusion: It is not.

### III. WHY THE COURT GOT IT RIGHT (AND WHY LOEWY'S MISTAKE ALSO PROVES WEXLER WRONG)

If the answer to the “is it science?” question is so simple and obvious, how does Loewy go so badly awry in concluding that intelligent design is actually science, and therefore that, in barring it from public-school science classrooms because of its conformity with a particular religious doctrine, the *Kitzmiller* court acted with unconstitutional hostility toward religion?<sup>82</sup> Loewy’s error underscores widespread popular confusion about what intelligent design actually is—confusion that stems not just from the intelligent-design movement’s deceptive tactics, but also from the persistent, pervasive scientific illiteracy that permits those deceptive tactics to bear fruit.<sup>83</sup> Loewy’s critique thus also

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and invalid scientific hypotheses, the yardsticks we use to measure the soundness of a theological claim bear no relation to the ones we use to measure the validity and explanatory power of a scientific hypothesis or theory. So while scientific concepts like evolution, the big-bang theory, global warming, and even heliocentrism (the theory that the Earth revolves around the sun) may have theological implications for at least some people, science can never prove or disprove matters of faith, just as faith can never support or falsify a scientific theory.

82. See Loewy, *supra* note 2, at 88.

83. Loewy’s error may also stem in part from his intentional blurring of the line between scientific propositions and religious beliefs. Loewy imagines that a group in fifteenth-century Spain “believed, contrary to the prevailing science of the day, that God created the earth and had made it round,” and wanted Spanish schools to balance teaching “the prevailing wisdom, flat earth science,” with “such scientific evidence as they had to prove that the earth was round.” *Id.* at 85. Setting aside the historical inaccuracy in Loewy’s assumption that fifteenth-century scientists thought the Earth was flat, the thought experiment fails to recognize the difference between a scientific hypothesis or theory about the natural world—“the Earth is round”—and a religious belief about the world—“God created the Earth and made it round.” Loewy thus wrongly concludes that, “[i]f the Spanish Supreme Court followed the future logic of the United States Supreme Court in *Edwards*, it would have had to invalidate teaching round earth theory.” *Id.* (alteration added). *Edwards* and the rest of the U.S. Supreme Court’s modern Establishment Clause jurisprudence would bar teaching that God made a round Earth, and it would bar incorporating round-Earth views into a public-school curriculum in order to advance the view that “God made it that way.” But nothing in *Edwards* or any other Establishment Clause case of

provides, I think, the most straightforward explanation why the *Kitzmiller* court needed to decide all that it did in order to conclude that the Establishment Clause prohibits teaching intelligent design in public schools: If the opinion had done nothing to dispel the misperception that intelligent design is science, the court's decision would always have borne the apparent taint of antireligious bias that Loewy ascribes to it.

#### A. Loewy's Mistake

Loewy did not, as he explains things, reach the conclusion that intelligent design is science by considering and rejecting experts' views or by evaluating the *Kitzmiller* court's opinion and finding it unpersuasive. Rather, he did what most of us would do if we were curious about intelligent design in the wake of the *Kitzmiller* case and the national and international media attention that it garnered: He reviewed *Of Pandas and People*<sup>84</sup>—the book that the Dover school board tried to use to introduce its students to intelligent design—and saw that *Pandas* appears to have the features of a science textbook, not those of a traditional religious tract.<sup>85</sup> Because to him it *looks* like science, Loewy infers that *Pandas* (and therefore also intelligent design as a whole) must *be* science<sup>86</sup>—thus making the very same argument that members of the Dover school board used to defend their decision to incorporate intelligent design into the Dover High School biology curriculum.<sup>87</sup>

Loewy is right: *Pandas* does *look* like science. Flip the pages and you will find no express references to God, Jesus, or a divine creator; no biblical passages; and no prayers or devotional readings—in short, nothing that you would expect to see in a traditional sectarian religious tract. On the contrary, *Pandas* is rife with charts and graphs; it couches its claims in the specialized technical language of statistics,

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which I am aware would preclude teaching that the Earth is round just because some of the proponents of the round-Earth hypothesis also had a view about a divine preference for spheres over planes.

84. PERCIVAL DAVIS & DEAN H. KENYON, *OF PANDAS AND PEOPLE* (2d ed. 2003).

85. Loewy, *supra* note 2, at 87.

86. *See id.*

87. *Cf. Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 758-59 (M.D. Pa. 2005) (summarizing voluminous testimony revealing “the striking ignorance concerning the concept of ID amongst Board members”).

biochemistry, and comparative zoology; and to the untutored it looks like something more at home on a lab table than on a pulpit. But looks, as we all know, can be deceiving; and nowhere is that fact more apparent, as the federal courts have frequently noted in *Daubert* rulings, than where pseudoscience is at issue.

In the first instance, *Pandas* is not genuine science but merely the simulacrum of science—and those of us fortunate enough to take part in (or merely to attend) the *Kitzmiller* trial saw startling displays of both. Though the juxtaposition of the plaintiffs' honest, passionate regard for their children's education with the school-board members' dissembling was surely the high-water mark of the trial as a morality play, the most compelling moments from an evidentiary standpoint were demonstrations of the overwhelming scientific evidence for evolution juxtaposed with the demonstrations of intelligent design's vacuousness from the standpoint of science. When cell-biologist Kenneth Miller showed shared mistakes in the DNA for humans and great apes that can be explained only by acknowledging closer evolutionary connections among those species than exist between humans and the rest of the animal kingdom,<sup>88</sup> and when paleontologist Kevin Padian displayed the step-by-step progression in the fossil record from feathered dinosaurs to modern birds and from hippopotamus-like land mammals to modern whales and dolphins,<sup>89</sup> anyone in the courtroom who had the slightest intellectual curiosity (or simply tried to keep an open mind) could not have helped but be awed by the overwhelming evidentiary support for the scientific theory of evolution, as well as the theory's explanatory power in uniting disparate scientific disciplines and forging a coherent account of the natural world. (Indeed, in her *New Yorker* article on the trial, journalist Margaret Talbot aptly described the proceedings as "the biology class you wish you could have taken."<sup>90</sup>) But even more amazing than those jaw-dropping revelations was the way that these same experts deconstructed the pretenses at science in *Pandas* and showed, as the *Kitzmiller* court ultimately found, that "*Pandas*

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88. Transcript of Trial, vol. 1: 79-82, Sept. 26, 2005, *Kitzmiller*, 400 F. Supp. 2d 707.

89. Transcript of Trial, vol. 16:146-48, 16:107-17, 16:117-31, 16:131-45, 17:6-9, 17:17-27, Oct. 14, 2005, *Kitzmiller*, 400 F. Supp. 2d 707.

90. Margaret Talbot, *Darwin in the Dock: Intelligent design has its day in court*, NEW YORKER, Dec. 5, 2005, at 66.

misrepresents,” among other things, “molecular biology and genetic principles, as well as the current state of scientific knowledge in those areas in order to teach readers that common descent and natural selection are not scientifically sound.”<sup>91</sup>

This article is not the place to rehash all the scientific evidence that the experts brought to bear in debunking the claim that *Pandas* and intelligent design are genuine science. One can simply read the expert testimony in the trial transcript to learn all that one needs to know about why *Pandas* and intelligent design fail as science—and in the process to gain a satisfyingly rich understanding of evolutionary biology. But because I have the luxury to stand on the experts’ and Judge Jones’s shoulders, I will quickly point to a few of *Pandas*’ most glaring defects just to underscore the wide gulf between the book that the intelligent-design movement and the Dover school board touted, on the one hand, and the work of genuine scientists, on the other. As experts Ken Miller and Kevin Padian, among others, explained, and as the *Kitzmiller* court ultimately found, *Pandas* “misrepresent[s] well-established scientific propositions,”<sup>92</sup> including, among other things, “distort[ing] and misrepresent[ing] evidence in the fossil record about pre-Cambrian-era fossils, the evolution of fish to amphibians, the evolution of small carnivorous dinosaurs into birds, the evolution of the mammalian middle ear, and the evolution of whales from land animals.”<sup>93</sup> It similarly “misrepresents the ‘dominant form of understanding relationships’ between organisms, namely, the tree of life”<sup>94</sup>—distorting beyond recognition the standard, universally accepted method for depicting those relationships that goes all the way back to Darwin’s *On the Origin of Species*,<sup>95</sup> in order to permit *Pandas*’ authors to attack that false portrayal of the classification system as inconsistent with biological evidence.<sup>96</sup>

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91. *Kitzmiller*, 400 F. Supp. 2d at 744.

92. *Id.* at 743 (alteration added).

93. *Id.* at 744 (alteration added) (citing Padian testimony).

94. *Id.* at 743 (citing Padian testimony).

95. CHARLES DARWIN, *ON THE ORIGIN OF SPECIES* 116, 514-15 (Ernst Mayr ed., Harvard Univ. Press 2003) (1859). The tree of life—the sole diagram in *On the Origin of Species*—remains the standard pictographic representation of evolutionary relationships among biological organisms.

96. Compare *id.* with DAVIS & KENYON, *supra* note 84, at 38 (depicting linear relationships between modern species, and then criticizing that false representation of evolutionary theory as inconsistent with empirical data).



The book also “misrepresents ‘homology,’ the ‘central concept of comparative biology,’ that [has] allowed scientists to evaluate comparable parts among organisms for classification purposes for hundreds of years.”<sup>97</sup> It “fails to address”—or even to acknowledge the existence of—“the well-established biological concept of exaptation, which involves a structure changing function,”<sup>98</sup> because admitting that exaptation is a possibility would undermine the intelligent-design movement’s threshold claim that evolution in accordance with principles of natural selection cannot explain, even in principle, how complex functions could have developed incrementally over time. *Pandas* also “misrepresents basic molecular biology,”<sup>99</sup> thus “misinform[ing] readers on the standard evolutionary relationships between different types of animals”<sup>100</sup>—a defect that, as the court explained, even biochemist Michael Behe (“a ‘critical reviewer’ of *Pandas* who wrote a section within the book,”<sup>101</sup> and who served as the Dover school board’s star witness) acknowledged.<sup>102</sup>

Beyond all that, it became utterly apparent at trial that, at the same time that *Pandas* misrepresents scientific knowledge to cultivate the appearance that evolutionary theory is weak, unsupported, and contrary to the biological evidence, its authors only imperfectly disguise the religious content that really stands at *Pandas*’s core and drives the conclusions that the book reaches. In that regard, *Pandas* may not be quite so blunt as to refer to God or a divine creator; but it does employ euphemisms (like, for example, “master intellect”<sup>103</sup>) that not just theologians, but indeed anyone even vaguely familiar with Western religious tradition, would immediately recognize as invoking a Christian or Judeo-Christian God.<sup>104</sup> What is more, while the published versions

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97. *Kitzmiller*, 400 F. Supp. 2d at 743 (citing Padian testimony).

98. *Id.* at 743-44 (citing Padian testimony).

99. *Id.* at 744 (citing Miller testimony).

100. *Id.* (alteration added) (citing Miller testimony).

101. *Id.*

102. *Id.* (citing Behe and Miller testimony).

103. See DAVIS & KENYON, *supra* note 84, at 85.

104. See, e.g., *Kitzmiller*, 400 F. Supp. 2d at 718 (“The only apparent difference between the argument made [in 1802] by [the Rev. William] Paley [for the existence of God] and the argument for ID, as expressed by defense witnesses Behe and Minnich, is that ID’s ‘official position’ does not acknowledge that the designer is God. However, as [noted Catholic theologian] Dr. [John] Haught testified, anyone familiar with Western religious thought would immediately make

of *Pandas* speak only abstractly of ‘intelligent design,’ leaving it to readers to draw the inevitable inference that any intelligent design they might perceive must be attributable to an Intelligent Designer, the book’s authors did not even adopt the label ‘intelligent design’ until after the Supreme Court issued its 1987 decision in *Edwards* barring the teaching of creation science in public schools.<sup>105</sup> Whereas the *Pandas* drafts prepared before *Edwards* spoke concretely and forthrightly about “creation” and the “Creator,” in their post-*Edwards* efforts, *Pandas*’ authors simply substituted the circumlocution ‘intelligent design’ for the more than 100 invocations of creation and the divine creator in the earlier, unpublished versions—employing, as I have said elsewhere, all the intellectual honesty and editorial sophistication of a word processor’s search-and-replace algorithm.<sup>106</sup>

So while *Pandas* may *present* itself as a science book—just like intelligent design’s proponents market their view as a scientific theory—that fact does not justify the conclusion that intelligent design is actually science. To confuse the aesthetic judgment that intelligent design looks like science for a reasoned evaluation that peers beneath the façade to ascertain intelligent design’s true nature (as the *Kitzmiller* court did and as the Supreme Court in *Stone* required) is to be taken in by the subterfuge at the very heart of intelligent design. No honest scientist or theologian, looking closely at *Pandas*’ content in light of its history,

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the association that the tactically unnamed designer is God . . . .” (alterations added)).

105. *Id.* at 721.

106. Opp’n Def.’s Mot. Summ. J. at 14-15, available at <http://www.au.org/pdf/PsBriefopposingSJpdf.pdf>. As the *Kitzmiller* court explained:

By comparing the pre and post *Edwards* drafts of *Pandas*, three astonishing points emerge: (1) the definition for creation science in early drafts is identical to the definition of ID; (2) cognates of the word creation (creationism and creationist), which appeared approximately 150 times were deliberately and systematically replaced with the phrase ID; and (3) the changes occurred shortly after the Supreme Court held that creation science is religious and cannot be taught in public school science classes in *Edwards*. This word substitution is telling, significant, and reveals that a purposeful change of words was effected without any corresponding change in content . . . .

*Kitzmiller*, 400 F. Supp. 2d at 721.

would fail to recognize intelligent design for what it is (or mistake it for what it is not). But the ability of those with expertise in evolutionary theory or in religious studies to see through intelligent design's obfuscatory language does not overcome the difficulty—which for its proponents is no doubt intelligent design's principal virtue—that even well-educated people outside the relevant professional disciplines will very often mistake technical jargon for genuine scientific content.

In speaking throughout the country (both in academic settings and in public venues) about what the *Kitzmiller* case might mean for the future of religiously motivated attacks on evolution, I now regularly meet working scientists who cannot understand how anyone could mistake intelligent design for science. Indeed, most find it almost incomprehensible that presumably sophisticated public officials on state boards of education and in state legislatures (not to mention President George W. Bush<sup>107</sup>) would seriously consider incorporating intelligent design into high-school-science curricula—much less that citizens lacking obviously religious agendas would express anything other than disdain for the intelligent-design movement's claims to engage in genuine scientific debate or to offer anything useful to science education. Perhaps because of this incredulity, scientists have, on the whole, been slow to come out of their labs and into the public square to challenge the inroads that the intelligent-design movement has been making into public education—notwithstanding the dedicated efforts by the National Center for Science Education, and the additional attention now being devoted by the National Academy of Sciences and the American Association for the Advancement of Science, to raising consciousness within the scientific community about intelligent design's sectarian religious aims to undermine evolutionary science and science instruction. While professional scientists might be in the best position to explain why intelligent design is not science, and why teaching it as though it were science is bound to confuse and mislead children, the obviousness to those who work in the natural sciences that intelligent design is vacuous scientifically—whatever its theological merits or demerits might be—

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107. See Peter Baker & Peter Slevin, *Bush Remarks on 'Intelligent Design' Theory Fuel Debate*, WASH. POST, Aug. 3, 2005, at A01.

leaves many simply unable to comprehend why anyone would dignify the intelligent-design movement with serious academic debate.<sup>108</sup>

But while widespread failures among both elected officials and the general public to recognize intelligent design as a nonscientific claim about divine causation (and therefore widespread ignorance concerning the constitutional mandate not to include it in public-school science curricula) might be almost unfathomable to those who devote their professional lives to serious scientific endeavors (and who therefore find it second nature to distinguish between natural causation subject to empirical testing, on the one hand, and divine causation requiring a leap of faith, on the other), the popular confusion about intelligent design's nature is entirely understandable to me—as it should be to all who ever felt out of their depth in a high-school or college science class. For although intelligent design's proponents eschew scientific rigor and the constraints that science as a discipline imposes on itself,<sup>109</sup> they self-consciously create the appearance of trading in actual science—an appearance that is sufficient to induce even well-educated nonscientists to mistake intelligent design for a scientific theory. They rely, in other words, on the fact that when most of us look at materials, like *Pandas*, that are rife with charts, graphs, probability calculations, polysyllabic Latinate terminology, and other trappings of technical fields, our eyes

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108. Indeed, members of the scientific community boycotted hearings on intelligent design before the Kansas State Board of Education in May 2005, not because they wanted to make a political statement, but because they wanted to avoid conveying the false impression that working scientists take intelligent design seriously from the standpoint of science. Scientists in Kansas appear to have assumed—wrongly, as it turned out—that state officials would recognize their absence as signifying that there is no genuine controversy within the scientific community about intelligent design, and that intelligent design, as a proposed addition to a public-school science curriculum, offers nothing worth any serious person's time or attention. Only after intelligent design's advocates managed to exploit the opportunity to rewrite Kansas's science standards in a way that made the standards unrecognizable to the scientific community did scientists there finally realize that the movement's marketing strategies were succeeding, and therefore that those with scientific *bona fides* would have to take an active role in public debate to reverse a dangerous trend. John Hanna, *Scientists Boycott Kansas Evolution Hearings*, ASSOCIATED PRESS, May 9, 2005; David Keppler, *Kansas Raises the Curtain for Long-Awaited Hearings*, KANS. CITY STAR, May 6, 2005, at A1.

109. See *Kitzmiller*, 400 F. Supp. 2d at 745 (intelligent design's proponents have “failed to publish in peer-reviewed journals, engage in research and testing, [or] gain acceptance in the scientific community” (alteration added)).

glaze over; we lack the knowledge, the insight, or perhaps just the patience to try to distinguish the genuine from the disingenuous. So we simply assume that what claims to be scientific really is science. Paleontologist Leonard Krishtalka has famously called intelligent design “creationism in a cheap tuxedo.”<sup>110</sup> But viewed from a sufficient distance, and with eyelids half closing in technospeak-induced slumber, even a cheap tuxedo can look almost elegant—at least to those of us without the training or discernment to distinguish cashmere from polyester blend.

What is perhaps most interesting about the intelligent-design movement, however, is that, while it clearly preys (or prays) on the public’s general lack of scientific acumen, its lack of candor is context specific: The disingenuousness may run deep, but it does not necessarily run wide. As philosopher and social-historian Barbara Forrest carefully documented in her book *Creationism’s Trojan Horse*<sup>111</sup> and other scholarly works,<sup>112</sup> and as she also explained during the *Kitzmiller* trial (where she served as an expert witness for the plaintiffs), the Discovery Institute and its allies at the intelligent-design movement’s head show multiple, inconsistent faces that vary depending on their audience.<sup>113</sup> When speaking to each other, to potential donors to their religious mission promoting so-called cultural renewal, and to other sympathetic

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110. Peter Slevin, *Teachers, Scientists Vow to Fight Challenge to Evolution*, WASH. POST, May 5, 2005, at A3.

111. See FORREST & GROSS, *supra* note 53 (reporting the results of Forrest’s research into the strategy of the intelligent-design movement, its founders, and its principal proponents).

112. See, e.g., Matthew J. Brauer, Barbara Forrest, & Steven G. Gey, *Is it Science Yet? Intelligent Design Creationism and the Constitution*, 83 WASH. U. L.Q. 1, 22-23 (2005); Barbara Forrest & Paul R. Gross, *Intelligent Design Has Distinctly Evolutionary Nature*, SCIENCE & THEOLOGY NEWS, Dec. 1, 2004, available at <http://www.stnews.org/Books-343.htm>.

113. See, e.g., William A. Dembski, *Intelligent Design’s Contribution to the Debate Over Evolution* (Feb. 1, 2005) available at [http://www.designinference.com/documents/2005.02.Reply\\_to\\_Henry\\_Morris.htm](http://www.designinference.com/documents/2005.02.Reply_to_Henry_Morris.htm); The Center for Science and Culture, *The Wedge Strategy*, available at <http://www.antievolution.org/features/wedge.html>; cf. Carl T. Hall, *Nature’s Diversity Beyond Evolution: Debate Over ‘Intelligent Design’*, S.F. CHRON., Mar. 17, 2002, at A1 (“The question of just who—or what—that designer might be is usually left open, in part to avoid charges that intelligent design is little more than a stalking horse to sneak God back into the public schools. ‘It could be space aliens,’ said William Dembski . . . ‘There are many possibilities.’”).

audiences—such as the creationist ringleaders on the Dover school board—movement leaders do not hesitate to acknowledge that intelligent design as a body of thought is nothing other than a strain of Christian religious doctrine translated into scientific-sounding terminology.<sup>114</sup> But

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114. To take just a few examples: Phillip Johnson (a retired criminal-law professor at U.C. Berkeley's Boalt Hall and the father of the intelligent-design movement) describes intelligent design as "theistic realism," which he in turn defines as meaning "that we affirm that God is objectively real as Creator, and that the reality of God is tangibly recorded in evidence accessible to science, particularly in biology." Phillip E. Johnson, *Third-Party Science*, 2 BOOKS & CULTURE, May-June 1996, at 30, *republished as* Phillip E. Johnson, *Starting a Conversation About Evolution*, at <http://www.arn.org/docs/johnson/ratzsch.htm> (Aug. 31, 2006). The Discovery Institute has stated that "the foundational belief behind the intelligent design movement and the reason that [the movement has] rejected the theory of evolution" is the movement's adherence to "[t]he proposition that human beings are created in the image of God [as] one of the bedrock principles on which western civilization was built." Discovery Institute, *The Wedge*, *supra* note 53, at <http://www.seattleweekly.com/news/0605/discovery-wedge.php#intro> (alterations added). And William Dembski—one of the intelligent-design movement's leading lights and most prolific marketers—has elaborated, explaining that "intelligent design is just the Logos theology of John's Gospel restated in the idiom of information theory." William A. Dembski, *Signs of Intelligence: A Primer on the Discernment of Intelligent Design*, TOUCHSTONE, July-Aug. 1999, at 76, 84, *reprinted in* SIGNS OF INTELLIGENCE: UNDERSTANDING INTELLIGENT DESIGN 171, 192 (William A. Dembski & James M. Kushiner eds. 2001).

For those not immediately familiar with Dembski's biblical reference, the "Logos theology of John's Gospel" is the story of divine creation and the origin of Christ that appears in the *New Testament's* Book of *John*:

In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men. And the light shineth in darkness; and the darkness comprehended it not.

There was a man sent from God, whose name was John. The same came for a witness, to bear witness of the Light, that all men through him might believe. He was not that Light, but was sent to bear witness of that Light.

That was the true Light, which lighteth every man that cometh into the world. He was in the world, and the world was made by him, and the world knew him not.

He came unto his own, and his own received him not. But as many as received him, to them gave he power to become the sons of God, even to them that believe on his

when marketing intelligent design to school officials making good-faith efforts to obey the law, or to the public generally, the movement's leaders and more sophisticated proponents adamantly deny the religious connection, and instead claim that they are presenting a thoroughly secular, scientific alternative to evolution.<sup>115</sup> As they know that they must: If they were to admit, to those who don't share their religious mission, that intelligent design is faith masquerading as science, they would run headlong into the constitutional prohibition against governmental advocacy for sectarian religious views. And in so doing, they would consign intelligent design to the same fate that befell creation science after *Edwards v. Aguillard*.<sup>116</sup> So they "sanitize [intelligent design's] terminology, using euphemisms and code words"<sup>117</sup> to

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name: which were born, not of blood, nor of the will of the flesh, nor of the will of man, but of God.

And the Word was made flesh, and dwelt among us,  
(and we beheld his glory, the glory of the only begotten of  
the Father,) full of grace and truth.

*John 1:1-14* (King James).

Dembski thus lends a more academic flavor to the simple theological claim that Phillip Johnson had earlier presented as intelligent design's starting point:

The first thing you understand is that the Darwinian theory isn't true. It's falsified by all of the evidence and the logic is terrible. When you realize that, the next question that occurs to you is, "Well, where might you get the truth?" I start with *John 1:1*. "In the beginning was the Word." In the beginning was intelligence, purpose, and wisdom. The Bible had that right. And the materialist scientists are deluding themselves.

Phillip N. Johnson, *How the Evolution Debate Can Be Won*, <http://www.coralridge.org/specialdocs/evolutiondebate.asp> (last visited Oct. 29, 2006).

115. See, e.g., Discovery Institute Center for Science and Culture, Top Questions, <http://www.discovery.org/csc/topquestions.php#questionsabout%20intelligent%20design> (last visited Nov. 14, 2006); Stephen C. Meyer, *Not by Chance: From Bacterial Propulsion Systems to Human DNA, Evidence of Intelligent Design is Everywhere*, NAT'L POST, Dec. 10, 2005, at A18, available at <http://www.discovery.org/scripts/viewdb/index.php?command=view&id=3059>; Stephen C. Meyer & John Angus Campbell, *Teach the Controversy*, BALTIMORE SUN, Mar. 11, 2005, available at <http://www.discovery.org/scripts/viewDB/index.php?command=view&id=2456>.

116. See, e.g., Nelson, *supra* note 51, at 2.

117. Barbara Forrest, *The "Vise Strategy" Undone: Kitzmiller et al. v. Dover Area School District*, CREATION & INTELLIGENT DESIGN WATCH, available at <http://www.csicop.org/intelligentdesignwatch/kitzmiller.html> (alteration added).

camouflage the religious underpinnings just enough to slip intelligent design past unsuspecting parents and well-meaning but uninformed public-school officials.

In concluding that intelligent design is science because it looks like science,<sup>118</sup> Loewy thus falls into a carefully wrought trap—a trap designed, intelligently, perhaps, but also disingenuously, to snare even well-educated people who lack advanced training in science. My friends in the scientific community would say that the fact that so few people can distinguish genuine science from fraud—making us ready dupes for anyone who effectively employs scientific-sounding mumbo-jumbo—reveals serious, systemic deficiencies in science education in this country. But irrespective of what it might say about science education generally, the fact that intelligent design deceives so many people so much of the time underscores the relevance of the *Kitzmiller* court's finding that the intelligent-design movement distorts science in order to trick the rest of us into accepting religious dogma without recognizing it as such.<sup>119</sup>

#### B. *Hostility or neutrality?*

Loewy's mistake matters doctrinally as well as culturally. Parents have a constitutional right to insist that public schools excuse their children from lessons that they find objectionable on religious grounds,<sup>120</sup> just as they have a right to exit the public schools altogether and send their children to parochial schools to avoid what they view as harmful secular influences.<sup>121</sup> But both those rights are of the opt-out

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118. Loewy, *supra* note 2, at 87.

119. See, e.g., *Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 743 (M.D. Pa. 2005).

120. See, e.g., *Mozert v. Hawkins County Bd. of Educ.*, 827 F.2d 1058, 1063, 1067-68 (6th Cir. 1987).

121. While in *Pierce v. Society of Sisters*, 268 U.S. 510 (1925), the Supreme Court upheld Catholic parents' right not to send their children to public schools that were effectively sectarian Protestant institutions, that right has, over the intervening half century, expanded to include not just avoiding unwanted religious instruction, but also affirmatively choosing immersion in one's own faith in a private, parochial-school setting. See, e.g., *Mozert*, 827 F.2d at 1067; cf. *Wisconsin v. Yoder*, 406 U.S. 205 (1972) (holding that Amish parents have the right to exempt their children from compulsory schooling after the eighth grade, and recognizing vocational education



variety only: “[T]he 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>122</sup> irrespective of whether school officials seek to bend the curriculum to a religious objective on their own initiative or in response to parental demands.<sup>123</sup> Accordingly, if intelligent design were a scientific theory that just incidentally had religious implications for some people or some faiths, as Loewy believes,<sup>124</sup> the prohibition against religious control over instruction in the public schools would bar any attempt to challenge intelligent-design lessons because the federal courts have no more authority to employ the machinery of the state to impose an officially preferred religious view than do school administrators or elected school-board members.

The real significance of Loewy’s criticism of the *Kitzmiller* court’s decision as being hostile toward religion, though, is that Loewy’s ability to level the charge—and to make it sound plausible to those without advanced training in a scientific discipline—goes a long way toward explaining why the court needed to address the “is it science?” question in deciding the case. It therefore also provides yet another response to Wexler’s criticism that the court went too far in deciding the matter. The court was a neutral arbiter with the luxury—though I doubt that Judge Jones would call it that—to receive an intensive, six-week tutorial from some of the world’s foremost experts on evolutionary biology, creationist theology, and the scientific and philosophical principles that distinguish one from the other. As such, the court could do what most of the rest of us cannot: make a fully informed, reasoned assessment whether intelligent design’s scientific appearance reflects genuine scientific content suitable for public-school science classrooms, or whether intelligent design instead constitutes a fundamentally, inherently, unavoidably religious view inappropriate for public-school

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that Amish communities provide as adequate substitute for statutorily required schooling).

122. *Epperson v. Arkansas*, 393 U.S. 97, 106 (1968) (alteration added); *accord* *Edwards v. Aguillard*, 482 U.S. 578, 585 (1987); *id.* at 608 (Powell, J. concurring).

123. *See, e.g., Mozert*, 827 F.2d at 1064-65 (rejecting, under *Epperson*, parents’ claim for religious accommodation regarding instruction touching on “such themes as evolution, false supernaturalism, feminism, telepathy and magic,” where “[t]he only way to avoid conflict with the plaintiffs’ beliefs in these sensitive areas would be to eliminate all references to the subjects . . .” (alteration added)).

124. Loewy, *supra* note 2, at 88.

instruction. And while it might be impossible to make fully intelligible to a general and legal audience every aspect of professional scientists', philosophers', and theologians' analyses of evolutionary theory and intelligent design, those who otherwise might have remained on the fence about whether intelligent-design lessons should be permitted in the public schools as science instruction, or whether those lessons should instead be barred as state-sponsored proselytizing, can take comfort in the fact that the court undertook to make sense of the case and to resolve the dispute sincerely, diligently, and completely, relying on all that expertise to support its decision.

#### IV. AUTHORITY, PUBLIC JUSTIFICATION, AND LEGITIMACY

Had the *Kitzmiller* court declined to conduct a *Stone*-type sham-purpose inquiry and dodged the "is it science?" question, its incomplete analysis might, of course, have led it to an incorrect decision. But more fundamentally, the court would have shirked its responsibility, as a jurisprudential matter, to explain—and in so doing, to justify—its decision both to the defendants before it and to the public more broadly. As a result, the decision would have done nothing to quell a growing political and social controversy that otherwise would have continued to create religiously based rifts in the social fabric of communities, as it did in Dover.

In criticizing Judge Jones for supposedly reaching out to decide a question that was unnecessary to the case,<sup>125</sup> Wexler mistakenly fixates on the court's comment that the plaintiffs raised the issue whether intelligent design is science<sup>126</sup>—as though that statement were the court's *justification* for addressing it, and not merely a descriptive statement about one of the themes of the plaintiffs' (and the defendants') case at trial. The thrust of Wexler's argument is that, because the court could have ruled in favor of the Dover parents on other grounds, they had no right to expect a ruling on whether intelligent design is science.<sup>127</sup> I agree with that view, as far as it goes: If the court's only reason for deciding whether intelligent design is science had been that the plaintiffs had asked it to do so, the ruling might well have been superfluous.

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125. Wexler, *supra* note 2, at 99-100.

126. *See id.* at 110.

127. *See id.*

Because the court was deciding the case in their favor anyway, all that it owed the plaintiffs was a decision with sufficient factual findings to define the appellate record and, as prevailing parties always hope, sufficiently cogent (or at least sufficiently transparent) reasoning to facilitate appellate review.<sup>128</sup> But the *Kitzmiller* plaintiffs did not offer evidence about intelligent design's essential nature on a lark; they did so because, as explained above,<sup>129</sup> the defendants premised all their defenses on the contention that intelligent design is science. So the real question that Wexler should have asked was not whether the court owed the *plaintiffs* a decision whether intelligent design is science, but whether it owed the *defendants* a ruling on that issue. As a jurisprudential matter as well as a practical one, I believe that the defendants did indeed have a right to expect a ruling that addressed whether intelligent design is science—and so did the public at large.

I have long thought that any satisfying answer to the countermajoritarian difficulty<sup>130</sup> would have to be grounded, at least in part, in the fact that courts in our Western legal tradition must aim to justify their decisions, not to prevailing parties, but to unsuccessful ones. Unless a lawsuit's winners are repeat players in litigating some particular issue, they typically care only that they have won; they rarely trouble themselves overmuch about *why* they've won. After all, it is never terribly difficult to justify in one's own mind a court's confirmation that one was innocent, nonnegligent, or otherwise right all along. And even though prevailing parties might not always like a court's reasoning, to most it is the bottom line that counts. But to the losers, the court's explanation for its decision might make the difference between accepting the judgment, even if grumpily, and rebelling against (or simply ignoring) it. If as Locke supposed, the role that impartial judges play in civil society is to ameliorate the need for physical violence and other self-help remedies to resolve disagreements,<sup>131</sup> the courts' legitimacy

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128. Cf. *Selman v. Cobb County Sch. Dist.*, 449 F.3d 1320, 1338 (11th Cir. 2006) (vacating and remanding decision striking down textbook sticker disclaiming scientific theory of evolution, on ground that record was inadequate to permit full appellate review).

129. See *supra* text accompanying notes 12-14.

130. See generally ALEXANDER M. BICKEL, *THE LEAST DANGEROUS BRANCH: THE SUPREME COURT AT THE BAR OF POLITICS* 16-23 (2d ed. 1986).

131. See JOHN LOCKE, *SECOND TREATISE OF GOVERNMENT* §§ 13, 19-21 (1690).

depends on the extent to which losing parties on the whole walk away with the conviction that the courtroom was the proper venue to resolve their dispute, however much they might wish that the outcome had been different. That willingness to accept an adverse judgment yet still view the courts as legitimate arbiters for disputes in turn requires unsuccessful litigants to believe that the court hearing their case treated them, and their arguments, with respect, and therefore that they in some sense lost fair and square.

I am not, of course, so naïve as to think that losing parties are ever *happy* to have lost. Nor, in emotionally charged and hotly contested cases, will many ever straightforwardly and publicly concede that they were wrong and their opponents were right from the very beginning. But whether in a constitutional dispute between parents and public-school officials to determine who gets to decide what religious instruction children will receive, or in an ordinary tort suit between two motorists to determine who ran a red light, there remains a critical difference between being upset that the court ruled for the opposing party, on the one hand, and believing that the court never gave one a fair hearing, on the other.

Had the *Kitzmiller* court declined to consider whether intelligent design is science, it would have entirely ignored the School District's proffered defenses for its curriculum change under the purpose, effect, and endorsement tests, for all were premised on the claim that intelligent design is a genuine scientific theory. Absent a direct response from the court to those defenses and a reasoned explanation why they were inadequate under the Establishment Clause, the Dover school board could have justifiably claimed to have been ill used, credibly charging that the court never took it, or its arguments, seriously. Hence, the Board could have reasonably complained that, in denying to the defendants a full and fair hearing, the court had proved itself an illegitimate arbiter for the dispute. But after a six-week trial during which the court allowed both sides to present all the evidence that they could muster, and after a 139-page slip opinion<sup>132</sup> in which the court thoroughly addressed every contention that the Board members, their expert witnesses, and their attorneys had offered, the School District could not reasonably contend that it had received an unfair hearing. And indeed, neither Dover school

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132. See *Kitzmiller v. Dover Area Sch. Dist.* No. 04cv2688 (M.D. Pa. Dec. 20 2005), available at <http://www.au.org/site/DocServer/DoverOp.pdf?docID=461>.

officials nor their attorneys from the faith-based Thomas More Law Center have even tried to do so.<sup>133</sup>

That the defendants have not cried foul, even while expressing their grievous disappointment over the crushing defeat that they suffered, is not, I believe, the product of newfound shyness among the Board members and Thomas More lawyers, who, after all, had no qualms about touting to the media, from the courthouse steps at the end of each trial day, the supposed strengths of their arguments and effectiveness of their witnesses. Rather, it is a natural consequence of the fact that the court gave them every opportunity to make their best case, and then responded directly and concretely to each argument and every piece of evidence that they offered. Because no one who attended the trial and read the resulting opinion could in good faith claim that the court misunderstood the School District's arguments, ignored the District's evidence, or otherwise treated the District unfairly, the Board members and their attorneys in effect accepted the judgment—however bitter a pill it may have been for them to swallow.<sup>134</sup>

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133. The only exception that I have yet found is former-Board-member William Buckingham's complaint to a reporter in March 2006 that the Board "never got a fair shake." Lauri Lebo, *At Trial, Dover's 'Sacrificial Lamb': Buckingham Reflects on Becoming Defense Target*, YORK SUNDAY NEWS, Mar. 26, 2006, available at <http://w2.ydr.com/story/doverbiology/114646/?PHPSESSID=d930a5d765ab72a6e7e48c97e43f1c94>. Buckingham also, however, tenaciously clings to his story that he never used the term 'creationism' in conjunction with his service on the school board, even though he did just that in a videotaped interview that had been aired by the local Fox News affiliate. *Id.* And as the Board member whose religious advocacy for intelligent design the School District's lawyers tried to explain away as mere OxyContin-induced ramblings, see Transcript of Trial vol. 40, 80:14-19, Nov. 4, 2005, *Kitzmiller*, 400 F. Supp. 2d 707, Buckingham continues to describe himself as the trial's "sacrificial lamb," Lebo, *supra*, an odd metaphor to employ while flatly denying ever having invoked religion in any public or private remarks about the curriculum or the intelligent-design controversy.

134. To be sure, the Discovery Institute and Michael Behe complain that the court did not understand the material that Behe and the Board's other expert witnesses presented. See DEWOLF ET AL., *supra* note 31 at 28-57, 79-92. But even they do not claim that the school board received undeservedly harsh or otherwise unfair treatment. And so far as I have been able to determine, not a single genuine journalist who covered the trial—irrespective of religious affiliation, political bent, or previous knowledge about intelligent design or evolution (and the court gallery was populated throughout the trial with members of the national and international media from across the spectrum on each of those dimensions)—has ever viewed the

Nor were the Board members the only ones to whom the court had to justify its decision. In the first instance, the whole Dover community looked to the court to settle the matter once and for all. The citizens of Dover voted, just days after the trial ended, to replace the school board.<sup>135</sup> The citizens' collective decision to oust the old Board, after seeing its misdeeds paraded in front of them in court and in the local, national, and international media, was undeniably a first step toward the community's healing itself from the painful divides that the Board had inflicted when it used the school science curriculum to promote its preferred faith. But the real closing of the wounds came when the new Board declined to make intelligent design a continuing political issue, and chose instead to put its faith in the integrity of the legal proceedings, announcing that it would abide by whatever decision the court rendered.<sup>136</sup> That the community embraced the Board's decision to leave the matter to the court, rather than demanding that it act (one way or the other) without waiting for a judicial ruling, reflects neither apathy about the issue nor blind faith in elected officials (both of which the old Board's tenacity and duplicity had pretty thoroughly foreclosed). Instead, it reflected the popular understanding that the court had treated both sides, and all their experts, arguments, and evidence, fairly and with appropriate respect throughout the trial, and therefore that allowing the court to have the final word was the right way to move past an otherwise unresolvable cultural controversy.

In coming to the conclusion that the best course of action was to remove the battle over intelligent design from the political arena, the new Board and the Dover citizenry thus came, on their own, to understand the central insight from Locke's *Letter Concerning Toleration*, which Jefferson and Madison implemented through the First Amendment's mandate to separate church and state: When government chooses to align itself with a particular faith, it does no great service to religion, but

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proceedings or Judge Jones's performance in them as Behe and the Discovery Institute portray them.

135. Trial ended on November 4, 2005. On November 8, eight incumbents running on a pro-intelligent-design platform were unseated, leaving only one member from the original Board (who had not been up for reelection). See, e.g., Laurie Goodstein, *The 2005 Elections: School Board; Evolution Slate Outpolls Rivals*, N.Y. TIMES, Nov. 9, 2005, at A24.

136. See, e.g., Christina Kauffman, *Dover Dumps Designers*, YORK DISPATCH, Nov. 9, 2005, at A1, available at [http://www.yorkdispatch.com/local/ci\\_3198408](http://www.yorkdispatch.com/local/ci_3198408).

instead produces political oppression and foments civil strife.<sup>137</sup> Perhaps if all voters and public officials were to reflect on the violence that has historically flowed from religiously based political disagreements, more of them would reach the same conclusion that Locke, Madison, and Jefferson did about the proper relationship between religion and government,<sup>138</sup> and therefore about the need to place disputes touching on religion beyond the reach of politics.<sup>139</sup> But sadly, the lessons of history are seldom sufficient. For Dover, it took the actual experience of neighbors in a small, once-close-knit community turning on each other, on the one hand, and an exceedingly temperate, patient jurist, on the other, to make people understand the basic need for legally enforceable church-state separation in a religiously diverse society. Had the

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137. John Locke, *A Letter Concerning Toleration* 34-35, 42-43, 51-52 (James H. Tully ed., Hackett Pub. Co. 1983) (1689); *see also, e.g.*, ALEXIS DE TOCQUEVILLE, *DEMOCRACY IN AMERICA* 284 (Harvey C. Mansfield & Delba Winthrop eds. & trans., 2000) (1835) ("Religion . . . cannot share the material force of those who govern without being burdened with a part of the hatreds to which they give rise."); *id.* at 285 ("Insofar as a nation takes on a democratic social state, and societies are seen to incline toward republics, it becomes more and more dangerous for religion to unite with authority. . . . [I]f the Americans, who have delivered the political world to the attempts of innovators, had not placed their religion somewhere outside of that, what could it hold onto in the ebb and flow of human opinions? In the midst of the parties' struggle, where would the respect be that is due it? What would become of its immortality when everything around it was perishing?" (alteration added)).

138. As Justice O'Connor eloquently stated the matter just last Term:

At a time when we see around the world the violent consequences of the assumption of religious authority by government, Americans may count themselves fortunate: Our regard for constitutional boundaries has protected us from similar travails, while allowing private religious exercise to flourish. . . . Those who would renegotiate the boundaries between church and state must therefore answer a difficult question: Why would we trade a system that has served us so well for one that has served others so poorly?

*McCreary County v. ACLU of Ky.*, 125 S. Ct. 2722, 2746 (2005) (O'Connor, J., concurring).

139. As the Supreme Court explained long ago, "[t]he very purpose of a Bill of Rights was to withdraw certain subjects from the vicissitudes of political controversy, to place them beyond the reach of majorities and officials and to establish them as legal principles to be applied by the courts." *W. Va. Bd. of Educ. v. Barnette*, 319 U.S. 624, 638 (1943).

*Kitzmiller* court failed to address the full measure of the conflict that the community entrusted to it, I do not believe that the people of Dover could have moved beyond the religiously based turmoil into which the school board and the intelligent-design movement had plunged them.

The audience to whom the *Kitzmiller* court had to answer also went far beyond Dover and the immediate conflict that the school board's policy produced. For no matter how hard intelligent design's proponents have tried to distance themselves from the members of the Dover Board, no one doubts that the lawsuit constituted a major front in the culture war, with the School District, its attorneys, and its expert witnesses effectively voicing the views of evolution's religiously motivated opponents generally, and of the intelligent-design movement in particular. The public, moreover, invested a year's close attention by a federal court—an exceedingly scarce resource—to hear and evaluate those views. It had a right to expect a reasonable return on the investment, in the form of a decision that actually made headway toward resolving the cultural controversy.

To return to Loewy's principal objection, and its source, the fact that even well-educated people are easily duped into viewing intelligent design as science meant that Judge Jones had a stark choice to make: either address the "is it science?" question directly, acting as a neutral arbiter who takes seriously both sides' arguments in a significant national debate; or duck the question and leave it to future courts to face the same issue, consigning more communities, in the meantime, to the turmoil that Dover experienced. And quite apart from what it would have meant for those other communities, the choice to avoid the central question that the Dover Board had posed in defending its policy would have left the court's decision open to attack—not just by the intelligent-design movement, but by casual observers everywhere—as nothing more than a partisan screed supporting one side in the culture war. The *Kitzmiller* case thus presented the court with not just the opportunity but also the burden to do what neither scientists nor theologians had yet quite managed—namely, translate the professional scientific and theological dialogues over intelligent design into publicly accessible messages that would be respectful of religious belief, yet explain why intelligent design does not, as a constitutional or public-policy matter, belong in public-school science classes.

That Judge Jones accepted the challenge was not just a matter of character and courage—though in view of his willingness to stand up for



judicial independence in the face of the public attacks and personal threats that he has suffered since issuing his decision,<sup>140</sup> one cannot doubt that he possesses both qualities in ample measure. It was also a necessary consequence of the courts' institutional role in our constitutionally mandated separation of powers.<sup>141</sup> For had Judge Jones ignored the board's proffered defenses and ruled *ex cathedra*, his decision would have just added fuel to an already-overheated national controversy, sending the message that courts are no place to resolve it, and therefore that, as a society, we can finally end the religious infighting only after repeating the same battle in every town and every state legislature across the country.<sup>142</sup> While that result would have been

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140. See, e.g., Judge John E. Jones III, Address to the Anti-Defamation League National Executive Committee Meeting (Feb. 10, 2006), *available at* [http://www.adl.org/Civil\\_Rights/speech\\_judge\\_jones.asp](http://www.adl.org/Civil_Rights/speech_judge_jones.asp) (describing both attacks on Judge Jones for following the law rather than pandering to the religious right, and threats against him that required federal marshals to provide him with round-the-clock protection in the wake of the *Kitzmiller* decision).

141. See, e.g., TOCQUEVILLE, *DEMOCRACY IN AMERICA*, *supra* note 137, at 97 (“[T]he American judge is led despite himself onto the terrain of politics. He judges the law only because he has to judge a case, and he cannot prevent himself from judging the case. The political question that he must resolve is linked to the interest of the litigants, and he cannot refuse to decide it without making a denial of justice. It is in fulfilling the narrow duties imposed on the profession of the magistrate that he performs the act of the citizen.” (alteration added)).

142. In introducing the opinion’s “is it science?” analysis, Judge Jones wrote:

[A]fter a six week trial that spanned twenty-one days and included countless hours of detailed expert witness presentations, the Court is confident that no other tribunal in the United States is in a better position than we are to traipse into this controversial area. . . . [W]e will offer our conclusion on whether ID is science not just because it is essential to our holding that an Establishment Clause violation has occurred in this case, but also in the hope that it may prevent the obvious waste of judicial and other resources which would be occasioned by a subsequent trial involving the precise question which is before us.

*Kitzmiller v. Dover Area Sch. Dist.*, 400 F. Supp. 2d 707, 735 (M.D. Pa. 2005) (alteration added). After being attacked more ferociously for those two short sentences than for anything else in the opinion, Judge Jones elaborated:

There was something I said in the opinion that was grossly misunderstood . . . . I said that on the issue of whether intelligent design was science, that there wasn’t a judge in

appropriate for ordinary education-policy disputes—and undoubtedly preferred by the intelligent-design movement as well<sup>143</sup>—it is

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the United States in a better position to decide that than I was. [Commentator Phyllis] Schlafly interpreted that as my saying that I am so brilliant and erudite that I could decide that better than anyone else could. What I meant was that no one else had sat through an intensive six weeks of largely scientific testimony, and in addition to the task at hand, which was to decide the case, I wanted the opinion to stand as a primer for people across the country . . . . I wanted it to stand as a primer so that folks on both sides of the issue could read it, understand the way the debate is framed, see the testimony in support and against the various positions . . . and what is heartening to me is that it's now evident that it's being used in that way . . . . We did some of the lifting in that trial. To my mind . . . it would be a dreadful waste of judicial resources, legal resources, taxpayer money . . . to replicate this trial someplace else. That's not to say it won't be, but I suspect it may not be . . . . And I purposefully allowed the trial to extend and a record to be made . . . the defendants could never say that they weren't given the opportunity to present their case. I didn't cut off anybody's testimony, I didn't cut off anybody's presentation, and I allowed the testimony to be put forth in the ways the parties wanted it to be presented.

John Timpane, *The Opinion Speaks for Itself*, PHILA. INQUIRER, Feb. 26, 2006 (interviewing Judge Jones) (alteration in original), available at [http://www.templeton-cambridge.org/fellows/timpane/publications/2006.02.26/interview\\_with\\_judge\\_john\\_jones\\_the\\_judge\\_at\\_dover/](http://www.templeton-cambridge.org/fellows/timpane/publications/2006.02.26/interview_with_judge_john_jones_the_judge_at_dover/).

143. In that regard, both *amicus* briefs that Discovery Institute senior fellow David DeWolf filed in *Kitzmiller* asked the court to avoid addressing whether intelligent design is science when ruling against the Dover School District. See Brief for Biologists and Other Scientists as Amici Curiae Supporting Defendants at 6, *Kitzmiller*, 400 F. Supp. 2d 707 (No. 04cv2688), available at <http://www.discovery.org/scripts/viewDB/filesDB-download.php?command=download&id=558>; cf. Brief for the Discovery Institute as Amicus Curiae Supporting Defendants at 11-12, 20 n.30, *Kitzmiller*, 400 F. Supp. 2d 707 (No. 04cv2688), available at <http://www.discovery.org/scripts/viewDB/filesDB-download.php?command=download&id=646>. The *amicus* briefs thus reflect the Discovery Institute's overarching strategy of first persuading local school boards and state educational officials to adopt intelligent design into their science curricula, but then withdrawing support for the measures as soon as the danger arises that the intelligent-design movement's ruse will be exposed or its program will become subject to judicial scrutiny in a legal challenge. See *supra* note 18.

inappropriate for resolving controversies over fundamental constitutional rights. And it is especially inadequate in the Establishment Clause context because it would consign every other community to the same religiously based turmoil that the citizens of Dover faced—thus fostering the very evil that the Religion Clauses were designed, intelligently, to prevent.

#### CONCLUSION

The decision to take up the “is it science?” question allowed the *Kitzmiller* court to issue an opinion speaking directly to the issues that both the Dover school board and the intelligent-design movement raised, and to work toward dispelling the popular misunderstandings on which the movement depends in attempting to capture political control over public-school curricula. Had the court not undertaken to answer the question, all the careful analysis of purpose, effect, and endorsement that Wexler approves would have been largely for naught, because the court’s opinion would not have answered the defendants’ arguments, nor would it have provided any basis for public confidence in the ruling. So even if Wexler is correct that the court need not have resolved whether intelligent design is science in order to come to a bare decision among the parties, *Stone* and the required sham-purpose analysis notwithstanding, the ruling’s legitimacy depended on undertaking the “is it science?” inquiry—as, therefore, did the court’s ability to make a genuine difference in putting to rest the political and cultural controversy that the intelligent-design movement has wrought in Dover and throughout the country. To call the decision a judicial usurpation is, then, to misunderstand the courts’ basic function as much as it is to misunderstand the nature of intelligent design itself.