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PART II

TEXTBOOKS, JUDGES, AND SCIENCE

EDWARD J. LARSON*

This term, the United States Supreme Court will reopen the creation-evolution legal controversy when it hears the state of Louisiana's appeal in *Edwards v. Aguillard*.¹ Three successive lower court rulings in this case have declared unconstitutional a Louisiana statute² mandating balanced treatment for "creation-science" and "evolution-science" in

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¹ No. 85-1513 (U.S. Oct. Term 1985-86).

² The Louisiana statute provides:

**SUB-PART D-2. BALANCED TREATMENT FOR CREATION-SCIENCE
AND EVOLUTION-SCIENCE IN PUBLIC SCHOOL INSTRUCTION**

§ 286.1. Short Title

This Subpart shall be known as the "Balanced Treatment for Creation-Science and Evolution-Science Act."

§ 286.2. Purpose

This Subpart is enacted for the purposes of protecting academic freedom.

§ 286.3. Definitions

As used in this Subpart, unless otherwise clearly indicated, these terms have the following meanings:

(1) "Balanced treatment" means providing whatever information and instruction in both creation and evolution models the classroom teacher determines is necessary and appropriate to provide insight into both theories in view of the textbooks and other instructional materials available for use in his classroom.

(2) "Creation-science" means the scientific evidences for creation and inferences from those scientific evidences.

(3) "Evolution-science" means the scientific evidences for evolution and inferences from those scientific evidences.

(4) "Public schools" mean public secondary and elementary schools.

§ 286.4. Authorization for balanced treatment; requirement for nondiscrimination.

A. Commencing with the 1982-1983 school year, public schools within this state shall give balanced treatment to creation-science and to evolution-science. Balanced treatment of these two models shall be given in classroom lectures taken as a whole for each course, in textbook materials taken as a whole for each course, in library materials taken as a whole for the sciences and taken as a whole for the humanities, and in other educational programs in public schools, to the extent that such lectures, textbooks, library materials, or educational programs deal in any way with the subject of the origin of man, life, the earth, or the universe. When creation or evolu-

public school classrooms.³ Considering the drubbing that creationists have taken in the courts during the past quarter-century, the decision by the Supreme Court to hear their appeal represents a surprising new opportunity for creationists to obtain a remake of *Inherit the Wind*.

In public pronouncements, creationists have pinned their

tion is taught, each shall be taught as a theory, rather than as proven scientific fact.

B. Public schools within this state and their personnel shall not discriminate by reducing a grade of a student or by singling out and publicly criticizing any student who demonstrates a satisfactory understanding of both evolution-science or creation-science and who accepts or rejects either model in whole or part.

C. No teacher in public elementary or secondary school or instructor in any state-supported university in Louisiana, who chooses to be a creation-scientist or to teach scientific data which points to creationism shall, for that reason, be discriminated against in any way by any school board, college board, or administrator.

§ 286.5. Clarifications

This Subpart does not require any instruction in the subject of origins but simply permits instruction in both scientific models (of evolution-science and creation-science) if public schools choose to teach either. This Subpart does not require each individual textbook or library book to give balanced treatment to the models of evolution-science and creation-science; it does not require any school books to be discarded. This Subpart does not require each individual classroom lecture in a course to give such balanced treatment but simply permits the lectures as a whole to give balanced treatment; it permits some lectures to present evolution-science and other lectures to present creation-science.

§ 286.6. Funding of inservice training and materials acquisition

Any public school that elects to present any model of origins shall use existing teacher inservice training funds to prepare teachers of public school courses presenting any model of origins to give balanced treatment to the creation-science model and the evolution-science model. Existing library acquisition funds shall be used to purchase nonreligious library books as are necessary to give balanced treatment to the creation-science model and the evolution-science model.

§ 286.7. Curriculum Development

A. Each city and parish school board shall develop and provide to each public school classroom teacher in the system a curriculum guide on presentation of creation-science.

B. The governor shall designate seven creation-scientists who shall provide resource services in the development of curriculum guides to any city or parish school board upon request. Each such creation-scientist shall be designated from among the full-time faculty members teaching in any college and university in Louisiana. These creation-scientist shall serve at the pleasure of the governor and without compensation.

LA. REV. STAT. ANN. § 17:286.1-.7 (West 1982). The full original act can be found at 1981 La. Acts 685.

³ *Aguillard v. Treen*, 634 F. Supp. 426 (E.D. La.), *aff'd sub nom. Aguillard v. Edwards*, 765 F.2d 1251 (5th Cir.), *reh'g denied*, 778 F.2d 225 (5th Cir. 1985), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

hopes for a judicial turnabout on the accumulation of scientific evidence which they say supports their viewpoint and on the growing number of federal court judges, appointed by President Reagan, who they view as being friendly to their cause. Exemplifying this second point, Reagan's recent controversial appointee to the Seventh Circuit Court of Appeals, Daniel Manion, cosponsored legislation similar to the Louisiana Balanced Treatment Act when he was an Indiana state legislator. Likewise, Reagan appointees to the Fifth Circuit Court of Appeals voiced strong support for "creation-science" in reviewing the Louisiana balanced treatment statute.⁴ This winter the Supreme Court will again consider arguments in this long-running legal controversy.

This Article offers a spectator's guide to this controversy by analyzing three central issues in *Aguillard*. First, the Article examines the persistent interest of both creationists and evolutionists in the content of public-school biology instruction, which is reflected in passage of the Balanced Treatment Act, and the overwhelming, organized opposition to its implementation. Focusing on the impact of science in recent decisions, the second section of the Article reviews judicial responses to the cases spawned by the controversy over creationist and evolutionary instruction. The Article concludes by exploring the central role played by scientific opinion in the legal arguments for and against the Louisiana Balanced Treatment Act, as reflected in the briefs filed with the Supreme Court.

I. CONTROVERSIES OVER INSTRUCTIONAL CONTENT

The underlying controversy over public-school instruction in biological origins has pitted creationists and evolutionists against each other for the past sixty years, with partisans in both camps seeking to promote the teaching of their own views or to frustrate the teaching of opposing views. Although this controversy has been the most long-lived and highly publicized dispute over school instructional content during the Twentieth Century, it represents only one among many such disputes, as suggested by the following observation by the president of a leading textbook publisher:

⁴ *Aguillard*, 778 F.2d at 225-28 (Gee, J., dissenting).

In recent years, militancy for causes has been as pronounced as at any time in our history. There are crusades for women's rights and crusades against communism. There are crusades for conservative causes and for liberal causes. There are crusades for a better environment. There are crusades for and against sex education. There are crusades by various ethnic groups for recognition of their cultures. Those who develop learning materials for the schools know that all of these groups have one thing in common—the conviction that textbooks and related materials are a major vehicle for furthering their crusades.⁵

Crusaders for various causes have attempted to influence instructional content through legislation, litigation, education, and exhortation. In this way, the creation-evolution controversy has many parallels.

What these crusaders have in common is the design to alter (they would say correct) public perceptions, attitudes, or knowledge. Creationists and evolutionists are no exception. Both have promoted the teaching of their views or opposed the instruction of alternative ones with the express goal of spreading their opinions among students.⁶ Even assuming that both sides are convinced of the essential truth of their views and are sincere in their attempt to help students learn that truth, the fact remains that both are engaged in a propaganda effort. Indeed, the controversy is intensified because the protagonists strongly believe in their views and in the significance of those views for others.⁷

School textbooks and classroom instruction offer an effective means of influencing public perceptions and attitudes, making them a primary target for crusaders and propagandists. As Harvard University education professor Jeanne S. Chall noted:

Textbooks are more potent forces in what and how teachers teach and in what and how children learn than we are ready to admit. Textbooks select for study a content, an emphasis, a

⁵ Williamson, *Textbook Publishing: Facts and Myths*, in *THE TEXTBOOK IN AMERICAN SOCIETY* 38, 40 (J. Cole & T. Sticht eds. 1981).

⁶ *E.g.*, H. MORRIS, *A HISTORY OF MODERN CREATIONISM* 190, 246 (1984); H. MORRIS & D. ROHRER, *CREATION: THE CUTTING EDGE* 9 (1982); G. SIMPSON, *THIS VIEW OF LIFE: THE WORLD OF AN EVOLUTIONIST* 33 (1964); Muller, *One Hundred Years Without Darwinism Are Enough*, 49 *SCHOOL SCIENCE AND MATHEMATICS* 305, 306 (1958).

⁷ E. LARSON, *TRIAL AND ERROR: THE AMERICAN CONTROVERSY OVER CREATION AND EVOLUTION* 127-28 (1985).

method of instruction and learning, and a level of difficulty. This power is held jealously by the government and dominant party of nondemocratic countries. No totalitarian country would chance the consequences of freedom in textbook development and selection. Even the choice of first story in the first reading text must pass the approval of political and educational committees.⁸

In America's freer environment, crusaders can, and often do, seek to impress textbooks and public education into service for their causes.

Various recent studies have examined the impact of school textbooks and instruction on students' perceptions and attitudes. In an influential 1969 study by University of Minnesota educational psychologists John Litcher and David Johnson, one group of white elementary students used readers that included characters from several racial and ethnic groups while a similar group used traditional readers presenting only whites.⁹ After four months, the researchers conducted four separate tests of the students' racial attitudes. On all four tests, Litcher and Johnson reported, "the children using the multiethnic readers responded significantly more favorably toward Negroes than the children using the regular readers."¹⁰ Later studies have found that the way American Indians, Eskimos, and women are presented in school textbooks impact students' attitudes toward those groups.¹¹ For example, increasing student exposure to instructional materials showing women in traditionally male roles repeatedly has been found to loosen sex-role attitudes among both male and female students.¹²

⁸ Chall, *Middle and Secondary School Textbooks*, in *THE TEXTBOOK IN AMERICAN SOCIETY* 24, 26 (J. Cole & T. Sticht eds. 1981). A recent Tennessee federal district court decision allowing public school students to opt-out of reading class on religious grounds noted: "There is no question that the reading texts teach more than just how to read." *Mozert v. Hawkins County Pub. School*, No. CIV-2-83-401, slip op. at 12, n.8 (E.D. Tenn. Oct. 24, 1986).

⁹ Litcher & Johnson, *Changes in Attitudes Toward Negroes of White Elementary School Students After Use of Multiethnic Readers*, 60 J. EDUC. PSYCHOLOGY 148, 149 (1969).

¹⁰ *Id.* at 151.

¹¹ U.S. COMM'N ON CIVIL RIGHTS, *CHARACTERS IN TEXTBOOKS: A REVIEW OF THE LITERATURE* 15-16 (1980); O. URIBE, JR. & J. MARTINEZ, *ANALYZING CHILDREN'S BOOKS FROM A CHICANO PERSPECTIVE* 10 (1975); Bains, Altman & Vasquez, *A Black American Perspective*, in *PERSPECTIVES ON SCHOOL PRINT MATERIALS: ETHNIC, NON-SEXIST AND OTHERS* 29-30 (L. Beckum, J. Vasquez & W. Rosenoff eds. 1975).

¹² Scott & Schau, *Sex Equity and Sex Bias in Instructional Materials*, in *HANDBOOK FOR*

To a great extent, such findings simply documented what was generally believed already—that schooling profoundly influences students. This belief helped spur both the turn-of-the-century movement for compulsory public education, which was seen as a means of assimilating the Eastern and Southern European immigrants then flooding into America, and the simultaneous spread of parochial education. “Give me a child for six years,” the Jesuit motto promised, “and I will have him for life.” Both the findings of these studies and the common-sense notions about schooling reinforced by them help account for creationists’ interest in public education. If multiethnic readers lead white students to view blacks more favorably and if the portrayal of women in non-traditional roles breaks down sexual stereotypes, then the balancing of evolutionary teaching with creationist instruction should promote acceptance of the rebel theory.

Crusaders for civil rights, feminism, and other social causes of the past quarter-century have, like creationists, turned to legislation and governmental support to alter public-school instruction in their favor. For example, California has adopted a statute requiring that public school instructional materials portray the “contributions of both men and women in all types of roles, including professional, vocational, and executive roles.”¹³ To implement this law, the California State Department of Education mandated standards for instructional material. In a standard conceptually similar to the Louisiana Balanced Treatment Act, the Department decreed, “Instructional materials containing references to, or illustrations of, people must refer to or illustrate both sexes approximately evenly, in both numbers and importance, except as limited by accuracy or special purpose.”¹⁴ Explaining this standard, the Department added the following comment:

Counting portrayals alone is not sufficient to judge compliance with this standard; but a quantitative assessment could help to determine “approximately even” numbers of portray-

ACHIEVING SEX EQUITY THROUGH EDUCATION 218, 220-21 (S. Klein ed. 1985); Campbell & Wirttemberg, *How Books Influence Children: What the Research Shows*, 11 *INTER-RACIAL BOOKS FOR CHILDREN BULL.* 3, 4 (1980); BALTIMORE FEMINIST PROJECT, *SEXISM AND RACISM IN POPULAR BASAL READERS 1964-1976* 5 (1976).

¹³ CAL. EDUC. CODE § 60040(a) (West 1976).

¹⁴ CALIFORNIA STATE DEP'T OF EDUC., *STANDARDS FOR EVALUATION OF INSTRUCTIONAL MATERIALS WITH RESPECT TO SOCIAL CONTENT* 5 (1982).

als. In addition, evaluators must make a qualitative judgment concerning the relative importance or impact of those portrayals. For example, an illustration within a story of a female in a highly nontraditional occupation might be considered to have as much impact as a short story containing two male characters.¹⁵

A second standard required: "If professional or executive occupations, trades, or other gainful occupations are portrayed, men and women should be represented therein approximately equally."¹⁶ The explanatory comment asserted that, while portraying equal representation of females in some occupations (such as coal mining) might "draw ridicule from pupils . . . because it would constitute a complete departure from the reality they see around them", compliance with the standard in such areas was important to encourage the aspirations of female students "in spite of current reality."¹⁷ A third standard provided: "The number of traditional activities engaged in by characters of one sex should be approximately even with the number of nontraditional activities presented for characters of that sex."¹⁸ The ensuing comment explained that "'traditional' refers to activities which previously were often considered appropriate for persons of only one of the sexes."¹⁹ The aim of such standards is to have instructional materials portray the sexes as equal in an effort to realize that objective. Similarly, critics allege that the Louisiana Balanced Treatment Act requires the presentation of an artificial view of science as a means of promoting that view.²⁰

Partisans on both sides of the creation-evolution controversy readily admit that their ultimate aim is to advance acceptance of their particular views of origins. This aim is apparent from even a cursory review of recent developments in biology textbooks. After decades of deemphasis in public school instructional materials, evolutionary teaching received a boost in the mid-1960s when the federally funded Biological Sciences Curriculum Study (BSCS) released three

¹⁵ *Id.* at 5-6.

¹⁶ *Id.* at 6.

¹⁷ *Id.*

¹⁸ *Id.* at 7.

¹⁹ *Id.*

²⁰ *E.g.*, Brief of Appellees at 25-31, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513) [hereinafter *ACLU Brief*].

new high-school biology textbooks which quickly captured half of the national market and greatly influenced other texts. The BSCS textbooks emphasized evolutionary concepts due to the influence of Hermann J. Muller, a leading Indiana University zoologist.²¹ In the immediate aftermath of Sputnik and shortly before joining the Study, Muller had issued the following public call for expanded evolutionary teaching:

We need, in these decisive days of world tension, . . . a complete about-face in this critical area of education. We dare not leave it to Soviets alone to offer men the inspiration that is to be gained from the wonderful world view opened up by Darwin and other Western biologists. This view, founded so solidly upon the discoveries of modern science, is, when fully incorporated into men's personalities, the source of the profoundest idealism and hope. It should lend us support in our struggle for a freer world. For it shows how the most essential properties of living things have led to their perpetual reaching out, self-transformation, progression, and conquest of the rest of nature, until from a slimy scum they have stood erect, become aware of themselves, evolved social feelings and moral principles, and striven toward the stars.²²

Thus, Muller plainly saw social and cultural reasons for promoting evolutionary teaching in public schools.

A decade later, the Creation Research Society (CRS), a private organization of scientifically trained creationists, countered the BSCS by releasing its own high school textbook, *Biology: A Search for Order in Complexity*. In the "Preface" this text decried the evolutionary bias of existing textbooks and acknowledged "the creation concept as the most acceptable underlying explanation of [biological] facts."²³ The author of this Preface was Henry M. Morris, the cofounder and leader of both the Creation Research Society and the later Institute for Creation Research (ICR).

²¹ A. GROBMAN, *THE CHANGING CLASSROOM: THE ROLE OF THE BIOLOGICAL SCIENCES CURRICULUM STUDY 94-95*, 204 (1969). For a discussion of the influence of the BSCS textbooks and the prior deemphasis of evolution in high school texts, see Skoog, *Topic of Evolution in Secondary School Biology Textbooks: 1900-1977*, 63 *SCI. EDUC.* 621, 633 (1979).

²² Muller, *supra* note 6, at 306.

²³ Morris, *Preface to TEXTBOOK COMMITTEE OF THE CREATION RESEARCH SOCIETY, BIOLOGY: A SEARCH FOR ORDER IN COMPLEXITY* at XX (J. Moore & H. Slusher eds. 1970).

Like Muller, Morris had ulterior motives for promoting a new biology textbook. Viewing belief in "creation-science" as a step toward Christian conversion, Morris has called creationism "the *Cutting Edge* of the Gospel, the sharp weapon of foundational truth, in the great battle for the eternal souls of men and women for whom Christ died."²⁴

Both Muller and Morris have recognized the value of school textbooks and instruction for promoting their view of biological origins. However, Morris has not been as successful as Muller in utilizing this means due to judicial rulings against both using the CRS text and teaching "creation-science" in public schools. Those rulings, leading up to the pending case before the Supreme Court, have reflected a persistent judicial opposition to Morris' means and his objective.²⁵

II. JUDICIAL VIEWS OF CREATION AND EVOLUTION

The legal controversy between creationism and evolutionism dates back to 1925, when Tennessee outlawed the teaching of human evolution in public schools which led to the celebrated trial of John Scopes.²⁶ Perhaps no American judicial decision has evoked more criticism than Scopes' conviction sixty-one years ago. Even the 1927 Tennessee Supreme Court decision upholding the antievolution statute under which Scopes was convicted (while overturning the conviction on a technicality) urged prosecutors to conserve "the peace and dignity of the state" by not enforcing that law.²⁷ Criminal charges were never again filed under that law or other similar statutes in nearby Mississippi and Arkansas.

When the United States Supreme Court finally overturned an antievolution statute forty years later in *Epperson v. Arkansas*,²⁸ the Justices left no doubt as to their acceptance of the scientific theory of evolution. Writing for a unanimous court, Justice Abe Fortas likened antievolution laws to restrictions against teaching that the earth is round or re-

²⁴ MORRIS & ROHRER, *supra* note 6, at 9 (emphasis in original).

²⁵ The history of these rulings is analyzed in LARSON, *supra* note 7 *passim*.

²⁶ *Scopes v. State*, 154 Tenn. 105, 289 S.W. 363 (1927).

²⁷ *Id.* at 367.

²⁸ 393 U.S. 97 (1968).

volves on its axis.²⁹ In a concurring opinion, Justice Potter Stewart compared human evolution to higher mathematics and astronomy, calling each “an entire system of respected human thought.”³⁰

Following this setback, creationists continued their legal battles against evolution with a series of court cases and legislative proposals designed either to limit public teaching of evolution or to require equal time for creationist theories. Until December of 1985, these efforts served only to reveal the depth of judicial support for evolution. For instance, a 1972 action in federal court challenging evolutionary teaching in Houston public schools as an unconstitutional establishment of secular humanism was dismissed for failing to state a claim.³¹ Three years later, Tennessee enacted a new statute barring public school textbooks from presenting human evolution as “a scientific fact” and mandating equal space for creationism. However, the court voided the enactment without so much as a hearing and observed that the statute was so “patently unconstitutional” as not to merit any review.³² In 1977, an Indiana court ruled that public school use of the CRS biology textbook violated the establishment clause and noted: “The attempt to present Biblical Creationism as the only accepted scientific theory, while novel, does not rehabilitate the constitutional violation.”³³ In 1980, the District of Columbia Circuit Court of Appeals dismissed a creationist’s challenge to evolutionary exhibits at the Smithsonian Institution with the observation that the exhibits represented a nonreligious “diffusion of knowledge based on responsible scientific foundations.”³⁴ Evolution appeared to hold sway in the courts.

A surprising shift was under way, however. A 1979 Gallup poll found that half the Americans surveyed rejected evolution in favor of a literal interpretation of the *Genesis* ac-

²⁹ *Id.* at 102. Justice Fortas borrowed this analogy from Clarence Darrow’s autobiography. *Id.* at n.9.

³⁰ *Id.* at 116 (Stewart, J., concurring).

³¹ *Wright v. Houston Indep. School Dist.*, 366 F. Supp. 1208, 1208-09 (S.D. Tex. 1972).

³² *Daniel v. Waters*, 515 F.2d 485, 492, 494 (6th Cir. 1975).

³³ *Hendren v. Campbell*, No. 5577-0139, slip op. at 19-20 (Marion Co. Ind. Super. Ct. No. 5, April 14, 1977).

³⁴ *Crowley v. Smithsonian Inst.*, 636 F.2d 738, 744 (D.C. Cir. 1980).

count.³⁵ During the 1980 presidential campaign, Ronald Reagan endorsed the position that creationism should be taught in public schools along with evolution.³⁶ Shortly after the 1980 election, both Arkansas and Louisiana enacted legislation requiring balanced treatment for "creation-science" along with "evolution-science." Federal district court judges in both states struck down those laws as violating the separation of church and state.³⁷ The judge in Arkansas acted first, ruling that the law "was simply and purely an effort to introduce the Biblical version of creation into the public school curricula."³⁸ "Creation-science," as he saw it, "is [simply] not science."³⁹ The judge in Louisiana agreed, and added that "whatever 'science' may be, 'creation,' as the term is used in the statute, invokes religion."⁴⁰ It is interesting to note that both of these judges were appointed by Jimmy Carter and a new team of Reagan appointees to the Fifth Circuit Court of Appeals waited to review the Louisiana decision.

The initial appeal of the Louisiana decision went before a three-judge panel consisting of appointees by Eisenhower, Carter, and Reagan. While it unanimously affirmed the trial court's decision, a new tone appeared, evidenced by the panel's declaration that, "[we] do not deny that the underpinnings of creationism may be supported by scientific evidence."⁴¹ After ruling that a state may not *mandate* the teaching of creationism, the panel suggested that individual teachers could teach scientific evidence supporting the creation theory.⁴²

Appealing to Reagan appointees on the full court, defenders of the law asked for a rehearing en banc by the entire

³⁵ *The Christianity Today-Gallup Poll: An Overview*, CHRISTIANITY TODAY, Dec. 21, 1979, at 14.

³⁶ Pierce, *Putting Darwin Back in the Dock*, TIME, March 16, 1981, at 80.

³⁷ *McLean v. Arkansas Bd. of Educ.*, 529 F. Supp. 1255 (E.D. Ark. 1982); *Aguillard v. Treen*, 634 F. Supp. 426 (E.D. La.), *aff'd sub nom. Aguillard v. Edwards*, 765 F.2d 1251 (5th Cir.), *reh'g denied*, 778 F.2d 225 (5th Cir. 1985), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

³⁸ *McLean*, 529 F. Supp. at 1264.

³⁹ *Id.* at 1272. Judge Overton, who authored the memorandum opinion in this case further concluded that: "There is no way teachers can teach the *Genesis* account of creation in a secular manner." *Id.*

⁴⁰ *Aguillard*, 634 F. Supp. at 427.

⁴¹ *Aguillard v. Edwards*, 765 F.2d 1251, 1256 (5th Cir.), *reh'g denied*, 778 F.2d 225 (5th Cir. 1985), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

⁴² *Id.* at 1257.

fifteen-judge appellate bench.⁴³ This motion was denied by a surprisingly close eight to seven vote, and the minority filed a sharp dissent that represented the first published judicial support for creationists' claims since *Scopes*.⁴⁴ Pointing to the defense affidavits supporting a scientific basis for creationism, the dissenters maintained that "there *are* two bona fide views" of human origins.⁴⁵ "The statute which concerns us today," the dissent continued, "merely requires that the whole scientific truth be taught on the subject if any is. . . . It comes as news to me, however, that the Constitution forbids a state to require the teaching of truth."⁴⁶ The author of the panel opinion thereupon added an unusual response to this dissent: "I offer my apologies to the majority of this court for aligning it with the forces of darkness and anti-truth."⁴⁷ Clearly a profound split in world view divides the current Fifth Circuit bench.

This forceful seven-judge dissent reflected a view of evolution and creation far different from the views reflected in earlier judicial decisions. Rather than being merely a relic from the days of *Scopes*, this dissent may indicate future trends. A majority of the judges ruling against the Louisiana law were Carter appointees, while the majority of the judges ruling for it were chosen by Reagan. In particular, the seven dissenters included four Reagan appointees, two named by Nixon, and only one Carter appointee. Under-scoring the shifting nature of this balance, the Eisenhower appointee opposing the law in the panel decision had been replaced at the time of the en banc ruling and the new judge joined the dissent. One more such replacement, and the balance would tip.

As the dissent indicates, even the most solid judicial precedent—two decades of unwaivering support for evolutionary teaching over creationist claims—can shift with the infusion of new judges. Perhaps prodded by the dissenters, the Supreme Court will now reopen this issue.

⁴³ Suggestion for rehearing en banc, *Aguillard v. Edwards*, 765 F.2d 1251 (5th Cir. 1985) (No. 85-3030), *reh'g denied*, 778 F.2d 225 (5th Cir. 1985), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

⁴⁴ *Aguillard v. Edwards*, 778 F.2d 225, 225-28 (5th Cir. 1985) (Gee, J., dissenting), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

⁴⁵ *Id.* at 226 (emphasis in original).

⁴⁶ *Id.* at 227-28.

⁴⁷ *Id.* at 228 (Jolly, J., responding to dissent).

In their motion to affirm the lower court ruling, filed in opposition to the State's petition for Supreme Court review, opponents of the Louisiana balanced treatment statute told the High Court, "this case, in the words of the Court of Appeals majority, 'is a simple one, subject to a simple disposal: the [Balanced Treatment] Act violates the establishment clause because the purpose of the statute is to promote a religious belief.'"⁴⁸ By agreeing to hear the case, the Supreme Court rejected any simple disposal on religious grounds in favor of a closer look at the constitutionality of the balanced treatment concept. An analysis of the numerous briefs filed in this case suggests that both sides expect the ultimate decision to turn on whether or not "creation-science" is scientific rather than whether or not it is religious.

III. SEARCHING FOR SCIENCE IN "CREATION-SCIENCE"

Viewed together, the briefs of appellants (State) and appellees (ACLU), combined with the numerous amicus curiae briefs filed on behalf of approximately 150 organizations or individuals, pose one clear question for the Supreme Court in *Aguillard*: Is creation-science science or religion? No brief claimed that creation-science is anything other than a scientific or religious concept. Every brief opposing the Louisiana Balanced Treatment Act asserted or assumed that creation-science is solely religious and not scientific.⁴⁹

⁴⁸ Motion to Affirm at 2, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) (quoting *Aguillard v. Edwards*, 765 F.2d 1251, 1253 (5th Cir.), *reh'g denied*, 778 F.2d 225 (5th Cir. 1985), *prob. juris. noted*, 106 S. Ct. 1946 (1986)).

⁴⁹ ACLU Brief, *supra* note 20, at 25-26; Brief of People For the American Way at 13-14, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513) [hereinafter PAW Brief]; Amicus Curiae Brief of 72 Nobel Laureates, 17 State Academies of Science, and 7 Other Scientific Organizations, in Support of Appellees at 6-7, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513) [hereinafter Nobel Brief]; Brief of Americans United for Separation of Church and State at 11, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513) [hereinafter Am.-United Brief]; Brief Amici Curiae of the American Association of University Professors and the American Council on Education in Support of Appellees at 11-12, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter Educators' Brief]; Brief of the Anti-Defamation League of B'nai B'rith and Americans for Religious Liberty, Amici Curiae, in Support of Appellees at 4, 7-8, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter B'nai Brief]; Brief of the American Jewish Congress and the Synagogue Council of America as Amici Curiae in Support of Appellees at 45, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter Jewish Brief]; Amicus Curiae Brief of the State of New York, Joined by the State of Illinois at 4, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter New York Brief]; Brief of Amicus Curiae, American Federation of Teachers, AFL-CIO in Support of

Every brief supporting the Act maintained that creation-science is scientific (or at least as scientific as evolution) and is not religious (or no more so than evolution).⁵⁰ Conceptually, the legal arguments for and against the statute flow from this disagreement over the ultimate nature of creation-science.

To say that the constitutionality of the Balanced Treatment Act turns on perceptions of the scientific basis for creation-science is not to suggest that *Aguillard* will be decided on grounds other than the establishment clause. In all likelihood, it will be. Yet, perceiving a scientific basis for creation-science probably precludes finding an establishment-clause violation and rejecting a scientific basis for it almost necessitates the opposite finding. These consequences emerge from reviewing the three-prong test for an establishment-clause violation set forth in *Lemon v. Kurtzman*.⁵¹

To survive the first prong of the *Lemon* test, a statute must have a secular legislative purpose. This standard, which has been invoked only three times by the Supreme Court to invalidate statutes, is violated "only when [the Court] has concluded that there was no question that the statute or activity was motivated *wholly* by religious considerations."⁵² Apply-

Appellees at 7-9, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513); Motion for Leave to File Brief of Amici Curiae and Brief of Amici Curiae Reverend Bill McLean, Bishop Ken Hicks, Right Reverend Herbert Donovan, and Most Reverend Andrew J. McDonald at 9-11, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter McLean Brief]; Brief For Amicus Curiae The National Academy of Sciences Urging Affirmance at 12, 27, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter National Academy of Sciences Brief]; Brief Amicus Curiae of the New York Committee for Public Education and Religious Liberty at 53, 58, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513); Brief For the Spartacist League and Partisan Defense Committee as Amicus Curiae on Behalf of Appellees at 11, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) ("The essential starting point, however, is the fact that creationism is not science, but religion.").

⁵⁰ Brief of Appellants at 15-21, *Edwards v. Aguillard* (U.S. 1986) (No. 85-1513) [hereinafter State's Brief]; Brief of the Christian Legal Society and National Association of Evangelicals as Amici Curiae Supporting Appellants at 4-5, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter CLS Brief]; Brief of the Rabbinical Alliance of America at 18-20, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter Rutherford Brief]; Brief Amicus Curiae of Concerned Women For America in Support of Appellants at 9, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter CWA Brief]; Brief For the Catholic League For Religious and Civil Rights, Amicus Curiae, in Support of Appellants at 5, *Edwards v. Aguillard* (U.S. 1985) (No. 85-1513) [hereinafter Catholic Brief].

⁵¹ 403 U.S. 602, 612-13, *reh'g denied*, 404 U.S. 876 (1971).

⁵² *Lynch v. Donnelly*, 465 U.S. 668, 680 (1984) (emphasis in original). The three decisions invoking the purpose prong were *Epperson v. Arkansas*, 393 U.S. 97

ing this standard to the pending case, it is difficult to entirely discount the Balanced Treatment Act's express legislative purpose of "protecting academic freedom" if creation-science is, in fact, scientific.⁵³ Assuming that creation-science was scientific, dissenting Appellate Judge Thomas Gee logically observed: "I should have thought that requiring the truth to be taught on any subject displayed its own secular warrant, one at the heart of the scientific method itself."⁵⁴ The amicus brief filed by the Christian Legal Society and the National Association of Evangelicals in support of the Louisiana statute make this point even more succinctly: "If serious, credible scientists are engaged in [creation-science], then the Louisiana legislature acted properly."⁵⁵

If creation-science lacks scientific merit and is a solely religious doctrine, then an unconstitutional religious motive is what is left as the likely reason for enactment of the law. As noted by an amicus brief filed on behalf of a variety of prominent scientists and scientific organizations: "A law that seeks to introduce religious dogma into the public school classroom indisputably has a religious purpose [citation omitted]. Louisiana has attempted to avoid this result by calling creationism 'science.' But, as this Court has repeatedly held, labels such as 'science' or 'morality' do not transform religion into nonreligion [citations omitted]."⁵⁶ While

(1968); *Stone v. Graham*, 449 U.S. 39, *reh'g denied*, 449 U.S. 1104 (1981); *Wallace v. Jaffree*, 105 S. Ct. 2479 (1985).

⁵³ LA. REV. STAT. ANN. § 17:286.2 (West 1982).

⁵⁴ *Aguillard v. Edwards*, 778 F.2d 225, 228 (5th Cir. 1985) (Gee, J., dissenting), *prob. juris. noted*, 106 S. Ct. 1946 (1986).

⁵⁵ CLS Brief, *supra* note 50, at 8; State's Brief, *supra* note 50, at 42.

⁵⁶ PAW Brief, *supra* note 49, at 14. Even the dissenting appellate court opinion suggested that the Constitution may forbid a state from mandating the classroom teaching of erroneous science, such as "that the earth is flat." *Aguillard*, 778 F.2d at 228 (Gee, J., dissenting). Although the State did not make this argument, even if creation-science is solely a religious concept, a fatal religious purpose may not have motivated enactment of the Balanced Treatment Act if Louisiana legislators thought creation-science was scientifically valid. This is possible in light of the 1982 Gallup survey finding that 49% of Southerners believed the biblical account of creation. Gallup, *Public Evenly Divided Between Evolutionists, Creationists* 1-2 (1982) (press release). Assuming that Louisiana legislators were representative of their electorate, it is probable that many of them accepted the *Genesis* account as accurate history, and therefore logically could believe that there should be some scientific evidence of a creation. Further, during House consideration of the measure, the floor leader for the bill was a science-education professor at Northeast Louisiana University who claimed that there was a scientific basis for creation-science. Given this background, it is arguable that Louisiana legislators sincerely intended to promote science education by requiring balanced treatment for creation-science. If creation-science actually is primarily a

every brief opposing the statute reflected similar reasoning, one added that "even if it were conceded that the law requires the teaching only of scientific theory and not religious doctrine, the Act is still unconstitutional because of its impermissible legislative purpose" rooted in traditional religious opposition to evolution.⁵⁷ Defenders of the Louisiana statute countered this argument by pointing out: "It is settled law under the Establishment Clause that the mere convergence between governmental action and a religious tenet fails to create an Establishment Clause violation."⁵⁸ Even an anticreationist amicus brief observed that "the courts have long recognized that the teaching of science does not, without more, constitute religion and therefore cannot raise an establishment problem in the public schools."⁵⁹ This principle, asserted in support of evolutionary teaching, also supports creationist instruction if creation-science is indeed a science.

The second prong of the *Lemon* test, which voids statutes for having a primarily religious effect, leads to a similar result as the first prong. If creation-science is science, then, as the State's brief asserted, "The primary effect of the Balanced Treatment Act is to advance students' academic freedom to receive scientific information."⁶⁰ However, if creation-science is religion rather than science, then, as the ACLU brief replied, "the effect of the Creationism Act is needlessly to contrast science [evolution-science] and religion [creation-science]."⁶¹ A supportive amicus brief added, "Since creation science cannot be classified as science, the conclusion becomes inescapable that the primary effect of the Act is to advance religion."⁶²

The third prong of the *Lemon* test asks whether a statute fosters an excessive governmental entanglement with reli-

religious concept, however, this rationale does not protect the Act from challenge under the second and third prongs of the *Lemon* test.

⁵⁷ Am.-United Brief, *supra* note 49, at 6.

⁵⁸ Catholic Brief, *supra* note 50, at 8. *See also* Harris v. McRae, 448 U.S. 297, 319-20 (1980); McGowan v. Maryland, 366 U.S. 420, 442 (1961). *See generally* CWA Brief, *supra* note 50, at 3-7; CLS Brief, *supra* note 50, at 16-17.

⁵⁹ B'nai Brief, *supra* note 49, at 4.

⁶⁰ State's Brief, *supra* note 50, at 45.

⁶¹ ACLU Brief, *supra* note 20, at 39-40.

⁶² McLean Brief, *supra* note 49, at 11. This brief was filed by some of the plaintiffs who had successfully challenged an Arkansas balanced treatment act, and this assertion is drawn from the decision in that case. *See* McLean v. Arkansas Bd. of Educ., 529 F. Supp. 1255, 1272-74 (E.D. Ark. 1982).

gion. Again, the answer turns on the scientific merit of creation-science. Viewing creation-science as exclusively a religious doctrine of a particular sect, opponents of the statute foresaw creationist instruction in public schools creating an unconstitutional entanglement, much like other programs of publicly funded religious instruction.⁶³ Supporters of the Act countered that teaching purely scientific evidence for a creation, assuming such evidence exists, does not involve religion and would not create an entanglement problem. Indeed, they can argue that creation-science belongs in a science classroom much like courts have indicated that *Paradise Lost* belongs in a literature class, that *The Messiah* belongs in music education, that the Sistine Chapel frescoes belong in art appreciation coursework, and that Martin Luther belongs in history instruction.⁶⁴

The outcome of applying the tripart *Lemon* test to the Balanced Treatment Act, therefore, turns on the underlying issue of whether or not creation-science is a science. The parties and amici on both sides devote considerable portions of their briefs to this issue because, as the ACLU brief noted, "Simply calling something a science cannot make it so."⁶⁵

"By definition, science does not rely on the supernatural," the ACLU brief asserted in opening its argument against the scientific nature of creation-science. "Science observes and classifies data, posits an explanation of that data, and then continues to test the explanation for error with other available data."⁶⁶ An amicus brief filed by seventy-two scientific Nobel laureates and seventeen state academies of science against the Balanced Treatment Act advanced a similar definition for science, stating, "Science is devoted to formulating and testing naturalistic explanations for natural phenomena."⁶⁷ Both briefs pointed out that

⁶³ ACLU Brief, *supra* note 20, at 2, 40-41; B'nai Brief, *supra* note 49, at 28; McLean Brief, *supra* note 49, at 15.

⁶⁴ State's Brief, *supra* note 50, at 48-49; CLS Brief, *supra* note 50, at 20-21. *See, e.g.*, *Abington School Dist. v. Schempp*, 374 U.S. 203, 300 (1963) (Brennan, J., concurring); *Grove v. Mead School Dist. No. 354*, 753 F.2d 1528, 1540-41 (9th Cir. 1985) (Canby, J., concurring); *Florey v. Sioux Falls School Dist.* 49-5, 619 F.2d 1311, 1314 (8th Cir. 1980).

⁶⁵ ACLU Brief, *supra* note 20, at 37.

⁶⁶ *Id.* at 25.

⁶⁷ Nobel Brief, *supra* note 49, at 23. *Accord*, National Academy of Sciences Brief, *supra* note 49, at 6.

members of the leading creation-science organizations, such as the Creation Research Society and the Institute for Creation Research, affirm belief in the *Bible* as scientifically true.⁶⁸ “‘Creation-science’ thus is not a scientific theory about nature in search of inconsistent data,” the ACLU brief concluded, “but a faith in a Creator in search of consistent data.”⁶⁹ A supportive amicus brief pounded home this point by quoting CRS and ICR leader Henry Morris’ affirmation that “it is precisely because Biblical revelation is absolutely authoritative and perspicuous that the scientific facts, rightly interpreted, will give the same testimony as that of Scripture.”⁷⁰

Opponents of the Balanced Treatment Act did not rest their case against the scientific validity of creation-science on a definitional requirement that science be naturalistic and testable; rather they raised a second argument. “It is fundamental to the progress of science that scientists determine what is scientific and what is not. . . . Science and its boundaries must be defined by the collaborative and competitive work of minds devoted to its study rather than by the preemptive exercise of the power of the state, an anticreationist amicus brief claimed.”⁷¹ This argument suggests an alternative, somewhat tautological definition that science is what scientists do. Assuming that this approach will influence the Court, an impressive array of scientists and scientific organizations joined in briefs asserting that creation-science is not science.⁷² As if to summarize this point, a brief submitted by the National Academy of Sciences asserted that “the value of a scientific theory is determined in the marketplace of ideas that constitutes the scientific community. Creationists do not compete in that marketplace, and ‘creation-science’ does not offer scientific

⁶⁸ ACLU Brief, *supra* note 20, at 27; Nobel Brief, *supra* note 49, at 10-11.

⁶⁹ ACLU Brief, *supra* note 20, at 26-27. *See also* Nobel Brief, *supra* note 49, at 6-17.

⁷⁰ Jewish Brief, *supra* note 49, at 46.

⁷¹ Educators’ Brief, *supra* note 49, at 14.

⁷² Nobel Brief, *supra* note 49, at 6-8, 23; ACLU Brief, *supra* note 20, at 25-26; PAW Brief, *supra* note 49, at 14-15; Educators’ Brief, *supra* note 49, at 12. The scientific organizations that asserted this position included the American Association for the Advancement of Science, the American Association of University Professors, the American Society of Biological Chemists, the American Society of Zoologists, the Federation of American Societies for Experimental Biology, the National Academy of Science, seventeen state Academies of Science, and scores of America’s most respected individual scientists.

value.”⁷³

Addressing these arguments against creationism, the State’s brief neither rejected the ACLU’s definition of science as naturalistic and testable nor disputed the deference to supernatural authority tainting the scientific credibility of prominent creation scientists. Instead, it completely ignored the work of CRS and ICR members, including Henry Morris, and redefined “creation-science” to mean simply “origin through abrupt appearance in complex form of biological life, life itself, and the physical universe.”⁷⁴ Borrowing the argument that science is what scientists do, the State’s brief then cited various authorities suggesting that secular scientists are engaged in studying this redefined form of creationism.⁷⁵

Having adopted this argument, the State’s defense of the statute rests on demonstrating the existence of a secular, “abrupt-appearance” creation-science. The State presented its case on this point in a three-page section of its brief beginning as follows:

Creation-science is scientific, and in fact is as scientific as evolution. The State’s uncontroverted affidavits, in addition to the State’s multitude of authorities cited in factual assertions, contain many examples such as the following:

I am not a creationist or a religious Fundamentalist, and instead am an evolutionist and Agnostic. My conclusions are that creation-science is *scientific*, non-religious, and educationally worthwhile in comparison with evolution. It can be taught and can be presented in a textbook *without any religious content*. It is affirmative *scientific evidence* that supports *creation-science*.⁷⁶

The quoted example was drawn from an affidavit by W. Scot

⁷³ National Academy of Sciences Brief, *supra* note 49, at 15. Non-scientific amici briefs opposing the Balanced Treatment Act also stressed that the scientific community rejects creation-science as unscientific. *E.g.*, Jewish Brief, *supra* note 49, at 34-35; New York Brief, *supra* note 49, at 4.

⁷⁴ State’s Brief, *supra* note 50, at 15. Only one brief supporting the Balanced Treatment Act disputed appellees’ definition of “science” as naturalistic and testable, at least as that term is applied to include research into theories of origins. Drawing on the work of science philosopher and historian Thomas Kuhn, this brief asserted: “Neither theory of origins can make the connection to objectivity that fuels the confidence of the physical sciences in other respects, because neither creation-science or evolution can be directly tested.” Rutherford Brief, *supra* note 50, at 16-17.

⁷⁵ State’s Brief, *supra* note 50, at 19-21.

⁷⁶ *Id.* at 19 (emphasis in original).

Morrow, an associate professor in chemistry at Wofford College, a small, church-affiliated, liberal-arts college in Spartanburg, South Carolina.⁷⁷ Morrow's short affidavit, which the State appended to its brief, neither cited any scientific research supporting its conclusions regarding creation-science nor suggested that Morrow was actively engaged in original scientific research beyond a few projects reported in state science journals. The only other scientific affidavit appended to the State's brief was a lengthy statement by San Francisco State University biology professor Dean H. Kenyon.⁷⁸ Unlike Morrow's statement, this affidavit did not note the affiant's religious views, presumably because he has some. In fact, Kenyon has had a long-standing interest in the relations between Christianity and evolution and held a 1969-70 Society for Religion in Higher Education fellowship as a Visiting Scholar at the Graduate Theological Union in Berkeley. As noted by opposing briefs, Kenyon's affidavit primarily presented scientific research challenging various evolutionary theories rather than affirming creationist concepts.⁷⁹

The State's brief also cited three scientific authorities supporting creation, beginning with a 1980 article by British physicist Henry S. Lipson entitled *A Physicist Looks at Evolution*, reprinted in its entirety in the brief's appendix.⁸⁰ While the article did affirm "that the only acceptable explanation [for living beings] is *creation*," this creationist finding is not based on any cited scientific research.⁸¹ Indeed, the article itself was not a research piece, but rather a one-page critique of Darwin's original 1859 theory written by a retired physics professor whose prior publications dealt with crystallography. This critique prompted a response that "Professor Lipson's reservations have already been considered and are answered perfectly adequately by *molecular evolution*,

⁷⁷ *Id.* at A-25 to -29.

⁷⁸ *Id.* at A-7 to -25.

⁷⁹ PAW Brief, *supra* note 49, at 15. The only scientific research discussed in Kenyon's affidavit that affirms a creation (other than implicitly by way of debunking evolution) is the probability research of Fred Hoyle and Chandra Wichramasinghe, which computed the extreme improbability of the spontaneous generation of life and proposed "cosmic creation" as an alternative, with this cosmic creation involving a non-supernatural explanation of life being seeded on earth from outer space. State's Brief, *supra* note 50, at A-23.

⁸⁰ State's Brief, *supra* note 50, at A-44 to -47.

⁸¹ *Id.* at A-46 (emphasis in original).

as browsing through college texts or recent *Scientific American's* will show."⁸² Lipson's article appeared in a publication of the British Institute of Physics devoted to professional news and light articles not based on original research, such as *Would More Women Change Science?* and *Black Goats and Bedouins Go Out in the Midday Sun*.⁸³

The other two cited authorities suggested that breaks in the fossil record support creationism. One authority was an informally published school textbook by science educator Adell Thompson designed to present both creationist and evolutionary concepts based on the author's "research of the literature."⁸⁴ While Thompson's book contained the passage quoted in the State's brief that "the breaks in the known fossil record support the creation of major groups," the book inexplicably stated at another point that "[t]he fossil record supports the evolutionist's point of view."⁸⁵ On its final page, the book concluded "that there is no *scientific* data that supports creationism, nor is there a professional organization of scientists in America, other than the Creation Research Society, that believes there is any scientific support for creationism."⁸⁶ The final cited authority was a fifty-eight-year-old article by Smithsonian paleontologist Austin H. Clark, written during the original antievolution crusade, critical of both creationists and evolutionists.⁸⁷ The remaining scientists cited in the State's brief were evolutionists, such as Steven J. Gould, who support alternative evolutionary theories to account for the abrupt appearance of new species in the fossil record. These theories still posit special development over time, however, and could not constitute creation-science unless, as the Nobel laureates' brief observed, "the Louisiana legislature sought to provide 'balanced treatment' of *evolution* and evolution."⁸⁸

⁸² Finegold, *Creation/evolution*, 31 PHYSICS BULL. 226, 227 (1980).

⁸³ Lipson, *A Physicist Looks at Evolution*, 31 PHYSICS BULL. 138 (1980). The other two named articles were: Savage & Griffiths, *Would More Women Change Science?*, 31 PHYSICS BULL. 166 (1980); *Black Goats and Bedouins Go Out in the Midday Sun*, 31 PHYSICS BULL. 199 (1980).

⁸⁴ A. THOMPSON, *BIOLOGY, ZOOLOGY, AND GENETICS: EVOLUTION MODEL VS. CREATION MODEL* (1983). This text was cited in State's Brief, *supra* note 50, at 21.

⁸⁵ THOMPSON, *supra* note 84, at 12, 76. The first passage was quoted in State's Brief, *supra* note 50, at 21.

⁸⁶ THOMPSON, *supra* note 84, at 127.

⁸⁷ Clark, *Animal Evolution*, 3 Q. REV. OF BIOLOGY 523 (1928). This article was cited in State's Brief, *supra* note 50, at 21, n.85.

⁸⁸ Nobel Brief, *supra* note 49, at 18 (emphasis in original). See also Jewish Brief,

As if to underscore this point, an amicus brief filed by Stephen J. Gould and various other scientists and scientific organizations affirmed that "there is near universal agreement among scientists that complex forms of life did evolve from simpler forms over a period of millions of years."⁸⁹ Against this statement, the State's brief offered scant evidence for the existence of a secular abrupt-appearance creation-science. Yet this case reached the Supreme Court on the State's appeal of a pretrial summary judgment voiding the Balanced Treatment Act. In this procedural posture, the State needs only to present enough evidence to demonstrate the existence of a material issue of fact in order to obtain a full trial on that issue. The State's brief argued that it has satisfied this minimal requirement on the factual issue that creation-science is scientific and promised added evidence at trial to prove this point.⁹⁰ The Supreme Court now must decide whether Louisiana gets that opportunity.

IV. CONCLUSION

Prominent creationists and evolutionists have warred over the contents of school science textbooks and coursework for decades, seeking to promote their particular views of origins. *Aguillard* represents the latest battle in that ongoing conflict. As in earlier courtroom confrontations over creation and evolution, the decision is bound to turn (at least in part) on judicial perceptions of the scientific status of those warring theories. In their legal briefs, both camps recognized this factor by mustering scientists and advancing scientific arguments for or against creation-science. Creationists can only hope that they have presented sufficient evidence on this front to hold back summary judgment and to secure a full trial on the merits.

supra note 49, at 44-45. The Kenyon affidavit appended to the State's brief agreed that Gould's hypothesis is evolutionary rather than creationist. State's Brief, *supra* note 50, at A-12, A-13. Gould joined in filing an amicus brief endorsing evolution as the only viable scientific theory of biological origins and development. PAW Brief, *supra* note 49, at 14-15.

⁸⁹ PAW Brief, *supra* note 49, at 14-15.

⁹⁰ State's Brief, *supra* note 50, at 6-13, 19-21. Appellants' Reply Brief was not filed at the time that this Article went to press, and that brief may contain additional science references.

