
IN THE
UNITED STATES COURT OF APPEALS
FOR THE FIFTH CIRCUIT

NO. 97-30879

HERB FREILER; SAM SMITH; AND JOHN JONES

Plaintiffs-Appellees,

v.

TANGIPAHOA PARISH BOARD OF EDUCATION;
E.F. BAILEY; ROBERT CAVES; MAXINE DIXON;
LEROY HART; RUTH WATSON; DONNIE
WILLIAMS, SR.; ART ZIESKE; ED CASON

Defendants-Appellants.

*On appeal from the United States District Court
for the Eastern District of Louisiana
No. 94-3577
Hon. Marcel Livaudais, Jr.*

**BRIEF AMICUS CURIAE OF
THE NATIONAL CENTER FOR SCIENCE EDUCATION, INC.
IN SUPPORT OF APPELLEES**

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STATEMENT OF INTEREST OF
THE NATIONAL CENTER FOR SCIENCE EDUCATION, INC.

The National Center for Science Education (the "NCSE") is a national clearinghouse of information and resources for schools, parents and other citizens working at local, state, and national levels to defend and enhance the quality of public school science education. Its members are teachers, scientists, clergy, and citizens with diverse religious affiliations. The NCSE educates the press and public about evolution, through the dissemination of informative materials to schools, libraries, and interested individuals.

Pursuant to a stipulation between the parties to these proceedings, the NCSE submits this brief for the limited purpose of addressing the characterizations of science set forth in the briefs submitted by appellants and amici curiae for appellants, the Christian Legal Society and the Union of Orthodox Jewish Congregations (hereinafter, "amici for appellants"). Otherwise, the NCSE joins the brief submitted by the National Committee for Public Education and Religious Liberty in support of appellees and adopts in toto the arguments set forth in the brief submitted by appellees.

STATEMENT OF THE ISSUE

Does a Louisiana school board's resolution requiring public school teachers to read a disclaimer of endorsement of evolution before teaching such material violate the prohibition on laws "respecting an establishment of religion" contained in the U.S. and Louisiana Constitutions?

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INTRODUCTION

The NCSE submits this brief for the limited purpose of addressing the assertion of appellants and their amici that students in the Tangipahoa public schools need to be dissuaded from viewing evolution as a scientific "orthodoxy" (Appellants' Br. at 17, 19) or a "grand metaphysical claim" (Brief Amici Curiae of the Christian Legal Society and The Union of Orthodox Jewish Congregations of America, in Support of Appellants (hereinafter "Br. of Amici for Appellants") at 10-18). Appellants and their amici argue that the Tangipahoa resolution serves the religiously neutral purpose of countering this scientific orthodoxy/metaphysical theory.

ARGUMENT

Appellants and their amici make two assumptions about science and its role in public school education that are fundamentally wrong: (1) that there are secular explanations for the diversity of life other than evolution, and (2) that students are being educated to "believe" in evolution as a quasi-religious metaphysical theory rather than simply to understand evolution as a fact of nature.

- I. BECAUSE THERE ARE NO SECULAR ALTERNATIVES TO EVOLUTION, THE ONLY POSSIBLE PURPOSE OF THE TANGIPAHOA RESOLUTION IS TO ENDORSE A RELIGIOUS VIEW.

The Tangipahoa resolution recommends that students consider not just the Biblical theory of creation but also "any other concept." Appellants have sought to cloak the resolution in a secular purpose by off-handedly, and repeatedly, suggesting that "other concepts" refers not just to religion but also

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includes alternative secular theories to evolution. They claim that the purpose of the Tangipahoa resolution is not to discredit evolution in favor of religion, which they appear to admit would be unconstitutional, but to ensure that "in teaching it, religious or other beliefs are not intended to be disparaged." Appellants' Br. at 34-35 (emphasis added); see also id. at 50.

The references to "other concepts" and "other beliefs" are misleading because appellants and their amici do not identify any concepts or beliefs other than evolution and religion. Certainly, no alternatives to evolution have been advanced that are accepted by the scientific community. Eugenie C. Scott & H.P. Cole, The Elusive Scientific Basis of Creation "Science", Quarterly Review of Biology at 21-30 (March 1985); G.W. Gilchrist, The Elusive Scientific Basis of Intelligent Design Theory, Reports of the National Center for Science Education at 14-15 (May/June 1997). Nor have any courts accepted the claim that there are secular alternatives. For example, one purported "alternative" to evolution that has been proposed with a scientific-sounding name is "creation science." This was held to be religion not science. Edwards v. Aguillard, 482 U.S. 578, 591-92, 107 S. Ct. 2573, 2582 (1987); McLean v. Arkansas, 529 F. Supp. 1255, 1272 (D. Ark. 1982) ("Since creation science is not science, the conclusion is inescapable that the only real effect of [a statute mandating equal time for the teaching of creationism] is the advancement of religion.").

Evolution, like the theories of heliocentrism and gravitation, is considered "factual" even if specific details

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remain to be worked out. It is a core idea of science that underpins all present study of plant and animal biology, and there is no genuine dispute in the scientific community that it occurs. See, e.g., The National Academy of Sciences, Science and Creationism at 22 (1984) ("Evolution pervades all biological phenomena. To ignore that it occurred or to classify it as a form of dogma is to deprive the student of the most fundamental organizational concept in the biological sciences.")

In arguing that the Tangipahoa resolution may be understood as religiously-neutral, appellants have pitted evolution against non-existent secular theories. As the District Court correctly recognized, the only possible explanation of the resolution is that it was passed to offer support for religious views.

II. EVOLUTION IS NOT A THEORY OF METAPHYSICS.

Amici for appellants take a different path in their search for a neutral purpose for the Tangipahoa resolution. They argue that school boards face difficulties "crafting an educational policy that remains truly neutral on the issue of the origins of the universe," and that the "obvious reason for the (disclaimer) policy is that the (Tangipahoa) Board was striving to maintain the neutrality that the First Amendment requires." Br. of Amici for Appellants at 15. Amici for appellants then advance a straw man definition of evolution as a quasi-religious (or even anti-religious) belief, a "grand metaphysical claim that the universe and mankind evolved entirely by purposeless, mechanical forces." Id. at 16.

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The argument that evolution is itself a religious belief, entitled to a religious counterweight, was squarely addressed and rejected by the Ninth Circuit in Peloza v. Capistrano Unified Sch. Dist., 37 F.3d 517 (9th Cir. 1994). In that case a public high school biology teacher sought relief from the requirement that he teach "evolutionism," which he claimed to be a theory of "secular humanism." Id. at 520-21. The Ninth Circuit rejected this claim, "because neither the Supreme Court, nor this circuit, has ever held that evolutionism or secular humanism are 'religions' for Establishment Clause purposes." Id. at 521 (noting also that "[t]he concept [of evolution] has nothing to do with how the universe was created; it has nothing to do with whether or not there is a divine Creator.").

Here, amici for appellants mix apples and oranges in the manner in which they would apply the Establishment Clause's requirement of government neutrality to the presentation of science in a public school classroom. Science and law, like science and religion, have different goals and operate according to different rules. "[T]he goal of science is to seek naturalistic explanations for phenomena -- and the origins of life, the earth, and the universe are, to scientists, such phenomena -- within the framework of natural laws and principles and the operational rule of testability." Science and Creationism at 26.

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There is nothing religious or anti-religious about presenting scientific consensus.¹ To teach or even suggest that evolution -- or heliocentrism -- is scientifically unsupported would be counter to scientific consensus and could only be justified by the unconstitutional purpose of promoting religious beliefs at the expense of scientific learning.

Moreover, the definition of evolution as metaphysics does not come from the scientific or educational literature (from which it would find no support), but from the publications of law professor Phillip E. Johnson, one of the signatories to the brief submitted by amici for appellants. Dictionaries do not define evolution in such philosophical terms (nor even as a disputed fact or theory, or as a belief). For example, the Oxford Dictionary of Natural History defines evolution as follows:

Evolution. Change, with continuity in successive generations of organisms. The phenomenon is amply demonstrated by the fossil record, for the changes over geological time are sufficient to recognize distinct eras, for the most part with very different plants and animals.

Oxford Dictionary of Natural History 241 (1985). Other dictionaries specializing in biological sciences, as well as general dictionaries, offer similar, non-metaphysical definitions.² The reason that the scientific literature does not

¹ Amici for appellants suggest that the teaching of evolution expresses hostility to religion because some scientists hold anti-religious beliefs. Br. of Amici for Appellants, at 14. This is an obvious non-sequitur. That other scientists also hold religious beliefs does not make evolution a religious theory, either.

² See The Dictionary of Ecology and Environmental Science (1993) (evolution is "[t]he process by which all existing organisms developed from earlier ones through changes in inherited characteristics over many generations"); The Dictionary of Scientific Literacy (1991) ("Evolution:

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define evolution as a theory of metaphysics is that science deals with questions of how things occur, not "why" they occur.

Certainly, evolution is not defined as metaphysics in the Louisiana Science Framework, which mandates the teaching of evolution and from which the Tangipahoa disclaimer purports to shield students. Louisiana teachers are directed by the state's science framework to teach basic science concepts -- not metaphysical implications -- that include "exploring experimental evidence that supports the theory of the origin of life;"

Earth's present-day life-forms have evolved from common ancestors reaching back to the one-cell organisms about three billion years ago. The fact of evolution is confirmed by three main sets of observable data: 1) the enormous number of different life-forms present on Earth, 2) the clear similarities in anatomy and molecular chemistry seen within that diversity of life-forms, and 3) the sequence of changes in FOSSILS found in successive layers of rock and sediment that have formed over more than a billion years"; Henderson's Dictionary of Biological Terms (1995) (evolution is "the development of new types of living organisms from pre-existing types by the accumulation of genetic differences over long periods of time. It is studied by reference to the fossil record and to the anatomical, physiological and genetical differences between extant organisms. . . ."); The Academic Press Dictionary of Science and Technology (1992) ("1. a cumulative change in the characteristics of organisms or populations from generation to generation; 2. the scientific study of these processes; 3. any developmental process in which an organ or organism becomes more complex by the differentiation of its parts"); The Oxford Dictionary of Natural History (1985) (evolution is "[c]hange, with continuity in successive generations of organisms. The phenomenon is amply demonstrated by the fossil record, for the changes over geological time are sufficient to recognize distinct eras, for the most part with very different plants and animals"); The McGraw-Hill Dictionary of Biology (1984) (evolution is "the processes of biological and organic change in organisms by which descendants come to differ from their ancestors"); A Dictionary of Earth Sciences (1983) ("[t]he gradual change in organisms through time, resulting in the origin of new species. . . .").

Nor do general, non-specialized dictionaries define evolution as a metaphysical theory. See, e.g., The American Heritage Dictionary of the English Language (1969) ("Evolution: 1. A gradual process in which something changes into a significantly different, especially more complex or more sophisticated form. 2. Biology. a. The theory that groups of organisms, as species, may change with passage of time so that descendants differ morphologically and physiologically from their ancestors. b. The historical development of a related group of organisms; phylogeny").

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"recognizing the evidence for evolution;" "discussing the patterns, mechanisms, and rate of evolution;" and "classifying organisms." Louisiana Science Framework State Standards for Curriculum Development, May 22, 1997, at 38, 44.

Finally, amici for appellants are mistaken in their understanding of evolution as a "belief." Students are not required to "believe" in scientific concepts but to understand them. As in any other scholarly discipline, they may also freely reject them.

CONCLUSION

Appellants and their amici assert that the Tangipahoa resolution benignly resolves a long-standing "controversy" over the teaching of evolution. Appellants' Br. at 29; Br. of Amici for Appellants at 13-14. But while certain adherents to religious faiths may have waged war on evolution in the public schools in recent decades, the halls of science have seen no such controversy. More than being the only secular explanation of the diversity of life, evolution -- and Darwin's theory of natural selection -- is a core concept of modern biological studies and continues to grow in importance.

Consistent with the National Science Education Standards, the Louisiana Science Framework recognizes that it is essential for students to study evolution. To require science teachers to instruct their students that evolution is one of many scientific theories does not simply promote a falsehood, it promotes religion at the expense of teaching a cornerstone of science.

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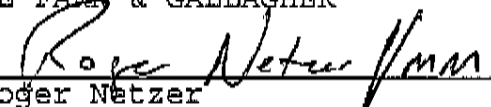
For all of the above reasons, as well as the reasons stated in the briefs submitted by Appellees and amicus curiae the National Committee for Public Education and Religious Liberty, the judgment of the District Court should be affirmed.

Dated: January 2, 1998

Respectfully submitted,

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Pursuant to 5th Cir. R. 32.2.7(c), the undersigned certifies that this brief complies with the type-volume limitations of 5th Cir. R.32.2.7(b).

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The undersigned, a member in good standing of the bar of the Courts of New York, hereby certifies that on January 3, 1998, he served a copy of the attached Brief Amicus Curiae of the National Center For Science Education, Inc. in Support of Appellees by regular first class mail in postage-prepaid, properly addressed envelopes to the following counsel of record and counsel for amici:

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