

Science Defended, Science Defined: The Louisiana Creationism Case

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On August 18, 1986, seventy-two Nobel laureates, seventeen state academies of science, and seven other scientific organizations submitted an amicus curiae brief to the Supreme Court of the United States in which they defined and agreed upon the nature and scope of science. The brief was submitted in response to the Louisiana Balanced Treatment Act for creation science and evolution science that had been struck down in the Federal Court of Louisiana in 1985 and was being appealed to the Supreme Court. The Louisiana trial in general and the amicus curiae brief in particular have historical significance for the history of science, being unique in the collective mobilization of scientists both in defense of and in defining science. This article describes the origin and significance of the brief.

On August 18, 1986, Al Seckel of the Southern California Skeptics organized a press conference at the National Press Club in Washington, D.C., to announce the filing of an *amicus curiae* brief on behalf of seventy-two Nobel laureates, seventeen state academies of science, and seven other scientific organizations. This brief supported the appellees in *Edwards v. Aguillard*, the Supreme Court test of the constitutionality of the Louisiana Balanced Treatment for Creation-Science and Evolution Science Act.¹ "The

AUTHOR'S NOTE: This article was originally presented at the annual meeting of the Society for Social Studies of Science in 1989. I wish to acknowledge my gratitude to Al Seckel who, as instigator of the *amicus curiae* brief, provided primary documents and organizational details of historical development; to Murray Gell-Mann, for taking the time to offer his personal insights into his involvement in the brief; and to Jeffrey Lehman, the attorney who wrote the brief. Richard Olson was especially helpful in his critical review of the manuscript, as was Richard Hardison, who made many important suggestions. All letters and primary documents cited in the Notes are in the possession of Al Seckel and the offices of the Southern California Skeptics, Pasadena, California. Reprint requests may be sent to the Institute for Human Progress (2761 N. Marengo Ave. Altadena, CA 91001).

purpose in holding a news conference was not simply to advertise the brief but also to focus public attention on how important proper scientific education is to the welfare of this country," Seckel noted. "In their statement of interest in the brief, the scientists explain that, while it is important that science education accurately portray the current state of substantive scientific knowledge, it is even more important that science education accurately portray the premises and processes of science."²

Representing the brief with Seckel were attorneys Jeffrey Lehman and Beth Shapiro Kaufman from the firm of Caplin and Drysdale, with Nobel laureate Christian Anfinsen, University of California, Davis, biologist Francisco Ayala, and Harvard paleontologist Stephen Jay Gould present as expert supporters. The press room was filled with representatives from the major television and radio stations as well as from newspapers from across the country.

Opening statements were made by Stephen Jay Gould and Francisco Ayala, while the statement from Nobel laureate Murray Gell-Mann (who directed the recruiting of the Nobel laureates) was read in absentia. The emotional commitment of these representatives from the scientific community in overriding this appeal was clear from the outset and baldly disclosed in these briefs. Gould, for example, noted, "As a term, creation-science is an oxymoron—a self-contradictory and meaningless phrase—a white-wash for a specific, particular, and minority religious view in America—Biblical literalism."³ Ayala added: "To claim that the statements of Genesis are scientific truths is to deny all the evidence. To teach such statements in the schools as if they were science would do untold harm to the education of American students, who need scientific literacy to prosper in a nation that depends on scientific progress for national security and for individual health and economic gain."⁴ Gell-Mann concurred with Ayala in the broad national scope of the problem but went further in noting, in no uncertain terms, that this was an assault on all science:

I should like to emphasize that the portion of science that is attacked by the statute is far more extensive than many people realize, embracing very important parts of physics, chemistry, astronomy, and geology as well as many of the central ideas of biology and anthropology. In particular, the notion of reducing the age of the earth by a factor of nearly a million, and that of the visible expanding universe by an even larger factor, conflicts in the most basic way with numerous robust conclusions of physical science. For example, fundamental and well-established principles of nuclear physics are challenged, for no sound reason, when "creation scientists" attack the validity of the radioactive clocks that provide the most reliable methods used to date the earth.⁵

"The result was tremendous," Seckel reports. "The next day you could not pick up a paper in the U.S. and in many cities abroad without reading about the brief."⁶ Stories reviewing the brief also appeared in a broad range of publications including *Scientific American*, *Nature*, *Science*, *Omni*, the *Chronicle of Higher Education*, *Science Teacher*, and *California Science Teacher's Journal*.⁷ The *Detroit Free Press* even published an editorial cartoon, which, for Seckel, had a special meaning: "You know you've made it when you're in an editorial cartoon!"⁸

This article describes the historical contingencies that led seventy-two Nobel laureates and others to join in an *amicus* brief in this case. It reviews the substantial argument of the brief and discusses its bearing on the case. Finally, I address the question of why these typically individualistic scientists were so emotional in their commitment to defending and defining their profession in this particular situation.

Historical Background

Historically, creationists have used three basic strategies in the presentation of their religious beliefs. The Louisiana case was the culmination of a series of legal battles beginning in the 1920s that may be grouped around these three approaches.

In the 1920s a perceived degeneration of the moral fiber of America was increasingly linked to Darwin's theory of evolution. For example, a supporter of the fundamentalist orator William Jennings Bryan, T. T. Martin, commented in 1923, "Ramming poison down the throats of our children is nothing compared with damning their soul with the teaching of evolution."⁹ Fundamentalists rallied to quell the moral decline by checking the problem at the heart of its cause—teaching evolution in public schools. In 1923 Oklahoma passed a bill offering free textbooks to public schools on the condition that evolution not be mentioned. Florida went further by passing an antievolution law in 1923. In 1925 the Butler Act, making it "unlawful for any teacher in any of the Universities, Normals and all other public schools of the state . . . to teach any theory that denies the story of the Divine Creation of man as taught in the Bible, and to teach instead that man has descended from a lower order of animals,"¹⁰ was passed by the Tennessee legislature. The bill was perceived to be in obvious violation of civil liberties and resulted in the famous Scopes trial, well documented by de Camp, Gould, Nelkin, Settle, and others.¹¹