

Creationists Limit Scope of Evolution Case

A light volley in the California courts may be a prelude to the rumble of heavy artillery

A constitutional clash that was reportedly headed for the U.S. Supreme Court turned into a petty squabble. A life-and-death struggle over whether teachers of evolutionary biology should be forced to describe God and the 6 days of creation turned into bickering over a single sentence in a California guide for public school teachers.

The comedown was engineered by creationists, who say the long-held strategy has blessed them with psychological momentum, media attention, and money. They still want to fight a much bigger battle, one over basic constitutional issues. But only when they are ready.

"When you fight a war sometimes you fire a lot of artillery and sometimes you just make a lot of noise," says creationist attorney Richard K. Turner, who early in the 5-day trial stunned the packed courtroom by asking that the scope of the trial be considerably narrowed. "We basically got what we wanted. We can fight other battles tomorrow."

Advertised as a rerun of the 1925 Scopes trial, only this time with evolutionists under fire, the creationist suit was tried from 2 to 6 March. Defending the state and its policy of not mentioning biblical creation in biology classes was deputy attorney general Robert Tyler. The suit was filed in 1979 by Kelly Segraves, 37, director of the San Diego-based Creation Science Research Center. The nonprofit group publishes biology texts that euphemistically refer to God as "the designer of life."

A key creationist gain was the finding that the California Board of Education was not communicating clearly enough to teachers the "undogmatic" intent of the guidelines for the teaching of evolution. This, say the creationists, will result in new inroads for teaching the biblical view of creation. Possibly their most significant gain was attention from the press. The media blitz alerted the wider fundamentalist community to the evolution issue in general, as evidenced by the flood of phone calls, letters, and donations that Turner says his clients have received. A fair amount of money, he notes, is needed in order to fight "the big constitutional case" that would "probably go for more than a year."

The issue that Turner threw out on the second day of the trial—the issue for the "big case"—is whether the teaching of evolution in public schools constitutes a "religion" of secular humanism, and whether neutrality by the state demands equal time for competing explanations of man's origin.

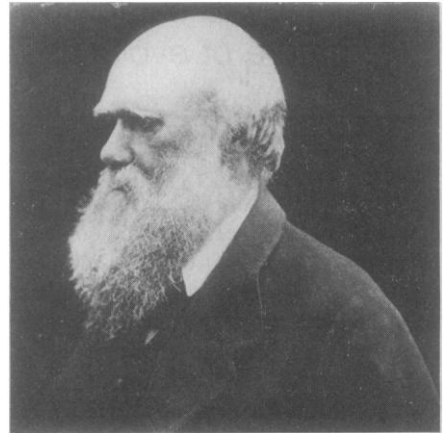
Without this sweeping constitutional issue, the nonjury trial in the California superior court turned into a mild-mannered debate over the wording of the guidelines, or "science framework" that governs teaching standards in the state, and whether the guidelines are dogmatic. The lone setback for the fundamentalists was the ruling of 6 March that the guidelines do not violate their rights.

During the trial, scientists testified to the equity of the guidelines. Unneeded, however, were most of the 20 eminent scientists, including Carl Sagan and Nobel laureate Arthur Kornberg, who had originally been gathered by the state to fight off a full-fledged creationist attack. Cutting back on the breadth of the trial was a "brilliant strategy," according to Thomas H. Jukes, a biophysicist at the University of California at Berkeley who lined up witnesses for the state. "Just like that," he says, "we didn't need all the experts. We had people coming from all over. Next time the state tries to rally the ranks it may not be so easy."

A rallying of the ranks would definitely be needed if creationists argued that evolution was a religion. Constitutional scholars do not scoff at the issue, one expert at Harvard recently saying it is "far from a frivolous argument." Complicating the issue is evolutionary theory itself, which does not behave like a good theory. It is unable, for instance, to make significant predictions about future events. Rather than a theory, one respected philosopher of science calls it a "metaphysical research program," a description that delights more than a few creationists.

If ever argued, the issue of whether belief in evolutionary theory is the basis of a religion would result in an epic courtroom battle. The outlines of such a case were recently described for *Science* by Turner, a former legal aide to then California Governor Ronald Reagan. Turner argues that current California teaching violates both clauses of the

First Amendment: the one forbidding the state from *establishing* a religion and the one protecting an individual's right to practice religion. For tactical reasons, however, Turner says a successful attack must focus on the "establishment" clause.



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Darwin on the defensive

If scientists expect to prevail, a well-planned offensive against the creationist arguments may be the only sure recourse. Contemporary creationists are not the "yahoos" that journalist H. L. Mencken lampooned at the Scopes trial. At the Creation Research Society, one of a handful of such organizations in California, voting members must have a postgraduate degree in science. As of 1974, there were 514 such members. Increasing sophistication leads to more pointed attacks. Creationists today have a solid understanding of the methodological weakness of evolutionary theory, and of the rivalries among evolutionists over what is the correct version of the theory. Not only philosophical insight is growing, but also popular support across the nation in the form of the rising conservative ethos. Last year, Ronald Reagan told a meeting of evangelical Christians in Dallas that "if evolution is taught in the public schools, then the biblical story of creation should also be taught."

The First Amendment reads in part: "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof. . . ." In the 1960's, fundamentalists argued that the

teaching of evolution was the establishment by the state of a religion, and such "secular humanism" should therefore be banned. They cited the 1963 Supreme Court ruling that said it was unconstitutional to force children to read prayers in school. If this was unconstitutional, they argued, to teach "the absence of God" was also unconstitutional.

Hidden in the absence-of-God argument, however, was a paradox that eventually forced a change of creationist

setback in 1975 when a U.S. Court of Appeals ruled that a Tennessee law mandating equal time showed "a clearly defined preferential position for the biblical version of creation as opposed to any account of the development of man based on scientific research and reasoning." The law was ruled unconstitutional. Another creationist setback came in 1978 when the California Board of Education rewrote its teaching guidelines to exclude any mention of biblical crea-

theories are passé. The philosophers also put forward a final, rather self-effacing argument. The fact, they say, that the philosophy of science has so far failed to satisfactorily explain how evolutionary theory works in relation to "good" scientific theories is no reason to therefore doubt the historical reality of evolution itself.

A credible scientific defense at a creationist trial would depend in no small part on the philosophic sophistication of the witnesses. It is perhaps significant, therefore, that of the 20 witnesses that the state of California was ready to set before Turner and the creationists, none was a philosopher of science.

Discrediting the theory on methodological grounds is not enough, says Turner. Another avenue of attack is to point out the bickering, squabbling, and lack of consensus among evolutionists over what is the correct form of the theory. One dispute that Turner mentioned is the ongoing fracas among cladists, punctuated equilibrists, and uniformitarians over how evolution progresses (*Science*, 21 November 1980, 2 January 1981). Darwin and his successors envisaged a process of gradual change, while some contemporary evolutionists envision sudden leaps and discontinuities. Says Turner: "This thing is as big an issue as between evolution and creation."

Methodological problems and doctrinal disputes add up to an undercutting of evolutionary fact, says Turner. "If you can prove that the theory is simply a poor theory, and that scientists still believe in it and fight over it, then you've started to prove that it's akin to believing that there's a God."

Whether the politics of equal time will work their way to the U.S. Supreme Court depends, says Turner, on someone being interested enough to organize the massive amount of evidence that would be needed. For his own part, Turner says his recent experience in the courtroom has whetted his desire for more. "These scientists get up on the stand, and act as if their very lives were being attacked. They not only close ranks, but they almost deny anybody the right to know of the internal fights that go on within the evolutionary crowd. They're pompous and arrogant, just the kind of people that the First Amendment was written to protect us against."

If such a constitutional case were ever argued in the courts, a rallying of the ranks would definitely be in order, especially in light of the increasing philosophic skill of the attackers.

—WILLIAM J. BROAD

In the ultimate court battle, creationists will try to establish the "religious" nature of evolutionary beliefs.

strategy. At its logical extreme, the argument meant that school curricula would have to be emptied of almost all content, of anything having to do with ultimate points of view, of history, philosophy, and psychology. Almost anything, after all, could be construed as teaching the "absence of God." The state, as Harvard constitutional scholar Lawrence H. Tribe puts it, "would be able to teach only Venn diagrams."

Due in part to these considerations, the Supreme Court in 1968 ruled that an Arkansas law banning the teaching of evolution was unconstitutional. Not only had prayer been thrown out of the schools, said creationists, but equal treatment for evolutionary theory was now denied by the Supreme Court.

The result was an increasingly strong drive for equal time. Once again, the "secular humanism" flag was flown, but this time as an argument for putting the claims of the creationists into the classroom as well. The dictum of constitutional neutrality, of the government not taking religious sides, demanded it. Using this type of argument, the creationists convinced the California Board of Education in 1969 to issue guidelines saying that creation should be taught in biology courses as an alternative to the theory of evolution.

Evolutionists were incredulous, and satirized the equal-time developments accordingly. One physician at a hearing of the California Board of Education suggested that Bible publishers insert a sentence to indicate that "scientific method rejects the supernatural approach to explaining the universe." A biologist asked whether a course on reproduction should mention the stork theory. Ridicule aside, equal time suffered a

setback. This rewrite touched off the Seagraves suit that was recently tried in California.

According to creationist attorney Turner, the preceding legal history points in but one direction: in order to obtain a favorable ruling in the courts, creationists have to expose more successfully the "religious" nature of evolutionary beliefs.

One avenue of attack is to point out the methodological oddities of the theory, says Turner, who had read a good deal of evolutionary literature, including such tomes as *Ontogeny and Phylogeny* by Harvard biologist Stephen Jay Gould. An understanding of celestial mechanics allows astronomers to predict eclipses and the like, and this ability to predict is how celestial mechanics eventually won out over more archaic explanations. With evolutionary theory, however, significant explanations can only be made about events long past.

Turner also cites the work of Karl Popper, a philosopher of science at London University who holds that "Darwinism is not a scientific theory but metaphysical. But its value for science as a metaphysical research program is very great, especially if it is admitted that it may be criticized and improved upon." Popper is widely known for his falsificationist theory of science, which says that theories cannot be "proved true" but only refuted, and when refuted in any serious way must be abandoned. Popper holds that since evolutionary theory cannot make predictions, and cannot therefore be proved false, it therefore is not a scientific theory.

Rebuttals to these arguments are often mounted by philosophers of science, who are quick to point out that Popper's