Science and Creationism

An Annotated Bibliography Of Recent Books

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The science vs. creationism issue continues to confront secondary school biology teachers and scientists. For generations, this issue has been debated both publicly and privately. In Dayton, Tennessee in 1925, the Scopes Trial brought the conflict into public view. School teacher John Scopes was arrested for violating a Tennessee state law forbidding the teaching of evolution in his high school biology classes. In the end, Scopes was found guilty and fined $100. Later, the Tennessee Supreme Court reversed this decision on a technicality.

More recently, we have seen the issue arise elsewhere in the U.S.—in Texas and California, where there have been serious controversies over the selection of appropriate science textbooks for public school classrooms, and in Arkansas and Louisiana, which passed laws requiring "equal time" for instruction pertaining to evolution and creationism.

While the controversy rages on, biology teachers, school administrators, school boards and parents are faced with making sound decisions about science education. The 18 books reviewed in this article should help provide answers to questions such as: What is creationism? How does it differ from evolution? Isn't scientific creationism nothing more than Biblical creationism clothed in a different language? What scientific evidence do the creation scientists really have to support their position?

All but three of the 18 books selected for review were published in the 1980s. The fact that so many books have been published recently on the topic of evolution and creationism reflects the continuing intensity of the controversy surrounding this issue. Many of the books have been reviewed in greater detail elsewhere; when such reviews were identified, we cited them.

Biology teachers must be leaders in helping students, parents, school administrators and the public in general to understand the critical issues affecting science education today. Certainly, the creation/evolution controversy is one of those issues. The mini-review accompanying each title in the bibliography should help biology teachers answer questions such as: Should I read this book? Will this book be helpful to my school administrators and school board members? Should this book be in my classroom for students to read, or is it primarily a useful reference for me?

Be prepared! Be informed! Read on. . . .

- Committee on Science and Creationism, National Academy of Sciences. (1984). *Science and creationism: A view from the National Academy of Sciences*. Washington, D.C.: National Academy Press. 28 pp.

  This booklet details the position of the National Academy of Sciences on the science versus creationism debate. The introduction provides a very brief description of the differing viewpoints. Coming from an organization consisting of the nation's most distinguished scientists, the tone of the booklet is decidedly pro-evolution. Five key issues are discussed: the nature of science; scientific evidence of the earth's origin; scientific evidence for evolution; human evolution; and the origin of life. While brief, this inexpensive ($4.00) booklet provides support for teachers and administrators who wish to teach biology as science.

- Eldridge, Niles. (1982). *The monkey business: A scientist looks at creationism*. New York: Washington Square Press. 157 pp.

  This book, available as an inexpensive paperback, examines the negative effect of creation science on science education. While the idea of creationism never disappeared after the Scopes Trial, Eldridge is of the opinion that science education should re-

strict its attention to science and leave religious beliefs out of science classrooms. The book strongly supports teaching evolution and would be a fine supplement to the science classroom textbook. For the novice who has time to read only one book on the subject, this may well be the one! Additional review in *Science, 220,* 851, May, 20 1983.

• Frye, Roland Mushat. (Ed.). (1983). *Is God a creationist? The religious case against creation-science.* New York: Charles Scribner's Sons. 205 pp.

The unique feature of this book is that it is a collection of essays by theologians and clergymen—including Pope John Paul II, Asa Gray and Langdon Gilkey—that presents the religious case *against* creationism. Throughout the book, the authors show that belief in divine creation and acceptance of the theory of evolution are not mutually exclusive. Several of the authors also express the view that creation science is neither good science nor good religion. This book presents a very interesting point of view on this highly controversial topic and is recommended reading for the general public. Additional reviews in *Science Books and Films, 19,* 274, May/June 1984 and in *BioScience, 36,* 390, June 1986.

• Futuyma, Douglas J. (1983). *Science on trial: The case for evolution.* New York: Pantheon Books. 251 pp.

This well illustrated book strongly presents the idea that science is based on verifiable evidence; in fact, the author includes a chapter on the nature of the scientific process and how that process relates to the creation/evolution issue. The theory of evolution is accepted by the scientific community and is based on empirical evidence that evolution has occurred. Creation scientists, on the other hand, do not have the empirical data necessary to substantiate their claims. Futuyma's point is that science courses in school should stick to the teachings of science and present scientific facts, concepts and theories. The author includes an appendix with 28 creationist arguments specifically refuted. Since the creationists do not have the data to support their arguments, their ideas should not be presented as science in science classes. This well written book is intended for both the well informed and general reader. Additional review in *Science, 220,* 851, May, 20 1983.

• Godfrey, Laurie R. (Ed.). (1983). *Scientists confront creationism.* New York: Norton. 324 pp.

This collection of articles by 15 scientists generally presents scientific data to refute the ideas of the creation scientists. Some of the essays merely dismiss the creationist ideas without presenting detailed explanations of why the creationist views are unacceptable to the scientific community. Others evaluate the creationists' arguments step-by-step, and carefully explain why the creationist position is in error; they do this in a way that the nonscientist reader can understand. Additional reviews in *Science, 220,* 851, May, 20 1983 and in *Science Books and Films 19,* 67, November/December 1983.

• Gould, Stephen J. (1977). *Ever since Darwin: Reflections in natural history.* New York: Norton. 285 pp.

As usual, Gould's engaging style of writing makes this book interesting reading. In a collection of articles, the author explains Darwin's theory of evolution and its significance to science and the history of the earth. Gould also examines the impact of evolution from social and religious points of view. He shows the problems involved when an uninformed or misinformed public attempts to judge science experts. This book entertains as well as informs.

• Kitcher, Philip. (1982). *Abusing science: The case against creationism.* Cambridge, MA: MIT Press. 213 pp.

Described by the author as "a manual for self-defense," *Abusing Science* is written to provide teachers and administrators with a means of fighting the argument of equal time in school for both the theory of evolution and the "theory" of Biblical creation. Kitcher makes it clear that creation science is based primarily on religious beliefs; he presents a strong case for evolution. The position represented by Kitcher is one that many science teachers and high school administrators support. This book is recommended for those who face making the "equal time" decision. Additional review in *Science, 220,* 851 May, 20 1983.

• Lafollette, Marcel C. (Ed.). (1983). *Creationism, science, and the law: The Arkansas case.* Cambridge, MA: MIT Press. 236 pp.

A collection of essays by attorneys, scientists, sociologists and theologians representing their views on this controversial topic. This book does not attempt to support either idea; rather, it looks at the social and legal impact of this issue. Included is a bibliography and an index of legal cases. Written for advanced undergraduate and graduate students. Additional review in *Science Books and Films, 19,* 132, January/February 1984.

• Larson, Edward. (1985). *Trial and error: The American legal controversy over creation and evolution.* New York: Oxford University Press. 224 pp.

Larson's book deals with the history of the creation vs. evolution issue and presents the impact of the debate from a legal point of view. Larson, himself

a lawyer, follows the legal history from the start of the controversy to date. This book is intended for the general reader. Additional reviews in *Science, 230,* 1266, December, 13 1985; *Booklist, 82,* 174, October, 1 1985; and in *Library Journal, 110,* 209, September, 1 1985.

• McGowan, Chris. (1984). *In the beginning ---.* Buffalo, NY: Prometheus Books. 208 pp.

This book supports the theory of evolution and attempts to dispel the creationist argument. McGowan primarily uses evidence from the fossil record to lend credence to his acceptance of the theory of evolution. The generally easy-to-read, understandable book would be a good supplement for high school biology courses.

• Montagu, Ashley (Ed.). 1984. *Science and creationism.* New York: Oxford University Press. 415 pp.

This collection of articles highlights the facts that the creationists present to the public and provides scientific information which disputes the creationist argument. The reading is entertaining and of interest to the general public as well as to scientists and teachers. Additional reviews in *Science Books and Films, 19,* 283, May/June 1984 and in *BioScience, 36,* 390, June 1986.

• Nelkin, Dorothy. (1982). *The creation controversy: Science or scripture in the schools.* New York: Norton. 242 pp.

This book presents both sides of the creation-evolution debate in an objective manner. Nelkin outlines the sequence of events leading to the teaching of both evolution and creationism in the classroom. A professor of sociology, Nelkin tries to show the social, political and cultural implications of attempts to censor science. The book is appropriate for advanced high school and college students.

• Nelkin, Dorothy. (1978). *Science textbook controversies and the politics of equal time.* Cambridge, MA: MIT Press. 174 pp.

Nelkin's book presents the continuing conflict between science and creation science. Both sides are presented and, while the author admits that some of the creationists' goals are frightening, she also states that the subject cannot be dealt with completely as black versus white. The book emphasizes some of the unresolved disputes such as: Should values be taught or should the schools be teaching only information and skills? Is the teacher hired for his/her knowledge or his/her willingness to cooperate with the wishes of the community? One section of the book shows some of the changes recommended in textbooks by the California Board of Education as a result of the creation science movement.

• Newell, Norman D. (1982). *Creation and evolution: Myth or reality?* Irvington, NY: Columbia University Press. 199 pp.

The author presents the scientific evidence to support the theory of evolution in a clear manner that is easily understood by people with little or no science background. Newell follows the development of the theory of evolution and highlights the rise of scientific creationism. This book does a good job of explaining evolution and creation science, and would be valuable reading for science teachers, school administrators and the general public. Additional review in *Science, 220,* 851, May, 20 1983.

• Ruse, Michael. (1982). *Darwinism defended: A guide to the evolution controversies.* Reading, MA: Addison-Wesley. 356 pp.

This book contains a survey of Darwinism, his theory of natural selection and the theory of evolution. The author deals more with evolution as a science and touches upon the political debate over its inclusion in the classroom. Ruse also deals with the creation science theories on a point-by-point basis, and explains why he believes them to be wrong. *Darwinism Defended* is written for the general reader. Additional review in *Science Books and Films, 18,* 196, March/April 1983.

• Settle, Mary Lee. (1972). *The Scopes Trial: The State of Tennessee versus John Thomas Scopes.* New York: Franklin Watts, Inc. 115 pp.

This book is a record of events leading to, including and following the Scopes Trial in 1925. The first chapter touches briefly on Darwin's experiences and subsequent publication of the *Origin of Species.* The remainder of the book focuses on the people involved in the trial . . . William Jennings Bryan, Clarence Darrow and Dudley Field Malone, to name a few . . . and their role in the proceedings. Perhaps the most fascinating piece of information is given toward the end of the book when John Scopes states that he was found guilty of a crime he never committed. This highly recommended book is an interesting account of history that will impress upon both students and teachers the problems that have been associated with teaching evolution. Interest in this book may well be heightened by the July 1986 textbook selection trial in Tennessee.

• Wilson, David B. and Dolphin, Warren D. (Eds.). (1983). *Did the devil make Darwin do it?* Ames, IA: Iowa State University Press. 241 pp.

Very well written and enlightening. This book is for students and teachers alike and is not necessarily intended for those with science backgrounds. Divided into four sections, the first section attempts to define the issues in the debate over creationism and evolution. Section two describes the nature of science. Section three deals with the internal conflict of creationism and Christianity. The last section confronts the problem created for the schools by the creation-evolution controversy. A book with an intriguing title!

• Zetterberg, J. Peter. (Ed.). (1983). *Evolution versus creationism: The public education controversy.* Phoenix, AZ: Oryx Press. 528 pp.

This collection of articles gives equal time to both sides of the controversy. Scientists present their case and tell why they believe evolution should be a part of the science curriculum. Creationism is defined and the creationists explain why they do not accept evolution. In addition to these points of view, the legal implications of the issue are also addressed. Designed for educators, administrators and religious institutions to provide insight into this explosive issue. Additional review in *BioScience, 36,* 390, June 1986.