

## EFFECTS OF THE 1981 ARKANSAS TRIAL ON THE CREATIONIST MOVEMENT

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### ABSTRACT

The Arkansas Trial tested the legality of presenting both creation and evolution in public schools. The plaintiff (ACLU) emphasized the Christian (Biblical) motivation for the bill, and the defense stressed that both creation and evolution were scientific and secular. As a result of the Trial the visibility of creation and creationists increased greatly, and so creationists were stimulated to more intense activity as also were the anti-creationists. Although science is restricted to empirical research, scientists need to be more willing to consider and present the various metaphysical connotations of their research. Creationists who base their beliefs upon Biblical revelation candidly should acknowledge this as they deal with the implications of scientific discoveries.

### INTRODUCTION

Publication of THE GENESIS FLOOD by Whitcomb and Morris in 1961 [62] signaled commencement of the modern creationist movement which soon evidenced an explosive rate of growth. Debates between creationist and evolutionist scientists led by Henry Morris and Duane Gish (see Lubenow, 1983 [37]) were rocking the scientific community which in previous years generally had been unaware of, or just had avoided the extant creationist scientific foundation (see Lunn, 1947 [38]; Marsh, 1947 [41]; Klotz, 1955 [31]; Dewar, 1957 [8]). Outside the evangelical Christian community only rarely would scientists engage in serious discussions of anti-macroevolutionary theory.

In the 1960's evolutionists became aware of a creationist ascendance which led in the 1970's to a state of alarm, and then in the 1980's to one of antagonism toward creationists. So the 1981 Arkansas Trial occurred at a crucial period when evolutionists were beginning a counterattack against the rapidly advancing creationist offensive. At this time legislatures in at least twenty-two states (O'Neil, 1982 [54]) were dealing with bills which would favor inclusion of additional creationist material in their school curriculums.

### ACT 590

#### Pretrial

On 19 March 1981 Governor Frank White in Arkansas signed Act 590 which required a "balanced treatment" of creation-science and evolution-science in Arkansas public schools. The Act mandated that (1) there be balanced treatment in origins lectures, textbooks, library materials and educational programs. Regarding lectures the Attorney General of the state interpreted the Act as meaning that both sides would be presented objectively during studies of origins. The issue was not "equal time" but rather what the educators involved would consider to be a fair amount of time for each perspective. It was brought out at the Trial that a teacher who was uninformed regarding creation or evolution could use a film, or speaker from the outside to present an alternative view to the one found in the student textbook. Statute (2) was a prohibition against religious instruction and use of religious writings and (3) that there was to be no discrimination against any student who completely or partially rejected either model.

The creation-science position in contrast to evolution-science was defined as (1) the sudden appearance

of the universe from nothing, (2) insufficiency of mutation and natural selection, (3) changes of plants and animals within the fixed limits of created kinds, (4) separate ancestry for man and apes, (5) catastrophism for explaining earth's geology, and (6) a relatively recent inception of the earth and kinds (see Holsted, 1981[23]).

### **The Trial - Plaintiffs**

A suit by The American Civil Liberties Union (ACLU), *Bill McLean, et al. against The State of Arkansas, et al.*, soon followed, and a two-week Trial commenced in Little Rock, Arkansas, 7 December 1981. The litigation began with the ACLU plaintiffs putting on the witness stand the Methodist Bishop of Arkansas, Kenneth Hicks (from the denomination of the Judge, William Overton). The Bishop, who was one of the plaintiffs, testified strongly against the Act. There followed 12 other witnesses, four of whom were scientists. These four were Francisco J. Ayala, U. of California; G. Brent Dalrymple, U.S. Geological Survey; Harold Morowitz, Yale; and Stephen Jay Gould from Harvard.

The plaintiff witnesses uniformly testified under oath that creation was religion, not science, and that there was a lack of scientific literature supporting a creationist viewpoint. They affirmed that it was not right for a teacher to be required to teach religion in a science classroom. I was one of the seven science witnesses supporting the state's position.

The plaintiff witnesses had been coached thoroughly by scientists including my personal friend, Niles Eldredge, from the American Museum of Natural History. Eldredge later (1982 [13]) published his own anti-creation book in which he brought out some pertinent scientific information, but unfortunately for a scientist of his stature the book demonstrated his ignorance of available scholarly creation literature. For example, he said he knew of no scientific papers written by creationists, and that creationists were so unenlightened that they made simple spelling errors. Later, while reading one of Eldredge's anti-creationist papers (1981 [12]) I noticed three spelling errors on just one page. One of the errors was the misspelling of trilobite, regarding which Eldredge is a respected expert. Also, in the index on the front page of that anti-creation, pro-evolution publication Eldredge's own name was spelled incorrectly. I sincerely regret that proofreading would become any issue here, and I have no pleasure criticizing Eldredge regarding this matter. Unfortunately, however, he and many other anti-creationists have neglected to study the scholarly creationist literature which has been increasing in abundance and quality, especially since the early 1960's.

### **The Trial - Defense**

An aspect of Act 590 and the milieu of the Trial, which disturbed me then and still does, is the idea that you could have a creation position without the Creator. The Act defined creation of life basically as the ABRUPT APPEARANCE of various unrelated types of life (see Bird 1991 [5]). How these forms arrived on the planet was not the issue. They could have been created by a personal agency (the Christian position) or non-personal agency (as held by Plato and Aristotle). Or possibly they arrived in some form from space outside the earth (panspermia, as supported by Trial witness, Wickramasinghe). Alternatively, they could have been delivered to the earth (as seeds for example) by some delivery system, a process termed "directed panspermia", which was an idea brought to wide attention by Nobel laureate, Francis Crick (see Bergman, 1995 [4]). The point is that various unrelated types appeared on the earth, and this is supported by observational data.

At the Trial the defense promoted a non-theistic (reputedly scientific) stance, and I was coached by defense attorney, David Williams, not to answer religious questions. While I was on the witness stand ACLU lawyer, Bruce Ennis, repeatedly pressured me to answer questions about the Bible and my Christian position. Because I was a scientific witness I steadfastly declined rendering responses to those queries. He requested that I read the position statement of the Creation Research Society (CRS), of which I was secretary at that time. The CRS is a scientific society, but a person must be a Christian to be a voting member. Of course I said I was a Christian, but also affirmed that my religious position was not an issue for discussion at the Trial. For I already had made it clear as did other witnesses that many scientists including atheists favored an abrupt appearance hypothesis or theory for the origin of extinct and extant types of life. What I testified then I believe to be correct and even better supportable with scientific data in 1998 than it was in 1981.

I arrived in the courtroom on Friday, the last day of plaintiff testimony, and I was informed by Norman Geisler (another defense witness) that we certainly would lose because of the judge's bias against the defense (creation) Case and his favoring of the evolutionists. But he also said that the creationists had more to gain by losing than by winning, because the American people would favor the underdog.

## **The Trial - Religion & Science**

The plaintiff lawyers and witnesses were quite liberal and even atheistic. As would be expected, most of those on the defense were conservative and mostly Christian. Newman noted correctly that the contest usually was heralded by the popular press as religious dogmatism versus scientific objectivity; whereas in actuality it was "between two kinds of religion as well as between two kinds of science -- between 'creation-religion' and 'evolution-religion' as well as between 'creation-science' and 'evolution-science'" (Newman, 1984 [51, p.2]). The plaintiffs won the Case, but not the battle between the two factions. Reverberations from the Trial were immediate and protracted. They will be elucidated in the conclusions.

## **CONCLUSIONS**

### **Creation - Visible**

There was increased visibility of the creation movement because of extensive radio, television, newspaper, and magazine coverage during the Trial and subsequently. Virtually all publications dealing with public issues have had articles dealing with creation/evolution matters, and there have been many books. The most comprehensive newspaper report on the Trial was by Beisner (1981 [3]). The only entire book covering the Trial written by authors who were there for the entire two weeks is by Geisler, Brooke, and Keough, 1982 [17].

### **Creation - Discussed**

Creationist views became more popular matters for discussion in many public forums including club meetings, debates, radio and television interviews, and even public school classes.

For example I was invited by a non-creationist professor at Yale University to attend his class and give a creationist presentation for an entire evening session. The date was 19 April 1982 which coincidentally was the 100th anniversary of the death of Charles Darwin. The class previously had heard from Yale Professor Harold Morowitz who had testified with the plaintiffs at the Trial. Material from the second edition of my book [16] and my other creation writings had been distributed to the class prior to my coming, and so the class was well prepared. Students were very receptive and asked some excellent, perceptive questions. My impression at the end was that they were empathic with a creationist view. They did not want to leave when the professor dismissed the class. We continued informal discussion after the formal class session, and later I corresponded with two of the students.

Among the many other invitations I received was to a debate at Dartmouth College in New Hampshire. The building was packed as the four speakers (mostly professors) on each side gave their talks and handled questions. Strange as it may seem, those on the evolution side became quite sympathetic to the creationist arguments. One of our evolutionist opponents, speaking to me after the debate, sighed with relief saying that he felt relieved that he did not have to deal with some of what he considered to be even greater problems with an anthropological evolution position than we had disclosed. A Dartmouth student expressed his opinion in the college paper saying that there was too little difference of opinion between positions of the two sides. It seemed clear to me that the creationist debaters were much more confident and better prepared for the debate.

### **Creation Positive**

Since the Trial creationists have placed more stress upon projecting a positive creation position (see Frair, 1985 [14]). The emphasis upon abrupt appearance is a positive approach rather than just negative against a genetic continuity or evolution thrust. Influential in this regard has been the classic scholarly two-volume set by Bird (1991 [5]) and the more recent publication of ReMine (1993 [56]). ReMine stresses what he calls the biotic message. Themes for both the Third and Fourth International Conferences on Creationism (1994, 1998) have emphasized the development of the creation model of origins. Also many creationists have spotlighted intelligent design in opposition to chance.

## Creation - The Vocabulary

There has been a re-evaluation of definitions of science and creationists' use of such terms as abrupt appearance, and creation-science.

Arkansas's Act 590 characterized creation as a naturalistic concept which emphasized an abrupt appearance of organisms in the fossil record. A statement I made at the Trial was that if Darwin were alive today he would be a creationist. In accord with definitions included in Act 590 what I meant was that Darwin would recognize that the fossil record after a century and a half of intense collecting still testifies to typology rather than genetic continuity.

In my own mind at the time of the Trial there was a tension which made me feel uncomfortable even bowing my head to pray before eating. The Trial has helped me and others to perceive the grand picture more realistically. It is true that most creationists today accept typology or the recognition of unrelated groups or "kinds", but they also believe in a supernatural Creator.

Although etymologically the word science refers to knowledge, today we employ it more precisely as empirical knowledge with emphasis upon its method which includes observability, reproducibility and consequent falsifiability. It is philosophically neutral with respect to the investigator's world view whether atheism, agnosticism or theism (see Kofahl, 1986 [34], 1989 [35]; also see Brand, 1996 [6]).

However, in the integration of observed facts into hypotheses, theories and laws, sometimes there are implications regarding naturalism or supernaturalism (Behe, 1996 [2]). Investigators should be free to discuss these, but currently there is a tendency for leaders in science to muzzle any metaphysical connotations, categorically dismissing them as anti-scientific and religious (see Johnson, 1995 [27]).

Newman (1982 [50, p.14]) has alleged that science is somewhat trivialized when it becomes a game to "explain everything without recourse to the supernatural". Science should be "an attempt to find out how things really are" (also see Frair, 1990 [15]).

It not only is possible, but also is common for a person to be both a theist and a scientist. When science is defined as a study of the way the universe including our world really is, then the natural **and** supernatural may be included. This position includes a grandeur understood not only by the founder of the scientific method, Francis Bacon, and other early scientists (see Morris, 1982 [46]) but also by hundreds of thousands of scientists living today. A poll of American scientists in 1916 and another in 1996 both indicated that about 40% of scientists believe in a personal prayer-answering God and afterlife (Larson and Witham, 1997 [36]).

As pointed out by Toumey, 1994 [59], many have been taking science too seriously, and I think that true scientists need not bear all the blame for this, but more so the popularizers of science (see Vaughter, 1983 [60]). In addition to newspaper and magazine authors, other popularizers including the respected eminent scientists, Isaac Asimov and Carl Sagan, used their scientific status as a platform for anti-theist and anti-creationist speaking and writing.

In referring to the four scientific witnesses for the plaintiffs at the Arkansas Trial, defense lawyer, Callis Childs, in a private conversation with me during the Trial called these men, "societal gods". How do you "challenge" people like this? Christians thus have been intimidated. A formula for improvement certainly includes sound and careful scholarship on both sides and appropriate sensitivity toward ones disputant.

The term "intelligent design" is a teleological expression which has become popular since the 1989 volume by Davis and Kenyon [7], and has been much more widely discussed since the late-1996 appearance of Behe's significant book [2]. Behe also stressed the importance of "irreducible complexity" with regard to the origin of biochemical systems. This of course is abrupt appearance; it is not necessarily supernatural creation (a view held by most creationists including the majority of Arkansas Trial defense witnesses).

Most of this terminology in addition to "creation-science", "creation research", and "two-model approach" has arisen within the creationist community during recent decades. Also, frequently there is reference to evolution and creation as "models" (rather than theories) because they are historic constructs not amenable to observation or repetition (see Gish, 1973 [18]). There has been some backlash by scientists within the evolutionary community, for many have been contending that evolution is a "fact" (a word traditionally employed for observational data), and we observe many university life science groups now being termed departments of evolutionary biology.

Personally I tend to favor the term "limited change model" rather than "abrupt appearance model". Also I have reservations about terms like creation-science and evolution-science which meld procedures with interpretations or implications. The Arkansas Trial certainly gained the attention of many scientists who before the Trial ignored these origins issues, and so the resulting new terminology still is in a testing period.

### Creation - Legal Considerations

Between 1921 and 1929, as a result of encouragement by the Anti-Evolution League, there were 37 anti-evolution measures presented to twenty state legislatures. In five states (Oklahoma, Florida, Tennessee, Mississippi, and Arkansas) they were approved (Goetz, 1997 [21, p.13]). The famous Scopes Trial was held at Dayton Tennessee in 1925, after which there was about a half-century lull in major judicial contests over creation/evolution issues.

In early 1982 there were creationist type bills before 22 legislatures (O'Neil, 1982 [54, p. 20]), and in 1985 it even was said that in 31 states creation bills had been introduced since the year before (Bauman, 1985 [1]). But following that time legal action in all states generally was suspended (Soyke, 1985 [58]), with the exception of Louisiana where a balanced treatment bill like that in Arkansas also had been passed in 1981. The law was challenged, and the Case eventually went to the Supreme Court (*Edwards v. Aguillard*). The anxiously-awaited verdict finally came in June 1987. The Court's decision rejected the necessity for such a law because there already were constitutional guarantees under the first amendment and academic freedom for teachers to present views contrary to evolution in public school classrooms.

Following this Supreme Court decision there was a lag of several years during which creationists were hoping to see an appropriate inclusion of their views in school curriculums. But implementation of this was very slow until early to mid- 1990's.

Then in April 1995 there appeared a joint statement drafted and endorsed by a broad spectrum of about 36 religious and legal societies including the American Civil Liberties Union, Christian Legal Society, American Muslim Council, National Association of Evangelicals, and Union of American Hebrew Congregations. The document explains what current laws permit and prohibit regarding religion in public schools. It says that the Bible may be taught as literature, and further that, "It is both permissible and desirable to teach objectively about the role of religion in the history of the United States and other countries... These same rules apply to the recurring controversy surrounding theories of evolution." (Drafting Committee, 1995 [9, pp. 2-3]; also see Gish, 1995 b [20]).

Because it is perfectly legal objectively to inform public school students regarding beliefs of creationists, many individuals and groups were encouraged to put more and more pressure on the legislators to pass laws requiring public school science teachers to demonstrate greater fairness in dealing with origins issues. So evolutionary hegemony officially has been challenged in a high number of states including Alabama, Arizona, Arkansas, California, Colorado, Georgia, Indiana, Kentucky, Michigan, Nevada, New Hampshire, New Mexico, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, Washington, and Wisconsin. For example see Humphreys, 1996 [24]; Nelson, 1997 [49]; Wiester, 1997 [63]; Matsumura, 1997 [42].

In both the Arkansas (*McLean*) and the subsequent Louisiana (*Aguillard*) cases, creationists sought redress under the Establishment Clause which would prevent public schools from promoting a religious position; therefore a secular mask was placed on creation, making it scientific which is only partially true. The same of course can be said for atheistic evolution or secular humanism which commonly are being taught, but this is more difficult to prove. The ideal situation would be that teachers follow the policy of explaining the different views **objectively**.

Some creationists have retreated from the courts; they have done this because they feared that a fair trial was not possible as appears to have been true in the *McLean* and *Aguillard* cases. But these experiences have clarified our perspectives regarding creation, evolution, and the legal establishment. On the whole the courts have not been sympathetic to creationist views, but creationists should be encouraged to keep up the pressure until the tide turns (see Kofahl, Undated a, b [32, 33]; Melnick, 1986 [43], 1990 [44]). At least scientific views besides evolution should be taught. In recent years home schooling has become increasingly popular because of conditions in many public schools and the increasing availability of high quality resources.

## **Creation - Opposed**

After the Arkansas Trial the momentum of the anti-creationist movement was spurred on by the rising popularity of creationist views. In all fifty of the United States political units called Committees of Correspondence were established to oppose creationist efforts. To some extent they were effective, but by 1986 they were "dead, fading, or existent in name only" (Weinberg, 1995 [61, p.46]). However, their sponsor, the National Center for Science Education (NCSE), has survived. In 1997 the two notable remaining anti-creationist periodicals from the NCSE were condensed into a single title.

The first significant book written from an anti-creationist perspective was published by Dorothy Nelkin in 1977 [48], but after the Trial many dozens more burst into print, inspired by the perceived threat that creationist views could destroy the scientific enterprise. Unfortunately most of this flush of literature contained shallow scholarship as exemplified by Dr. Niles Eldredge who had not yet studied the available learned creationist literature. Even the respected National Academy of Sciences published a work of this sort (Ebert, 1984 [10]), later answered by a much more even-handed American Scientific Affiliation publication (Price, 1986 [55]). Fortunately in more recent years unscholarly perspectives have been muffled.

The Arkansas Trial was a major stimulus for advancing the creationist movement, which is better anchored scientifically than ever before. Anti-creationist antagonism, largely characterized by a lack of knowledge and understanding, became rampant in the 1980's but now has abated and acceded to more enlightened appraisals and more willing acceptance of authoritative aspects of creationist views (for example see Numbers, 1992 [52]; Wise, 1998 [64]).

While I perceive an enlarging scholarly irenic vector in the whole educational scene, it is true that there are injustices particularly perpetuated by those intolerant of dissent. Still far too frequently evolutionary naturalism (so called "enlightened science") is pitted against theism (so called "religious obscurantism") (see Montgomery, 1996 [45]). Marsden, 1983 [40, p.574] has said:

Dogmatic proponents of evolutionary anti-supernaturalistic mythologies have been inviting responses in kind.

Unfortunately, some Christians have attacked scientists and even science itself, rather than faulty philosophy and scientific bias.

## **Creation - The Age Issue**

In the 1940's-1950's most creationists, more than 90%, believed that the universe was billions of years old. The Evolution Protest Movement in England (founded in 1932) favored this position as did the USA-based American Scientific Affiliation which was founded in 1941. Both strongly opposed macroevolution. The Bible was coupled to science usually using either Progressive Creation or the Ruin-Reconstruction Concept (Gap Theory), the latter fostered by annotations in the Scofield Reference Bible which was very popular at that time.

Since the early 1960's the question of age (billions versus thousands of years) has become the main controversial and even contentious issue among creationists. Today those who are opposed to macroevolution are somewhat evenly divided between Ancient and Recent Creation, with probably more scientists who are creationists being in the former group and more non-scientist creationists in the latter group.

As the Recent Creation position has become more popular among creationists, it also has become a favorite attack target for anti-creationist activists. Recent-creationist scholars acknowledge the Bible as the God-revealed foundation for their belief in Recent Creation. Even though there also are empirical data supporting the Recent Creation view, it still is much more successfully attacked by anti-creationists than is the typological or Limited Change anti-evolution position. Since the Arkansas Act 590 included the "recent inception of the earth and kinds" a strong claim has been made that the rapid rise of anti-creationism following the Trial was the consequence of this young-earth contention [65]. In regard to this it is interesting to note that the leading creationist debater and a popular author, Duane Gish, has handled the age issue with some caution, frequently indicating that "whether or not the earth is ten thousand, ten million, or ten billion years old, the fossil record does not support the general theory of evolution" (1995 a [19, p.51]).

### **Creation - Groups, Publications**

It should be noted that some creationist groups launched shortly before or after the Arkansas Trial flourished during the middle 1980's, but thereafter ceased operation, for example the Rochester Creation Science Association (early 1980-1988) and the Baltimore Creation Fellowship (late 1980-1988). Many others including the Creation Science Fellowship located in Pittsburgh (founded in 1979) and The Creation Science Association for Mid-America which is based in Missouri (founded in 1983) still are very active. Groups begun before the 1980's, such as the Creation Research Society (1963) and Institute for Creation Research (1970) continue with strong operations and publishing in 1998. There are many dozens of creationist periodicals today including some which started before and some after the Arkansas Trial.

### **Creation - Legacy from Lawyers**

Members of the bar actually have played very significant roles in the growth of the modern creationist movement, likely because of their investigative, analytical and reasoning capabilities--for example see Dewar, 1957 [8]; Macbeth, 1971 [39]; Eidsmoe 1984 [11]; Bird, 1991 [5]; Johnson, 1991 [26], 1995 [27], 1997 [28].

### **Creation - Roman Catholicism**

The Roman Catholic Church, often conceived as a monolithic structure, actually is not unified regarding the topic of evolution. Evolution is popular among Roman Catholics, but in recent years there have been many outspoken creationists and anti-evolutionists, for example, Murray, 1955 [47]; O'Connell, 1969 [53]; Johnson, 1976 [29]; Sennott, 1984 [57]; Johnson, 1987 [25]; Keane, 1991 [30]. Paul Ellwanger (3830 Old Denton #213, Carrollton TX 75007), a Roman Catholic creationist leader of "Citizens for Fairness in Education", was responsible for creation-evolution bills being introduced into many state legislatures including Act 590 in Arkansas. Bill Crofut during the 1980's distributed a monograph entitled "Biblical Creation is for Catholics", and for a few years Raymond M. Seaman worked with him in publishing the "Catholic Creation Report." Currently the Morning Star Catholic Origins Society (P.O. Box 189, Shade Gap PA 17255) publishes the Watchmaker magazine, a creationist publication.

It is my opinion that Roman Catholic anti-evolutionists were encouraged by the increased visibility of their beliefs resulting from the Arkansas Trial. For example Sennott in 1984 [57] urged that Catholics support giving equal time for creation along with evolution in public schools. So the creationist movement is much stronger than just a parochial Protestant fundamentalist phenomenon as Gould, (1997 [22, p.16]) imagines. However, I anticipate that Pope John Paul's 1996 proclamation which appears to make evolution somewhat more acceptable for Roman Catholics will influence the intensity with which Roman Catholics oppose evolution in the future.

### **Creation - Summary**

The Arkansas Trial provided a sudden explosive visibility for the creation movement, and opened countless new forums for discussing evolution/creation. It has led to reevaluations of creationist terminology and tactics. Anti-creationists, who also were stimulated to action by the Trial have consolidated their efforts and assumed a more scholarly stance. Although science is restricted to empirical research, all scientists need to be more willing to consider and objectively discuss the various metaphysical connotations of their research. Creationists who base their beliefs upon Biblical revelation should candidly acknowledge this as they deal with the implications of scientific discoveries.

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## NOMENCLATURE

MACROEVOLUTION- large changes in life forms. Generally the term evolution is referring to macroevolution, also known as the general theory of evolution.

MICROEVOLUTION- refers to small changes in life forms. Although the word is not used in this paper, it would be the same as limited change or variation, consistent with typology or the "kinds" model, which also has been called the special theory of evolution.

