



The MYTHS
of SCIENCE

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A
kategoria
BOOK

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Preface

WHEN CHRISTIANITY IS mentioned in the context of science or modern knowledge, a few old pennies will inevitably turn up. First, we'll be reminded that although the church tried to suppress his findings, Galileo still managed to prove that the earth was not the centre of the universe, as Christianity had taught. Then we'll be told that David Hume showed that miracles could not have happened, and that Darwin built on this scientific understanding by proving that life was not the special creation and plan of God, but a natural process. Any lingering inclination towards God can be banished by remembering the times when Christianity has brutally, but ultimately unsuccessfully, opposed the forward march of enlightenment; when, for instance, Giordano Bruno was martyred for his beliefs about astronomy, or when the Scopes Trial saw the blind irrationalism of Fundamentalists pitted against evolution.

None of these stories is true. Some have the gist of the conflict right but entirely misread the conclusion; others simply have the facts of the matter wrong. As common mythology, they drift around the academic and popular media, to be mentioned when it suits the commentator but rarely if ever to be actually examined. These myths have frequently been cited by intelligent

thinkers who really should know better; in my own hearing, Stephen Jay Gould and Bishop John Selby Spong have both been perpetrators. It is not surprising, then, that these myths are accepted as plain historical fact in more general discourse—in newspapers, school texts or television programmes.

kategoria is a journal which, from its first issue, took on such challenges, to put on record in a clear, accessible and well-referenced manner what the historical accounts actually say. As part of its general aim to provide a Christian critique of our contemporary intellectual world, *kategoria* has also periodically taken up popular distortions of fact which are used as arguments against Christianity, and put them under the spotlight. We are pleased to have been able to do that; but journals date, and are left on the shelf and forgotten. This present volume aims to bring some of these issues back into the spotlight, to remind ourselves and others that these myths are still circulating, are still wrong, and still need to be challenged.

We hope in future to bring together other *kategoria* collections, so that topics or themes that have been examined over a number of journal issues can be available in a single book. This not only makes it easier for the reader to find the articles on that particular theme, but continues to bring before the public the necessary challenges and corrections to a non-Christian world view. We hope you enjoy them.

6. History gone wrong: the Scopes trial

Kirsten Birkett

IN 1925, JOHN Scopes was arrested for teaching evolution in his high-school biology class in the small town of Dayton, Tennessee. He was tried and found guilty, and fined \$100. The trial was over within a few days. The law was eventually repealed. It doesn't seem all that funny.

Yet this trial is one of the major reasons why creationism, and belief in the Bible in general, became a laughing-stock in America and places where American culture rules. It provided a huge intellectual blow to the credibility of sincere Christian belief and made 'fundamentalist' virtually synonymous with 'stupid'. Because of this event, evolution gained massive public acceptance not just as a true theory, but as an alternative to biblical creation and one which made belief in the Bible outdated and childish.

Summer for the Gods,* Edward J. Larson's 1998 Pulitzer Prize-winning book about the Scopes trial, is for the

* This article was originally published as an essay review of Edward J. Larson, *Summer for the Gods: The Scopes Trial and America's Continuing Debate over Science and Religion*, BasicBooks, New York, 1997.

most part documentation of precisely what happened before, during, and after the trial. It is not written with any overt partisan leanings, and indeed is rather dry in its lengthy descriptions of who did what on which day and with what result. It is a book that tells a surprising story; for the trial in reality bears little resemblance to the trial I had read about, even in Christian books. It is a startling testament to how a mythology can take hold of public awareness to the point where even those hurt by the mythology do not question its truth. Through the dramatisations of the Scopes trial and the way in which it was remembered in American written history, the actual trial has been almost totally obscured, and reading what really happened is a profoundly shocking and delightful experience.

The myth I had believed was that defence lawyer Clarence Darrow, evolutionist, had confronted fundamentalist prosecutor William Jennings Bryan over the Bible, and shown him up as a fool; this was the essence of the trial. I had been embarrassed on behalf of the Christians (why didn't they choose an intelligent man to defend them?) and reluctantly admiring of the cool rational Darrow (at least he had reason on his side) and sympathetic for John Scopes, the poor teacher prosecuted for teaching what he thought was true.

It was, after all, what I had been taught, in numerous books, newspaper columns and lectures. Received history testified that biblical belief, and the blind prejudice of its supporters, was in the Scopes trial finally forced out into the scientific light of day and shown up

for the inanity it is. When it came to the crunch, the Bible just could not stand up against the facts of science. Although narrow-minded churchgoers had tried to use the weight of the law to stop the progress of science—as they had with Galileo—this time, science finally won. You just can't stop progress.

The metaphor of the church as a tyrannical overlord standing against the freedom of scientific inquiry is an old one. It drags from the Middle Ages to Galileo; it follows Descartes' fear of publishing his philosophy in Catholic France; it props up Darwin as he faced a church backlash against his theory; it carries Soapy Sam Wilberforce into battle—and ignominious defeat—against Thomas Huxley; and it appears again in the Scopes trial. It's one particular aspect of the general belief that science is and must be opposed by Christianity. Much publicised events like key legal trials suit the metaphor admirably, for there the battle is easily portrayed as institutional power against freedom of thought and speech, whatever the more subtle details of the case.

It is interesting that the same metaphor was not generally applied in coverage of a more recent example of this clash. The difference this time was that the side attempting to bring legal power to stop the teaching of a certain intellectual point of view was the side of science. Ian Plimer, an ardent evolutionist, took Allen Roberts of the Ark Search Inc (an extreme example of Creation Science) to court in 1997 for “misleading and deceptive conduct”. Other modern evolutionists have been equally keen. Daniel Dennett has written against

the teaching of creation science as the “deliberate misinforming of children about the natural world”, which should be stopped because “misinforming a child is a terrible offense”.¹ It’s an ironic request, since it echoes the exact rhetoric used by those who framed the original Tennessee statute against teaching evolution on which John Scopes was prosecuted. Do not teach as true, the parents of Tennessee demanded, these unproven ideas which damage our children.

However, few people today would ever have heard what the parents of Tennessee said. The real arguments of the people involved in the Scopes Trial have all but disappeared. Somehow, the safety-grids for preserving truth in our society have slipped, and what people now know or think about the Scopes Trial is not what really happened. Instead of truth, an anti-religion rhetoric has survived, and apparently has survived for no better reason than that it *is* anti-religion. Those who should have known better—academics who should have researched original documents before teaching their students, education boards who should have reviewed the material they recommended—failed to live up to their positions. The guardians of truth failed to realise that what they were teaching was inaccurate, because they were comfortable with it.



If our usual understanding of the Scopes trial is illusion, then what was the reality? William Jennings Bryan, advocate of anti-evolution laws and counsel for the prosecu-

tion during the trial, was essentially a career politician. He was a one time Secretary of State who negotiated fiercely for a series of international treaties before the first world war, designed to avert war by requiring the arbitration of disputes among nations. He resigned from his office at the start of the first world war, but continued to campaign for constitutional amendments, and was successful in four particular amendments: the direct election of senators, a progressive federal income tax, Prohibition, and female suffrage. He was no fool, and no stranger to fierce public political argument. His opposition to Darwinism was largely on moral grounds; although he accepted the possibility of a long process of creation as being consistent with the Bible, he objected to the implications of Darwinistic philosophy.

I object to the Darwinian theory because I fear we shall lose the consciousness of God's presence in our daily life, if we must accept the theory that through all the ages no spiritual force has touched the life of man and shaped the destiny of nations...But there is another objection. The Darwinian theory represents man as reaching his present perfection by the operation of the law of hate—the merciless law by which the strong crowd out and kill off the weak (quoted p. 39).

When two scholarly works were published after the first world war which attributed German militarism to misguided Darwinian thinking, Bryan became even more opposed to Darwinism. It was argued that the

idea of natural selection based on violent competitive struggle strongly influenced German intellectualism; Darwin's influence on Nietzsche was also considered significant. Bryan also saw a connection between Darwinism and the breaking down of Christian belief in the universities. Darwinism, Bryant believed, was a danger to individuals, to society and to world peace. He was not alone, and probably persuaded many more through his itinerant speaking. When the Tennessee House of Representatives was presented with the bill against teaching evolution—or rather against teaching “any theory that denies the story of the Divine Creation of man as taught in the Bible, and to teach instead that man had descended from a lower order of animal” (quoted p. 50), the bill was passed seventy-one to five.



It was the American Civil Liberties Union who provided the initiative for the trial to challenge this bill. The ACLU had fought a wide range of issues, including the right to conscientious objection during the war—in fact to a large extent it had been founded and financed by Quakers to protect religiously motivated pacifists from compulsory military service. After the first world war, the ACLU turned its attention to protecting labour unions (including school teachers), and the issues of academic freedom, and freedom of speech.

When the Tennessee law was enacted, the ACLU saw it as a chance for a legal victory for freedom of speech. The leaders sent out a press release offering to

challenge the law, and calling for any Tennessee teacher to volunteer as a test case. They would provide the legal defence and cover all costs, and were sure that the teacher concerned need not lose his or her job.

This was not a battle over religion. If anything, it was a battle over different forms of democracy. Bryan, who had spent his life campaigning for democracy as the fairest and most humane way to govern society, passionately believed that what the majority had voted for was what the law should uphold. In this particular case, he had further moral reasons for his conviction—he had seen that Darwinism did actually harm the moral development of young people and of society as a whole. His democracy was built upon the “virtuous citizen”, and he worried that Darwinism would justify an “economic jungle” and discourage “those who labour for the improvement of man’s condition”.² He wanted to stop evolution, an unproven hypothesis, from being taught as true, especially as it was claimed to disprove Christian belief and establish materialism. When such an overwhelming majority agreed with him, he considered it merely an application of democracy to insist upon this being followed.

The ACLU members, on the other hand, did not consider democracy in this light. They considered the protection of freedom of speech as one of the most important aspects of enlightened government. Wary of censorship which could stifle dissent and the pursuit of knowledge, they considered it a democracy’s duty to allow all citizens to hold their opinions—and follow

their consequences—in a peaceful way. The majority vote should not be allowed to silence the minority view.

Neither side wished to debate whether evolution contradicted the Bible. However greater forces than the original combatants were moving. The motivations of the initial conflict were to be lost once other personalities with other interests entered the fray.



In a small town in East Tennessee, a few young professionals gathered at the local drug store to discuss the offer from the ACLU. It seems they were struck with the possibilities of free publicity for their town. One of the group invited a close friend of his, 24-year-old John T. Scopes, to join them in one of their drug store get-togethers. He was asked if he would be willing to let his name be used for a test case. Although he was not actually a biology teacher, he had filled in for the regular teacher during an illness using the state-approved biology text, which had a section on human evolution. It was enough for the trial.

At that stage, local lawyers assumed they would be conducting the trial. However Clarence Darrow, who eventually was to be counsel for the defence at the trial, came to hear of what was going on. He was, at the time, probably the most famous trial lawyer in America. He specialised in defending criminal cases in bitterly hostile communities. One case which gained him a great deal of publicity was his defence of two wealthy and intelligent Chicago teenagers who had murdered an unpopular

schoolmate. He managed to save them from the death penalty using arguments of psychological determinism.

Darrow's personal interests included public disparagement of Christianity. "In the courtroom, on the Chautauqua circuit, in public debates and lectures, and through dozens of popular books and articles, Darrow spent a lifetime ridiculing traditional Christian beliefs" (p. 71). He believed he was doing good—he considered the Christian doctrine of salvation dangerous. "It is not the bad people I fear so much as the good people. When a person is sure that he is good, he is nearly hopeless; he gets cruel—he believes in punishment" (p. 71). He was not a scientist, but he used science when it suited his purposes, just as he rejected it on other occasions when it did not.

When the Scopes trial came up, Darrow volunteered his service for the defence for free. Later he was quite open about his motivation at the time: "My object was to focus the attention of the country on the programme of Mr Bryan and the other fundamentalists in America" (p. 73). Many within the ACLU leadership were uncomfortable about Darrow's help, since he clearly had no particular interest in Scopes nor free speech in general. The ACLU had never been hostile to religion as such, and feared that Darrow's opinions might jeopardise Scope's defence. However the lawyers in Dayton welcomed such a distinguished ally, just as they welcomed Bryan as an assistant to the state for the prosecution—it just made the whole show bigger.



So what was the trial about? The defendant and his local counsel were eager for the publicity. Suddenly their small town was national news, and the local businessmen expected the visitors to boost revenue considerably. Bryan considered the trial to be mainly about majority rule; about the democracy he had spent his political career defending and nurturing. It was not just a matter of whether evolution should be taught; the fact was, a large majority of the voters of Tennessee did not want it taught, and had the right to have their democratic decision abided by. The ACLU saw it as a matter of freedom of speech. Intellectual freedom must be respected in order for democracy to work at all, as they saw it. Two models of democracy were clashing.

Clarence Darrow, on the other hand, saw a chance to ridicule Christianity on a scale previously unforeseen. He gathered a battalion of professional witnesses who would testify that evolution was true. The ACLU's desire for a simple test trial disappeared under Darrow's much broader aim of having out his battle with Bryan. In the end, the ACLU was not in control of the defence at all.

Darrow nearly missed out on his wish. The expert witnesses were ruled unnecessary, the case was decided within three days. John Scopes was guilty—he had freely admitted what he taught—and there was nothing more to it. However Darrow was not to be denied all his fun. His team called Bryan as an expert on the Bible. Up until then the prosecution had strictly limited the use of expert witnesses, wanting a legal battle, not a scientific

or theological one, but Bryan welcomed the opportunity to have his say and his reputation was weighty enough that he prevailed. It was the last day of the trial, and the proceedings had to be moved outside the courthouse onto the lawn to accommodate the crowds.

Darrow questioned Bryan as a hostile witness, and Bryan answered poorly. He simply did not know the answers to many of the questions on biblical detail; he was not an expert, and it became obvious under Darrow's questioning. Bryan was infuriated, and refused to step down despite his co-counsel's urging. It turned into an abusive shouting match before the judge adjourned—after two hours of interrogation. That was essentially the end of the trial; the next day the defendant was found guilty, after a few minutes deliberation by the jury.



Already it is easy to see that the trial was a very complex matter. From the beginning strong personalities and private concerns were enough to distort any legal issues, and the ideological battle only made it more complicated. Perhaps the best question, then, is not to ask what was the trial about, but why did it come to be seen as a simple battle between evolution and religion, with evolution winning?

In 1931, Harper's magazine editor, Frederick Lewis Allen, published a best-selling book, *Only Yesterday: An Informal History of the Nineteen-Twenties*. It was not meant to be serious history; in the gloom of the Great

Depression, Allen was nostalgically remembering the fun of the twenties. The Scopes Trial featured as one of the largest stories of 1925. Allen pictured Darrow battling Bryan in a farcical encounter. Reducing the trial to the triumph of reason over revelation, he ignored all the wider issues, even making several factual errors in the origins of the trial, and in what Bryan said. It was the beginning of widespread misunderstanding of the trial, for Allen's book was a huge best-seller and even became widely used as a college history text. A number of later writers accepted Allen's depiction of events (p. 228).

The most serious misreporting of the trial, however, came in 1955 when *Inherit the Wind*, the play by Jerome Lawrence and Robert E. Lee, opened on Broadway. Ostensibly, their play was about the dangers of Macarthyism. Like *The Crucible*, the authors presented their ideas under the guise of a 'parallel' event in American history—this time, the Scopes Trial. Also like *The Crucible*, Christianity was taken as the parallel to mindless, irrational oppression of individuals. The fundamentalist opposition to teaching evolution was the 'metaphor' for the Macarthy opposition to freedom of writers and actors.

History was altered in several significant ways for the sake of the play. *Inherit the Wind* did not portray the trial as a comic farce, as Allen's book had, but as a dramatic, serious threat to progress and freedom. In the play—and in the later film of the same title—the ACLU and the actual reasons for the trial disappeared altogether, and a romantic interest was introduced

between Scopes and the pretty daughter of a (fictitious) fire-breathing fundamentalist local pastor. There were also some major idealistic changes:

1. Scopes in the movie became the victim of a mob-enforced anti-evolution law. He was just going about his business, faithfully teaching from the textbook, when the town fathers dragged him out of the classroom and threw him into gaol, with the whole town against him. This was quite different from the real case where the defence actually instigated the trial.

2. The character representing Bryan was portrayed as a mindless, reactionary creature of the mob. He attacked evolution on narrow biblical grounds only (there was no mention of his wider social concerns) and was against all science as godless. He babbled on about the earth being created on 13 October 4004 BC at 9 am, and ended up crying to his wife in public, as well as ranting against the smallness of the fine against Scopes. (In reality, Bryan had always been opposed to there being any fine attached to the anti-evolution law. He even offered to pay the imposed fine for Scopes.)

3. Darrow was uplifted in character. He was presented as agnostic, not as a crusading materialist. In the play, Darrow angrily criticises another character who ridicules 'Bryan's' religion. This exchange, in which the other character joked that Bryan "died of a busted belly" (referring to Bryan's corpulence), is one of the few lines taken directly from real life. In real life, however, it was Darrow who said it, upon learning of Bryan's death just a few days after the trial. In stark

contrast to such callousness, the Darrow of the play and film defends Bryan's right to his religion, and chastises his colleague: "You smart-aleck! You have no more right to spit on his religion than you have a right to spit on my religion!" (pp. 242-243). He walks off with *The Origin of Species* and the Bible side-by-side in his briefcase, the model of the tolerant liberal.

The play and the movie were criticised for their inaccuracies in published reviews. Nonetheless, both remained extremely popular: the play was the then longest-running drama on Broadway, and became the accepted version of the trial. In 1994 the National Center for History in Schools published instructional standards, which recommended using excerpts from *Inherit the Wind* as part of educating students about the twenties. This process had its effect on the American consciousness, and gradually the idea that the play was actually a ridiculously distorted travesty of history drifted away. In 1996, when the play was restaged on Broadway, newspapers which had criticised the original play as "much too elementary" now praised it as "a thoughtful, powerful explication of religious and political issues". The play had not changed in the meantime—but reviewers had. They had actually come to accept that what they were seeing was a faithful representation of the issues involved in the trial. The myth had triumphed.



When the Tennessee anti-evolution law was finally overturned by the Federal Supreme Court in 1967,

creationists responded by demanding equal time for creationist theories. It was a logical response; the statement attributed to Darrow—"It is bigotry for public schools to teach only one theory of origins"—was now widely quoted by the creationist side. Interestingly, this statement was fictitious—part of the Scopes legend, now used by the creationists themselves. The statement is actually wrong on two counts. Not only did Darrow not say it, but creationism was never taught in schools in the twenties, because of the separation of church and state—this was even part of Bryan's attack, that if creation could not be taught then neither should evolution. The legend had well and truly by now overtaken reality. Three states attempted to have 'equal time' laws, but were all defeated—and the opponents made use of rhetoric from the Scopes legend to affect the decision.



What we have in the Scopes story is a real-life example of how history was rewritten to the detriment of Christian belief, and in a surprisingly short space of time. I can remember marking a university essay about the Scopes trial. The student had described it as *Inherit the Wind*—not even realising, apparently, that his research had totally failed to report reality rather than fiction. His education had been taken over by Hollywood.

The debate between science and religion is a philosophically serious one. How can we proceed, however, when the discourse has been so seriously hijacked by false reporting? We may hope that this weighty book might

have an impact—the fact that it won a Pulitzer Prize might mean that its ideas have been fairly well publicised.

Nonetheless so far I have found rather a paucity of reviews of the book; none of the main history of science journals appear to have reviewed it. Those reviews which have appeared show a sad deference to the myth. While the review in *The New York Times Book Review*³ admits that *Inherit the Wind* “loosely fictionalized” the trial, it still ends with the recommendation “For the trial of the century, rent the movie”—no doubt tongue-in-cheek, but an annoying refusal to emphasise how misleading the movie is. A review in *The Journal of American History*⁴ comments “Though Darrow’s cross-examination of Bryan and the verdict in the case are already well known in American history”—ignoring Larson’s demonstration that the the story is obviously *not* well known. No review I have seen takes seriously the challenge to the teaching and understanding of ‘true’ history provided by this book.

In the case of evolution and creationism, it will probably be a long time before the issues are untangled sufficiently from their fictitious representation to move forward with genuine education on the matter. In the meantime, however, *Summer for the Gods* reminds us to maintain a suitable level of skepticism in all science-religion discussion. The slate is far from clean.

ENDNOTES

1 Daniel C. Dennett, *Darwin’s Dangerous Idea: Evolution and the Meanings of Life*, Penguin, Harmondsworth, 1995, p. 516.

2 Quoted in Carol Iannone, 'The truth about Inherit the Wind', *First Things*, 1997, 70, pp. 28-33. It hardly needs pointing out that Bryant was quite right; the economic rationalism we see around us today is the working-out in society of a Darwinistic view of business.

3 5th October, 1997.

4 84 (4), March 1998, pp. 1553-1554.