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Studies in History and Philosophy of Biological and Biomedical Sciences

journal homepage: www.elsevier.com/locate/shpsc

Claiming Darwin: Stephen Jay Gould in contests over evolutionary orthodoxy and public perception, 1977–2002



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ARTICLE INFO

Article history:

Available online 21 January 2014

Keywords:

Scientific orthodoxy
Darwinism
Stephen Jay Gould
Creationism
Punctuated equilibrium
Pseudoscience

ABSTRACT

This article analyzes the impact of the resurgence of American creationism in the early 1980s on debates within post-synthesis evolutionary biology. During this period, many evolutionists criticized Harvard biologist Stephen Jay Gould for publicizing his revisions to traditional Darwinian theory and opening evolution to criticism by creationists. Gould's theory of punctuated equilibrium was a significant source of contention in these disputes. Both he and his critics, including Richard Dawkins, claimed to be carrying the mantle of Darwinian evolution. By the end of the 1990s, the debate over which evolutionary thinkers were the rightful heirs to Darwin's evolutionary theory was also a conversation over whether Darwinism could be defended against creationists in the broader cultural context. Gould and others' claims to Darwin shaped the contours of a political, religious and scientific controversy.

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When citing this paper, please use the full journal title *Studies in History and Philosophy of Biological and Biomedical Sciences*

In 1981, Harvard biologist Stephen Jay Gould asserted, “Some now wish to mute the healthy debate about theory that has brought new life to evolutionary biology. It provides grist for creationist mills.”¹ The resurgence of creationism in the 1980s changed the way that biologists debated the tenants of evolutionary theory. This episode is an example of the complex and often oversimplified relationship between evolution and public culture in the twentieth-century United States.

During his career, Gould claimed to be a strict Darwinian, but he also criticized key components in synthetic evolutionary theory including gradualism, adaptation and gene-selection. In the last two decades of the twentieth century, Gould debated with other well-known evolutionists over the potentially subversive nature of his unorthodox views. Although it was not the only point of contention, Gould and Niles Eldredge's theory of punctuated equilibrium was central to what came to be called the “Darwin wars.”² Punctuated equilibrium explained the gaps in the fossil record as positive evidence rather than as missing information. David Sepkoski

has recently argued that these rereadings of fossil evidence helped paleontology claim a new importance in evolutionary theory.³ But these revisions also closely resembled creationist criticism that paleontological data could not definitively prove evolution. In the 1985 edition of *Scientific Creationism*, Henry Morris claimed that the “leading evolutionist Stephen Jay Gould” had proposed a new theory which supported what creationists had “long argued”—that there were “no true transitional forms in the fossil record.”⁴ These creationist critiques alarmed other evolutionists. By 1995 geneticist John Maynard-Smith worried that Gould was giving “non-biologists a largely false picture of evolutionary theory,” whereas journalist Robert Wright plainly asserted Gould was “bad for evolution.”⁵ Gould's fellow evolutionists believed he had opened their theory to general attack.

The fervency of the Darwin wars had its roots in the resurgence of the American creationist movement in the early 1980s. When Ronald Reagan publicly disavowed evolution during his successful bid for presidency in 1980, many were visibly concerned about the

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¹ Gould (1981).

² Brown (1999) and Morris (2001).

³ Sepkoski (2012).

⁴ Morris (1985).

⁵ Maynard-Smith (1995) and Wright (1999).

future of evolution in American culture. Gould complained in letters to colleagues that they now “had a creationist in the White House.”⁶ He wrote several editorials in the *New York Times* and elsewhere, decrying the rise of creation-science as nothing more than one of a number of machinations of the politically ascendant New Right.⁷ And in 1981, Gould did his part to defend the place of evolution in public science classrooms by testifying in the highly publicized Arkansas Supreme Court case *McLean v. Arkansas*. Though *McLean v. Arkansas* ended in defeat for creationists’ clamoring for “equal time,” it spurred political action against creationism in the professional evolutionary biology community. The Society for the Study of Evolution (SSE) spent its annual meetings in the early 1980s strategizing against creationism.⁸ A grassroots movement of biologists across the country formed into the National Center for Science Education (NCSE), an organization dedicated to combating creationism in public schools.⁹ And popular books with such titles as *Scientists Confront Creationism* (1984), *Science and Creationism* (1984) and *Fallacies of creationism* (1985) hit shelves hoping to explain to public audiences that there was a firm scientific consensus against creationism.¹⁰

It was into this political tumult that Gould published his revisions to the synthetic theory of evolution for both professional and public audiences.¹¹ Fearing the incursion of creationism, other evolutionists insisted that Gould’s promotion of punctuated equilibrium was merely rhetorical (or worse, just hot air).¹² But the very existence of the conflict between Gould and his evolutionary opponents destabilized the authority of biology. If biologists could not agree on evolution, how could the rest of the country be certain that it was true? Michael Gordin has recently argued that historians can utilize debates over pseudoscience to understand the changing boundaries around science through history.¹³ But challenges by a “pseudoscience” do more than undermine scientific authority—they also capture public attention. The controversy with creationists garnered publicity precisely because it highlighted the difficulty professional evolutionists had in establishing scientific consensus. Gould’s quarrels with other evolutionists appeared in national newspapers, news magazines and on television.¹⁴ The link between punctuated equilibrium and creationism even appeared in a biographical spread on Gould in the gossip magazine *People* in the summer of 1986.¹⁵ The controversy with creationism fueled Gould’s increasing celebrity to audiences across America.

The Darwin wars were not the first moment in which Gould clashed with other evolutionists, nor the first time that other scientists worried about Gould’s sway with popular audiences. Earlier, in the sociobiology debate of the mid 1970s, Gould and fellow Harvard biologist E.O. Wilson had argued over whether biology could provide objective standards for assessing sex difference. Gould believed Wilson should exercise caution before suggesting that human difference was biologically determined. Wilson thought that Gould allowed his leftist activism to interfere with the integrity

of scientific research. This disagreement reached its peak when Gould decided to publish his objections to Wilson’s research in *Natural History* magazine.¹⁶ Wilson excoriated Gould for publishing a scientific debate before a public audience. Nevertheless, though their debate was vehement, it largely remained within a set of left-oriented academics and a northeast public.¹⁷ When creation-science entered the public stage in the early 1980s, it brought a different religious, political and regional community into dialogue with these scientists. And the larger audience for the evolution–creation debate also resulted in greater public interest for disagreement among evolutionary biologists.

Creationist critics further fueled this public interest by authoring popular books such as *Evolution: a Theory in Crisis* (1986) and *Darwin on Trial* (1991), which argued that the disagreements among Darwinians undermined the validity of evolution.¹⁸ By the 1990s, the continued presence of creationism and the rising Intelligent Design movement caused conflicts between Gould and other evolutionists to reach a fever pitch. These evolutionists hurled insults at each other on the pages of the *New Yorker* and the *New York Review of Books*.¹⁹ In this article, I argue that the terms of the Darwin Wars were set in the early years of the resurgence of creationism. The cultural power of creation-science in the early 1980s shocked many evolutionary biologists. But their own disagreements made it more difficult to close ranks against creationism. In this moment, both Gould and his evolutionary opponents publicly laid claim to being the rightful heirs to Charles Darwin’s theory. In doing so, they fashioned different readings of their discipline’s chosen founding figure. Gould wanted Darwin to be a historical figure that could be revised and reconsidered in order to accommodate Gould’s own understanding of evolutionary theory, particularly punctuated equilibrium. His critics, including Richard Dawkins, desired that Darwin stand as the beacon for intellectually defensible atheism. For these evolutionists, claiming Darwin was an assertion of their authority to be public spokespersons for evolution, and it was done in the face of a new political threat from American creationists in the early 1980s.

1. The changing media presence of punctuated equilibrium

Punctuated equilibrium did not originate as the most well-known revision of Darwin’s theory. Gould and Eldredge first advanced the theory in an essay in Thomas Schopf’s *Models in Paleobiology* in 1972.²⁰ This volume generated momentum for a new research agenda in paleontology and introduced punctuated equilibrium to other young paleontologists who were interested in macroevolution.²¹ As the decade wore on, punctuated equilibrium gained recognition in a widening circle of evolutionary thinkers, particularly after Gould and Eldredge published an expansion on the initial essay in a 1977 article in *Paleobiology*.²² The theory challenged the traditional picture of Darwinian evolution in which natural selection creates slight modifications to successive generations.

⁶ For instance Gould to Resenberger (14 November 1980).

⁷ For instance Gould (1982a, 1982c).

⁸ Society for the Study of Evolution (28 June 1981).

⁹ This organization was originally called the “Committees of Correspondence” and was organized by Stanley Weinberg. Weinberg (1985).

¹⁰ Godfrey (1984), Montagu (1984) and Young (1985).

¹¹ Gould and Lewontin (1979), and Gould (1980).

¹² Dawkins (1986) and Dennett (1995).

¹³ Gordin (2012).

¹⁴ Adler (1980, 1982).

¹⁵ Green (1986).

¹⁶ Perez (2013).

¹⁷ Ibid.

¹⁸ Denton (1986) and Johnson (1991).

¹⁹ Gould (1997), Wright (1999) and Ruse (2000).

²⁰ Eldredge & Gould (1972).

²¹ Sepkoski (2012).

²² Eldredge & Gould (1977).

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