

# THE BISHOP AND THE BULLDOG: SAMUEL WILBERFORCE AND THE WILBERFORCE-HUXLEY DEBATE OF 1860

*by Jonathan Menn*

## Introduction

BEFORE CHARLES DARWIN published his seminal *On the Origin of Species by Means of Natural Selection* in 1859, Christianity and science had been viewed as compatible, a view that lasted well into Darwin's lifetime.<sup>1</sup> Allan Chapman, Oxford professor of the history of science, has written that the Judeo-Christian faith is fundamental to the rise of modern science. Indeed, Christianity brought "a radical new concept into human thought: a historical timeline. . . . And I would argue that it was this very precise relationship between monotheism and a beginning, a sequence of events, and an ending which made a scientific view of the world possible, giving as it does a potential for hard-edged objectivity."<sup>2</sup>

This view has been echoed by, among others, eminent non-Christian mathematician and philosopher Alfred North Whitehead. Whitehead states that the belief in the order of things, the order of nature, was indispensable to the rise of modern science.<sup>3</sup> However, that alone was insufficient. What was needed was "the inexpugnable belief that every detailed occurrence can be correlated with its antecedents in a perfectly definite manner, exemplifying general principles. Without this belief the incredible labours of scientists would be without hope."<sup>4</sup> From where did this mindset come? "When we compare this tone of thought in Europe with the attitude of other civilisations when left to themselves, there seems but one source for its origin. It must come from the medieval insistence on the rationality of God,

---

1. Sheridan Gilley and Ann Loades, "Thomas Henry Huxley: The War Between Science and Religion," *Journal of Religion* 61, no. 3 (July 1981): 285–86.

2. Allan Chapman, *Slaying the Dragons: Destroying Myths in the History of Science and Faith* (Oxford, England: Lion Hudson, 2013), 239–40.

3. Alfred North Whitehead, *Science and the Modern World* (New York: The Free Press, 1967), 4.

4. Whitehead, *Science and the Modern World*, 12.

conceived as with the personal energy of Jehovah and with the rationality of a Greek philosopher.”<sup>5</sup>

It therefore should not be surprising that not only was Christianity foundational to the rise of modern science, but Christians have been and continue to be among the leaders of science:

Men of science who would have identified themselves as Christians have been the norm over the centuries, and . . . they are far from a rarity today. . . . In the earlier days of science, and even discounting the numerous monk-priest scientific thinkers of the medieval centuries, one had astronomers of the standing of Nicholas Copernicus, Galileo Galilei, Johannes Kepler, Pierre Gassendi, and Isaac Newton. Then there followed Robert Boyle (of Boyle’s law fame), Michael Faraday (electrical physicist), William Buckland and many other Victorian geologists (a good number in holy orders), Abbot Gregor Mendel (founder of genetics), James Clerk Maxwell (mathematical physicist), and Sir Arthur Eddington and Father Georges Lemaître (both twentieth-century cutting-edge cosmologists). And those are only a selection of the illustrious dead, without reckoning those alive today.<sup>6</sup>

That situation—or at least the popular understanding of that situation—changed and changed radically in the decades following the publication of *Origin*. Darwin’s *Origin* both augmented and epitomized a “shift in scientific framework or paradigm that was just getting under way in 1860 [but] was nearly complete by the 1890s.”<sup>7</sup> Two principal reasons for this paradigm or worldview shift were: (1) a shift in the nature of science, the scientific endeavor, and who is to be considered a proper scientist or scientific authority; and (2) the ultimately more fundamental issue of the relationship between reason and revelation, science and scripture, naturalism versus supernaturalism, chance versus design, atheism versus theism, or, to put it succinctly, can the existence of God be acknowledged as legitimate by scientists as part of their work? In the event, the forces of “professionalism” in science, reason, atheism, chance, and naturalism triumphed over the forces of the Bible, supernaturalism, design, and theism, at least among the scientific community and the popular scientific press. The result was a profound shift in who has a lock on legitimacy when it comes

---

5. Whitehead, *Science and the Modern World*, 12. At pages 265–303 of his *Where the Conflict Really Lies* (New York: Oxford University Press, 2011), philosopher Alvin Plantinga discusses multiple areas which demonstrate deep concord between Christian theism and modern science.

6. Chapman, *Slaying the Dragons*, 234. A 1916 survey of 1000 randomly selected scientists found that 42% believed in God; that study was replicated in 1996 and found that 39% of the randomly selected scientists believed in God. Edward Larson and Larry Witham, “Scientists are still keeping the faith,” *Nature* 386 (April 3, 1997): 435–36.

7. Brian Stanley in “The Discussion,” 1 of 14; originally accessed 23 January 2005 at <http://www.st-edmunds.cam.uk/cis/brooke/lecture6.html> (though this link is no longer valid).

to explaining the existence and development of the “natural world” and the beings that populate it.<sup>8</sup> This is exemplified by the British Association for the Advancement of Science. Although the British Association had been founded with a largely amateur public in mind, after 1860, it became “more and more of a closed shop, with its own puritan ethic, from which amateurs are more and more excluded.”<sup>9</sup> The scope and rapidity of the shift is graphically illustrated by the fact that “In the period 1831–65 no fewer than forty-one Anglican clergy had presided over the various sections of the British Association. . . . Between 1866 and 1900 the number fell to three.”<sup>10</sup>

An important symbolic catalyst for this shift was the debate in 1860 between the Archbishop of Oxford, Samuel Wilberforce, and Thomas Henry Huxley, over the validity of Darwin’s theory of evolution. That debate has been called “the defining moment in the great science-religion debate of the 19th century.”<sup>11</sup> A popular account describes it as follows:

The Archbishop of Oxford, Samuel Wilberforce, ridiculed the whole notion of evolution and asked Huxley whether he was descended from an ape on his grandmother’s side or his grandfather’s side. Huxley was more than happy to take the bait and rose to Darwin’s defense. According to one version of events, he declared, “I would rather be the offspring of two apes than be a man and afraid to face the truth.”

All accounts of the tumultuous gathering agree that Huxley crushed Wilberforce in the debate, defending evolution as the best explanation yet advanced for species diversity.<sup>12</sup>

Stephen Jay Gould, well-known paleontologist, evolutionary biologist, and

8. Today it is extremely difficult for scientists who advocate creation science or intelligent design to be published in mainstream peer-reviewed science journals, despite their credentials and the legitimacy and value of their research. See “Peer Review in Creation Research,” *Answers in Genesis* (October 13, 2020); accessed 24 November 2021 at <https://answersingenesis.org/creation-vs-evolution/peer-review/>.

9. J. R. Lucas, “Wilberforce and Huxley: A Legendary Encounter,” *Historical Journal* 22 (1979): 330.

10. John Hedley Brooke, “The Wilberforce-Huxley Debate: Why Did It Happen?,” *Science & Christian Belief* 13, no. 2 (2001): 132.

11. John H. Lienhard, “No. 1371: *Soapy Sam* and Huxley,” in *Engines of Our Ingenuity*; accessed 27 August 2020 at <https://www.uh.edu/engines/epi1371.htm>. Oxford professor Dr. Diane Purkiss said the debate “was really the first time Christianity had ever been asked to square off against science in a public forum in the whole of its history.” Alison Flood, “Plinth commemorates Huxley-Wilberforce evolution debate,” *The Guardian*, September 10, 2010; accessed 13 November 2021 at <https://www.theguardian.com/books/2010/sep/10/plinth-huxley-wilberforce-evolution-debate>.

12. Leslie Alan Horvitz, *The Complete Idiot’s Guide To Evolution* (Indianapolis: Alpha, 2002), 113.

historian of science, adds:

The story of Wilberforce's oration and Huxley's rejoinder has been enshrined among the half dozen greatest legends of science—surely equal to Newton beamed by an apple or Archimedes jumping from his bath and shouting “Eureka!” through the streets of Syracuse.... The story has an “official version” codified by Darwin's son Francis, published in his *Life and Letters of Charles Darwin*, and expanded in Leonard Huxley's biography of his father. This reconstruction has become canonical, copied from source to later source hundreds of times, and rarely altered even by jot or tittle.<sup>13</sup>

Today the room at the Oxford Museum of Natural History where the debate took place is known as the “Huxley Room.”<sup>14</sup> In 2010 a memorial plinth was erected on the site to commemorate the 150th anniversary of the event.<sup>15</sup> Each year on February 12 (“Darwin Day”), the Australian Museum Society, the Humanist Society of New South Wales, and Australian Skeptics, Inc. present a number of awards, including “The Wilberforce”—named after Bishop Wilberforce—which is dedicated to “the antievolutionist who, through the silly nature of their arguments or actions has done the most to promote evolution as a fact.”<sup>16</sup> John Mortimer's popular “Rumpole of the Bailey” books and television shows include the character Samuel Ballard, Christian head of chambers and Rumpole's nemesis, “dubbed ‘Soapy Sam’ after Bishop Samuel Wilberforce.”<sup>17</sup> The Wilberforce-Huxley debate has thus loomed large in the popular

13. Stephen Jay Gould, “Knight Takes Bishop?,” *Natural History* 95, no. 5 (May 1986): 18.

14. Caption of photograph in Oxford University Museum of Natural History, *The Great Debate*; accessed 27 August 2020 at <https://oumnh.ox.ac.uk/great-debate>.

15. Flood, “Plinth commemorates.”

16. “Darwin Day Sydney 12 February 2004,” *Australian Museum Society, the Humanist Society of New South Wales, and Australian Skeptics, Inc.*; accessed 27 August 2020 at <http://www.hsnsw.asn.au/darwinday/dd2004/index.html>.

17. “Rumpole of the Bailey (1978–1992),” Trivia, *Internet Movie Database*; accessed 27 August 2020; at [https://www.imdb.com/title/tt0078680/trivia?ref\\_=tt\\_trv\\_trv](https://www.imdb.com/title/tt0078680/trivia?ref_=tt_trv_trv). In his lifetime, Wilberforce did have the sobriquet of “Soapy Sam.” Leslie Stephen states, “The nickname of ‘Soapy Sam’—finally fastened upon him in consequence of Lord Westbury's description in the House of Lords (15 July 1864) of his synodical judgment on ‘Essays and Reviews’ [in an anonymous review published in the *Quarterly Review* Wilberforce had condemned *Essays and Reviews*, which was a collection of essays on biblical subjects by pro-Darwinian liberal churchmen] as ‘a well-lubricated set of words, a sentence so oily and saponaceous that no one can grasp it’—both expressed and did something to confirm the public's impression of his capacity for evasion.” Leslie Stephen, “Wilberforce, Samuel,” in *The Dictionary of National Biography*, vol. 21, edited by Leslie Stephen and Sidney Lee (Oxford, England: Oxford University Press, 1959–1960 [reprint]), 207. Wilberforce's own explanation of his nickname is recounted by Gertrude Himmelfarb, “He explained away his nickname as glibly and good-humoredly as he explained away other embarrassing situations, saying that ‘though often in hot water, he always came out with clean hands.’” Gertrude Himmelfarb, *Darwin and the*

mind and has virtually been memorialized as demonstrating the incompatibility of religion and science and the impropriety (if not ignorance) of those who, from a “religious” perspective or motive, question or attack scientific orthodoxy or consensus.<sup>18</sup>

Despite its prevalence in popular culture and in writings on the history of science and religion, in most of its particulars, the “canonical” account is at least a caricature, if not frankly wrong—and all to Bishop Wilberforce’s detriment. That is shown by scholarly assessments of the debate<sup>19</sup> and is now acknowledged by leading evolutionist apologists themselves.<sup>20</sup> Given the outsized influence the debate has had, this paper will look at Bishop Wilberforce and his critique of Darwin’s theory, examine the facts of the debate itself, consider why the popular account of the debate has remained so prevalent despite its acknowledged inaccuracy, and discuss contemporary implications, particularly the ongoing relevance of questions raised by Wilberforce to evolutionary theory and its naturalistic/materialistic premises.

## Bishop Wilberforce

---

*Darwinian Revolution* (Chicago: Ivan R. Dee, 1996), 273. Allan Chapman adds, “We should remember that in Victorian usage ‘soapy’ also meant smooth and polished. Or in today’s fashionable lingo, *cool*.” Chapman, *Slaying the Dragons*, 115.

18. The significance of the debate, the account of which is in accord with the above “canonical” version, is indicated by the fact that it forms *the opening paragraph* of the Introduction to Philip Kitcher’s *Abusing Science: The Case Against Creationism* (Cambridge, MA: MIT Press, 1982). It is also listed as one of the ten greatest disputes in the history of science in Hal Hellman’s *Great Feuds in Science* (New York: Wiley, 1998).

19. Lucas, “Wilberforce and Huxley,” 313–30; J. Vernon Jensen, “Return to the Wilberforce-Huxley Debate,” *British Journal for the History of Science* 21 (1988): 161–79; J. Vernon Jensen, *Thomas Henry Huxley: Communicating for Science* (Cranbury, NJ: Associated University Presses, 1991), 63–86; Colin Gauld, “The Huxley-Wilberforce Debate,” *Research in Science Education* 22 (1992): 149–56; Frank A. J. L. James, “An ‘Open Clash between Science and the Church’?: Wilberforce, Huxley and Hooker on Darwin at the British Association, Oxford, 1860,” in *Science and Beliefs: From Natural Philosophy to Natural Science, 1700–1900*, eds. David Knight and Matthew Eddy (Aldershot, England: Ashgate, 2005), 171–93; Chapman, *Slaying the Dragons*, 113–20; George Benthien, “Huxley-Wilberforce Debate,” (2014); accessed 30 August 2020 at [https://www.academia.edu/38106521/Huxley\\_Wilberforce\\_Debate](https://www.academia.edu/38106521/Huxley_Wilberforce_Debate); Richard England, “Censoring Huxley and Wilberforce: A new source for the meeting that the *Athenaeum* ‘wisely softened down’,” *Notes and Records of the Royal Society of London* 71 (2017): 371–84.

20. Gould, “Knight,” 18–33; Michael Ruse, *Can a Darwinian Be a Christian?* (Cambridge, England: Cambridge University, 2001), 5.

Wilberforce (1805–73) was the third son of noted evangelical, anti-slavery crusader William Wilberforce.<sup>21</sup> Educated at Oxford, he graduated with a first in mathematics and a second in classics.<sup>22</sup> A High Church Anglican, he relatively quickly rose in the ranks until he was appointed as Bishop of Oxford in 1845, a post he held for 25 years; he then was enthroned as the Bishop of Winchester in 1869, a post he held until his death from a riding accident in 1873.<sup>23</sup>

Wilberforce was no naïf when it came to scientific matters. He was one of the vice presidents of the British Association for the Advancement of Science.<sup>24</sup> He was a Fellow and Vice-President of the Zoological Society of London<sup>25</sup> and was “something of an ornithologist.”<sup>26</sup> In fact, at the time of the debate in 1860, Wilberforce had been a full fellow of the Royal Society (the world’s oldest scientific academy) for fifteen years.<sup>27</sup> It was therefore both as a keen amateur scientist, as well as a leading theologian, that Wilberforce provided one of the first reviews of Darwin’s *Origin of Species* for the *Quarterly Review*.

### Wilberforce’s Critique of Evolution

Wilberforce’s forty-page review of *Origin* was written five weeks before the debate with Huxley and published on July 18, 1860.<sup>28</sup> Wilberforce did not rely solely upon his own knowledge but was aided by eminent anatomist and paleontologist Sir Richard Owen.<sup>29</sup> Wilberforce’s speech during the debate with Huxley was a condensed version of his written review.<sup>30</sup> Stephen Jay Gould has summarized Wilberforce’s arguments as follows:

In the first part, Wilberforce attacks Darwin’s factual claims. He emphasizes

---

21. *Encyclopaedia Britannica*, 11th ed., s.v. “Wilberforce, Samuel.”

22. Stephen, “Wilberforce, Samuel,” 204.

23. Stephen, “Wilberforce, Samuel,” 204, 207.

24. Jensen, “Return,” 166.

25. Emma Milnes, “Celebrating the Life of ‘Darwin’s Bulldog’ – Thomas Henry Huxley,” *ZSL.org* (September 6, 2017); accessed 29 November 2021 at <https://www.zsl.org/blogs/artefact-of-the-month/celebrating-the-life-of-darwins-bulldog-thomas-henry-huxley>.

26. Lucas, “Wilberforce and Huxley,” 317.

27. Chapman, *Slaying the Dragons*, 115.

28. Samuel Wilberforce, “Review of *On the Origin of Species*, by Charles Darwin,” *Quarterly Review* 108 (July 1860): 225–64; Frederick Burkhardt, ed., *The Correspondence of Charles Darwin*, vol. 2, 1860, (Cambridge, England: Cambridge University, 1993), 293n.1 (re. the publication date).

29. Himmelfarb, *Darwinian Revolution*, 273; Burkhardt, ed., *Correspondence*, 492n.5.

30. Lucas, “Wilberforce and Huxley,” 317. As one eyewitness wrote many years later, “he used no argument beyond those to be found in his *Quarterly* article, which appeared a few days later, and is now admitted to have been inspired by Owen.” Leonard Huxley, ed., *Life and Letters of Thomas Henry Huxley* (New York: Appleton, 1901), 1:197.

three arguments (where Darwin confessed his own weakness): limitation of variation within a rigid “sphere” about the modal form, so that dogs might produce fox terriers and Saint Bernards, but never cats[;] . . . missing data from the fossil record; and sterility of hybrids as evidence for unbridgeable gaps between species.

The second part criticizes Darwin’s general arguments. . . . [He argues] that natural selection is . . . but a divine device for maintaining the purity of created forms by eliminating misfits. . . . [He then] insists that features of form and color must be essential aspects of created perfection [as opposed to being vestiges of inheritance, since] organisms are only the incarnated ideas of an infallible deity. . . . When we work through Wilberforce’s critiques, we finally come to the bottom line that, in the end, has always motivated the passion surrounding this debate . . . what T.H. Huxley called in the language of his day (but meaning all of us), “Man’s place in nature.”. . .

We come finally to the third part of Wilberforce’s critique—his attack on Darwin’s style of reasoning. . . . Wilberforce accuses Darwin of leaving the strict path of experiment and observation for the fictional fancy of pure speculation.<sup>31</sup>

His was no mere “religious” attack. He did not reject Darwin’s conclusions *a priori* but expressed adherence to the principle of induction. In the review, he stated:

We have objected to the views with which we have been dealing solely on scientific grounds. We have done so from our fixed conviction, that it is thus that the truth or falsehood of such arguments should be tried. We have no sympathy with those who object to any facts or alleged facts in nature, or to any inference logically deduced from them, because they believe them to contradict what it appears to them is taught by Revelation. We think that all such objections savour of a timidity which is really inconsistent with a firm and well-instructed faith.<sup>32</sup>

Wilberforce quoted at some length from geologist Sir Charles Lyell, who had written in opposition to the transmutation of species.<sup>33</sup> He even employed his own ornithological knowledge to refute (and correct) one of Darwin’s speculations

31. Stephen Jay Gould, “Soapy Sam’s Logic,” *Natural History* 95, no. 4 (April 1986): 20–21. See also Brooke, “Wilberforce-Huxley,” 137–39, for a synopsis of the review.

32. Wilberforce, “Review,” 256.

33. Wilberforce, “Review,” 263–64. Lyell’s *Principles of Geology* had been very influential with Darwin. In 1863 Lyell changed his view and accepted the Darwinian position. Andrew Dickson White, *A History of the Warfare of Science with Theology in Christendom* (New York: Appleton, 1896), 74.

regarding the coloring of young blackbirds.<sup>34</sup> After challenging Darwin *on the facts*, he concluded that “when subjected to the stern Baconian law of the observation of facts, the theory breaks down utterly.”<sup>35</sup>

Gould acknowledges that:

despite Wilberforce’s grossly distorted argument, we must admit his basic claim about Darwin’s reasoning. Darwin does not advance his theory of natural selection either as a conclusion drawn from pure observation or a deduction proved by repeated and controlled experiment. If all scientific conclusions must have such defenses, then Darwin’s theory is seriously wanting.... The structure of Darwin’s argument rests upon two types of reasoning that Wilberforce disparaged as speculation. First, Darwin’s central statement—that natural selection produces major transformations over millions of years—is based on analogy, not observation.... Second, Darwin often imposed his theory on imperfect evidence to make sense of observations that, in their literal appearance, did not support natural selection.<sup>36</sup>

He concludes, “Wilberforce recognizes—and here I grant him some credit, for not everyone did—that Darwin’s strongest claims for evolution invoked imperfect structures [to which Wilberforce was able to give alternative explanations].”<sup>37</sup>

The review was of concern to Darwin. Upon reading it, Darwin wrote on July 20, 1860 to his supporter, botanist Joseph Hooker, that the review “is uncommonly clever; picks out with skill all the most conjectural parts, & brings forwards [*sic*] well all difficulties.”<sup>38</sup> In a letter to Lyell on August 11, 1860 he stated that “the Bishop makes a very telling case against me by accumulating several instances where I speak very doubtfully.”<sup>39</sup> He made similar comments in letters to others. Both Darwin and his correspondents also observed that the review “contains no malice” and was not “ill-natured.”<sup>40</sup> Rodney Stark has written that “several of Wilberforce’s comments caused Darwin to make modifications in a later revision of the book.”<sup>41</sup> Wilberforce himself thought well enough of his review to reprint it in 1874.<sup>42</sup> Despite Darwin’s own

34. Wilberforce, “Review,” 252.

35. Wilberforce, “Review,” 239.

36. Gould, “Soapy,” 22–23.

37. Gould, “Soapy,” 21.

38. Burkhardt, ed., *Correspondence*, 293.

39. Burkhardt, ed., *Correspondence*, 320.

40. Burkhardt, ed., *Correspondence*, 294, 297, 299, 306, 309, 362, 491.

41. Rodney Stark, *For the Glory of God* (Princeton: Princeton University Press, 2003), 189. Mary Midgley similarly states (regarding the debate itself) that Wilberforce “made clear, forceful and pertinent scientific criticisms, which were seen as such by Darwin himself. (Darwin at once began experimental work to answer them.)” Mary Midgley, *Evolution as a Religion* (New York: Methuen, 1985), 11.

42. Lucas, “Wilberforce and Huxley,” 323–24. The reprinting itself occurred posthumously.



magnanimity toward it, “Wilberforce’s attack infuriated Darwin’s friends [especially Hooker and Huxley, who bore the brunt of public debate in support of *Origin*] as did no other single episode in the controversy. A quarter of a century later Huxley’s indignation still had not abated.”<sup>43</sup>

Beyond its attack on Darwin’s methodology and evidence, there is probably a deeper reason that may account for the odium in which Huxley held the review. That is, Wilberforce’s Christian theism represented an entirely different worldview, which clashed with Darwin’s theory.<sup>44</sup> Although naturalism and, indeed, the concept of evolution had long existed, *Origin* gave that worldview a scientific plausibility it previously lacked. Huxley’s recognition of this (and his antagonism toward the theistic worldview) was expressed in his essay “On the Reception of the *Origin of Species*” as follows:

The oldest of all philosophies, that of Evolution, was bound hand and foot and cast into utter darkness during the millennium of theological scholasticism. But Darwin poured new life into the ancient frame; the bonds burst, and the revived thought of ancient Greece has proved itself to be a more adequate expression of the universal order of things than any of the schemes which have been accepted by the credulity and welcomed by the superstition of seventy later generations of men.<sup>45</sup>

Gould has acknowledged that Darwin’s theory is not strictly a limited “scientific” theory at all but is fundamentally a “big idea,” a “truly large theory,” a “comprehensive world view,” an “historical hypothes[i]s” or “historical inquiry”; it cannot be “seen or derived by experiment” and cannot “proceed by canonical methods of direct experiment and repetition,” but “is based on analogy, not observation” and could only be judged “by seeking concordance of pattern among large sets of independent criteria.”<sup>46</sup>

Wilberforce recognized the fundamentally “worldview” nature of Darwin’s

43. Himmelfarb, *Darwinian Revolution*, 275.

44. “‘Darwinism’ was defined in the Victorian period and is defined today not only as Darwin’s theory of natural selection, but as a comprehensive network that includes a philosophical view of the ethical as well as practical significance of scientific investigation; as a type of materialism; as agnosticism; as an assault on the historical validity of scripture; and as a model for the design of a political and economic community.” Charles Blinderman and David Joyce, “Preview,” *The Huxley File*; accessed 27 August 2020 at <http://aleph0.clarku.edu/huxley/>.

45. Thomas Henry Huxley, “On the Reception of the *Origin of Species*,” in *The Life and Letters of Charles Darwin*, edited by Francis Darwin (New York: Appleton, 1889), 1:534.

46. Gould, “Soapy,” 22–24. Karl Popper, perhaps the twentieth century’s greatest philosopher of science, similarly said that Darwinism, in both its original and modern forms, “is not a testable scientific theory, but a metaphysical research programme.” Karl Popper, *Unended Quest: An Intellectual Autobiography*, 2d ed. (London: Routledge, 2002), 195; see also at 198.

hypothesis and what that entailed. Consequently, toward the end of the review, he raised the related issues of God, design, and the applicability of Darwin's theory to mankind:

He [Darwin] not obscurely declares that he applies his scheme of the action of the principle of natural selection to MAN himself, as well as to the animals around him. Now, we must say at once, and openly, that such a notion is absolutely incompatible not only with single expressions in the word of God on that subject of natural science with which it is not immediately concerned, but, which in our judgment is of far more importance, with the whole representation of that moral and spiritual condition of man which is its proper subject-matter. Man's derived supremacy over the earth; man's power of articulate speech; man's gift of reason; man's free-will and responsibility; man's fall and man's redemption; the incarnation of the Eternal Son; the indwelling of the Eternal Spirit, All are equally and utterly irreconcilable with the degrading notion of the brute origin of him who was created in the image of God, and redeemed by the Eternal Son assuming to himself his nature.<sup>47</sup>

Additionally, Wilberforce recognized potentially dangerous implications inherent in the naturalistic, evolutionary worldview. After discussing examples Darwin gave of improvement of instinct by natural selection, he made these comments:

We cannot but think that we detect one of those hints by which Mr. Darwin indicates the application of his system from the lower animals to man himself, when he dwells so pointedly upon the fact that it is always the black ant which is enslaved by his other coloured and more fortunate brethren. 'The slaves are black!' We believe that, if we had Mr. Darwin in the witness-box, and could subject him to a moderate cross-examination, we should find that he believed that the tendency of the lighter-coloured races of mankind to prosecute the negro slave-trade was really a remains, in their more favoured condition, of the 'extraordinary and odious instinct' which had possessed them before they had been 'improved by natural selection' from Formica Polyerges into Homo.<sup>48</sup>

---

47. Wilberforce, "Review," 257–58. Wilberforce added that the only plausible way to account for "the manifest plan, order, and arrangement which pervade creation" is to acknowledge that "all creation is the transcript in matter of ideas eternally existing in the mind of the Most High—that order in the utmost perfectness of its relation pervades His works, because it exists as in its centre and highest fountain-head in Him the Lord of all." Wilberforce, "Review," 259. Darwin responded to these arguments by writing, in the margin of the review next to this passage, "Mere words." Burkhardt, ed., *Correspondence*, 295n.2.

48. Wilberforce, "Review," 253–54. He discussed the zoological aspects of ant slavery at pages 227–30. Wilberforce was passionately committed to continuing the campaign (begun by his father) against all forms of human conduct predicated on the assumption that some people

J. R. Lucas explains the importance of this:

One of the charges against Wilberforce was that he considered the bearing of Darwin's theory on our understanding of man, and ... allowed his audience to be swayed by considerations not strictly scientific. But whereas such considerations are irrelevant to limited scientific laws, such as Baconian hypotheses, they cannot be ruled out *a priori* from being relevant to very general theories or paradigms. Just as evidence for Darwinism could be drawn from many fields, so can evidence against it. In recent years Jensen and Eysenk have been in hot water for their allegedly racist views about the genetic aspects of human intelligence. It is interesting to note that Wilberforce in his review had foreseen the potentially racist implications of Darwin's theories, and has a witty passage about the colour prejudice of ants, who always have black ants as their slaves. To put the argument briefly in the form of a dilemma: either Darwin's theory was a simple hypothesis, in which case difficulties about hybrids and reversion to type were fair and at the time well-nigh conclusive arguments against it: or it was a grand interpretive schema, in which case counterintuitive consequences about the nature and dignity of man were relevant and cogent.<sup>49</sup>

Although it is beyond the scope of this paper to discuss the vast array of social, political, economic, and moral matters to which natural selection and evolutionary thinking have been applied, it is sufficient to observe that Wilberforce's concerns about the implications of Darwin's theory were justified.<sup>50</sup> Indeed, Wilberforce's

---

were of less intrinsic value than others because of their race or color. Brian Stanley comments, "The Christian campaign against slavery was founded on the understanding of the unity and hence the distinctiveness of the human race. What worried Bishop Wilberforce most about Darwin's theory was its apparent undermining of that foundation for Christian morality." Brian Stanley in "The Discussion," 2 of 14.

49. Lucas, "Wilberforce and Huxley," 322.

50. From the beginning, Darwinism was applied to social, political, and economic life (see nn.44, *supra*, and 59–62, *infra*, and associated text). The extent to which such applications of Darwinism outside the realm of biology have been largely positive or negative is debated. See Christopher Fish, "The Impact of Darwinism," *The Stanford Review* (April 21, 2008); accessed 23 November 2021 at <https://stanfordreview.org/impact-darwinism/>; Greta Jones, *Social Darwinism in English Thought* (Atlantic Highlands, NJ: Humanities Press, 1980). Given Wilberforce's concerns about the effect of Darwinism on the foundation of Christian morality, it is fair to observe that, even in Darwin's lifetime, Herbert Spencer's "Social Darwinism" was applied to justify *laissez faire* capitalism and oppose any laws that helped workers, the poor, and those deemed genetically weak, on the grounds that such laws would go against the evolution of civilization by delaying the extinction of the "unfit." See History.com Editors, "Social Darwinism" (August 21, 2018); accessed 23 November 2021 at

prescient recognition of the potentially racist implications of Darwinism was confirmed in that, “In 1860 genetic arguments were being adduced in the United States in defence of slavery.... Evolutionary arguments could be used—in our century have been used—to justify the degradation of man.”<sup>51</sup>

It therefore will not do to attack Wilberforce’s point, as Gould does, on the grounds that Darwin was personally opposed to slavery, that Darwin did not, in fact, “dwell pointedly” on the color of the ant slaves, that Darwin was indicted “for things he doesn’t say but which, the reviewer conjures, he might say,” and that Darwin made no “explicit comparison of ants and humans” because “ants are not on an evolutionary lineage leading to vertebrates, so no comparison could be made.”<sup>52</sup> That is to miss the substance of Wilberforce’s remarks and to ignore the potential implications of Darwinism.<sup>53</sup> Such, then, was Wilberforce’s analysis of *Origin*, which he brought to the British Association for the Advancement of Science’s meeting on June 30, 1860.

### The Wilberforce-Huxley Debate

The meeting of the British Association was held at Oxford from June 26–July 3, 1860; the “debate” occurred during the June 30 meeting of Section D (zoology and botany, including physiology).<sup>54</sup> At that time, Thomas Henry Huxley was 35 years old, chair

---

<https://www.history.com/topics/early-20th-century-us/social-darwinism>; “Social Darwinism,” *Wikipedia* (2021). On the opposite end of the political spectrum, Karl Marx wrote that “Darwin’s work is most important and suits my purpose in that it provides a basis in natural science for the historical class struggle.” “Influences on Karl Marx,” *Wikipedia* (2021); accessed 26 November 2021 at [https://en.wikipedia.org/wiki/Influences\\_on\\_Karl\\_Marx#cite\\_note-20](https://en.wikipedia.org/wiki/Influences_on_Karl_Marx#cite_note-20). Dutch astronomer, philosopher, and Marxist theorist, Anton Pannekoek, early on concluded, “The scientific importance of Marxism as well as of Darwinism consists in their following out the theory of evolution, the one upon the domain of the organic world, of things animate; the other, upon the domain of society.” Anton Pannekoek. *Marxism and Darwinism*, trans. Nathan Weiser (Chicago: Charles H. Kerr and Company, 1912), 7.

51. J. R. Lucas, “Wilberforce no ape,” *Nature* 287, no. 5782 (9 October 1980): 480. Sir Francis Galton (Darwin’s half-cousin) launched a new “science” of eugenics, based on his reading *Origin*, which aimed at improving the human race by ridding society of “undesirables.” Adolf Hitler read about eugenics and social Darwinism while he was in Landsberg prison in 1924 and adopted such views which, of course, led to the mass-murder of Jews and others considered by the Nazis to be biologically inferior. History.com Editors, “Social Darwinism.”

52. Gould, “Soapy,” 16–18.

53. Indeed, Gould’s criticism of Wilberforce’s review on this issue is based upon narrow, scientific, linguistic and personal grounds—the very type of argument he later chided Wilberforce for making when Wilberforce attacked Darwin’s theory on the grounds that it was not validated either by observation or experiment. Gould’s point then was that natural selection is a “big idea” that cannot be judged so narrowly. See text, *supra*, at n.46. Here Wilberforce was considering the potential implications of evolution as a “big idea,” the very point Gould ignores.

54. “Report of the British Association meeting in Oxford, 26 June–3 July, 1860,” as set forth in the *Athenaeum*, 7 July and 14 July 1860, in “Darwin Correspondence Project” (University of Cambridge University, 2020), 590; accessed 1 September 2020 at

of natural history at the School of Mines in Edinburgh, naturalist to the Geological Survey, and a Fellow of the Royal Society.<sup>55</sup> He had found “in Darwin what he had failed to find in Lamarck, an intelligible hypothesis good enough as a working basis.”<sup>56</sup> He immediately became, and remained throughout his life, Darwin’s champion defender—“Darwin’s bulldog.”<sup>57</sup> Two days before the debate with Wilberforce, at the June 28 session of Section D, Huxley had clashed with Owen over the brains of gorillas and men.<sup>58</sup>

The June 30 session of Section D featured the presentation of Dr. John W. Draper’s paper “On the Intellectual Development of Europe, considered with Reference to the Views of Mr. Darwin and others, that the Progression of Organisms is determined by Law.”<sup>59</sup> The *Athenaeum* reported that the announcement of that paper “attracted an immense audience” to the Section.<sup>60</sup> Janet Browne describes Draper as “a keen cultural evolutionist, describing the advance of human society as it was released from what he called a thoroughly benighted Catholic past, and embryology of nations, so to speak. Draper said that human progress depended on science vanquishing theology.”<sup>61</sup> His paper thus shows “how quickly a Darwinian metaphor of adaptation and environment had entered what we would call social and political science.”<sup>62</sup> In other words, from its inception Darwinism was seen as an all-

---

<https://www.darwinproject.ac.uk/commentary/religion/british-association-meeting-1860>.

55. *Encyclopaedia Britannica*, 11th ed., s.v. “Huxley, Thomas Henry.”

56. *Encyclopaedia Britannica*, 11th ed., s.v. “Huxley, Thomas Henry.” Nevertheless, “he never to the end of his life concealed the fact that he thought it [Darwinism] wanting in rigorous proof.” *Encyclopaedia Britannica*, 11th ed., s.v. “Huxley, Thomas Henry.”

57. According to Blinderman and Joyce, the nickname was self-imposed. Blinderman and Joyce, “Preview.” The popular view that Huxley was known as “Darwin’s bulldog” is itself a myth. In an article for the Linnaean Society, John van Wyhe writes, “It should come as a surprise then to discover that, in fact, Huxley was *not* widely known as or indeed *ever* referred to as ‘Darwin’s bulldog’ during his lifetime. The name occurs in no 19th-century newspapers, magazines or books. It has never been quoted from a contemporary diary or letter. The nickname first appeared in a lecture by the American palaeontologist Henry Fairfield Osborn in 1895, shortly after Huxley’s death in June that year.” John van Wyhe, “Why there was no ‘Darwin’s bulldog,’” *The Linnaean* 35, no. 1 (April 2019): 28.

58. “Report of the British Association,” 14 July 1860, 592–93. At the time, Owen was Darwin’s chief scientific opponent. Huxley feuded with Owen both personally and scientifically. Gilley and Loades, “The War,” 291–93. The “inner circle of Darwinians” saw that the real fight was with Owen, not Wilberforce. Brooke, “Wilberforce-Huxley,” 130.

59. “Report of the British Association,” 14 July 1860, 593.

60. “Report of the British Association,” 14 July 1860, 594. The crowd was estimated to be in excess of 700, necessitating a change of rooms. Adrian Desmond, *Huxley: From Devil’s Disciple to Evolution’s High Priest* (Reading, Mass.: Addison-Wesley, 1997), 277.

61. Janet Browne, *Charles Darwin: The Power of Place* (Princeton, NJ: Princeton University Press, 2002), 121.

62. Keith Thomson, “Huxley, Wilberforce and the Oxford Museum,” *American Scientist* 88, no.3 (May–June 2000): 211–12.

encompassing worldview, not merely a scientific theory limited to the biological realm of nature.

No official record or transcript of the proceedings was kept, but *Jackson's Oxford Journal*, 7 July 1860, after noting that “great interest was aroused in this section by Professor Draper’s paper,” summarized the proceedings as follows:

The large library at the Museum was crowded. A long discussion took place on the soundness or unsoundness of the Darwinian theory, in which the Bishop of Oxford took a prominent part. He condemned the Darwinian theory as unphilosophical; as founded, not upon philosophical principles, but upon fancy, and he denied that one instance had been produced by Mr. Darwin on the alleged change from one species to another had ever taken place. He alluded to the weight of authority that had been brought to bear against it—men of eminence, like Sir B. Brodie and Professor Owen, being opposed to it, and concluded, amid much cheering, by denouncing it as degrading to man, and as a theory founded upon fancy, instead of upon facts.—Professor Huxley, in a calm, dispassionate and argumentative speech, replied to his Lordship, and was followed by Admiral Fitzroy, Dr. Beale, Mr. Lubbock, and Dr. Hooper.<sup>63</sup>

Toward the end of his speech, to “lighten the atmosphere after the passage of about two hours ... In the tradition of British debate, hard-hitting but with a strong undercurrent of playfulness,”<sup>64</sup> Wilberforce made a comment, the wording of which is disputed by the eyewitnesses, about whether Huxley would prefer a monkey for his grandfather or grandmother, or was related by his grandfather’s or grandmother’s side to an ape.<sup>65</sup> The *Oxford Chronicle* reported, “Glancing at Professor Huxley’s remarks, on the previous day, in a discussion with Professor Owen, the Bishop facetiously asked if he had any particular predilection for a monkey ancestry, and, if so, on which side—whether he would prefer an ape for his grandfather, and a woman for his grandmother, or a man for his grandfather, and an ape for his grandmother.”<sup>66</sup> Eyewitness Balfour Stewart, a prominent physicist and meteorologist, wrote, “The Bishop said that he had been informed that Prof. Huxley didn’t care whether his grandfather was an ape[;] now he [the Bishop] would not like to go to the Zoological Gardens and find his father’s father or his mother’s mother in some antiquated ape.”<sup>67</sup>

---

63. “Meeting of the British Association,” *Jackson's Oxford Journal*, 7 July 1860, 2. The summary in the *Athenaeum*, 14 July 1860 was similar. “Report of the British Association,” 14 July 1860, 595. The meeting was also summarized in the *Oxford Chronicle* and *Berks and Bucks Gazette* on 21 July 1860.

64. Jensen, “Return,” 176, 177.

65. Jensen, “Return,” 166–67.

66. England, “Censuring Huxley and Wilberforce,” 375–76.

67. Gould, “Knight” 21.

As the *Oxford Chronicle* reported and Stewart's account implies, "the ape-grandfather metaphor originally had been *Huxley's own coinage*—if not in Thursday's discussion, then on some earlier occasion."<sup>68</sup> Indeed, *The Press's* account of the Thursday session reveals that very thing. In response to Owen's presentation on gorilla versus human brains, Huxley "was stimulated to reply, and 'somewhat facetiously remarked that they [the churchmen] had nothing to fear should it be shown that apes were their ancestors.'"<sup>69</sup> Alfred Newton, who was present at both the Owen-Huxley encounter on June 28 and the Wilberforce-Huxley "debate," explicitly stated that Wilberforce's question to Huxley was "referring to what Huxley had said two days before."<sup>70</sup>

That did not end Wilberforce's speech. He returned to disputing the scientific aspects of Darwinism. In doing so, he first indicated that his quip about grandfather or grandmother was meant jocularly when, according to the *Oxford Chronicle*, he said, "But to treat the subject seriously" and then went on to reiterate that the line between humans and animals was distinct and that no experimental or other evidence showed any tendency of one animal to assume the form of another.<sup>71</sup> Thus, he generally followed the order of his *Quarterly Review* critique. He closed his presentation by lambasting the idea that humanity which, in many respects, "partook of the highest attributes of God," was merely "a development of the lower forms of creation." He concluded that he "did not believe that science and revelation were inimical to each other, but that what appeared irreconcilable in the present state of scientific knowledge would in the fullness of time be made manifest, and redound to the triumph of both."<sup>72</sup>

Huxley then spoke. He presented no detailed refutation of Wilberforce's arguments but, according to the *Athenaeum*:

defended Mr. Darwin's theory from the charge of its being merely an hypothesis. He said, it was an explanation of phenomena in Natural History, as the undulating theory was of the phenomena of light. . . . Without asserting that every part of the theory had been confirmed, he maintained that it was the best explanation of the origin of species which had yet been offered. With regard to the psychological distinction between man and animals; man himself was once a monad—a mere atom, and nobody could say at what moment in the history of his development he became consciously intelligent.<sup>73</sup>

Huxley also responded to Wilberforce's whimsical jibe. According to the *Oxford*

68. Thomson, "Huxley, Wilberforce," 212, *emph. added*.

69. Jensen, "Return," 164, quoting *The Press*, 7 July, p.656.

70. A. F. R. Wollaston, *Life of Alfred Newton* (New York: E. P. Dutton, 1921), 119.

71. England, "Censuring Huxley and Wilberforce," 376.

72. England, "Censuring Huxley and Wilberforce," 376.

73. "Report of the British Association," 14 July 1860, 595.

*Chronicle*, that was the first thing he did when he arose: “In reply to the Bishop’s query he said that if the alternative were given him of being descended from a man conspicuous for his talents and eloquence, but who misused his gifts to ridicule the laborious investigators of science and obscure the light of scientific truth, or from the humble origin alluded to, he would far rather choose the latter than the former.”<sup>74</sup>

That did not end matters. The *Oxford Chronicle* reports that Wilberforce again arose and said he regretted that Professor Huxley had taken umbrage at what he had said and that he had not intended any offense. As for his query to Professor Huxley:

he had been tempted to it by the merriment of the audience, and it was merely a passing allusion. He ridiculed Professor Huxley’s appeal to authority in connection with his remarks on amateurs in science. On which side lay the authority. Sir B. Brodie, Professor Owen, and other eminent men were opposed to it, and how the Professor could talk as he had done about authority he did not know.<sup>75</sup>

Then, according to the *Oxford Chronicle*, “Professor HUXLEY rose in answer to calls for him, and said he was sure the Bishop could have no desire to mislead, but he thought he had misapprehended his remarks upon authority. What he had deprecated was authority like the Bishop’s, authority derived from a reputation acquired in another sphere.”<sup>76</sup>

Three other speakers followed (one pro-Darwin; two con) before Joseph Hooker closed the discussion with a lengthy and more detailed rebuttal of Wilberforce.<sup>77</sup> None of the reports of the “debate” made any mention of a “crushing” rejoinder by Huxley.

74. England, “Censuring Huxley and Wilberforce,” 376. Other witnesses related a more acid tone to his rejoinder. W. Tuckwell, *Reminiscences of Oxford*, 2d ed. (New York: Dutton, 1908), 55; Huxley, ed., *Life and Letters*, 1:199 (referring to the recollection of J. R. Green). Huxley’s own version, as he wrote to Frederick Dyster on September 9, 1860, was: “If then, said I, the question is put to me would I rather have a miserable ape for a grandfather or a man highly endowed by nature and possessed of great means and influence who employs these faculties and that influence for the mere purpose of introducing ridicule into a grave scientific discussion—I unhesitatingly affirm my preference for the ape.” Thomas Henry Huxley, Letter to Frederick Dyster, 9 September 1860, in the *Huxley Papers* 15:117; accessed 27 August 2020 at <https://mathcs.clarku.edu/huxley/letters/60.html>.

75. England, “Censuring Huxley and Wilberforce,” 377. Wilberforce’s statement that he had been “tempted to [his query] by the merriment of the audience” is confirmed by eyewitness W. Tuckwell, who recalled, “He did not mean to hurt the Professor’s feelings; it was our fault—we had laughed, and that made him pursue the joke.” Tuckwell, *Reminiscences*, 55.

76. England, “Censuring Huxley and Wilberforce,” 377.

77. “Report of the British Association,” 14 July 1860, 595–96. The *Athenaeum* devoted three times the space to Hooker’s remarks than to Huxley’s (or Wilberforce’s). The multitude of speakers and the format of their remarks indicate that this was not a true “debate” at all but “an informal exchange, not a formal clash of prepared speeches.” Jensen, “Return,” 173.



In fact, according to Hooker, Huxley's voice probably could not even be heard by most of the audience.<sup>78</sup> The *Athenaeum* summarized the proceedings by commenting that Wilberforce and Huxley had "each found foemen worthy of their steel," although "the most eminent naturalists assembled at Oxford" were in the Bishop's camp.<sup>79</sup>

Both sides claimed victory; and the partisans wrote to their friends shortly afterward of their victories: Hooker on July 2—"I smashed him"; Wilberforce on July 3—"I thoroughly beat him"; Huxley on September 9—"I believe I was the most popular man in Oxford for full four and twenty hours afterwards."<sup>80</sup> More dispassionate evidence at the time suggests that, as the *Athenaeum* indicated, both sides acquitted themselves well, although the majority of the audience sided with the Bishop. Indeed, naturalist Henry Baker Tristram was *de-converted* from Darwinism as a result of listening to the debate.<sup>81</sup> Even so, the overall effect probably was, as summarized by Himmelfarb, "less to shift sentiment than to harden it, to intensify party strife among those already endowed with party spirit."<sup>82</sup>

Further, Huxley's famous "riposte" was not the unequivocal success posited by the "canonical" version of the "debate." The reason, of course, was that it was not Wilberforce who had ridiculed Huxley, but Huxley who had ridiculed Wilberforce—a Bishop and Vice-President of the British Association. As Lucas summarizes:

Grandmother ["A Grandmother's tales," *Macmillan's Magazine* (October 1898)] recalled . . . "as we passed through the crowd we felt that we were expected to say 'how abominably the Bishop was treated'- or to be considered outcasts and detestable." She attributed it to party spirit. But Hooker, who had also controverted Wilberforce, incurred no ill will. . . . Sir Charles Lyell reported a division of opinion about Huxley's performance, many blaming Huxley for his irreverent freedom, but others, including the vice-chancellor, thinking that the bishop got no more than he deserved. But if the legend were correct, there could have been no question of blaming Huxley. If I ask you whether you are descended from an ape, you are perfectly entitled to say you would rather be descended from an ape than a man like me. Huxley must have gone much further than the bishop for there to have been room for the difference of opinion reported by Lyell. . . . The *riposte* therefore cannot have been called for, nor have been entirely successful, and the legend, which awards all the blame to Wilberforce and a devastating success to Huxley,

---

78. Burkhardt, ed., *Correspondence*, 270. See also Browne, *Charles Darwin*, 122 ("When the riposte came, it was so quick that only a few people towards the front can have possibly heard").

79. "Report of the British Association," 7 July 1860, 591. J. Vernon Jensen similarly reports, "Even the pro-Huxley Mrs Sedgwick wrote, in 1900, that at the conclusion of the meeting Huxley supporters were still in the minority." Jensen, "Return," 172.

80. Jensen, "Return," 171–72.

81. Brooke, "Wilberforce-Huxley," 128–29.

82. Himmelfarb, *Darwinian Revolution*, 293.

cannot be correct.<sup>83</sup>

### The Aftermath

The above examination of the debate and its result leads one to wonder how it could have ended up being “the defining moment in the great science-religion debate of the 19th century.”<sup>84</sup> In fact, as John Hedley Brooke points out, “Far from any lasting significance, the event almost completely disappeared from public awareness until it was resurrected in the 1890s.”<sup>85</sup> The simple reason is that “The Oxford battle lives on in part because it mattered so terribly to Huxley,” whose “lifelong labor was the expulsion of amateurs from the physical sciences and the definition of natural science as a subject to be sharply distinguished from theology and philosophy.”<sup>86</sup> That necessarily pitted Huxley against the clergy “because the clergy dominated the universities, the few university positions in science were mostly occupied by clergymen, and becoming a cleric was the most obvious way of obtaining means and leisure for scientific research.”<sup>87</sup> George Benthien summarizes the situation:

At the beginning of the 19th century, as in previous centuries, science was not really a profession. It was more like a hobby for some of society’s elite, many of whom were members of the clergy. By the 1860s there were a few young men, like Huxley, who were trained in science and wanted to make science a career. They resented amateurs like Wilberforce speaking out on matters of science. Thus, they saw that the story of Huxley getting the best of the famous Bishop could serve their ends of creating a closed scientific community where only those trained in science were welcome.<sup>88</sup>

We see this in the debate, particularly in Huxley’s “protest against this subject being dealt with by *amateurs in science*” and “what he had deprecated was authority like the Bishop’s, *authority derived from a reputation acquired in another sphere*.”<sup>89</sup> Also, in 1889 Huxley wrote that there was no piece “more worthy of dishonor, than the article in the ‘Quarterly Review’ for July, 1860. Since Lord Brougham assailed Dr. Young, the world has seen no such specimen of the insolence of a *shallow*

83. Lucas, “Wilberforce and Huxley,” 325–26.

84. Lienhard, “*Soapy Sam*,” 2 of 3.

85. Brooke, “Wilberforce-Huxley,” 129. This is corroborated in that John William Draper, who had spoken immediately before Bishop Wilberforce on June 30, 1860, made no mention of the “debate” in his pro-science, anti-Catholic *History of the Conflict between Religion and Science* (1874).

86. Gilley and Loades, “The War,” 294–95.

87. Gilley and Loades, “The War,” 296.

88. Benthien, “Huxley-Wilberforce,” 6.

89. England, “Censuring Huxley and Wilberforce,” 376, 377, *emph. added*.

*pretender to a Master in Science* as this remarkable production.”<sup>90</sup>

Recall that, while Wilberforce—both in his *Quarterly Review* critique and at the debate—had raised the issue of evolution versus design by God, particularly in connection with the distinction between animals and mankind, his remarks at the debate were based on the *scientific* inadequacies of Darwin’s theory, not religion. He had concluded his opening remarks at the debate by stating, “He did not believe that science and revelation were inimical to each other, but that what appeared irreconcilable in the present state of scientific knowledge would in the fullness of time be made manifest, and redound to the triumph of both.”<sup>91</sup> Nevertheless, it suited Huxley and his supporters:

to portray their opponents as being more religiously bigoted than they truly were. And then, in the years to come, when Huxley and his friends came to tell the history, there was a strong tendency to portray the religious opposition to Darwinism—a religious opposition which they claimed to have conquered—as being far more strident and formidable than it truly was.<sup>92</sup>

If anyone was bigoted and strident, it was Huxley himself. In a letter written to a friend on 30 January 1859 (i.e., approximately ten months *before Origin* was published and a-year-and-a-half before the “debate” with Wilberforce), Huxley wrote, “My screed was meant as a protest against Theology and Parsondom in general—both of which are in my mind the natural and irreconcilable enemies of Science. Few see it but I believe we are on the eve of a new Reformation and if I have a wish to live thirty years, it is that I may see the foot of Science on the necks of her enemies.”<sup>93</sup> Huxley’s *Life and Letters* thus portrayed the “debate” as having “loomed all the larger in the public eye, because it was not merely the contradiction of one anatomist by another, but the open clash between Science and the Church.”<sup>94</sup> Indeed, the Wilberforce-Huxley encounter “in Huxley’s telling was quickly identified by [Darwin’s] friends and supporters as *the defining moment* of the whole controversy about evolution, because it harped on man and animal, bishop and baboon.”<sup>95</sup>

As the Darwinists prevailed, Huxley’s own account of the debate evolved, focusing on the repartee. His version of events took on decidedly religious overtones.

90. Huxley, “On the Reception,” 1:536, *emph. added*.

91. England, “Censoring Huxley and Wilberforce,” 376.

92. Michael Ruse, “Darwinism and atheism: different sides of the same coin?” *Endeavour* 22 (1998), 19.

93. Huxley, Letter to Frederick Dyster 30 January 1859, in the *Huxley Papers* 15:106. The “screed” refers to a lecture he gave at the Museum of Geology entitled “Science and Religion.” Blinderman and Joyce, *The Huxley File*, sec. 15: Verbal Delusions: The Bible.

94. Huxley, ed., *Life and Letters*, 1:194.

95. Randal Keynes, *Darwin, His Daughter, and Human Evolution* (New York: Riverhead, 2002), 257, *emph. added*.

In his letter of June 27, 1891, recounting the event, Huxley stated that “when he turned to me with his insolent question, I said to Sir Benjamin, in an undertone, ‘*The Lord hath delivered him into mine hands.*’”<sup>96</sup> Although that account is a late invention, “Once the story began to gather momentum as a result of the *Life and Letters* (of Darwin and Hooker as well as Huxley) it took on the aspect of a foundation myth—one of the defining moments of an emerging scientific professionalism.”<sup>97</sup> The myth lives on since “the debate in 1860 has mostly been of interest to pro-Darwinian historians of science. Huxley-Wilberforce therefore has a symbolic value which exceeds its historical importance: here indeed was a scientist and a theologian in direct opposition; *ergo*, there was a science/religion divide.”<sup>98</sup> As Rodney Stark concludes, “the tale of the bishop’s comeuppance continues to thrive as a revealing ‘truth’ about the incompatibility of religion and science. It’s as though Samuel Wilberforce . . . must have been wrong and a fool *because* he was a bishop.”<sup>99</sup>

And *that* really is the nub of the issue. Among the triumphant Darwinists, Darwinism early on became far more than a dispassionate, rationalistic search for truth, wherever that truth might be found. Instead, “Darwinism at once became a creed, to be espoused or eschewed with religious vehemence and enthusiasm.”<sup>100</sup> This, again, is epitomized by Huxley himself. Michael Ruse points out, “Huxley wanted to replace the old Christian theology with the new scientific theology of Darwinism.”<sup>101</sup> As Lucas observes, the “quarrel between religion and science came not because of what Wilberforce said, but because it was what Huxley wanted; and as Darwin’s theory gained supporters, they took over his view of the incident.”<sup>102</sup>

Wilberforce had recognized the essentially “worldview” nature of Darwinism and

96. Huxley, ed., *Life and Letters*, 1:202, *emph. added*. The lack of any perceived need by Wilberforce’s supporters to defend him initially, his untimely death, and other factors all contributed to the failure to provide a more balanced account of the event. J. R. Lucas, “Historian *Malgre Moi*,” in *Substance and Form in History*, ed. Leon Pompa and William Dray (Edinburgh: Edinburgh University, 1981), 142–43.

97. Brooke, “Wilberforce-Huxley,” 129. Keith Thomson, director of the Oxford University Museum of Natural History likewise says that Wilberforce-Huxley has become “part of science’s mythology.” Thomson, “Huxley, Wilberforce,” 210.

98. David Clifford, in “The Discussion,” 5 of 14.

99. Stark, *Glory*, 189, *emph. in original*.

100. Lucas, “Wilberforce and Huxley,” 321.

101. Michael Ruse, “Is Darwinism a Religion?” *Toronto Journal of Theology* 32 (2016): 373. T. S. Baynes wrote of Huxley in 1873:

Professor Huxley . . . represents what might be called its religious spirit in the most concentrated form. . . . He himself shows the truest instinct of this in calling his republished essays ‘Lay Sermons.’ . . . In perfect harmony with this feature of his character, Professor Huxley has been known to express an ardent desire for a scientific hell to which the finally impenitent, those who persist in rejecting the new physical gospel, might be condemned.

T. S. Baynes, “Darwin on Expression,” *Edinburgh Review* 137 (1873): 505–6.

102. Lucas, “Wilberforce and Huxley,” 329.

its implications concerning the uniqueness of humanity. In 1859–1860 that was an issue that Darwin wished to sidestep. In *Origin*, the closest he came was to predict, “In the distant future . . . Light will be thrown on the origins of man and his history.”<sup>103</sup> The heart of the matter was that, according to Darwin’s theory of natural selection, “the whole of nature, from the behaviour of microscopic algae to that of Fellows of the Royal Society, was a product of sheer chance! And it was the randomness of natural selection that caused such concern.”<sup>104</sup>

Thus, aside from the issue of professionals versus amateurs in science, the substantive importance of Darwinism, which Wilberforce understood (and which remains at issue today), is that, although evolution is not logically inconsistent with theism *per se*, it *is* inconsistent with historic, biblical Christianity. The reasons are two-fold and have been so from the beginning: (1) Darwinism is an all-encompassing worldview, not merely a theory of biological development. Michael Ruse (himself a leading evolutionist) acknowledges that “from the first it [Darwinism] has functioned as a secular religion, in opposition to the Christian religion of which it is the bastard offspring.”<sup>105</sup> (2) The Darwinian worldview is based on pure naturalism/materialism;

---

103. Charles Darwin, *On the Origin of Species by Means of Natural Selection* (London: John Murray, 1859), 190. That statement was somewhat disingenuous, since in *Origin* he also stated, “I should infer from analogy that probably *all the organic beings which have ever lived on this earth* have descended from some one primordial form, into which life was first breathed.” Darwin, *Origin*, 188, *emph. added*. Further, only a few days after *Origin* was published, Darwin “revealed privately to Lyell that he was confident that the theory of natural selection would explain fully how man had evolved as a thinking being.” Keynes, *Darwin, His Daughter*, 256. The sidestepping ended with Darwin’s *The Descent of Man* (1871) and *The Expression of the Emotions in Man and Animals* (1872).

104. Chapman, *Slaying the Dragons*, 139–40.

105. Ruse, “Is Darwinism a Religion?” abstract. Elsewhere, Ruse noted, “Evolution is promoted by its practitioners as more than mere science. Evolution is promulgated as an ideology, a secular religion -- a full-fledged alternative to Christianity, with meaning and morality. . . . This was true of evolution in the beginning, and it is true of evolution still today.” Michael Ruse, “Is Darwinism a Religion?” *HuffPost* (September 20, 2011); accessed 15 November 2021 at [https://www.huffpost.com/entry/is-darwinism-a-religion\\_b\\_904828](https://www.huffpost.com/entry/is-darwinism-a-religion_b_904828). In his book *Darwinism as Religion* (New York: Oxford University Press, 2017), Ruse makes this point by looking at a number of areas including God, origins, humans, race and class, amorality, sex, sin and redemption, and showing how, through Darwinian-influenced literature and other means, Darwinism speaks to these issues as “a religion, or if you want to speak a little more cautiously a ‘secular religious perspective’” (ix). Coming from a rather different perspective, Allan Chapman similarly identifies six “religious” premises and structures which characterize modern science. Chapman, *Slaying the Dragons*, 170–71. Chapman states, “In short, modern science, instead of driving religious and ‘meaning’ questions out of the picture, has brought them centre stage and under the spotlight.” Chapman, *Slaying the Dragons*, 164. The similarities between evolution and a religious sect were noted as early as 1873 by T. S. Baynes. Baynes, “Darwin on Expression,” 502–7. Perhaps this should not be surprising, since Richard Somerset, in an interesting essay, shows that Darwin based his theory of evolution “on metaphysical tenets,

there is no room for God or the supernatural. Alvin Plantinga points out that what is inconsistent with Christian belief “is the claim that this process [of evolution] is *unguided*—that no personal agent, not even God, has guided, directed, orchestrated, or shaped it. Yet precisely this claim is made by a large number of contemporary scientists or philosophers who write on this topic.”<sup>106</sup> Darwin himself wrote to Charles Lyell on October 20, 1859, “I have reflected a good deal on what you say on the necessity of continued intervention of creative power. I cannot see the necessity; and its admission, I think, would make the theory of Natural Selection valueless.”<sup>107</sup> Therefore, as early as 1874 Charles Hodge was correct to conclude, “What is Darwinism? It is Atheism.”<sup>108</sup>

### Contemporary Implications

In the more than 150 years since Darwin’s *Origin* was published, Darwin’s theory itself has evolved, and other scientific and philosophical theories have been developed that address the issues of existence. Darwin’s principle of natural selection has been combined with the principles of genetics and genetic inheritance (first discovered by Augustinian abbot Gregor Mendel in the 1860s), resulting in the modern evolutionary synthesis (sometimes called neo-Darwinism). The modern synthesis is based on a

---

which initially appeared to him to have a strong ethical and religious appeal.” Richard Somerset, “Charles Darwin: A Christian Undermining Christianity?” in *Science and Beliefs: From Natural Philosophy to Natural Science, 1700–1900*, eds. David Knight and Matthew Eddy (Aldershot, England: Ashgate, 2005), 155.

106. Plantinga, *Where the Conflict*, 12.

107. Darwin, ed., *Life and Letters*, 507. Keynes further reports that Darwin “rejected the idea that God had miraculously inserted the human soul in an animal body, and set a challenge for his argument. ‘I would give absolutely nothing for [the] theory of natural selection if it required miraculous additions at any one stage of descent.’” Keynes, *Darwin, His Daughter*, 256.

108. Charles Hodge, *What is Darwinism?* (New York: Scribner, Armstrong, and Co., 1874), 177. Hodge continued, “This does not mean, as before said, that Mr. Darwin himself and all who adopt his views are atheists; but it means that his theory is atheistic, that the exclusion of design from nature is, as Dr. Gray says, tantamount to atheism.” Hodge, *What is Darwinism?*, 177. Hodge’s point is not invalidated by the fact that “most Christians rapidly found an accommodation with evolutionism. . . . Some of [this century’s] most eminent and visible evolutionists have been sincere practicing Christians.” Ruse, “Darwinism and atheism,” 19. Professing Christians accept evolution by positing God’s guidance of the evolutionary process, e.g., God created the original “kinds” of creatures in such a way that he knew they would then “evolve” in particular ways, or God intervened in the process at particular points (such as causing particular mutations to occur, creating man as distinct from the animals, or by endowing an evolved ape with a soul). The point is that the nature of the “evolution” posited by these attempted reconciliations of God and evolution are *not* Darwin’s theory or the modern “scientific” consensus view of evolution at all. Ruse also states the corollary or other side of that coin, “In fact, to a person one can truly say that all of the early evolutionists were sincere believers. However, their belief was in a God as unmoved mover, rather than in a Christian providential God.” Ruse, “Darwinism and atheism,” 18.

number of core principles: “(1) genetic variation is the source of phenotypic variation; (2) this variation arises due to mutations that are random with respect to fitness; (3) accumulated mutations selected over time are the basis of evolution within a taxon (gradualism); (4) adaptation is solely the result of natural selection; and (5) evolution occurs at the population level.”<sup>109</sup> Although various modifications have been proposed, this has become the scientifically normative explanation for animate existence and development. For example, in the 1970s, Niles Eldredge and Stephen Jay Gould challenged the cardinal tenet of Darwinism and neo-Darwinism, evolutionary gradualism (which they said is not borne out in the fossil record), with their theory of “punctuated equilibrium,” i.e., that most species remain in a state of stasis, but the bulk of evolutionary change occurs in punctuated bursts.<sup>110</sup> At the grandest level—how and why the universe exists at all and in the form it is—much of the classical Newtonian physics of Darwin’s day has been significantly changed by Einstein’s theories of special and general relativity, the development of quantum mechanics, and now string theories and M-theory which “may offer answers to the question of creation.”<sup>111</sup>

Despite these revisions to evolutionary theory and the development of the theories of relativity, quantum mechanics, and M-theory, the issues raised by Wilberforce have not gone away.<sup>112</sup> Scientific theories, as they now stand, either explicitly or implicitly purport to offer explanations for the existence of the universe and life that exclude God. Thus, the National Association of Biology Teachers’ position statement on the teaching of evolution states that educators “should support science education by rejecting calls to account for the history of life or describe the mechanisms of evolution by invoking any non-natural or supernatural notions.”<sup>113</sup> This is the culmination of the

109. Zachary B. Hancock, Emma S. Lehmberg, and Gideon S. Bradburd, “Neo-darwinism still haunts evolutionary theory: A modern perspective on Charlesworth, Lande, and Slatkin,” *Evolution* 75, no. 6 (June 2021): 1245.

110. Niles Eldredge and Stephen Jay Gould, *Punctuated Equilibria: An Alternative to Phyletic Gradualism* (San Francisco: Freeman, Cooper, and Co., 1972); Stephen Jay Gould and Niles Eldredge, “Punctuated equilibria: the tempo and mode of evolution reconsidered,” *Paleobiology* 3 (1977): 115–51.

111. Stephen Hawking and Leonard Mlodinow, *The Grand Design* (New York: Bantam, 2010), 8.

112. In fact, at a symposium entitled “Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution,” the chairperson, Dr. C. H. Waddington of the Institute of Animal Genetics, Edinburgh, summarized by saying that the symposium “has actually been concerned with mathematical challenges to Darwinism as a whole, raising many points that were avidly discussed in the 1870’s and 80’s.” C. H. Waddington, “Summary Discussion,” in *Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution*, eds. Paul Moorhead and Martin Kaplan (New York: Wistar Institute of Anatomy and Biology, 1967), 95.

113. “NABT Position Statement on Teaching Evolution,” *National Association of Biology Teachers* (March 2019); accessed 18 November 2021 at <https://nabt.org/Position-Statements-NABT-Position-Statement-on-Teaching-Evolution>.

views and attitudes articulated by Darwin and Huxley.<sup>114</sup> The contemporary situation is candidly summarized by evolutionary biologist Richard Lewontin, former Alexander Agassiz Professor of Zoology and Professor of Biology at Harvard University:

Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take the side of science *in spite* of the patent absurdity of some of its constructs, *in spite* of its failure to fulfill many of its extravagant promises of health and life, *in spite* of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.<sup>115</sup>

Despite this naturalistic, scientific orthodoxy, both Christian and many non-Christian scientists and philosophers echo Wilberforce. They have raised issues that go to the heart of explanatory power and even the validity of these non-theistic theories. For example, Michael Denton, who was a senior research fellow in the Biochemistry Department at the University of Otago, Dunedin, New Zealand, and who also is a self-described agnostic,<sup>116</sup> observes that “at a morphological level the pattern of nature seems to correspond reasonably well with the old nineteenth-century

---

114. At the time he wrote *Origin*, Darwin still believed in God as a “First Cause.” However, that view weakened over time and he concluded, “The mystery of the beginning of all things is insoluble by us; and I for one must be content to remain an Agnostic.” Nora Barlow, ed., *The Autobiography of Charles Darwin* (New York: Harcourt, Brace and Company, 1958), 92–94. It was Huxley who coined the term “agnostic,” and his position was similar to Darwin’s, namely, that “the term ‘Nature’ covers the totality of that which is,” and the existence of supernature or supernaturalism has not been proved. Thomas Henry Huxley, *Science and Christian Tradition* (New York: D. Appleton and Company, 1895), 39n.1 and associated text. Although Darwin himself may have been equivocal regarding God’s existence, he had made it clear that God’s intervention in nature would be contrary to the principles of natural selection (see n.107 and associated text, *supra*). Hence, Charles Hodge and others correctly concluded early-on that Darwinism was atheistic. Now, even the idea of God as a “First Cause” is ruled out-of-court by contemporary scientific orthodoxy, which has taken Darwin’s views to their logical conclusion.

115. Richard Lewontin, “Billions and Billions of Demons,” *New York Review of Books* (January 9, 1997): 31, *emph. in orig.*

116. Tom Frame, *Evolution in the Antipodes: Charles Darwin and Australia* (Sydney: UNSW Press, 2009), 291.



typological model. Nearly all known groups appear to be isolated and well defined and clear sequential patterns whereby one class is linked to another through clear linear series of transitional forms are virtually unknown.”<sup>117</sup> In the years since Darwin, “the molecular biological revolution has dramatically changed this situation by providing an entirely new way of comparing organisms at a biochemical level.... All that was necessary to demonstrate an evolutionary relationship was to examine the proteins in the species concerned and show that the sequences could be arranged into an evolutionary series.”<sup>118</sup> However, the biochemical and molecular evidence has completely failed to substantiate Darwin’s theory:

As more protein sequences began to accumulate during the 1960s, it became increasingly apparent that the molecules were not going to provide any evidence of sequential arrangements in nature, but were rather going to reaffirm the traditional view that the system of nature conforms fundamentally to a highly ordered hierarchic scheme from which all direct evidence for evolution is emphatically absent. Moreover, the divisions turned out to be more mathematically perfect than even the most die-hard typologists would have predicted.<sup>119</sup>

Thus, at the animal level, microbiology is inconsistent with neo-Darwinian naturalism. But Wilberforce had been particularly concerned about *humanity’s* relationship to animals. In his published review of *Origin*, he stated, “Man’s derived supremacy over the earth; man’s power of articulate speech; man’s gift of reason; man’s free-will and responsibility.... All are equally and utterly irreconcilable with the degrading notion of the brute origin of him.”<sup>120</sup> The uniqueness of humanity, particularly human consciousness, mind, and the ability to reason, remains a major stumbling block to evolutionary materialism. Philosopher and evolutionist Daniel Dennett asserts, “An impersonal, unreflective, robotic, mindless little scrap of molecular machinery is the ultimate basis of all the agency, and hence meaning, and hence consciousness, in the universe.”<sup>121</sup> However, philosopher Alvin Plantinga points out, “Contrary to Dennett’s suggestion, the neo-Darwinian scientific theory of evolution certainly hasn’t shown . . . that God does not exist necessarily; it hasn’t even shown that it is possible, in the broadly logical sense, that mind might arise from ‘pure incognito’ matter. It hasn’t shown these things because it doesn’t so much as address

117. Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1986), 274.

118. Denton, *Evolution: A Theory in Crisis*, 275, 277.

119. Denton, *Evolution: A Theory in Crisis*, 277–78.

120. Wilberforce, “Review,” 258.

121. Daniel Dennett, *Darwin’s Dangerous Idea: Evolution and the Meanings of Life* (New York: Simon and Schuster, 2014), 203.

these questions.”<sup>122</sup>

Not only does the theory not attempt to prove how consciousness or mind could arise from non-conscious matter, but everything we know about physics and chemistry indicates that consciousness and mind *cannot* arise from non-conscious matter. Non-Christian chemist and philosopher Michael Polanyi recognizes this:

Hydrochloric acid will never dissolve platinum by mistake. Nor can self-regulating machines operating in accordance with the known laws of physics and chemistry represent human beings. For such machines are insentient automata and men are not insentient automata. . . . We speak of the thoughts Shakespeare had while writing his plays and not of the thoughts of hydrochloric acid dissolving zinc, because men think and acids don't. It is obvious, therefore, that the rise of man can be accounted for only by other principles than those known today to physics and chemistry. . . . And so long as we can form no idea of the way a material system may become a conscious, responsible person, it is an empty pretense to suggest that we have an explanation for the descent of man.<sup>123</sup>

Additionally, to assert that naturalism produced mind and reasoning that we know to be *reliable* is logically self-defeating. C. S. Lewis explains that all possible knowledge “depends on the validity of reasoning. . . . Unless human reasoning is valid no science can be true.”<sup>124</sup> However, Albert Einstein stressed that there is a logically unbridgeable gulf between physical or chemical sense experience (i.e., the physical and chemical phenomena that allegedly led to the creation of mind) and conceptual thought:

The concepts which arise in our thought and in our linguistic expressions are all—when viewed logically—the free creations of thought which cannot inductively be gained from sense-experiences. This is not so easily noticed only because we have the habit of combining certain concepts and conceptual relations (propositions) so definitely with certain sense-experiences that we do not become conscious of the gulf—*logically unbridgeable*—which separates the world of sensory experiences from the world of concepts and

---

122. Plantinga, *Where the Conflict*, 38.

123. Michael Polanyi, *Personal Knowledge: Towards a Post-Critical Philosophy* (New York: Harper Torchbooks, 1964), 389–90. Polanyi's point is strongly echoed by eminent atheist philosopher Thomas Nagel in *Mind & Cosmos: Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False* (Oxford: Oxford University Press, 2012). Nagel discusses in some detail the implausibility of there being a naturalistic explanation for human consciousness, cognition (thought, reason, and evaluation), and value (good and bad, right and wrong).

124. C. S. Lewis, *Miracles* (New York: Macmillan, 1960), 14.

propositions.<sup>125</sup>

Naturalistic evolution cannot bridge that gulf or account for logical insight, reasoning, and truth because:

natural selection could operate only by eliminating responses that were biologically hurtful and multiplying those which tended to survival. But it is not conceivable that any improvement of responses could ever turn them into acts of insight, or even remotely tend to do so. The relation between response and stimulus is utterly different between knowledge and the truth known. Our physical vision is a far more useful response to light than that of the cruder organisms which have only a photo-sensitive spot. But neither this improvement nor any possible improvements we can suppose could bring it an inch nearer to being a knowledge of light.<sup>126</sup>

Charles Darwin himself expressed this doubt: "Can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animal, be trusted when it draws such grand conclusions?"<sup>127</sup> J. B. S. Haldane, one of the founders of neo-Darwinism, admitted that "if my mental processes are determined wholly by the motions of atoms in my brain I have no reason to suppose that my beliefs are true. They may be sound chemically, but that does not make them sound logically. And hence I have no reason for supposing my brain to be composed of atoms."<sup>128</sup> Multiple Christian and non-Christian philosophers have demonstrated that Darwin's doubt is not only valid but is fatal to naturalism; hence, evolution, if based on

125. Albert Einstein, "Remarks on Bertrand Russell's Theory of Knowledge," in *The Library of Living Philosophers*, vol. 5, *The Philosophy of Bertrand Russell*, ed. Paul A. Schilpp, trans. Paul A. Schilpp (Evanston, IL: Northwestern University, 1944), 286–87, emph. added.

126. Lewis, *Miracles*, 18.

127. Barlow, ed., *Autobiography of Charles Darwin*, 93.

128. J. B. S. Haldane, "When I am Dead," in *Possible Worlds and Other Essays* (New York: Harper & Brothers, 1928), 219–20; see also J. B. S. Haldane, "Some Consequences of Materialism," in *The Inequality of Man and Other Essays* (London: Chatto & Windus, 1932), 162. Although Haldane subsequently recanted his statement, it still remains true. See J. B. S. Haldane, "I Repent an Error," *The Literary Guide* (April 1954): 7, 29.

Haldane was anticipating C. S. Lewis, who said that if all our thoughts are the "accidental by-product of the movement of atoms," then "I see no reason for believing that one accident should be able to give me a correct account of all the other accidents. It's like expecting that the accidental shape taken by the splash when you upset a milk-jug should give you a correct account of how the jug was made and why it was upset." C. S. Lewis, "Answers to Questions on Christianity," in *God in the Dock*, ed. Walter Hooper (Grand Rapids: Eerdmans, 1970), 53; see also C. S. Lewis, "Religion Without Dogma?" in *God in the Dock*, ed. Walter Hooper (Grand Rapids: Eerdmans, 1970), 136–37.

naturalistic premises, is self-contradictory and self-defeating.<sup>129</sup> Theism, of course, is not self-defeating since “God has created us in his image; an important part of this image consists in our resembling God in that like him, we can have [true] knowledge.”<sup>130</sup>

A corollary of this is that, in a naturalistic framework, it is impossible to determine whether anything is morally good or evil, which was one of Wilberforce’s concerns about Darwinism (see n.48, *supra*). Greg Koukl observes, “To say something is evil is to make a moral judgment, and moral judgments make no sense outside of the context of a moral standard. . . . Evil can’t be real if morals are relative. Evil is real, though. That’s why people object to it. Therefore, objective moral standards must exist as well.”<sup>131</sup> With respect to the different possible *sources* of moral standards, good and evil, “a morally perfect God is the only adequate standard . . . that makes sense of the existence of evil to begin with.”<sup>132</sup>

Non-Christian philosopher and ethicist Richard Taylor admits, “The modern age, more or less repudiating the idea of a divine lawgiver, has nevertheless tried to retain the ideas of moral right and wrong, without noticing that, in casting God aside, they have also abolished the conditions of meaningfulness for moral right and wrong as well. . . . The concept of moral obligation [is] unintelligible apart from the idea of God.”<sup>133</sup> Prominent atheist and evolutionist Richard Dawkins implicitly agrees with this by acknowledging the absence of good and evil that evolutionary naturalism entails, “The universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind,

129. See Richard Taylor, *Metaphysics*, 2nd ed. (Englewood Cliffs, NJ: Prentice-Hall, 1974), 118–19; Patricia Churchland, “Epistemology in the Age of Neuroscience,” *Journal of Philosophy* 84 (October 1987): 548; Thomas Nagel, *The View From Nowhere* (New York: Oxford University Press, 1989); Alvin Plantinga, *Warrant and Proper Function* (New York: Oxford University Press, 1993), 219–37; Alvin Plantinga, *Warranted Christian Belief* (New York: Oxford University Press, 2000), 227–40; Alvin Plantinga, “Introduction,” in *Naturalism Defeated?* ed. James Beilby (Ithaca, NY: Cornell University Press, 2002), 1–12; Barry Stroud, “The Charm of Naturalism,” in *Naturalism in Question*, eds. Mario De Caro and David Macarthur (Cambridge: Harvard University Press, 2004), 28; Plantinga, *Where the Conflict*, 312–50.

130. Plantinga, *Where the Conflict*, 313. See also Plantinga, *Warrant and Proper Function*, 236.

131. Gregory Koukl, “Evil as Evidence for God.” *Stand to Reason*. Online: <http://www.str.org/articles/evil-as-evidence-for-god#ANCHOR2>.

132. Gregory Koukl, *Tactics* (Grand Rapids: Zondervan), 138; see also Koukl, “Evil as Evidence”; C. S. Lewis, *Mere Christianity* (New York: Touchstone, 1996 [reprint]), 45–46; William Lane Craig, “The Indispensability of Theological Meta-Ethical Foundations for Morality.” *Foundations* 5 (1997): 9–12.

133. Richard Taylor, *Ethics, Faith, and Reason* (Englewood Cliffs, NJ: Prentice-Hall), 2–3, 84; see also Tim Barnett, “Four Problems with Evolutionary Morality,” *Stand to Reason* (January 9, 2017); accessed 27 November 2021 at <https://www.str.org/w/four-problems-with-evolutionary-morality#fnref:8>.

pitiless indifference.”<sup>134</sup> Elsewhere he admitted, “The question, ‘What is right and what is wrong?’ is a genuinely difficult question that science certainly cannot answer.”<sup>135</sup> When assessing the validity of any theory or view of life, one should ask such questions as: Is it true to reality? Can people actually live it out? The naturalist view of morality is contrary to how everyone—naturalist and theist alike—actually thinks and lives.<sup>136</sup> There is something wrong with any view that is contrary to the uniform position of all people, in all cultures, in all times, who act on the basis that good and evil exist and that some actions are moral and others immoral.

Behind these issues is the issue of how, in a purely materialistic universe, life itself could have arisen from non-living matter. Sir Fred Hoyle, who formulated the theory of stellar nucleosynthesis (and was a self-described atheist),<sup>137</sup> wrote, “The combinatorial arrangement of not even one among the many thousands of biopolymers on which life depends could have been arrived at by natural processes here on Earth.”<sup>138</sup> He concluded by stating:

Now imagine 10<sup>50</sup> blind persons<sup>139</sup> each with a scrambled Rubik cube and try to conceive of the chance of them all *simultaneously* arriving at the solved form. You then have the chance of arriving by random shuffling at just one of the many biopolymers on which life depends. The notion that not only the biopolymers but the operating programme of a living cell could be arrived at by chance in a primordial soup here on Earth is evidently nonsense of a high degree.<sup>140</sup>

---

134. Richard Dawkins, *River Out of Eden: A Darwinian View of Life* (New York: Basic Books, 1995), 133.

135. Richard Dawkins, “Obscurantism to the Rescue,” *The Quarterly Review of Biology* 72 (1997): 397.

136. Michael Ruse and Edward O. Wilson, in positing the naturalistic, evolutionary development of ethics and morality, deny that any “genuinely objective external ethical premises” exist, but state that “human beings function better *if they are deceived by their genes into thinking* that there is a disinterested objective morality binding upon them, which all should obey.” Michael Ruse and Edward O. Wilson, “Moral Philosophy as Applied Science,” *Philosophy* 61, no. 236 (April 1986): 186, 179, *emph. added*.

137. Jane Gregory, *Fred Hoyle’s Universe* (New York: Oxford University Press, 2005), 143.

138. Fred Hoyle, “The Big Bang in Astronomy,” *New Scientist* 92 (19 November 1981): 526.

139. I.e., 100 billion, billion, billion, billion, trillion blind persons.

140. Hoyle, “The Big Bang,” 527, *emph. in orig.* Elsewhere, Hoyle calculated the odds of life originating on earth by chance at one in 1040,000 which he characterized as “an outrageously small probability that could not be faced even if the whole universe consisted of organic soup.” He added, “If one is not prejudiced either by social beliefs or by a scientific training into the conviction that life originated on Earth, this simple calculation wipes the idea entirely out of court.” Fred Hoyle and Chandra Wickramasinghe, *Evolution from Space* (New York: Simon & Schuster, 1981), 24; see also Lee Elliot Major, “Big enough to bury Darwin,” *The Guardian* (August 23, 2001). Hoyle’s own answer to the issue of where life on earth came

Scientific consultant Dr. David Foster augmented Hoyle by pointing out, “The specificity of the DNA of the T4 bacteriophage is represented by the number  $10^{78,000}$  so that there is only one chance in  $10^{78,000}$  of it actually occurring by random shufflings.”<sup>141</sup> Foster describes the significance of this: “These figures have to be set against the fact that the universe is only  $10^{18}$  seconds, old, and so there is no possibility whatsoever of life having evolved through Darwin’s theory of natural selection operating on chance mutations.”<sup>142</sup>

Even that does not get to the underlying problem. That is, even the simplest living cell “employs the same genetic code and the same mechanism of translation as do, for example, human cells. . . . The code is meaningless unless translated. The modern cell’s translating machinery consists of at least fifty macromolecular components *which are themselves encoded in DNA: the code cannot be translated otherwise than by products of translation.*”<sup>143</sup> In other words, DNA contains the instructions an organism needs to develop, live, and reproduce but cannot operate unless it is fully formed and functional; hence, we cannot begin to guess, on naturalistic grounds, how DNA could have come into existence in the first place.<sup>144</sup>

In his review of *Origin*, Wilberforce spent two pages quoting multiple instances in which Darwin supported his theory with statements such as “it is conceivable,” “it is not incredible,” and “there seems to me to be no great difficulty in believing,” etc. Consequently, Wilberforce concluded that the theory was “the merest hypothesis, supported by the most unbounded assumptions.”<sup>145</sup> Although much has been

---

from, as articulated in *Evolution from Space*, is that the first life on earth began in space, spreading through the universe via panspermia. That answer, however, only takes the question of how life arose at all back one step but does not answer it.

141. David Foster, *The Philosophical Scientists* (New York: Dorset: 1985), viii.

142. Foster, *The Philosophical Scientists*, viii. Foster brings these calculations back to Wilberforce and Huxley by noting that Huxley had stated that “if six monkeys strummed at random on typewriters for ‘millions of millions’ of years they would type all the books in the British Museum. If we assume that ‘millions of millions’ of years is the life of the universe at 10 billion years, then a modern computer will tell us that those monkeys would only type out *one half-line* of sense and with the choice of matching any line in all those 700,000 books in the British Museum. . . . One can only hope that Bishop Wilberforce will now sleep a little more comfortably in his grave.” Foster, *The Philosophical Scientists*, viii–ix. Foster works out the calculations at pages 54–57.

143. Jacques Monod, *Chance and Necessity*, trans. Austryn Wainhouse (New York: Alfred A. Knopf, 1971), 142–43.

144. Karl Popper called this a “vicious circle” which faces us with “the possibility that the origin of life (like the origin of the universe) becomes an impenetrable barrier to science, and a residue to all attempts to reduce biology to chemistry and physics.” Karl Popper, “Scientific Reduction and the Essential Incompleteness of All Science,” in *Studies in the Philosophy of Biology*, eds. Francisco Jose Ayala and Theodosius Dobzhansky (Berkeley: University of California Press, 1974), 270.

145. Wilberforce, “Review,” 248.

discovered and learned since Darwin's day, the essential nature of the "proofs" for evolution remains the same. Daniel Dennett acknowledges, "The power of the theory of natural selection is not the power to prove exactly how (pre)history was, but only the power to prove how it could have been, given what we know about how things are."<sup>146</sup> In short, Darwin's theory, both in its original and contemporary forms, pronounces the naturalistic ability to create and evolve life from non-living matter, but this simply is an assertion that it cannot prove. In fact, evolutionary theorists nowhere endeavor to prove it.<sup>147</sup>

Indeed, many scientists are pointing out that Darwin's theory is not a proper scientific theory at all but is merely a tautology, i.e., a truism, a circular argument, something defined in terms of itself.<sup>148</sup> For example, Robert Henry Peters, professor of biology at McGill University, found "A number of popular ecological tenets, including natural selection, competitive exclusion, and parts of succession, species diversity, and spatial heterogeneity . . . lack the predictive and operational qualities which define scientific theories. Consequently, they must be termed tautologies."<sup>149</sup>

146. Dennett, *Darwin's Dangerous Idea*, 319.

147. The closest things to "proof" have been attempts, commencing with the Miller-Urey experiment in 1952, to create organic compounds from a simulated early-earth atmosphere of methane, ammonia, hydrogen, and water vapor; electrical sparks were fired into the mixture to simulate lightning. In Miller-Urey and similar experiments, as long as oxygen was excluded from the mixture, amino acids and other organic compounds have resulted. See "Miller-Urey" experiment," *Wikipedia* (2021); accessed 20 November 2021 at [https://en.wikipedia.org/wiki/Miller%E2%80%93Urey\\_experiment](https://en.wikipedia.org/wiki/Miller%E2%80%93Urey_experiment); see also Charles Thaxton, Walter Bradley; Roger Olsen, *The Mystery of Life's Origin* (Dallas: Lewis and Stanley, 1984), 22–41 for descriptions of Miller-Urey and similar experiments.

However, not even one living cell—the simplest form of "life"—was created by these experiments, and how to traverse the tremendous difference between amino acids and actual living cells has never even been hinted at. Thaxton, Bradley, and Olsen point out that, not only is "there is no known geological evidence for organic pools . . . ever existing on this planet," but evidence indicates that the early earth's atmosphere was oxidizing, which would have prevented any chemical generation of organic compounds; further, most prebiotic simulation experiments owe their "success" to the illegitimate role of the investigators. Thaxton, Bradley, and Olsen, *The Mystery*, 66, 182–85. In an updated and expanded version of Thaxton, Bradley, and Olsen's work, one commentator observes that, given the vast amount of knowledge we have gained regarding DNA and other matters since Miller-Urey, "one could argue that origin-of-life research is even more befuddled now than it was in 1952 since more questions have evolved than answers, and the voluminous new data regarding the complexity within a cell makes the target much more daunting than it used to be." James Tour, "We're Still Clueless About the Origin of Life," in *The Mystery of Life's Origin: The Continuing Controversy* (Seattle: Discovery Institute Press, 2020), 324.

148. E.g., "survival of the fittest": Who survives? The fittest. Who are the fittest? Those who survive. Or "the fittest individuals in a population leave the most offspring": Who are the fittest? Those who leave the most offspring. Who leave the most offspring? Those who are the fittest.

149. Robert Henry Peters, "Tautology in Evolution and Ecology," *The American Naturalist*

Tautological statements cannot be falsified and, therefore, cannot be scientific. Hence, “the tautology/circularity charge, if true, is fatal to natural selection as a theory of how biological change occurs.”<sup>150</sup>

Behind all of these issues is the foundational issue of how the earth and the universe came into being at all, or “why is there something rather than nothing?” Martin Heidegger called that “the fundamental question of metaphysics.”<sup>151</sup> Theism, of course, holds that “In the beginning God created the heavens and the earth” (Gen. 1:1). As we saw above (see n.114), at the time he wrote *Origin*, Darwin accepted God as the “First Cause,” but later lapsed into agnosticism, believing that the mystery of how everything began is insoluble. Science has continued down the path of naturalism since Darwin’s day. Consequently, scientists have done their best to come up with naturalistic explanations for why the universe exists at all.

The predominant view is the “Big Bang” theory which says that “the universe as we know it started with an infinitely hot and dense single point that inflated and stretched—first at unimaginable speeds, and then at a more measurable rate—over the next 13.8 billion years to the still-expanding cosmos that we know today.”<sup>152</sup> That theory is consistent with certain observed phenomena such as cosmic microwave background radiation, the fact that the universe appears to be expanding, and other phenomena.<sup>153</sup> How and why did this happen? One writer puts it like this, “Due to a random fluctuation in a completely empty void, a universe exploded into existence. Something the size of a subatomic particle inflated to unimaginably huge size in a fraction of a second, driven apart by negative-pressure vacuum energy.”<sup>154</sup>

---

110 (1976): 11. Similar conclusions have been reached by, among others, philosopher A. R. Manser, “The Concept of Evolution,” *Philosophy* 40 (1965): 18–34; Murray Eden, professor of electrical engineering at MIT, “Inadequacies of Neo-Darwinian Evolution as a Scientific Theory,” in *Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution*, eds. Paul Moorhead and Martin Kaplan (New York: Wistar Institute of Anatomy and Biology, 1967, 5; and Ronald Brady, associate professor of philosophy at Ramapo College, Mahwah, New Jersey, “Natural Selection and the Criteria by which a Theory is Judged,” *Systematic Zoology* 28 (1979): 600–621.

150. Tam Hunt, “Reconsidering the logical structure of the theory of natural selection,” *Communicative & Integrative Biology* 7 (December 2014): 4.

151. Martin Heidegger, *An Introduction to Metaphysics* (New Haven: Yale University Press, 1959), 7–8.

152. Elizabeth Howell, “What is the Big Bang Theory?” (2021); accessed 21 November 2021 at <https://www.space.com/25126-big-bang-theory.html>; see also “Big Bang,” *Wikipedia* (2021); accessed 21 November 2021 at [https://en.wikipedia.org/wiki/Big\\_Bang](https://en.wikipedia.org/wiki/Big_Bang).

153. Ethan Siegel, “Surprise: the Big Bang isn’t the beginning of the universe anymore” (October 13, 2021); accessed at <https://bigthink.com/starts-with-a-bang/big-bang-beginning-universe/>.

154. Karl Tate, “Alternatives to the Big Bang Theory Explained” (February 21, 2014); accessed 21 November 2021 at <https://www.space.com/24781-big-bang-theory-alternatives-infographic.html>.



However, various issues, questions, and problems with the Big Bang theory<sup>155</sup> have led scientists to posit other theories or refinements of the Big Bang, including “string theories,” the latest development of which is M-theory. Stephen Hawking and Leonard Mlodinow describe it:

According to M-theory, ours is not the only universe. Instead, M-theory predicts that a great many universes were created out of nothing. . . . These multiple universes arise naturally from physical law. . . . Because gravity shapes space and time, it allows space-time to be locally stable but globally unstable. . . . Because there is a law like gravity, the universe can and will create itself from nothing. . . . Spontaneous creation is the reason there is something rather than nothing.<sup>156</sup>

They add that this was a “quantum event” (i.e., it could not happen according to the laws of classical [non-quantum] physics) in which “the universe was as small as the Planck size, a billion-trillion-trillionth of a centimeter” in which gravity “warped” time “to such a great extent that time behave[d] like another dimension of space.”<sup>157</sup> At some point, this infinitesimal “universe” spontaneously expanded faster than the speed of light.<sup>158</sup> In short, “quantum fluctuations lead to the creation of tiny universes out of nothing. A few of these reach a critical size, then expand in an inflationary manner, forming galaxies, stars, and, in at least one case, beings like us.”<sup>159</sup> Hawking and Mlodinow assert that “the beginning of the universe was governed by the laws of science and doesn’t need to be set in motion by some god” and “a complete set of laws fully determines both the future and the past. This would exclude the possibility of miracles or an active role for God.”<sup>160</sup>

This virtually *a priori* rejection of the existence and active role of God is not valid.

155. See, e.g., Fred Alan Wolf, *Parallel Universes* (New York: Simon and Schuster, 1988); Siegel, “Surprise.”

156. Hawking and Mlodinow, *The Grand Design*, 8–9, 180.

157. Hawking and Mlodinow, *The Grand Design*, 131, 134; see also Paul Davies, “The Appearance of Design in Physics and Cosmology,” in *God and Design*, ed. Neil Manson (London: Routledge, 2003), 150–51.

158. Hawking and Mlodinow, *The Grand Design*, 129; see also Gerald Cleaver, “Multiverse: Philosophical and Theological Perspectives,” *Ex Auditu* 32 (2016): 72–73.

159. Hawking and Mlodinow, *The Grand Design*, 137. M-theory posits that there may be as many as 10500 different universes, each with its own set of physical/scientific laws. Hawking and Mlodinow, *The Grand Design*, 118.

160. Hawking and Mlodinow, *The Grand Design*, 135, 30. A fatal problem with this, however, is that the only physical laws we know are those which came out of the “big bang.” We cannot even remotely hope to know or model what laws were in operation *before* the big bang occurred and cosmic inflation was set in motion. Consequently, on evidential grounds, all such speculation is not one whit better than the supposedly outdated “God hypothesis.” See Chapman, *Slaying the Dragons*, 156–57.

John Feinberg explains that, in making any inductive argument or judgment as to the probability of something (i.e., the existence of God), “one must base it [the argument or judgment] on total evidence relevant to the theory.”<sup>161</sup> Indeed, “it is impossible to calculate the probability of a given hypothesis without incorporating background information.”<sup>162</sup> This is crucial since “what may be improbable on one piece or set of evidence may be probable on another.”<sup>163</sup> The background information or evidence that is needed in order to make a valid argument or probability judgment concerning God’s existence would include but not be limited to: the implausibility of the universe coming into existence by itself; the fact that the universe and its laws “appear to have a design that is both tailor-made to support us and, if we are to exist, leaves little room for alteration”;<sup>164</sup> the implausibility of life coming from non-living matter; the fact that multiple biological structures and phenomena at the molecular level are “irreducibly complex,” i.e., they are “a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning. An irreducibly complex system cannot be produced directly . . . by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional;”<sup>165</sup> the implausibility of mind and rationality coming from non-sentient beings; the inability of non-sentient forces to account for abstract universals like logic, truth, right and wrong; the uniqueness of the Bible; fulfilled prophecy; evidence of miracles; the resurrection of Jesus Christ; and experiences of divine and supernatural encounters.

The failure of non-theists to factor in any of this evidence and background

---

161. John Feinberg, *The Many Faces of Evil*, rev. ed. (Grand Rapids, MI: Zondervan, 1994), 290. Plantinga calls this considering “the antecedent probability of theism.” Plantinga, *Where the Conflict*, 219, 224.

162. Feinberg, *Many Faces*, 164.

163. Feinberg, *Many Faces*, 213.

164. Hawking and Mlodinow, *The Grand Design*, 162. This is often called the “fine tuning” argument, which Plantinga discusses in detail in *Where the Conflict*, 193–224.

165. Michael Behe, *Darwin’s Blck Box: The Biochemical Challenge to Evolution* (New York: Simon and Schuster, 1996), 39; see also Michael Behe, *The Edge of Evolution: The Search for the Limits of Darwinism* (New York: The Free Press, 1997). University of Chicago microbiologist James Shapiro points out, “In fact, there are no detailed Darwinian accounts for the evolution of any fundamental biochemical or cellular system, only a variety of wishful speculations. It is remarkable that Darwinism is accepted as a satisfactory explanation for such a vast subject—evolution—with so little rigorous examination of how well its basic theses work in illuminating how specific instances of biological adaptation or diversity.” James Shapiro, “In the Details . . . What?” *National Review* (September 16, 1996): 644. Plantinga discusses this issue in detail in *Where the Conflict*, 225–64. Darwin himself recognized that this would be fatal to his theory. He stated, “If it could be demonstrated that any complex organ existed, which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.” Darwin, *Origin*, 80.

information makes it impossible even to begin an argument concerning the probability of the existence of God. Because “science” is said to be characterized by “methodological naturalism” (i.e., it only considers natural or material phenomena, evidence, causes, and explanations),<sup>166</sup> *by definition*, no scientific theory or “science” as a whole can ever demonstrate the non-existence or non-active role of God, since the scientific evidence base and methodology are truncated compared to the complete evidence base relevant and necessary to calculate the probability of the existence or non-existence of God and/or the truth of Christianity.<sup>167</sup> On their own, the theory of evolution and the theories of the Big Bang and M-theory have no evidential value whatsoever in trying to assess the probability of God’s existence.

There are other reasons why, despite Hawking and Mlodinow’s confident assertions, the issues raised by Wilberforce and the existence and “active role” of God cannot be so easily dismissed. “Other universes” (if they exist) are unobservable, and the spontaneous existence of the universe or “multiverse” remains both speculative and controversial.<sup>168</sup> More fundamentally, concerning the issue of naturalism versus

---

166. Eugenie Scott, “The ‘Science and Religion Movement’ An Opportunity for Improved Public Understanding of Science?” in *Science and Religion*, ed. Paul Kurtz (Amherst, NY: Prometheus, 2003), 111; Ernan McMullin, “Plantinga’s Defense of Special Creation,” *Christian Scholar’s Review* 31 (September 1991): 57. It should be added that some scientists and philosophers such as Richard Dawkins and Daniel Dennett beg the question of God’s existence by adhering to *ontological or metaphysical naturalism* in addition to methodological naturalism, i.e., they are not neutral or “agnostic” concerning the claims of theism, but they positively deny all claims of theism *a priori*.

167. See Plantinga, *Where the Conflict*, 168–78. Peter Kupisz also points out the other side of that coin, “Science cannot prove physicalism [naturalism; materialism] if it presupposes it. That is, one cannot prove something by using a method that presupposes what one is trying to prove. To do so is to simply argue in a circle.” Peter Kupisz, “Does Neuroscience Presuppose that Human Souls Do Not Exist?” *Worldview Summit* (not dated); accessed 22 November 2021 at [https://www.worldviewsummit.org/post/does-neuroscience-presuppose-that-human-souls-do-not-exist?gclid=CjwKCAiAs92MBhAXEiwAXTi2578HRqmYcp013PEzl60pT80qGcLWA7UVEzpGUc7YI7EHAsZoTi-KrRoCk6AQAavD\\_BwE](https://www.worldviewsummit.org/post/does-neuroscience-presuppose-that-human-souls-do-not-exist?gclid=CjwKCAiAs92MBhAXEiwAXTi2578HRqmYcp013PEzl60pT80qGcLWA7UVEzpGUc7YI7EHAsZoTi-KrRoCk6AQAavD_BwE); see also Cornelius Hunter, “Evolution Confirmed? The Philosophy of Naturalism,” *Evolution News* (August 11, 2017) accessed 22 November 2021 at <https://evolutionnews.org/2017/08/evolution-confirmed-the-philosophy-of-naturalism/>.

168. “Physics provides theories which typically consist of a mathematical formalism and some procedures for applying that formalism to particular concrete situations. But both the formalism and the procedures may admit of alternate ontological *interpretations*. It may not be clear, for example, which part of the mathematics corresponds to real physical magnitudes and which is an artefact of arbitrary choices of units or gauges. It may not be clear which mathematical models represent real physical possibilities, and which do not. And it may not be clear which pairs of mathematical models represent the same physical situation. . . . These problems are magnified exponentially when one seeks to understand the ontological implications of quantum theory. There one finds a mathematical formalism and a set of practical procedures for using it, but no uniformity of opinion about how that formalism is to be

theism, David Darling, former Dean of the College of Education at the University of New Mexico, points out the sleight-of-hand behind the naturalistic pronouncements made by people such as Hawking and Mlodinow:

What is a big deal—the biggest deal of all—is how you get something out of nothing. Don't let the cosmologists try to kid you on this one. They have not got a clue either—despite the fact that they are doing a pretty good job of convincing themselves and others that this is really not a problem. “In the beginning,” they will say, “there was nothing—no time, space, matter or energy. Then there was a quantum fluctuation from which . . .” Whoa! Stop right there. You see what I mean? First there is nothing, then there is something. And the cosmologists try to bridge the two with a quantum flutter, a tremor of uncertainty that sparks it all off. Then they are away and before you know it, they have pulled a hundred billion galaxies out of their quantum hats. I don't have a problem with this scenario from the quantum fluctuation onward. Why shouldn't human beings build a theory of how the Universe evolved from a simple to a complex state. But there is a very real problem in explaining how it got started in the first place. You cannot fudge this by appealing to quantum mechanics. Either there is nothing to begin with, in which case there is no quantum vacuum, no pre-geometric dust, no time in which anything can happen, no physical laws that can effect a change from nothingness into somethingness; or there is something, in which case that needs explaining.<sup>169</sup>

Another science writer adds that the Big Bang theory:

does not attempt to answer the most common question we humans ask about the origin of the cosmos: *why?* And this question likely cannot be answered, because, by definition, whatever caused the appearance of that tiny point of energy, containing the seeds of everything that would ever be, was *not of this universe*. Therefore, whatever *caused* the universe left no evidence of its

---

interpreted. Further, there is almost nothing about which the alternative available interpretations agree, or which can be directly inferred from even the most surprising experimental phenomena.” Tim Maudlin, “Distilling Metaphysics From Quantum Physics,” in *The Oxford Handbook of Metaphysics*, eds. Michael Loux and Dean Zimmerman (New York: Oxford University Press, 2005), 461–62, *emph. in orig.*; see also Cleaver, “Multiverse,” 77. Christian physicist Don Page, who accepts string/M-theory and the concept of the “multiverse,” lists a number of common scientific, philosophical, and theological objections to multiverse ideas. Don Page, “Does God So Love the Multiverse?” (2008), 19–22; accessed 22 November 2021 at <https://arxiv.org/pdf/0801.0246.pdf>; see also Paul Davies, “A Brief History of the Multiverse,” *New York Times* (April 12, 2003).

169. David Darling, “Forum: On creating something from nothing,” *New Scientist* 151 (14 September 1996): 49.

existence for us to study, no clue as to what it was. It is also likely that, being something completely *outside* the universe, we would, in any event, be unable to comprehend it. The laws of physics, of motion, of gravity, of electromagnetism, of thermodynamics, simply did not apply at the moment of the universe's birth because they did not yet exist: they certainly cannot describe the presence and origin of that tiny seed.<sup>170</sup>

The logical candidate for the one who designed the laws of science and formed the materials and forces that constitute the universe is God.<sup>171</sup> The irony of the current situation is that, whereas Huxley deprecated Wilberforce's speaking about "scientific" matters because he was not a professional scientist, "scientists" today are speaking about matters that go far beyond the purview of science, since how and why the universe exists are not subject to observation, testing, experiment, or replication.<sup>172</sup> Alvin Plantinga points out that the claims that the universe came into being "naturally" (i.e., without God) and that evolution is not guided or directed by anyone, but takes place by chance, not teleology, are not part of scientific theory as such, but are "a metaphysical or theological add-on."<sup>173</sup> Thus, Gerald Cleaver, a Christian and physicist at Baylor University whose area of work is with M-Theory, contends that M-theory reveals "a Christian God whose creative ability is much larger than we ever could imagine before."<sup>174</sup>

---

170. Andy Briggs, "What is the Big Bang?" (June 11, 2020), *emph. in orig.*; accessed 21 November 2021 at <https://earthsky.org/space/definition-what-is-the-big-bang/>.

171. Many Christians accept the big bang as implying how God began the creation of the universe. "Religious interpretations of the big bang theory," *Wikipedia* (2021); accessed 30 November 2021 at [https://en.wikipedia.org/wiki/Religious\\_interpretations\\_of\\_the\\_Big\\_Bang\\_theory](https://en.wikipedia.org/wiki/Religious_interpretations_of_the_Big_Bang_theory); Steven Ball, "A Christian Physicist Examines the Big Bang Theory" (September 2003); accessed 30 November at <https://www.letu.edu/academics/arts-and-sciences/files/big-bang.pdf>.

172. See Alina Bradford, "What is Science?" *Live Science* (August 4, 2017); accessed 22 November 2021 at <https://www.livescience.com/20896-science-scientific-method.html>; with respect to multiverse ideas specifically, see Cleaver, "Multiverse," 77–80. Theoretical physicist Paul Davies, who himself would prefer that the laws governing the cosmos "should have an explanation from within the universe and not involve appealing to an external agency," nevertheless recognizes that "until science comes up with a testable theory of the laws of the universe, its claim to be free of faith is manifestly bogus." Paul Davies, "Taking Science On Faith," *Edge* (December 31, 2006); accessed 25 November 2021 at [https://www.edge.org/conversation/paul\\_davies-taking-science-on-faith](https://www.edge.org/conversation/paul_davies-taking-science-on-faith). Elsewhere he adds that "even the most atheistic scientist accepts as an act of faith the existence of a law-like order in nature that is at least in part comprehensible to us. So science can proceed only if the scientist adopts an essentially theological worldview." Davies, "The Appearance of Design," 148.

173. Plantinga, *Where the Conflict*, 309; see also Cleaver, "Multiverse," 77–80.

174. Trevor Persaud, "Christ of the Klingons," *Christianity Today* 54, no. 12 (December 2010): 47, quoting Cleaver. Elsewhere, Cleaver lists a number of other Christian scientists and

Natural laws do not, in fact, preclude either God's existence or "active role" in creation (including miracles). Plantinga observes that, under classical Newtonian physics, the physical "laws of science" only apply in a "closed system"; however, "if God were to perform a miracle, it wouldn't at all involve contravening a natural law. That is because, obviously, any occasion on which God performs a miracle is an occasion when the universe is not causally closed; and the laws essay nothing about what happens when the universe is not causally closed."<sup>175</sup>

The development of quantum mechanics has changed scientific understanding and the "determinism" implied by the classical laws of physics. "Through QM the future of a system is not inherently predictable; there is profound freedom in the physical universe, and future states of a system can only be predicted with probability."<sup>176</sup> Because QM only assigns probabilities to the possible outcomes for a given set of initial conditions rather than determining specific outcomes, Plantinga states, "With the advent of quantum mechanics it has become harder yet to find conflict between special divine action and current physics"; thus, pursuant to QM, "there is no question that special divine action is consistent with science; and even the most stunning miracles are not clearly inconsistent with the laws promulgated by science."<sup>177</sup>

## Conclusion

Given the historical relationship between Christianity and science and the important and valid issues raised by Wilberforce, which continue to be raised by contemporary Christian and non-Christian scholars, it is neither fair nor reasonable to view (as Huxley did) "theology and parsondom" as the "natural and irreconcilable enemies of Science."<sup>178</sup> The continued existence of scientists who are orthodox Christians relates back to Wilberforce—who was himself a Fellow of the Royal Society. As Norman Macbeth, author of *Darwin Retried: an appeal to reason*, puts it, "There is still need for a dissenting voice, a devil's advocate, a skeptical whistle-blower."<sup>179</sup> Since more accurate accounts of the "debate" than the "canonical" version have now been published, if science writers would look somewhat more objectively at Bishop

---

philosophers who accept M-theory and the "multiverse" concept and also a number who oppose those ideas. Cleaver, "Multiverse," 81–84.

175. Plantinga, *Where the Conflict*, 82–83; see also at 130.

176. Cleaver, "Multiverse," 70.

177. Plantinga, *Where the Conflict*, 130, 96; at 113–21 Plantinga proposes a means by which God regularly could act in special ways consistent with QM. See also Cleaver, "Multiverse," 70.

178. See note 93, *supra*, and associated text.

179. Norman Macbeth, *Darwin Retried: an appeal to reason* (Ipswich, MA: Gambit, 1971), Foreword. The irony of Macbeth's statement is that now it is Christians like Wilberforce who are the "dissenting voices" and "skeptics" who play the role of "devil's (!) advocate."

Wilberforce, perhaps his reputation and legacy may yet be recovered.

The issues raised by Wilberforce have not gone away; these issues and the more fundamental issue of the adequacy or inadequacy of scientific “naturalism” or materialism are being debated today by Christian and non-Christian, Darwinian and non-Darwinian, scholars.<sup>180</sup> Looking more objectively at the contributions Christian philosophers and scientists continue to make to the advancement of knowledge, understanding, and science, not rejecting the concept of God *a priori*, and opening peer-reviewed mainstream science journals to theistic scientists would advance the goal of science itself, namely, the pursuit of truth wherever that truth may be. That actually would be in accord with what even Darwin advocated in the introduction to the sixth edition of *Origin*, “I am well aware that scarcely a single point is discussed in this volume on which facts cannot be adduced, often apparently leading to conclusions directly opposite to those at which I have arrived. A fair result can be obtained only by fully stating and balancing the facts and arguments on both sides of each question.”<sup>181</sup>

---

180. See, e.g., John Buell and Virginia Hearn, eds., *Darwinism: Science or Philosophy* (Richardson, TX: Foundation for Thought and Ethics, 1997); Neil Manson, ed., *God and Design: The Teleological Argument and Modern Science* (London: Routledge, 2003); Daniel Dennett and Alvin Plantinga, *Science and Religion: Are they Compatible?* (New York: Oxford University Press, 2011); Joshua Rasmussen and Filipe Leon, *Is God the Best Explanation of Things? A Dialogue* (London: Palgrave Macmillan, 2019).

181. Charles Darwin, *The Origin of Species by Means of Natural Selection*, 6th ed. (New York: A. L. Burt, not dated [1872; reprint]), 2.