

# Evidence, Theory, and Interpretation: The “New Atheism” and the Philosophy of Science

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The term “New Atheism” was coined in 2006 to refer to a clutch of works by writers such as Richard Dawkins, Daniel Dennett, and Sam Harris, characterized as much by the aggressiveness of their rhetoric as the substance of their ideas.<sup>1</sup> Although given an enthusiastic welcome on its appearance, particularly in the United States, the passing of time has seen the emergence of more critical and negative attitudes toward the movement, particularly in relation to its philosophical underpinnings.

Perhaps the most important development has been the growing recognition of the quasi-religious nature of the movement.<sup>2</sup> As has often been observed, there are uncomfortable parallels between the “New Atheism” and religious fundamentalism—such as the conviction that they are in sole possession of truth; a somewhat disconcerting absence of tolerance for the views of their critics (Dawkins unwisely compared creationists to Holocaust deniers); their simplistic one-dimensional reduction of religion; and their overwhelming sense that they

1. For the original three, see Sam Harris, *The End of Faith: Religion, Terror, and the Future of Reason* (New York: W. W. Norton, 2004); Daniel C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (New York: Viking Penguin, 2006); Richard Dawkins, *The God Delusion* (London: Bantam, 2006). Other works of importance could be added to this list, including Christopher Hitchens, *God Is Not Great: How Religion Poisons Everything* (New York: Twelve, 2007); Victor J. Stenger, *God: The Failed Hypothesis: How Science Shows That God Does Not Exist* (Amherst, NY: Prometheus Books, 2008).

2. Chris Hedges, *When Atheism Becomes Religion: America's New Fundamentalists* (New York: Free Press, 2009).

have been oppressed and marginalized within Western society, and are entitled to cultural privilege on account of their rationalist credentials.<sup>3</sup> And feminist writers have noted that, like religious fundamentalism, the New Atheism is dominated by white middle-class males.<sup>4</sup>

Ideologies—both religious and anti-religious—regularly make use of “legitimizing myths,” which provide (often questionable) intellectual justification for their own claims to intellectual privilege and social dominance.<sup>5</sup> The “New Atheism” presents itself as standing at the cutting edge of a progressive rationalist movement that will necessarily triumph. Its failure to persuade is thus to be attributed, not to its own failures, but to the embedded power of religious ideas and institutions. Challenging such “legitimizing myths”—or showing that there are others of equal or greater validity—often generates both insecurity and anger on the part of “New Atheist” apologists.

Perhaps unsurprisingly, most mainline atheists have distanced themselves from the “New Atheism,” disliking both the shrill tone of its rhetoric, and its failure to take the intellectual and social aspects of religion seriously. It is therefore important not to extrapolate judgments made about the “New Atheism” to the wider atheism intellectual community. The “New Atheism” is best seen as a populist splinter movement within atheism as a whole, characterized by methods and attitudes that are not representative of the wider movement. To some, it will seem to be of questionable value to consider their philosophical arguments, precisely because these are stated in such rhetorically exaggerated and intellectually simplified forms.

It is, however, legitimate to focus on the “New Atheism,” partly because its recent high media profile, and partly because some of its distinguishing features are of wider cultural interest, mapping onto other philosophical and cultural debates. One of the most distinct features of the movement that has come to be known as the “New Atheism” is its privileging of scientific discourse in the debate about God.<sup>6</sup> This is of interest in several respects, especially in connection with contemporary reflections on the cultural authority of science.<sup>7</sup> Yet it is also of philosophical interest, in that it raises the question of how the “New Atheism” uses ideas and methods drawn from the natural sciences in their polemic against religion.<sup>8</sup>

3. See, for example, Terry Eagleton, *Reason, Faith, and Revolution: Reflections on the God Debate* (New Haven, CT: Yale University Press, 2009); David Bentley Hart, *Atheist Delusions: The Christian Revolution and Its Fashionable Enemies* (New Haven, CT: Yale University Press, 2009); Amarnath Amarasingam, ed., *Religion and the New Atheism: A Critical Appraisal* (Leiden: Brill, 2010); Ian S. Markham, *Against Atheism: Why Dawkins, Hitchens, and Harris Are Fundamentally Wrong* (Malden, MA: Wiley-Blackwell, 2010). These criticisms reflect cultural, sociological, philosophical, and theological concerns.

4. Tina Beattie, *The New Atheists: The Twilight of Reason and the War on Religion* (London: Darton, Longman and Todd, 2007), 9.

5. Jim Sidanius and Felicia Pratto, *Social Dominance: An Intergroup Theory of Social Hierarchy and Oppression* (Cambridge: Cambridge University Press, 1999).

6. Neil Ormerod, “Theology and the New Atheism: Science, Religion, and Metaphysics,” *Theology* 116 (2013), 187–94.

7. Harold W. Artridge and Ronald L. Numbers, eds., *The Religion and Science Debate: Why Does It Continue?* (New Haven, CT: Yale University Press, 2009).

8. See especially Karl Giberson and Mariano Artigas, *Oracles of Science: Celebrity Scientists Versus God and Religion* (New York: Oxford University Press, 2009).

It is not my intention here to discuss the historical question of the deeply problematic “warfare” model of the interaction of science and religion, which has been severely criticized both in terms of its historical reliability and its unacceptable tendency to “essentialize” both science and religion.<sup>9</sup> Richard Dawkins’s *God Delusion* is characterized by its construction of a narrative, based on the “warfare” model, which treats science and religion as locked in mortal combat, from which only science can emerge victorious. History is thus about the relentless advance of “reason and science,” and the retreat of “superstition and religion.” Scientists who are interested in—or inexplicably committed to—religion are thus cast as “collaborators” or “traitors.” It is one of the most widely criticized aspects of Dawkins’s polemic against religion, which can be tracked back to his earlier writings.<sup>10</sup>

In what follows, we can consider the implicit philosophy of science within the writings of the leading “New Atheists,” and correlate these with wider trends within the discipline. In preparing to engage with these issues, it is important to indicate that the degree of simplification entailed by the popularizing approach characteristic of the leading manifestoes of the “New Atheism” often leads to inadequate accounts of serious philosophical issues—such as the classic arguments for the existence of God.<sup>11</sup> As we shall see, this same lack of depth is often encountered in their somewhat lightweight accounts of issues concerning both the history and philosophy of science.

### EVIDENCE AND THEORY

One of the central assertions of Dawkins’s *God Delusion* is that beliefs should be proved with reference to evidence. Religious belief is often treated as an evidence-free zone, meriting the accolade of “blind faith.” So what is meant by “evidence”? Dawkins does not appear to appreciate that an observation only becomes evidence when placed within, and assessed against, a theoretical framework. An observation can thus function as evidence for several possible theories.<sup>12</sup> A core assumption of Dawkins’s polemic against theism is that observations can be treated as “brute,” in that they ultimately have only one proper, unequivocal meaning.

This is deeply problematic. Unsurprisingly, the work of Thomas Kuhn does not feature prominently in Dawkins’s writings. Kuhn rightly observed that any supposedly “univocal” observations (or methods) in science were interpreted in

9. See John Hedley Brooke and Geoffrey Cantor, *Reconstructing Nature: The Engagement of Science and Religion* (Edinburgh: T & T Clark, 1998); John Brooke and Ian Maclean, ed., *Heterodoxy in Early Modern Science and Religion* (Oxford: Oxford University Press, 2005).

10. Alister E. McGrath, *Dawkins’ God: Genes, Memes and the Meaning of Life* (Malden, MA: Blackwell, 2004), 119–37. More recent discussions about the hijacking of biology for ideological purposes should be noted here: see especially Denis Alexander and Ronald L. Numbers, ed. *Biology and Ideology from Descartes to Dawkins* (Chicago: University of Chicago Press, 2010).

11. See the very inadequate account in Dennett, *Breaking the Spell*, 240–46.

12. As noted by John Earman, “Underdetermination, Realism, and Reason,” *Midwest Studies in Philosophy* 18 (1994): 19–38. For a criticism of this position, see Igor Deuven and Leon Horsten, “Earman on Underdetermination and Empirical Indistinguishability,” *Erkenntnis* 49 (1998): 303–20.

the light of the dominant paradigm of interpretation at that time, or within that community of interpretation.<sup>13</sup> On the relatively few occasions when Dawkins does refer to Kuhn, it is as a "truth-heckler," someone who resists Dawkins's scientific positivism in the name of covert sociological agendas.<sup>14</sup> The physicist Victor Stenger notes Kuhn's views, but fails to engage them.<sup>15</sup> It is not difficult to understand this omission: the epistemological simplicity of "evidential univocality" is seriously undermined by Kuhn's historical and philosophical analysis, which simply cannot be ignored in this situation.

Dawkins's account of the scientific method, which he subsequently applies to religion, asserts that evidence forces us to draw certain conclusions. This is entirely reasonable; the point at debate, however, is how this evidence is to be assessed. Dawkins fails to make the significant and necessary distinction between a "logic of discovery" and a "logic of verification." The manner in which a scientific theory or hypothesis is derived has little bearing on its truth. As Charles S. Peirce pointed out, a theory might emerge through an act of inspiration. Yet once formulated, a theory must be tested against observation.<sup>16</sup> Dawkins's understanding of this process leaves something to be desired. Its most rigorous formulation is found in one of his earliest writings, *The Selfish Gene* (1976)<sup>17</sup>:

[Faith] is a state of mind that leads people to believe something—it doesn't matter what—in the total absence of supporting evidence. If there were good supporting evidence, then faith would be superfluous, for the evidence would compel us to believe it anyway.

This is a deeply problematic view of the relation of evidence and belief in the natural sciences, which fails to make the critical distinction between the "total absence of supporting evidence" and the "absence of totally supporting evidence."

In his more popular writings, Dawkins tends to the view that science proves its theories through evidence. Others within his camp take a similar position. For example, Stenger argues that incorrect theories are defeated "by calling upon empirical observations as the final judge."<sup>18</sup> Yet this is clearly inadequate as an account of the historical development of science, or philosophical reflection on its methods and tasks. Observations are open to multiple interpretations. These must be judged against epistemic virtues—such as simplicity, elegance, comprehensiveness, and fecundity—in order to make a judgment about which such interpretation

13. Thomas S. Kuhn, *The Structure of Scientific Revolutions*, 2nd ed. (Chicago: University of Chicago Press, 1970). See further Jose Díez, "Falsificationism and the Structure of Theories: The Popper–Kuhn Controversy About the Rationality of Normal Science," *Studies in History and Philosophy of Science* 38 (2007): 543–54.

14. Richard Dawkins, *A Devil's Chaplain* (Boston: Houghton Mifflin, 2003), 16.

15. Stenger, *God: The Failed Hypothesis*, 35.

16. Christiane Chauviré, "Peirce, Popper, Abduction, and the Idea of Logic of Discovery," *Semiotica* 153 (2005): 209–21.

17. Richard Dawkins, *The Selfish Gene* (Oxford: Oxford University Press, 1976), 330.

18. Stenger, *God: The Failed Hypothesis*, 34.

is the “best” such explanation.<sup>19</sup> Where Dawkins and Stenger think in terms of observations proving things, the dominant view is that one is forced to make defensible, yet often unprovable *judgments* about which constitutes the “best explanation” of a set of observations.<sup>20</sup>

For example, consider the current debate within cosmology over whether the primordial “big bang” gave rise to a single universe, or a series of universes (the so-called “multiverse”).<sup>21</sup> The same observations may be accommodated, with varying degrees of conviction, within two quite different theoretical frameworks, leaving the question of which is the “better” explanation wide open.

Charles Darwin’s *Origin of Species* (1859), a landmark in scientific history, is fundamentally an exercise in finding the “best explanation” for his biological observations. New Atheist websites often assert that Darwin *proved* his theories, contrasting this unfavorably with the “blind faith” of religion. Darwin himself believed that his theory of “natural selection” provided the most elegant and persuasive explanation of biological life forms. But he knew he could not prove it.<sup>22</sup> There was no unambiguous evidence which would conclusively and incontrovertibly compel people to accept his theory. Everything that was known about the natural world could be accommodated by rival theories, such as various forms of transformism.<sup>23</sup> Furthermore, there were serious scientific objections and difficulties to his theory, which made many scientists of his day believe it was unacceptable.<sup>24</sup> The most significant of these was probably the problem of genetic dilution.<sup>25</sup> Darwin lacked a viable theory of genetics to explain how inherited characteristics were transmitted to subsequent generations.

Yet despite such difficulties, Darwin believed that his theory was right, and would one day be shown to be right. How, he asked, could a theory be wrong when it made so much sense of what he observed? Yes, there were loose ends everywhere, and a large number of problems. But his core idea seemed to him to be correct—despite the fact it could not be proved<sup>26</sup>:

A crowd of difficulties will have occurred to the reader. Some of them are so grave that to this day I can never reflect on them without being staggered;

19. For the issues, see David H. Glass, “Coherence Measures and Inference to the Best Explanation,” *Synthese* 157 (2007): 275–96; Stathis Psillos, “The Fine Structure of Inference to the Best Explanation,” *Philosophy and Phenomenological Research* 74 (2007): 441–48.

20. Peter Lipton, *Inference to the Best Explanation*, 2nd ed. (London: Routledge, 2004).

21. Bernard Carr, ed., *Universe or Multiverse?* (Cambridge: Cambridge University Press, 2007).

22. See his famous comments on F. W. Hutton’s concerns about his theory: F. Darwin, ed., *The Life and Letters of Charles Darwin*, 3 vols. (London: John Murray, 1887), vol. 2, 155.

23. Pietro Corsi, “Before Darwin: Transformist Concepts in European Natural History,” *Journal of the History of Biology* 38 (2005): 67–83.

24. For a discussion of these difficulties, see Abigail J. Lustig, “Darwin’s Difficulties,” in *The Cambridge Companion to the Origin of Species*, ed. Michael Ruse and Robert J. Richards (Cambridge: Cambridge University Press, 2009), 109–28.

25. See here Michael Bulmer, “Did Jenkins’s Swamping Argument Invalidate Darwin’s Theory of Natural Selection?,” *British Journal for the History of Science* 37 (2004): 281–97.

26. Charles Darwin, *Origin of Species* (London: John Murray, 1859), 171.

but, to the best of my judgment, the greater number are only apparent, and those that are real are not, I think, fatal to my theory.

The importance of these observations to contemporary debates about the existence of God will be clear. The approach of the "New Atheism," grounded on the axiom—we might even say "dogma"—of evidentiary univocity, holds that there is "no evidence for God." But this notion of evidence is unsustainable. The real issue concerns which framework of interpretation offers the best explanation of observations. It is perhaps unsurprising that recent theistic apologetics has increasingly focused on inductive or abductive approaches to the existence of God, arguing that this provides the "best explanation" of what is observed in the world.<sup>27</sup>

### NATURALIST ACCOUNTS OF RELIGION: THE MEME

One of the most distinctive features of the criticism of religion mounted by Dawkins and Dennett is the appeal to the notion of the "meme" as a reductive explanation of belief in God. This idea was introduced in 1976 by Dawkins as part of his argument that both biological and cultural evolution could be accounted for by "units of replication" or "units of transmission."<sup>28</sup> Dawkins suggests that a Darwinian account of cultural evolution needs replicators analogous to genes, and posits the meme as a result of his prior conviction that cultural evolution is an essentially Darwinian process.<sup>29</sup>

Even in 1976, Dawkins suggested that a "God-meme" was an adequate explanation of belief in God. This approach was developed further in his *God Delusion*, which sets out the idea of the "meme" as if it were established scientific orthodoxy, making no mention of the markedly skeptical attitude toward the notion within the mainstream scientific community. Dawkins presents the "meme" as if it were an actually existing entity, capable of offering a persuasive reductive explanation of the origins of religion. Belief in God is to be attributed to a well-adapted meme. Dawkins further posits, without evidence, a meme for "blind faith,"<sup>30</sup> opening himself to the charge that such a belief in memes is itself a form of "blind faith."

Daniel Dennett takes a similar view in *Breaking the Spell*, arguing that human brains provide shelter for "toxic memes," which play a critical role in shaping human minds.<sup>31</sup> Dennett had developed similar ideas earlier. In *Darwin's*

27. Richard Swinburne, *The Existence of God*, 2nd ed. (Oxford: Clarendon Press, 2004). At a more popular level, see Alister E. McGrath, *Surprised by Meaning: Science, Faith, and How We Make Sense of Things* (Louisville, KY: Westminster John Knox Press, 2011).

28. For the origins of this idea, see McGrath, *Dawkins' God: Genes, Memes and the Meaning of Life*, 119–37.

29. Joseph Poulshock, "Universal Darwinism and the Potential of Memetics," *Quarterly Review of Biology* 77 (2002): 174–75.

30. Dawkins, *The Selfish Gene*, 212–13.

31. Dennett, *Breaking the Spell*, 328–33. Dennett's approach here is simply assertive, not evidence-based.

*Dangerous Idea* (1995), he asserted that, far from being “godlike creators of ideas” who can manipulate, judge, and control them from an independent “Olympian standpoint,” human beings are who they are, and think what they think, on account of “infestations of memes.”<sup>32</sup> The idea of a human mind which somehow transcends both its genetic and memetic creators is nothing more than an outmoded myth.<sup>33</sup> For this reason, the human mind is particularly prone to being manipulated by these “new replicators.” In *Breaking the Spell*, Dennett sets out a naturalist account of religion, based largely on an appeal to the meme. The analysis raises some awkward questions. Are *all* beliefs spread by what Dennett terms “toxic memes”? Or just the ones that anti-religious critics don’t like? Is there a meme for atheism? Dennett’s “Simple Taxonomy of Memes” certainly suggests so.<sup>34</sup> If so, the “meme” offers a reductive explanation for any belief system, whether religious or anti-religious.

Yet the empirical evidence for memes is somewhat underwhelming, putting Dennett in the somewhat difficult position of having to resort to the use of aggressive rhetoric to distract attention away from the weak evidential foundations of his approach.<sup>35</sup> His atheist apologetic at this point rests on the assumption that belief in God is demonstrably the outcome of memetic influence. Yet neither the notion of the meme, nor its alleged influence on religious beliefs, is scientifically proven; indeed, it has not even been stated in a form capable of scientific verification or falsification. Dennett, like other memeticists, has no answer to the question of why a “toxic” or “maladaptive” meme such as religion seems to be much more contagious than “adaptive memes” such as science.<sup>36</sup>

Dawkins argues both that scientific belief *undermines* belief in God; it also *explains it away* as an unintended outcome of human evolution. Believing in God is an “accidental by-product” of the evolutionary process. Religion arises from a “misfiring of something useful.”<sup>37</sup> Yet if Darwinian evolution is a random and purposelessness process, as Dawkins insists it must be, how can anyone speak about it having “accidental” or “unintended” outcomes? Dawkins argues at several points in his works that the natural world may have the *appearance* of design, but this *appearance* of design or intentionality arises from random developments.<sup>38</sup> However, if Dawkins is right, *all* outcomes of the evolutionary process would have to be “unintended.” Or does he really think that evolution is guided by some kind

32. Daniel C. Dennett, *Darwin’s Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995), 346.

33. Dennett, *Darwin’s Dangerous Idea*, 366.

34. Dennett, *Breaking the Spell*, 341–57. Note especially the taxonomy of memes presented on p. 344.

35. For the rather weak case, see Dennett, *Breaking the Spell*, 348–53.

36. Note the points made by Dan Sperber, “An Objection to the Memetic Approach to Culture,” in *Darwinizing Culture: The Status of Memetics as a Science*, ed. Robert Aunger (Oxford: Oxford University Press, 2000), 163–73; Kevin N. Laland and Gillian R. Brown, *Sense and Non-sense: Evolutionary Perspectives on Human Behaviour* (Oxford: Oxford University Press, 2002), 209–16.

37. Dawkins, *God Delusion*, 188.

38. See especially Richard Dawkins, *The Blind Watchmaker: Why the Evidence of Evolution Reveals a Universe without Design* (New York: W. W. Norton, 1986).

of metaphorical mind, which steers it in appropriate directions, while permitting occasional digressions and by-ways?

Dawkins and Dennett both offer naturalist accounts of belief in God, holding that the evolutionary process allows us to understand why belief in God should emerge. Their accounts are somewhat different. Yet both raise the same question: is an explanation of an idea equivalent to its dismissal? For example, suppose I could demonstrate that the human capacity and inclination to seek for truth was essentially an outcome of the evolutionary process. Does this invalidate the human quest for truth? The assumption that proposing a reductive explanation for a trait invalidates its legitimacy or application is deeply ingrained within the "New Atheism," and remains one of its more problematic aspects.<sup>39</sup>

### SCIENTIFIC EXPLANATION

Yet an objection might be raised here. At least the "New Atheism" is capable of offering explanations. God explains nothing. This criticism is expressed most forcibly in the writings of Christopher Hitchens, whose *God Is Not Great* added to the rhetorical force of the movement in 2008. For Hitchens, God is an explanatory redundancy. God is something that can be explained, but not something that possesses explanatory capacity in itself. Hitchens' view is that God serves no explanatory function, and is thus superfluous to any reasonable account of the world.

Yet Hitchens does not engage with any contemporary accounts of scientific explanation developed within recent works in the philosophy of science. His argument is severely weakened by an absence of serious consideration of what it means to speak of an "explanation" in the natural sciences.<sup>40</sup> In recent years, three particularly significant discussions of explanation have emerged: Paul Humphreys' model of causal explanation<sup>41</sup>; Peter Lipton's account of the nature of explanatory loveliness, which sets a causal approach to explanation within the framework of "inference to the best explanation"<sup>42</sup>; and the account of explanatory unification, initially offered by Michael Friedman and Paul Kitcher, and subsequently

39. See the comments in Tom Sjöblom, "Spandrels, Gazelles and Flying Buttresses: Religion as Adaptation or as a By-Product," *Journal of Cognition and Culture* 7 (2007): 293–312; Peter J. Richerson and Lesley Newson, "Is Religion Adaptive? Yes, No, Neutral. But Mostly We Don't Know," in *The Believing Primate: Scientific, Philosophical and Theological Reflections on the Origin of Religion*, ed. Jeffrey Schloss and Michael Murray (Oxford: Oxford University Press, 2009), 100–17.

40. For recent discussions of these issues, especially in the natural sciences, see Philip Clayton, *Explanation from Physics to Theology: An Essay in Rationality and Religion* (New Haven, CT: Yale University Press, 1989); David-Hillel Ruben, *Explaining Explanation* (London: Routledge, 1990); Gerhard Schurz, "Scientific Explanation: A Critical Survey," *Foundations of Science* 1 (1995): 429–65; Lorenzo Magnani, *Abduction, Reason, and Science: Processes of Discovery and Explanation* (New York: Plenum, 2001).

41. Paul Humphreys, *The Chances of Explanation: Causal Explanation in the Social, Medical, and Physical Sciences* (Princeton, NJ: Princeton University Press, 1989); James Woodward, *Making Things Happen: A Theory of Causal Explanation* (Oxford: Oxford University Press, 2003).

42. Lipton, *Inference to the Best Explanation*, 59–61.

developed by Margaret Morrison.<sup>43</sup> In what follows, we shall look at how each of these relates to the debates about God associated with the “New Atheism.”

### **Causal Explanation**

In its simplest form, this holds that to explain *A* is to determine what causes *A*. This approach has reemerged as significant in the recent past in relation to the debate about God, in that the realization that the universe had an origin raises the question of whether it can be said to have been “caused.”<sup>44</sup> The notion of a static or eternal universe was not seen as demanding a theistic explanation.<sup>45</sup> Theistic explanatory accounts of the origins of the universe hold that the appeal to God as the cause of the universe avoids the potential incoherence implicit in suggesting that the universe simply happened. This is a contested question; it is, however, important to note how the idea of God as a causative explanation has reentered serious debate.

### **Inference to the Best Explanation**

As we noted earlier, the debate here concerns the identification of the best framework for accounting for observed phenomena, without a demand to prove that this is correct. The approach in question sets out a set of criteria—which remain contested in terms of both their identity and priority—by which a set of possible explanations can be assessed. A given explanation is not “proved” to be correct; it is merely shown to be the best presently available.<sup>46</sup> Theistic arguments increasingly suggest that God can be proposed as the best explanation of themes on which the sciences ultimately depend—such as the regularity of nature.

### **Unitive Explanation**

This approach takes several forms. Its basic feature is the demonstration of connections between theories that were initially assumed to have no fundamental connection. To “explain” things is to show how they fit into a bigger picture. The capacity of a theory to “group” such observations—which may include other

43. See Michael Friedman, “Explanation and Scientific Understanding,” *Journal of Philosophy* 71 (1974): 5–19; Paul Kitcher, “Explanatory Unification and the Causal Structure of the World,” in *Scientific Explanation*, ed. Philip Kitcher and Wesley Salmon (Minneapolis: University of Minnesota Press, 1989), 410–505; Margaret Morrison, *Unifying Scientific Theories: Physical Concepts and Mathematical Structures* (Cambridge: Cambridge University Press, 2000), 192–206.

44. Rem B. Edwards, *What Caused the Big Bang?* (Amsterdam: Rodopi, 2001).

45. See, for example, Albert the Great’s arguments against Aristotle on this point in the Middle Ages. Steven Snyder, “Albert the Great: Creation and the Eternity of the World,” in *Philosophy and the God of Abraham*, ed. R. James Long (Toronto: Pontifical Institute of Biblical Studies, 1991), 191–202.

46. For the difficulties this raises, see Laurie Calhoun, “The Underdetermination of Theory by Data, ‘Inference to the Best Explanation,’ and the Impotence of Argumentation,” *Philosophical Forum* 27 (1996): 146–60.

theories—is seen as indicative of its reliability. Christian apologists such as G. K. Chesterton and C. S. Lewis developed theistic arguments based on the ability of Christianity to demonstrate a fundamental unity within the natural world, which can be seen as anticipating some aspects of this approach.<sup>47</sup>

The implications for this for the debate about warranted religious belief is clear. In an important recent discussion of this issue, Alvin Plantinga argues that a theistic framework—supremely, that offered by the Christian faith—offers us a conceptual framework which safeguards the reliability (within limits) of human reason.<sup>48</sup> The kind of naturalism advocated by Dawkins, he suggests, is obliged to regard the reliability of human reason simply as a piece of unintended good luck. The Christian doctrine of creation, in marked contrast, holds that God created a natural order governed by immutable laws, and created humans in his image, providing us with faculties that allow us to discover that order by using perception and reason. For Plantinga, this way of thinking led inexorably to the rise of the natural sciences. It is no accident, he remarks, that the “scientific revolution” took place in Christian Europe.

Plantinga is particularly critical of the form of naturalism developed by Dennett. If human beings are products of an unguided process of Darwinian evolution, what grounds do we have for believing that our cognitive faculties are reliable? How can we believe any theories they may lead us to develop? Plantinga takes Dennett to task for a radical lack of consistency. If indeed Darwinism does undermine religion and ethics, it also undermines human rationality—and hence any outcomes of human reason, including Dennett’s own naturalist philosophy.

## CONCLUSION

So what is the overall relationship of the “New Atheism” to the philosophy of science? The movement is keen to present itself as a bastion of “reason and science,” a bulwark of rationalism in the face of rising irrationality within Western society. There are clear echoes here of the agendas of the “science wars” which played such a significant role in American academic culture in the 1990s<sup>49</sup>; this time, however, the enemy of science is not portrayed as the academic left, but as religion. The persistence of religion tends to be interpreted, not as reflecting any fundamental weakness with atheism itself, but as a consequence of a resurgence of irrational ways of thinking. For Dawkins, science is the most noble form of rationality; religion the most irritating form of superstition.

It is difficult to sustain this position in the face of the intense criticism that it has been subjected to in the last five years, some of which have been noted in this

47. William Oddie, *Chesterton and the Romance of Orthodoxy: The Making of GKC, 1874–1908* (Oxford: Oxford University Press, 2008); Alister E. McGrath, *The Intellectual World of C. S. Lewis* (Malden, MA: Wiley-Blackwell, 2013), 105–46.

48. Alvin Plantinga, *Science, Religion, and Naturalism: Where the Conflict Really Lies* (New York: Oxford University Press, 2011).

49. Keith M. Ashman and Philip S. Barringer, ed., *After the Science Wars* (London: Routledge, 2001); James R. Brown, *Who Rules in Science? An Opinionated Guide to the Wars* (Cambridge, MA: Harvard University Press, 2001).

essay. The “New Atheism” has made a limited contribution to serious philosophical debate, given its overriding desire to present a simplified, rhetorically effective case for atheism, which causes it to take logical short cuts, misrepresent their opponents, and present occasionally crass accounts of complex philosophical, theological, and scientific debates. There is no doubt that this approach resonates with at least a section of American culture, which prefers precise statements based on empirical grounds.<sup>50</sup> Yet the real discussion continues, attracting little media attention. As media interest in the New Atheism has waned, however, there are encouraging signs of a renewal of interest with the classic questions of philosophical theology.

Perhaps this is just as well. There are serious debates here about the nature of human rationality, the place of science in our society, the intellectual and imaginative dimensions of religion, and the manner in which competing viewpoints can be accommodated and managed in a liberal democracy. The “New Atheism” has raised public interest in the debate about God, yet regrettably seems to have made no significant contributions to the issues underlying it. This is, however, hardly a matter for concern for the wider atheist community, which has already distanced itself from this splinter movement. The important thing is that others continue these discussions, realizing that exploring these questions properly remains integral to our identity of human beings. We must be grateful to Richard Dawkins and his colleagues for renewing public interest in the fundamental questions of the philosophy of religion; yet we must look elsewhere for serious discussion of these themes.

50. For the development of such attitudes in its social context, see James Turner, *Without God, Without Creed: The Origins of Unbelief in America* (Baltimore, MD: Johns Hopkins University Press, 1985), 132–40.