

The Boyle Lecture 2014

New Atheism - New Apologetics: The Use of Science in Recent Christian Apologetic Writings

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The front cover image shows Lismore Castle, Co. Waterford, Ireland, birthplace of Robert Boyle on 25 January 1627.

New Atheism – New Apologetics: The Use of Science in Recent Christian Apologetic Writings

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Ladies and gentlemen, it is a great pleasure to be able to deliver the 2014 Boyle Lecture. In doing so, I am conscious of standing in the shadows of some great figures, in both the immediate and more distant past. Shortly before his death in 1691, Robert Boyle – then one of England's greatest scientists – bequeathed a sum of money to endow a series of lectures devoted to "proving the Christian Religion against notorious Infidels".¹ The Boyle lectures, delivered over the period 1692-1732, are widely regarded as the most significant public demonstration of the "reasonableness" of Christianity in the early modern period, characterized by that era's growing emphasis on the importance of a rational defence of faith, and an increasing suspicion of ecclesiastical authority. Intellectual and cultural historians are increasingly appreciating the

¹ For the background, see John J. Dahm, "Science and Apologetics in the Early Boyle Lectures." *Church History* 39 (1970): 172-86; Michael Byrne, "The Boyle Lectures at St Mary-Le-Bow." *Science and Christian Belief* 17 (2005): 2-4. I have kept notes to a minimum for the purposes of this lecture.

importance of what is often known as the “Augustan Age” in shaping modern attitudes towards science and religion.

The first series of Boyle Lectures, delivered in 1692 by Richard Bentley, were devoted to a “confutation of atheism”. I thought it might be interesting to make a connection with our own times, and to consider some issues in the field of science and religion which are highlighted by the rise of what we have come to term, for better or worse, the “New Atheism”.² The phrase is, perhaps, unhelpful, in that most of the ideas associated with this movement are far from new. I think that what is “new” about this movement is not so much its intellectual outlook, but its tone of engagement. As has often been pointed out within scholarly assessments of the movement, its novelty value lies primarily in its aggressive rhetoric on the one hand, and its unpleasant tendency to focus its polemic against religious people, rather than religious ideas.

It is not my intention to engage the ideas of the New Atheism in this lecture. This has been done by so many people in so many ways that it seems pointless to add further to an increasingly tired and stale discussion. My intention is rather to explore how the assertion of epistemological priority and privileges on the part of the natural sciences by leading “New Atheist” writers, such as Richard Dawkins, has been reflected in the way in which Christian apologetics has deployed recognizably scientific strategies and working assumptions in responding to them. This is not about “science versus religion”, although it suits the purposes and agendas of some to present it as such. As we will see, it is fundamentally about competing interpretations of science, and diverging applications of the scientific method.

As I think many of you know, I began my academic career as a scientist, studying chemistry at Oxford University under the mentorship of Jeremy Knowles, and then researching in the biological sciences at Oxford under Professor Sir George Radda. This

² There is a large literature. See, for example, Amarnath Amarasingam, *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.

immersion in a scientific research culture is meant to shape minds and patterns of thought, and it certainly shaped mine. As I look back on my own intellectual development, I can see four points at which Oxford's scientific culture had a decisive impact on my approach to thinking and writing.

First, I absorbed an emphasis on clarity of writing and presentation. Opaque, ambivalent and highly nuanced forms of speech were to be avoided, in that they constituted a barrier to grasping your methods, results, and interpretations. I remain suspicious of the habit that some theologians seem to regard as some kind of intellectual virtue – namely, apparently hiding behind words – and take particular pleasure in the writings of those who aim for clarity of expression and formulation. After taking advice, the first Christian theologian that I read seriously was Karl Barth, and he persuaded me that theology could be taken seriously by a scientist. I often wonder what might have happened if I had begun my reading elsewhere? Happily, other theologians I studied reinforced this perception – most notably, Thomas F. Torrance, and Austin Farrer.

Second, an evidence-based approach to argument is now hardwired into my soul, and is reflected in the fundamental questions that I ask as a theologian. Why should someone think this? How might they be shown to be wrong? What evidence underlies your position? The capacity to assemble a well-ordered evidential argument seems to me to be one of the most important skills that any scientist can develop. And I must insist that theologians learn from this. I intend no disrespect, but I am unhappy about the tendency I see in some theologians to assert, rather than to argue; or to appeal to an authority rather than to evidence, without providing reasons for these assertions, or anticipating objections and alternatives. It seems to me that more theologians need to take seriously the intellectual discipline of evidence-based thinking, not least in engagement with the public domain.

A third habit of thought that I picked up during my time as a scientist is related to this. The core question that many of my philosophical colleagues want to ask about an idea is this: "Is it reasonable?" I have always balked at this. This seems to be a sure-fire way of locking us into some form of rationalism, which allows reason to determine what can be right, and thus imprisons the scientific enterprise within a rationalist straitjacket. The fundamental question a scientist is going to ask is not "Is this reasonable?" but "What are the reasons for thinking this is true?" We can't lay down in advance what "rationality" is characteristic of the universe; we have to find out by letting the universe tell us, or figuring out ways of uncovering it.

Scientific rationality is thus best thought of as something that is discovered, rather than predetermined or predicted. In my first year studying chemistry at Oxford, I specialized in quantum theory, and soon realized that I had to learn to conform my own thinking to the nature of the universe, rather than tell the universe what form it should take, based on what seemed to me to be "reasonable". I exaggerate slightly, but we might suggest that rationalism tells the universe what it ought to be like, whereas science allows the universe to answer back – and listens to it.

You will not need me to tell you how this line of thought is theologically productive and responsible. To give one obvious example: the key question to ask about the doctrine of the Trinity is not "is this reasonable?" As Augustine of Hippo pointed out ages ago, the task of theology is not to reduce God to the intellectually manageable (and then label this "reasonable"). It is to expand the vision of the human intellect so that it can grasp as much about God as it can – an idea that is best expressed using the notion of "mystery" – namely, "something that we cannot grasp in its totality". The task of a responsible Christian theology is to discover the internal logic of the Christian faith, not to lay down in advance what form this should take.

But it is a fourth habit of thought that I want to highlight. When confronted with a mass of observations, the scientist's fundamental instinct is to try and figure out what "big

picture” or “theory” makes the most sense of them. Let us remember here that a theory (Greek: *theoria*) is ultimately a way of seeing or “beholding” things. Although I remain unpersuaded by Martin Heidegger’s more adventurous explorations of this theme – such as his intriguing idea that *theoria* is a kind of “sacral beholding”³ – his more modest reflections on the need to “see” things properly are entirely plausible.

We might term this style of thinking “induction”. Or we might turn to the great American philosopher Charles Peirce – himself a scientist – and speak instead of “abduction”.⁴ By abduction, Peirce meant a search for a way of seeing things that fitted in observations naturally and persuasively. Sometimes this arose from intense rational reflection; sometimes by what I can only describe as imaginative leaps. A classic example is August Kekulé’s idea that benzene possessed a cyclical structure, first set out in a French article of 1865, and then a German article of 1866. Kekulé did not explain the “logic of discovery” lying behind this idea at that time, although his subsequent work provided an extensive “logic of justification” for the ring structure of benzene.

Yet in 1890, at a celebration marking the 25th anniversary of this suggestion – by then widely accepted – Kekulé spoke of how this idea came to him. Perhaps because his reputation was by then beyond reproach, Kekulé was able to tell his astonished audience of the unorthodox manner by which he developed the idea in the first place.⁵ He had a dream of a snake chasing its own tail. Happily, Sigmund Freud had yet to develop his own distinctive way of explaining dreams about snakes! But while the origins of this idea might indeed be somewhat speculative, even mystical, the fact remains that, when it was checked out against the evidence, it seemed to work. The manner of its derivation might be opaque; the manner of its verification was clear – and ultimately persuasive.

³ Those interested might enjoy William McNeill, *The Glance of the Eye: Heidegger, Aristotle, and the Ends of Theory*. Albany, NY: State University of New York Press, 1999.

⁴ Sami Paavola, “Peircean Abduction: Instinct, or Inference?” *Semiotica* 153 (2005): 131-54.

⁵ The text of the speech is reproduced in August Kekulé, “Benzolfest Rede.” *Berichte der deutschen chemischen Gesellschaft zu Berlin* 23(1890): 1302-11.

But these historical reflections are rather more than a mere prelude to my main themes this evening. The question I wish to explore in this lecture this evening is this. Given the emphasis of the “New Atheism” on the natural sciences as a model for rationality, what response might Christians make? Answering this question allows us an angle of approach to the relation of science and religion, which I believe to be illuminating and helpful, providing that its limits are understood and acknowledged. Although this question is given a new prominence by the “New Atheism”, it is important in its own right. And I want to suggest to you that this fourth habit of thought that I developed as a scientist – namely, looking for the “big picture” or the “best explanation” – is both theologically and apologetically important. Let me emphasise that I make no claim to personal acuity here; my point is simply that this habit of thought is typical of the scientific enterprise, and reflects its empirical and evidential orientation.

I think that we must recognize that, in bringing science and religion into discussion with one another, we are only dealing with a partial encounter. Science and religion can neither be elided, nor declared to be “non-overlapping magisteria.” There are clearly areas of shared interest and concern, despite important divergences that must be noted and respected. One of those is a desire to make sense of things.

The whole issue of making sense of reality is deeply embedded within both the natural sciences and the Christian faith. Indeed, if I might offer a personal perspective, one factor that led me decisively away from my youthful atheism to Christianity was my growing realization that the Christian faith made far more sense of what I saw around me and experienced within me than its atheist alternatives. I gladly endorse C. S. Lewis’s statement, now inscribed on his memorial stone in Poet’s Corner, Westminster Abbey: “I believe in Christianity as I believe that the Sun has risen, not only because I see it, but because by it I see everything else.”⁶

⁶ C. S. Lewis, “Is Theology Poetry?”, in *C. S. Lewis: Essay Collection*. London: Collins, 2000, 21.

Yet there is more to Christianity than making sense of things. We can hardly overlook its emphasis on the existentially transformative nature of salvation, nor the rich experience of beauty and awe which is so often evoked in Christian worship. Yet the fact remains the intellectual capaciousness of faith cannot be overlooked. As the Harvard psychologist William James suggested many years ago, religious faith is basically “faith in the existence of an unseen order of some kind in which the riddles of the natural order may be found and explained.”⁷

I concede that this aspect of Christianity can be overemphasised, leading to an impoverishment of faith. Dorothy L. Sayers, unquestionably one of the finest lay theologians of the twentieth century, was convinced that Christianity seemed to offer “the only explanation of the universe that is intellectually satisfactory.”⁸ Yet she subsequently wrote to William Temple, then archbishop of Canterbury, confessing that was so attracted to this aspect of Christianity that at times she wondered whether she had “fallen in love with an intellectual pattern.”⁹ Looking back on my own exploration of my faith, I can see this failing – and it is a failing! – reflected in my own early thinking. Yet as I grew in faith, its imaginative and aesthetic dimensions became increasingly evident to my mind, and increasingly important to my theological articulation. Yet that intellectual foundation remains firmly embedded in my mind, giving structure and stability to everything else that is based upon it.

At the other end of this spectrum of possibilities, we might note the brilliantly argued critique of the “New Atheism” provided by Terry Eagleton, who was severely critical of those who treat religion as a fundamentally explanatory phenomenon. “Christianity was never meant to be an explanation of anything in the first place”, he wrote. “It’s rather like saying that thanks to the electric toaster we can forget about Chekhov.”¹⁰ Eagleton

⁷William James. *The Will to Believe*. New York: Dover Publications, 1956, 51.

⁸Letter to L. T. Duff, 10 May 1943; *The Letters of Dorothy L. Sayers: Volume II, 1937 to 1943*, edited by Barbara Reynolds. New York: St Martin’s Press, 1996, 401.

⁹Letter to William Temple, Archbishop of Canterbury, 7 September 1943; *The Letters of Dorothy L. Sayers: Volume II, 1937 to 1943*, 429.

¹⁰Terry Eagleton, *Reason, Faith, and Revolution : Reflections on the God Debate*. New Haven,

suggests that believing that religion is a “botched attempt to explain the world” about as helpful as “seeing ballet as a botched attempt to run for a bus.”

Now Eagleton is surely right to argue that there is more to Christianity than an attempt to make sense of things. Yet this explanatory theme is – as Dorothy Sayers appreciated – part of its rich heritage. Christians have always held that their faith makes sense in itself, and makes sense of the enigmas and riddles of our experience. The gospel is like an illuminating radiance that lights up the landscape of reality, allowing us to see things as they really are. The French philosopher Simone Weil (1909-43) made this point especially well, and I would like to cite from her in making this point:¹¹

If I light an electric torch at night out of doors, I don't judge its power by looking at the bulb, but by seeing how many objects it lights up. The brightness of a source of light is appreciated by the illumination it projects upon non-luminous objects. The value of a religious or, more generally, a spiritual way of life is appreciated by the amount of illumination thrown upon the things of this world.

The ability to illuminate reality is an important measure of the reliability of a theory, and an indicator of its truth.

The best theory is the one that is able to fit in observations and experiences most elegantly, most simply, most comprehensively, and most fruitfully. This way of approaching things has come to play a significant role in recent Christian apologetics. The approach adopted is not primarily deductive. Instead of saying that there are certain incorrigible considerations that force us to draw the conclusion that God exists, we suggest that the Christian faith is like a good scientific theory: it gathers together or “colligates” observations and experiences in manner that is plausible, expansive, and productive.

CT: Yale University Press, 2009, 7.

¹¹Simone Weil, *First and Last Notebooks*. London: Oxford University Press, 1970, 147.

I mentioned Lewis a moment ago. As many of you will know, Lewis was an atheist as a young man, taking the view that modern science (by which he meant the science of the 1910s) had discredited faith. So what were his reasons for returning to faith after his atheist experimentations? In an unpublished manuscript, dating from around 1930, recording his musings about his conversion, Lewis makes a remarkable statement, which I would like to share with you. "I am an empirical theist. I arrived at God by induction." This may surprise some of you here tonight, but it fits in perfectly, not simply with the general trajectory of Lewis's intellectual development, but with his apologetic writings of the early 1940s, in which the rationality of faith is treated as a matter of supreme importance. And interestingly, Lewis makes an implicit appeal to a characteristically empirical mode of reflection in explaining the rational basis of his conversion.

Yet Lewis may well have found this way of thinking already expressed in the writings of his great hero, G. K. Chesterton. After his initial agnosticism, Chesterton's spiritual journey took a decisive new turn in 1903. He published a newspaper article explaining why he and many others now regarded Christianity with intense intellectual seriousness. "We have returned to it because it is an intelligible picture of the world." Chesterton realized that testing a theory meant checking it out against observation. "The best way to see if a coat fits a man is not to measure both of them, but to try it on." Let Chesterton himself explain what he has in mind.¹²

Numbers of us have returned to this belief; and we have returned to it, not because of this argument or that argument, but because the theory, when it is adopted, works out everywhere; because the coat, when it is tried on, fits in every crease . . . We put on the theory, like a magic hat, and history becomes translucent like a house of glass.

¹² G. K. Chesterton, "The Return of the Angels". *Daily News*, 14 March, 1903.

Chesterton's argument is that it is the Christian vision of reality as a whole – rather than any of its individual components – that proves so compelling. Individual observations of nature do not 'prove' Christianity to be true; rather, Christianity validates itself by its ability to make sense of those observations. Listen to this statement, which seems to be to be both beautifully phrased and fully of inductive insight: "The phenomenon does not prove religion, but religion explains the phenomenon." For Chesterton, a good theory – whether scientific or religious – is to be judged by the amount of illumination it offers, and its capacity to accommodate what we see in the world around us and experience within us. "With this idea once inside our heads, a million things become transparent as if a lamp were lit behind them." Once more, we note an implicitly inductive approach being adopted to apologetic questions, fitting in well with the habits of thought of many scientists.

Now Chesterton and Lewis are widely regarded as two of the best apologists of the twentieth century. And we need to note that they were not writing in reaction against the "New Atheism" or its forebears. Their approach here is not conditioned by circumstances, nor provoked by a specific controversy. Neither Chesterton nor Lewis would claim any scientific credentials, yet their inductive mode of thinking is one familiar to any scientist.

Let's tease out some aspects of this approach, and bring some other people into the conversation. First, let us go back to Chesterton's nice little aphorism: "The phenomenon does not prove religion, but religion explains the phenomenon." So what does Chesterton mean by "explain" in this context? The late Christopher Hitchens, one of the leading (and loudest) representatives of the "New Atheism", famously declared that religion explains nothing. However, the rhetorical force of this bold assertion is significantly reduced by Hitchens's failure to explain what he means by "explain." So let's explore this point a little further. Let me begin by turning to the writings of William Whewell, one of the greatest early Victorian philosophers of the empirical sciences, whose writings remain luminous and rewarding, even if few now read them.

One of Whewell's most interesting reflections concerns the capacity of a good theory to "colligate" observations, like a string holding together a group of pearls in a necklace. Whewell held that all observation involves what he terms "unconscious inference", in that what is observed is actually unconsciously or automatically interpreted in terms of a set of ideas. Like Bacon before him, Whewell rejected the somewhat deficient notion of induction as the mere enumeration of observation. Instead, Whewell developed the idea that induction was a process of reflection that added something essential to this process of enumeration – namely, some kind of organizing principle. In the process of induction, he suggested, "there is a New Element added to the combination [of instances] by the very act of thought by which they were combined."¹³ Whewell held that this "act of thought" was to be understood as a process of "colligation" – the mental operation of bringing together a number of empirical facts by "superinducing" upon them a way of thinking which unites the facts. For Whewell, this renders them capable of being expressed by a general law, which both identifies and illuminates the "true bond of Unity by which the phenomena are held together".¹⁴

One of the points that emerges from Whewell's perceptive analysis is that a good theory is able to "colligate" observations that might hitherto have been regarded as disconnected. We might think, for example, of Newton's theory of gravity as "colligating" observations that had up to that point been seen as unconnected – such as the falling of an apple to the ground, and the orbiting of planets around the sun. As many of you will know, this idea of explanation as colligation of what might otherwise be seen as unrelated and disparate events underlies Margaret Morrison's recent notion of unitative explanation, which has obvious importance for Christian apologetics.¹⁵ It also underlies the approach known as "inference to the best explanation", now widely regarded as the dominant philosophy of science.

¹³ William Whewell, *The Philosophy of the Inductive Sciences, Founded upon their History*. 2nd edn. 2 vols. London: John W. Parker, 1847, vol. 2, 48. For more on Whewell's approach and its wider impact, see L. J. Snyder, *Reforming Philosophy: A Victorian Debate on Science and Society*. Chicago: University of Chicago Press. 2006.

¹⁴ Whewell, *Philosophy of the Inductive Sciences*, vol. 2, 46.

¹⁵ E.g., Margaret Morrison, *Unifying Scientific Theories: Physical Concepts and Mathematical Structures*. Cambridge: Cambridge University Press, 2000.

You will forgive me for getting tetchy and fussy at this point. You can't "infer" to the best explanation! As Peirce pointed out, you can certainly *abduct* to the best explanation; and you can legitimately infer *that* a certain explanation is the best. But I guess we're stuck with the phrase "inference to the best explanation", and we might as well get used to it!

The rise of the New Atheism has led to Christian apologists reaffirming and representing the fundamental reasonableness of the Christian faith, and to an appeal to the natural sciences in support of faith, leading to inferential, inductive, or abductive approaches being deployed apologetically. It could be argued that this development is essentially both opportunistic and tactical, a response to a short-term need. But I'm not so sure. The cultural changes within England during the late seventeenth and eighteenth centuries made it clear that Christianity had to assert and defend its reasonableness in the public domain, if it was to hold its own in an increasingly sceptical world of ideas.¹⁶ Bishop Butler's classic *Analogy of Religion* (1736) is important both as a work of apologetics in its own right, and as a talisman of a church which was willing and able to engage cultural concerns and criticisms relating to its intellectual foundations. Back in the 1960s, in an age of cultural unrest and transition, Austin Farrer made much the same point. Listen to him – he's right:¹⁷

Though argument does not create conviction, the lack of it destroys belief. What seems to be proved may not be embraced; but what no one shows the ability to defend is quickly abandoned. Rational argument does not create belief, but it maintains a climate in which belief may flourish.

In my view, the New Atheism prompted the church to recover an apologetic tradition that seems to have faltered after the 1960s. The continued popularity of the apologetic

¹⁶ I explore this point in Alister E. McGrath, *Darwinism and the Divine: Evolutionary Thought and Natural Theology*. Oxford: Wiley-Blackwell, 2011, 49-84.

¹⁷ Austin Farrer, "The Christian Apologist," in *Light on C.S. Lewis*, edited by Jocelyn Gibb, 23-43. London: Geoffrey Bles, 1965. Quote at p. 26.

writings of C. S. Lewis – whose books sell more copies today than during his lifetime – is partly a reflection of their merits, but also a reflection of the fact that nobody has really emerged as Lewis’s obvious successor as a popular Christian apologist.

What I want to highlight in this lecture is the way in which the New Atheism’s somewhat unsophisticated evidential appeal to science as indicative of atheism is being matched within Christian circles by a rather more sophisticated appeal to the scientific method as supportive of faith. I hope that I will need to offer no justification for my choice of John Polkinghorne to illustrate this approach. I also hope that he will need nothing in the way of introduction, not least because he wrote – though sadly, on account of illness, was unable to deliver –the Boyle Lecture last year.¹⁸

I first began to read Polkinghorne’s works in the early 1980s, and continue to do so, with both profit and admiration. So what approach does he use? A number of studies of Polkinghorne’s approach have picked up on his idea of “congruence”. This is expressed at a number of levels, including his important reflections on the “unreasonable effectiveness of mathematics”.¹⁹

We are so familiar with the fact that we can understand the world that most of the time we take it for granted. It is what makes science possible. Yet it could have been otherwise. The universe might have been a disorderly chaos rather than an orderly cosmos. Or it might have had rationality which was inaccessible to us... .There is a congruence between our minds and the universe, between the rationality experienced within and the rationality observed without.

¹⁸ The best studies of Polkinghorne are in German: Bernd Irlenborn, “Konsonanz von Theologie und Naturwissenschaft? Fundamentaltheologische Bemerkungen zum interdisziplinären Ansatz von John Polkinghorne.” *Trierer Theologische Zeitung* 113 (2004): 98-117; Johannes Maria Stenke, *John Polkinghorne: Konsonanz von Naturwissenschaft und Theologie*. Göttingen: Vandenhoeck & Ruprecht, 2006.

¹⁹John Polkinghorne, *Science and Creation: The Search for Understanding*. London: SPCK, 1988, 20-1.

Yet this congruence itself requires explanation. We might recall Albert Einstein's famous quip here: "The most incomprehensible thing about the universe is that it is comprehensible."²⁰ So what way of looking at things makes sense of this? How can we render intelligibility intelligible? Polkinghorne's answer over the years, increasingly framed in explicitly Trinitarian terms, is that Christianity provides us with a framework that explains what is otherwise a miracle or a most fortunate accident. In what follows, I want to look at several themes that I discern within Polkinghorne's approach, which seem to be to be both warranted and helpful.

To begin with, let's note that Polkinghorne makes a critical and important distinction between what critical realists call different "levels of explanation". He uses an analogy which is familiar to the British, and endearing to the Americans. Suppose, Polkinghorne suggests, that he decides to make a pot of tea, and puts a kettle on his gas stove. An observer might see this kettle of water on the stove and asks "Why is the water in the kettle boiling?" At one level, the answer is to be framed scientifically. Burning gas generates heat, which is transferred to the water, and thus raises the temperature of the water to its boiling point.

Yet the question can – and should – be answered at another level. The kettle is boiling because Polkinghorne wanted to make a pot of tea. Now I think you can see that these two responses are both valid and grounded in reality. Yet they are not in competition; indeed, the two explanations complement each other, providing a more complete picture of the whole tea-making enterprise. The two explanations are to be seen as "friends, not foes".

Why is this point so important? The "New Atheism" takes a strongly positivist view of science, holding that it explains (or has the potential to explain) everything, including matters traditionally regarded as lying within the religious realm. Science and religion

²⁰Albert Einstein, "Physics and Reality"(1936); in *Ideas and Opinions*. New York: Bonanza, 1954, 292.

offer competing explanations. For the “New Atheism”, science will ultimately triumph, and religious explanations will fade away. There cannot be multiple explanations of the same things, and only the scientific explanation can be valid.

A scientific description of the world describes how it arose from the initial cosmological event we know as the “big bang”, which led, over a long period of time, to the formation of stars and planets, creating conditions favourable to the origination and evolution of living creatures. No reference is made, or needs to be made, to God in this scientific account of things. Yet the Christian will supplement this account, speaking of God bringing the world into existence, and directing it towards its intended outcomes. For some, this process involves direct divine action; for others, it involves God creating and working through natural forces to achieve those goals.

Now my point is that these two accounts supplement each other, rather than contradicting each other. They are not in competition. As Polkinghorne rightly notes, “our goal is an integrated picture of the way the world is” – and that means weaving together different levels of explanation to provide a rich and comprehensive whole.

Next, we need to look at the question of whether religious faith can be proved. Polkinghorne makes it clear that Christian belief can be regarded as warranted or justified. Yet it is not something that is – or, indeed, can be – proved. Good reasons can be given for faith, even if these fall short of the rigorous proof that we expect in logic or mathematics. But on further reflection, we realize that this form of rigorous proof is actually *limited to* logic and mathematics. Here’s what Polkinghorne has to say on this matter.²¹

Neither science nor religion can entertain the hope of establishing logically coercive proof of the kind that only a fool could deny. No one can avoid some degree of intellectual precariousness, and there is a consequent need for a

²¹ For the context of this remark, see John Polkinghorne, *Theology in the Context of Science*. London: SPCK, 2008, 84–6.

degree of cautious daring in the quest for truth. Experience and interpretation intertwine in an inescapable circularity. Even science cannot wholly escape this dilemma (theory interprets experiments; experiments confirm or disconfirm theories).

This account of the place of proof and faith in science should be compared with that set out by Richard Dawkins in *The Selfish Gene*, on which he bases his criticisms of religious faith in *The God Delusion*. Dawkins argues that there is no need for faith in science, in that the evidence for a correct conviction compels us to accept its truth. Let us listen to what he has to say.²²

[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.

Yet on reflection, this turns out to be an unsustainable view of the relation of evidence and belief in the natural sciences, not least because it fails to make the critical distinction between the "total absence of supporting evidence" and the "absence of totally supporting evidence."

For example, consider the current debate within cosmology over whether the "big bang" gave rise to a single universe, or a series of universes (the so-called "multiverse"). Many distinguished scientists support the former approach, and equally distinguished scientists support the latter. Both are real options for thinking and informed scientists, who make their decisions on the basis of their judgements about how best to interpret the evidence. The issue is that of evidence-based judgement, in which decisions have to be taken on the basis of a less than total apprehension of reality. The issue is about justification, rather than proof – being able to show that

²²Richard Dawkins, *The Selfish Gene* Oxford: Oxford University Press, 1976, 330.

there are good reasons for thinking something is right, without the luxury of total confirmation.

Polkinghorne thus emphasises the ability of the Christian faith to make sense of the world, including the successes of the natural sciences. We see this especially in his 2003 essay "Physics and Metaphysics in a Trinitarian Perspective."²³ A Trinitarian view of reality, Polkinghorne here argues, offers a lens through which the scientific enterprise can be satisfactorily explained. Science raises questions which it cannot answer on the basis of its own methods, thus pointing the way to the need for a renewed theological engagement with nature. This general approach, often in redacted forms, is now encountered widely throughout the Christian community, particularly among natural scientists, who find it to resonate strongly with their working methods and assumptions. Thus far, I have commended an appeal to the natural sciences in engaging the "New Atheism". Yet I need to add a little more texture and depth to this discussion. We must, I think, appreciate that the use of such scientific approaches to apologetics is not without risk. To appreciate this point, let us reflect further on the original Boyle Lectures of the 1690s and early 1700s. While these lectures are of interest to historians for many reasons, one of their more intriguing features is how they demonstrate that critiques of Christianity often determine the shape of the Christian response – and hence a broader cultural perception of what Christianity actually is.

Let me explain what I mean. Any attempt to describe Christianity properly would have to take into account its rational, moral and aesthetic dimensions, acknowledging that it is a multifaceted phenomenon which is supremely resistant to reductionist accounts of either its identity or significance. Yet the "sceptical" criticisms of Christianity of the early Augustan Age primarily challenged its intrinsic rationality. In response, the apologists of that landmark age reasserted and defended the rationality of their faith, concentrating

²³John C. Polkinghorne, "Physics and Metaphysics in a Trinitarian Perspective." *Theology and Science* 1 (2003): 33-49.

on meeting specific cognitive objections, rather than setting out a full vision of their faith, indicating as appropriate how this related to the controversies of their day.

At one level, of course, this is a sound rhetorical strategy, in that objections are seen to be engaged and to be met. But I must suggest that it also unintendedly creates the impression that Christianity is essentially a rational belief system. And this, I must insist, is an impoverished view of Christianity. A defensible apologetic strategy thus unintentionally creates a misleading or impoverished perception of what Christianity is all about.

I see a similar trend in today's responses to the New Atheism. The New Atheists – especially Richard Dawkins and the late Christopher Hitchens – launched a critique of Christianity which focused on its alleged rational and moral defects. Christian apologists responded by meeting these rational and moral concerns, point by point. Yet with hindsight, we can see that the New Atheism set the terms of the debate, in effect determining the battleground. That's why the initial "New Atheist" critique served to crystallize so many popular perceptions about the nature of Christianity. If we were to judge Christianity by the manner in which it is presented in refutations of the New Atheism, I think it would be found to be excessively rational, lacking any real concern for beauty (to mention one obvious point). And here I must, by the way, concede my own complicity in this unhelpful development!

Things are now changing, of course, and the waning of media interest in the New Atheism and in the public credibility of its approach now allows for a much fuller and more authentic public articulation of the nature and characteristics of Christianity. The New Atheism raised some very good questions, without providing satisfactory answers. The debate and discussion continues, and we must ensure that we are part of that. The huge recent public interest in the 50th anniversary of the death of C. S. Lewis partly reflects his rich imaginative vision of the Christian faith. As his Oxford colleague Austin Farrer once suggested, Lewis's remarkable success as an apologist was partly due to his

ability to offer “a positive exhibition of the force of Christian ideas, morally, imaginatively, and rationally.”²⁴

I must conclude, not because I have exhausted my subject, but simply because we have run out of time. The Boyle Lectures, as originally conceived, were concerned with engaging the questions raised within the increasingly sceptical culture of the Augustan Age in England, and in particular demonstrating the intrinsic rationality of the Christian faith within an emerging scientific culture. I believe that this task needs to be continued, and I see plenty of encouraging signs that this is taking place – not least this impressive series of new Boyle Lectures here at St Mary-le-Bow. In this lecture, I have noted some of the themes and characteristics of these responses, as well as identifying some points of concern that appear to need further consideration as the discussion progresses.

But I would like to end on a personal note. As many of you will know, I shall be taking up the Andreas Idreos Professorship of Science and Religion at Oxford University in a few weeks’ time. I have the privilege of succeeding two distinguished historians – John Hedley Brooke and Peter Harrison – who each made landmark contributions to the field of science and religion. During its first phase, the Idreos chair has become associated with outstanding research and teaching in the field of science and religion. Yet for the reasons I have outlined in his lecture, I have concluded that the Idreos chair, without losing its vital focus on excellence in teaching and research, must also be a chair of public engagement. That is to say, it must become a focus for engagement with the issues about science and religion that are being asked right now within our culture, and not simply within the academy. We need to think more about the public dissemination and cultural interpretation of knowledge and research, not simply its academic generation. I believe that this can be done – but I know it needs to be done!

²⁴Farrer, “The Christian Apologist,” 26.

Response to the Boyle Lecture delivered by Alister McGrath

Richard Harries

The Rt Revd and Rt Hon. the **Lord Harries of Pentregarth** was bishop of Oxford from 1987 to 2006. He was previously dean of King's College London, where he is now a fellow and an honorary professor of theology. He is also an honorary fellow of Selwyn College, Cambridge, and of St Anne's College, Oxford.

As bishop of Oxford Lord Harries was chairman of the Church of England Board for Social Responsibility between 1996 and 2001, and Chairman of the Council of Christians and Jews between 1992 and 2001. He has (among other appointments) been a board member of Christian Aid, a member of the Royal Commission on the Reform of the House of Lords (the Wakeham Commission), and a founder member of the Abrahamic Group in Oxford. He was Gresham professor of divinity from 2008 to 2012.

My first welcome duty is to thank Alister, on behalf of everyone, for a wonderful lecture. Clear in language and clear in theme, he has drawn on his wide reading in science and religion to illuminate a contemporary issue of great importance. We could not have been better served. In my response I want to make four points, which are also in the nature of questions. Vast issues which I will have to state with absurd brevity.

First, Alister stresses that science proceeds on the basis of induction, the collation of observed phenomena in order to explore how they might fit together in a wider picture, and he suggests that this is not dissimilar to theological method. But I always understood that at the heart of science this wider picture arrived at by observation also enables us to make assertions or predictions that can be tested in practice for their truth or falsity. This gave rise to a great debate in the 1950's about whether theological assertions could be put to the test in a similar way. If not, it was suggested that they were meaningless. This resulted in the attempts of people like John Hick to affirm the idea of eschatological verification. So the question arises about whether or not the ability to make assertions that can be tested out is a fundamental aspect of scientific method, and if it is what are the implications for theological method?

Secondly, in referring to the idea of a big picture which makes most sense of things Alister says, "The best theory is the one that is able to fit in observations and experiences most elegantly, most simply, most comprehensively and most fruitfully". He described how he, as well as C.S. Lewis, found that the Christian faith did this for them. I would want to suggest, however, that whatever may be the case in science, when it comes to wider world views about the nature of life as a whole, making sense of things cannot of itself tell us whether or not that view is true. It might hold things together in a wonderful elegant, unified pattern but still not be true. I hold this position because of what I have always understood Kant's arguments against the traditional proofs for the existence of God to entail. Quite simply, we do not know whether the kind of reasoning which we know works in helping us understand phenomena within the world, is applicable to the universe as a whole. To assume that it does, to assume for example that because nothing in this life happens without a cause or causes, there must be an uncreated cause for the universe to be here in the first place, is to beg the question.

Similarly, because we can create big pictures relating to scientific phenomena that make sense of multiple facts within the world, it does not follow that there is rational purpose for the existence of a universe - or a multiverse - itself. The implication of this is that we can never say for certain, from a totally impartial point of view, whether the universe is the product of a rational purpose or is a tale of sound and fury signifying nothing. We simply do not know one way or the other. There is nothing sinister about this. It is just that we have a limited, human eye's view of the world. It is hugely satisfying to believe that the universe as a whole makes sense; but from a strictly detached point of view, we simply do not know.

Thirdly, I do believe that things can be held together in an all embracing explanation of life's meaning and purpose: but only on the basis of the Christian faith as a whole. Indeed I think Alister would agree with this, as he was careful to affirm that the kind of issue he was concerned with in this lecture, though very important, must not be seen apart from wider Christian issues. I emphasise the Christian faith as a whole because I

suspect that for most people the central issue for faith is not its alleged incompatibility with science, but the incompatibility of life as we know it with the idea of a just and loving creator.

Last week it was reported that before he died Mikhail Kalashnikov, the designer of the deadly killing machine the AK-47 that bears his name, wrote to the Patriarch of Moscow in great spiritual torment because he felt responsible for the deaths of millions who had died as a result of armed groups in every part of the world using it. As he wrote "The longer I live the more this question drills itself into my brain and the more I wonder why the Lord allowed man the devilish desires of envy, greed and aggression. Yes! An increasing number of churches and monasteries in our land. And yet evil does not decrease!"

Or as another Russian, a fictional one, Ivan Karamazov put it. "It's not God that I don't believe in, Alyosha, it's just that I return him my ticket." I used to enjoy teasing Richard Dawkins by saying "Richard, there so many good arguments against the truth of religion why do you keep dragging science into it." I believe these arguments, this challenge presented by the character of life, can only be lived (not finally solved) with the full panoply of the Christian faith: faith that God himself shares in human anguish to the full in Christ, his resurrection and its fulfillment in an eternal order in which the loving purpose of divine love prevails and suffuses all things. That for me, is the only way life can be seen to have a logic to it-but it is the logic of love, of Divine Wisdom. Yet, as I argued for my third point: just because it makes sense it does not mean to say it is true. So I come on to my fourth and last point.

Alister mentioned that Austin Farrer has been a big influence on him, and indeed quoted him with approval. He, together with Donald MacKinnon in a very different way, and Reinhold Niebuhr in the application of the Christian faith to the political order, have been the biggest influences on my theological thinking, and Farrer probably the biggest. The paradox of Farrer is that though he was described as the one genius produced by

the Church of England in the 20th century, he flowered in his less technical writings at the end of his life, not least his sermons, out of each one some theologians, as C.S. Lewis, a great admirer of Farrer put, would have made a whole book. Farrer wrote what must be the most remarkable Lent Book ever written, 127 tiny pages entitled "A Science of God?" in which he reflects on the process of evolution and on how, if at all, we can see God in the process. He takes his cue from a saying of Thomas Aquinas: "Practical science studies things we can work. But God is not to be worked by us. On the contrary, we men are God's work."

Farrer wrote once about creation, "Because we have God under the root of our being we cannot help but acknowledge him at the root of all the world's being". The Christian believes that her being is moment by moment held in existence by the fount of all being, that she is utterly dependent on the ground of all that exists. If this is the believers personal experience, she cannot help but acknowledge the same power as the ground of the length and breadth of the universe, including its origin *ex nihilo* some 13½ billion years ago.

Secondly, as Farrer put it

To make you or me, God must make half a universe. A man's body and a man's mind form a focus in which a world is concentrated, and drawn into a point. It may be in that point that I know existence; but it is an existence which involves the world.

[And again] If we are concerned about a creative cause, it is because, in creating all things he is creating us; and it concerns us to enter into the making of our souls, and of one another's. To enter into the action of God thus is what we mean by religion; and it is something we do, it is a matter of experience.

In short, a believer seeks to align their life with the divine illumination and leading. But because we exist as the product of evolution, that divine and illumination and leading has been present at every point of the whole process. We read back from our own interaction with the divine will that there is a divine will working in and through all secondary causes, all those causes that can be mapped out by scientific exploration. The divine leading cannot of course be located by scientific scrutiny. But the religious believer who claims to be aware of this will in their own life cannot but help posit this will as the basis of all life, cannot help, in the sense that consistency of thought demands it. R S Thomas gets the paradoxical nature of that divine leading in a late poem when he writes

To yield to an unfelt pressure that, irresistible
In itself, had the character of everything
But coercion?

It's described as a pressure, but unfelt. It's described as irresistible but it has the character of everything but coercion. In this way, as Farrer put it "We acquire experimental acquaintance with the work of God".

By the same process of mind, we can come to see that a faith that makes sense of my personal life, is a faith that makes sense of life as a whole; the big picture painted by the mind is rooted in a daily life and practice, and that practice illuminates life as a whole. Induction in science collates many observations to form a big picture which can be tested out in the laboratory. Induction in theology collates not only observations of how the world works, but insights of living and disclosure to form a big picture of God that can be tested in personal experience. "For God is not to be worked by us. On the contrary, we are God's work." With that I would like to end by once again thanking Alister for his illuminating and helpful lecture.

The Boyle Lecture 2015

The twelfth Boyle Lecture will take place in early 2015 and the Board is pleased to announce that the speaker will be Professor Robert J. Russell.

Robert J. Russell is the Founder and Director of the Centre for Theology and the Natural Sciences (CTNS), and the Ian G. Barbour Professor of Theology and Science in Residence at the Graduate Theological Union (GTU), Berkeley, California.

He is the author of *Time in Eternity: Pannenberg, Physics, and Eschatology in Creative Mutual Interaction* (University of Notre Dame Press, 2012) and *Cosmology from Alpha to Omega: Towards the Mutual Creative Interaction of Theology and Science* (Fortress Press, 2008). He has co-edited a multi-volume series of books focused on scientific perspectives on divine action through an international research conference program co-sponsored by CTNS and the Vatican Observatory, including such topics as quantum mechanics, chaos theory, evolutionary and molecular biology, the neurosciences, and quantum cosmology. His current research topics include: resurrection, eschatology and scientific cosmology; quantum mechanics, biological evolution and divine action; evolution, theodicy and Christology; philosophical assumptions in contemporary scientific cosmology and their theological roots; time and eternity from a Trinitarian perspective in relation to time in physics.

Dr Russell has served on the John Templeton Foundation Board of Advisors since its inception and has been a judge for the Templeton Prize for Progress in Religion. He also serves as co-editor of the journal *Theology and Science* and holds a Ph.D. in experimental physics from the University of California, Santa Cruz, as well as M.Div., M.A. and M.S. degrees. He is ordained in the United Church of Christ and a member of the Society of Ordained Scientists. His wife, Charlotte, is a UCC minister and they have two grown daughters, Christie Lavigne and Lisa Galicia.

Previous Boyle Lectures

2004 Lecturer: John F. Haught
Darwin, Design and the Promise of Nature

2005 Lecturer: Simon Conway Morris
Darwin's Compass: How Evolution Discovers the Song of Creation

2006 Lecturer: Philip Clayton
From Complexity to Anthropology to Theology

2007 Lecturer: John D Barrow
Cosmology of Ultimate Concern

2008 Lecturer: Malcolm Jeeves
Psychologising and Neurologising about Religion: Facts, Fallacies and the Future

2009 Lecturer: Keith Ward
Misusing Darwin: The Materialist Conspiracy in Evolutionary Biology

2010 Lecturer: John Hedley Brooke
The Legacy of Robert Boyle – Then and Now

2011 Lecturer: Jürgen Moltmann
Is the world unfinished? On interactions between science and theology in the concepts of nature, time and the future

2012 Lecturer : Celia Deane-Drummond
Christ and Evolution: A Drama of Wisdom?

2013 Lecturer: John Polkinghorne
Science and Religion in Dialogue