



# Has Science killed God?

Alister McGrath

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## Summary

This paper explores the aggressively atheist reading of the natural sciences associated with Richard Dawkins, raising serious questions about its intellectual plausibility and evidential foundation. Has the former populariser of science now become little more than an anti-religious propagandist, using science in the crudest of ways to combat religion, ignoring the obvious fact that so many scientists are religious believers? Dawkins' atheism seems to be tacked onto his science with intellectual Velcro, lacking the rigorous evidential basis that one might expect from an advocate of the scientific method.

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I used to be an atheist. When I was growing up in Belfast, Northern Ireland, during the 1960s, I came to the firm view that God was an infantile illusion, suitable for the elderly, the intellectually feeble, and religious fraudsters. I fully admit that this was a rather arrogant view, and one that I now find somewhat embarrassing. If this seemed rather arrogant, it was more or less the wisdom of the age back then. Religion was on its way out, and a glorious godless dawn was just around the corner. Or so it seemed.

Part of the reasoning that led me to this conclusion was based on the natural sciences. I had specialised in mathematics and science during high school, in preparation for going to Oxford University to study chemistry in detail. While my primary motivation for studying the sciences was the fascinating insights into the wonderful world of nature they allowed, I also found them to be a highly convenient ally in my critique of religion. Atheism and the natural sciences seemed to be coupled together by the most rigorous of intellectual bonds. And there things rested, until I arrived at Oxford in October 1971.

Chemistry, and then molecular biophysics, proved to be intellectually exhilarating. At times, I found myself overwhelmed with an incandescent enthusiasm, as more and more of the complexities of the natural world seemed to fall into place. Yet, alongside this growing delight in the natural sciences, which exceeded anything I could have hoped for, I found myself rethinking my atheism. It is not easy for anyone to subject their core beliefs to criticism; my reason for doing so was the growing realisation that things were not quite as straightforward as I had once thought. A number of factors had converged to bring about what I suppose I could reasonably describe as a crisis of faith.

Atheism, I began to realise, rested on a less than satisfactory evidential basis. The arguments that had once seemed bold, decisive, and conclusive increasingly turned out to be circular, tentative, and uncertain. The opportunity to talk to Christians about their faith revealed to me that I understood relatively little about Christianity, which I had come to know chiefly through the not-always-accurate descriptions of its leading critics, such as Bertrand Russell and Karl Marx. Perhaps more importantly, I began to realise that my assumption of the automatic and inexorable link



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between the natural sciences and atheism was rather naive and uninformed. One of the most important things I had to sort out, after my conversion to Christianity, was the systematic uncoupling of this bond; instead, I would see the natural sciences from a Christian perspective. And I would try to understand why others did not share this perspective.

In 1977, while still researching molecular biophysics at Oxford, I read Richard Dawkins' first book, *The Selfish Gene*, which had appeared the previous year. It was a fascinating book, brimming with ideas, and showing a superb ability to put difficult concepts into words. I devoured it, and longed to read more from him. Yet I was puzzled by what I considered to be his surprisingly superficial atheism, not adequately grounded in the scientific arguments that he set out in that book. His atheism seemed to be tacked on to his biology with intellectual Velcro, rather than demanded by the scientific evidence Dawkins assembled.

Dawkins has now firmly established himself as the leading voice of Britain's atheist establishment. Oxford's brilliant young zoologist of the late 1960s has gradually morphed into one of the most outspoken critics of religious faith, particularly Christianity. The quality of his writings makes him a *worthy* opponent, and the stridency and aggressiveness of his prose a *necessary* opponent, for any Christian apologist.

In this article, I want to raise some fundamental concerns about Dawkins' approach to questions of science and religion. In partic-

ular, I want to challenge the intellectual link between the natural sciences and atheism that is so characteristic of Dawkins's writings. It is not my intention to criticise Dawkins' science; that, after all, is the responsibility of the scientific community as a whole. Rather, my aim is to explore the link that Dawkins at times presupposes, and at other times defends, between the scientific method and atheism.

In this paper, I shall summarise the most important elements of his atheist critique of Christianity, and make brief responses to them. Readers who find brevity an irritation might like to know that I have set out my exposition of Dawkins' ideas, and my detailed criticisms of his atheist world-view, at much greater length in my book *Dawkins' God*, and readers wishing to have access to a much more detailed discussion should consult that work<sup>1</sup>.

## 1. Science has eliminated God

For Dawkins, science, and above all Darwinian evolutionary theory, makes belief in God impossible. Before Darwin, Dawkins argues, it was possible to see the world as something designed by God; after Darwin, we can speak only of the 'illusion of design'. A Darwinian world has no purpose, and we delude ourselves if we think otherwise. If the universe cannot be described as 'good', at least it cannot be described as 'evil' either. As Dawkins argues, 'The universe we observe had precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil and no good, nothing but blind pitiless indifference'<sup>2</sup>.

In that Dawkins sees Darwinism as a world-view, rather than a biological theory, he has no hesitation in taking his arguments far beyond the bounds of the purely biological. Darwin in particular – and science in general – impels us to atheism. And it is here that things begin to get a little bit tricky for Dawkins. Dawkins has certainly demonstrated that a purely natural *description* may be offered of what is currently known of the history and present state of living organisms. But *why* does this lead to the conclusion that there is no God?

It is well known that the scientific method is incapable of adjudicating the God-hypothesis, either positively or negatively. Those who believe that it proves or disproves the existence of God press that method beyond its legitimate limits, and run the risk of abusing or discrediting it. Some distinguished biologists (such as Francis S. Collins, director of the Human Genome Project) argue that the natural sciences create a positive presumption of faith; others (such as the evolutionary biologist Stephen Jay Gould) that they have negative implications for theistic belief. But they *prove* nothing, either way. If the God-question is to be settled, it must be settled on other grounds.

This is not a new idea. Indeed, the recognition of the religious limits of the scientific method was well understood around the time of Darwin himself. It is found clearly stated in the writings of 'Darwin's Bulldog', T. H. Huxley. However, there have been important recent discussions of the point. We shall look at one example.

In a 1992 article in *Scientific American*, America's then premier evolutionary biologist, Stephen Jay Gould insisted that science, by its legitimate methods, could not adjudicate on the existence of God<sup>3</sup>. 'We neither affirm nor deny it; we simply can't comment on it as scientists.' The bottom line for Gould is that Darwinism actually has no bearing on the existence or nature of God. For Gould, it

is an observable fact that evolutionary biologists are both atheist and theist – he cites examples such as the humanist agnostic G. G. Simpson and the Russian Orthodox Christian Theodosius Dobzhansky. This leads him to conclude that 'either half my colleagues are enormously stupid, or else the science of Darwinism is fully compatible with conventional religious beliefs – and equally compatible with atheism'.

Now Dawkins presents Darwinism as an intellectual superhighway to atheism. In reality, the intellectual trajectory mapped out by Dawkins seems to get stuck in a rut at agnosticism. And having stalled, it stays there. There is a substantial logical gap between Darwinism and atheism, which Dawkins seems to prefer to bridge by rhetoric, rather than evidence. If firm conclusions are to be reached, they must be reached on other grounds. And those who persistently try to tell us otherwise have some explaining to do.

## 2. Faith avoids dealing with evidence

According to Dawkins, Christianity makes assertions which are grounded in faith, which represents a retreat from a rigorous, evidence-based concern for truth. One of Dawkins' core beliefs, repeated almost to the point of tedium in his writings, is that religious faith is 'blind trust, in the absence of evidence, even in the teeth of evidence'<sup>4</sup>. Faith, Dawkins argues, is 'a kind of mental illness', one of the 'world's great evils, comparable to the smallpox virus but harder to eradicate'. But is it really quite as simple as Dawkins suggests? I certainly thought so when I was an atheist myself, and would then have regarded Dawkins' arguments as decisive.<sup>5</sup> But not now.

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Let's begin by looking at that definition of faith, and ask where it comes from. Faith 'means blind trust, in the absence of evidence, even in the teeth of evidence'. But why should anyone accept this ludicrous definition? What is the evidence that this is how religious people define faith? Dawkins is coy at this point, and adduces no religious writer to substantiate this highly implausible definition, which appears to have been conceived with the deliberate intention of making religious faith seem a piece of intellectual buffoonery. I don't accept this idea of faith, and I have yet to meet any religious intellectual who takes it seriously. It cannot be defended from any official declaration of faith from any Christian denomination. It is Dawkins' own definition, constructed with his own agenda in mind, being represented as if it were characteristic of those he wishes to criticise.

What is really worrying is that Dawkins genuinely seems to believe that faith actually is 'blind trust', despite the fact that no major Christian writer adopts such a definition. This is a core belief for Dawkins, which determines more or less every aspect of his attitude to religion and religious people. Yet core beliefs often need to be challenged. For, as Dawkins once remarked of William Paley's ideas on design, this belief is 'gloriously and utterly wrong'.

Faith, Dawkins tells us, 'means blind trust, in the absence of evidence, even in the teeth of evidence'. This may be what Dawkins thinks; it is not what Christians think. The definition of faith offered by W. H. Griffiths-Thomas (1861-1924) is typical of a long

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1. McGrath, A.E. *Dawkins' God: Genes, Memes and the Meaning of Life*, Oxford: Blackwell (2004).

2. Dawkins, R. *River out of Eden: A Darwinian View of Life*, London: Phoenix (1995), p. 133.

3. Gould, S.J. 'Impeaching a Self-Appointed Judge', *Scientific American* (1992) 267(1), 118-21.

4. Dawkins, R. *The Selfish Gene*, 2nd edn., Oxford: Oxford University Press (1989), p. 198.

5. For some reflections, see McGrath, A. *The Twilight of Atheism*, London: Rider (2004).

6. Griffiths-Thomas, W. H. *The Principles of Theology*, London: Longmans, Green & Co (1930), p. xviii.

Christian tradition<sup>6</sup>.

[Faith] affects the whole of man's nature. It commences with the conviction of the mind based on adequate evidence; it continues in the confidence of the heart or emotions based on conviction, and it is crowned in the consent of the will, by means of which the conviction and confidence are expressed in conduct.

This is a good and reliable definition, synthesising the core elements of the characteristically Christian understanding of faith. Readers might like to notice the explicit statement that this faith 'commences with the conviction of the mind based on adequate evidence'. I see no point in wearying readers with other quotations from Christian writers down the ages in support of this point. In any case, it is Dawkins' responsibility to demonstrate through evidence-based argument that his skewed and nonsensical definition of 'faith' is characteristic of Christianity.

Having set up his straw man, Dawkins knocks it down. It is not an unduly difficult or demanding intellectual feat. Faith is infantile, we are told – just fine for cramming into the minds of impressionable young children, but outrageously immoral and intellectually risible in the case of adults. We've grown up now, and need to move on. Why should we believe things that can't be scientifically proved? Faith in God, Dawkins argues, is just like believing in Santa Claus and the Tooth Fairy. When you grow up, you grow out of it.

This is a schoolboy argument that has accidentally found its way into a grown-up discussion. It is as amateurish as it is unconvincing. There is no serious empirical evidence that people regard God, Santa Claus and the Tooth Fairy as being in the same category. I stopped believing in Santa Claus and the Tooth Fairy when I was about six years old. After being an atheist for some years, I discovered God when I was eighteen, and have never regarded this as some kind of infantile regression. As I noticed while researching my recent book *The Twilight of Atheism*, a large number of people come to believe in God in later life – when they are 'grown up'. I have yet to meet anyone who came to believe in Santa Claus or the Tooth Fairy late in life.

If Dawkins' rather simplistic argument has any plausibility, it requires a real analogy between God and Santa Claus to exist – which it clearly does not. Everyone knows that people do not regard belief in God as belonging to the same category as these childish beliefs. Dawkins, of course, argues that they both represent belief in non-existent entities. But this represents a very elementary confusion over which is the conclusion and which the presupposition of an argument.

There is a great irony in the observation that the faith that Dawkins dismisses so readily as belonging to tooth fairies is the same faith that underpins the ancient intellectual heritage of his own university, and indeed of his own scientific discipline, for the role of Christian natural philosophers in the emergence of the biological sciences has been well documented.

One further striking aspect of Dawkins' atheism is the confidence with which he asserts its inevitability. It is a curious confidence, which seems curiously out of place – perhaps even out of order – to those familiar with the philosophy of science. As Richard Feynman (1918-88), who won the Nobel Prize for physics in 1965 for his work of quantum electrodynamics, often pointed out, scientific knowledge is a body of statements of varying degree of certainty – some most unsure, some nearly sure, but none absolutely certain.

### 3. God is a virus of the mind

The idea of God is a malignant, invasive infection, which infests otherwise healthy minds. Dawkins' key argument is that belief in God does not arise on rational or evidential grounds: it is the result

of being infected by an infective, invasive virus, comparable to those which cause chaos to computer networks<sup>7</sup>. Belief in God is to be seen as a malignant infection contaminating otherwise pure minds. It has proved to be a potent image, even if its argumentative and experimental basis is astonishingly slight, for the whole idea founders on the rocks of the absence of experimental evidence.

Not only is there a total absence of any observational evidence that ideas are like viruses, or spread like viruses – a decisive consideration that Dawkins glosses over with alarming ease. It is meaningless to talk about one kind of virus being 'good' and another 'evil'. In the case of the host-parasite relationship, this is simply an example of Darwinian evolution at work. It is neither good nor bad. It is just the way things are. If ideas are to be compared to viruses, then they simply cannot be described as 'good' or 'bad' – or even 'right' or 'wrong'. This would lead to the conclusion that all ideas are to be evaluated totally on the basis of the success of their replication and diffusion – in other words, their success in spreading, and their rates of survival.

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And again, if all ideas are viruses, it proves impossible to differentiate on scientific grounds between atheism and belief in God. The mechanism proposed for their transfer does not allow their intellectual or moral merits to be assessed. Neither theism nor atheism is demanded by the evidence, although both may be accommodated to it. The merits of such ideas are to be determined on other grounds, where necessary going beyond the limits of the scientific method to reach such conclusions.

But what is the experimental evidence for these hypothetical 'viruses of the mind'? In the real world, viruses are not known solely by their symptoms; they can be detected, subjected to rigorous empirical investigation and their genetic structure characterised minutely. In contrast, the 'virus of the mind' is hypothetical; posited by a questionable analogical argument, not direct observation, and is totally unwarranted conceptually on the basis of the behaviour that Dawkins proposes for it. Can we observe these viruses? What is their structure? Their 'genetic code'? Their location within the human body? And, most importantly of all, given Dawkins' interest in their spread, what is their mode of transmission?

We could summarise the problems under three broad headings.

1. Real viruses can be seen – for example, using cryo-electron microscopy. Dawkins' cultural or religious viruses are simply hypotheses. There is no observational evidence for their existence.
2. There is no experimental evidence that ideas are viruses. Ideas may seem to 'behave' in certain respects *as if* they are viruses. But there is a massive gap between analogy and identity – and, as the history of science illustrates only too painfully, most false trails in science are about analogies which were mistakenly assumed to be identities.
3. The 'God as virus' slogan works just as well for atheism – another world-view which goes substantially beyond the experimental evidence. Dawkins, of course, refuses to concede this, regarding atheism as the inevitable and proper outcome of the scientific method. But it is not. The natural sciences can be interpreted either atheistically or theistically; but they demand *neither* of these interpretations.

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7. Dawkins, R. *A Devil's Chaplain*, London: Weidenfield & Nicolson (2003), p. 121.

#### 4. Religion is a bad thing

Finally, I turn to a core belief that saturates Dawkins' writings – that religion is a bad thing in itself, which leads on to other evil things. It is clear that this is both an intellectual and moral judgement. In part, Dawkins regards religion as evil because it is based on faith, which evades any human obligation to think. We have already seen that this is a highly questionable viewpoint, which cannot be sustained in the face of the evidence.

The moral point is, of course, much more serious. Everyone would agree that some religious people do some very disturbing things. But the introduction of that little word 'some' to Dawkins' argument immediately dilutes its impact. For it forces a series of critical questions. How many? In what circumstances? How often? It also forces a comparative question: how many people with *antireligious* views also do some very disturbing things? And once we start to ask that question, we move away from cheap and easy sniping at our intellectual opponents and have to confront some dark and troubling aspects of human nature.

Although it was once fashionable, following Sigmund Freud, to suggest that religion was some kind of pathology, this view is now retreating in face of mounting empirical evidence that suggests (but not conclusively) that many forms of religion might actually be good for you. Sure, some forms of religion can be pathological and destructive. Others, however, seem to be beneficial. Of course, this evidence does not allow us to infer that God exists. But it does undermine a central pillar of Dawkins' atheistic crusade – the core belief that religion is bad for you.

A 2001 survey of 100 evidence-based studies to examine systematically the relationship between religion and human well-being disclosed the following<sup>8</sup>:

- 79 reported at least one positive correlation between religious involvement and well-being;
- 13 found no meaningful association between religion and well-being;
- 7 found mixed or complex associations between religion and well-being;
- 1 found a negative association between religion and well-being.

Dawkins' entire world-view depends upon precisely this negative association between religion and human well-being that only 1% of the experimental results unequivocally affirm, and 79% equally unequivocally reject.

The results make at least one thing abundantly clear: we need to approach this subject in the light of the scientific evidence, not per-

sonal prejudice. I would not dream of suggesting that this evidence unequivocally proves that faith is good for you. Still less would I argue that this demonstrates that God exists. But I need to make it clear that it is seriously embarrassing for Dawkins, whose world seems to be shaped by the core assumption that faith is bad for you – a view which is unsustainable in the light of the evidence. Religion is bad for you? Where's the evidence for this? This now lingers in the air like a wisp of smoke, gradually being dispersed by the force of evidence to the contrary.

For Dawkins, the issue is simple: the question is 'whether you value health or truth'. As religion is false – one of the unassailable core beliefs which recur throughout his writings – it would be immoral to believe, whatever benefits it might bring. Yet Dawkins' arguments that belief in God is false just don't add up. That is probably why he supplements them with the additional argument that religion is bad for you. The growing body of evidence that religion actually promotes human well-being is highly awkward for him here. Not only does it subvert a critical functional argument for atheism; it also begins to raise some very troubling questions about its truth as well.

#### Conclusion

In this article, I have touched on the major criticisms that Richard Dawkins directs against religion in general, and Christianity in particular. I have not been able to set out either Dawkins' arguments or my responses in full, hoping that my brief sketches will help readers get an idea of the issues involved. My conclusion is simple, and, I believe, uncontroversial. Dawkins is only able to argue that the natural sciences lead to atheism by an illegitimate extension of the scientific method, that does not carry weight within the scientific community. Contrast that with the view of Sir Peter Medawar, who won the Nobel Prize in Medicine some years ago: 'The existence of a limit to science is, however, made clear by its inability to answer childlike elementary questions having to do with first and last things – questions such as: "How did everything begin?"; "What are we all here for?"; "What is the point of living?"'.<sup>9</sup> The beginning of scientific wisdom, I would argue, is an informed and respectful recognition of its limits.

The reality is that the natural sciences are intellectually malleable, open to being interpreted in theistic, agnostic or atheistic ways. The great debate between atheism and theism is not, and cannot be, settled by the natural sciences. Dawkins represents one way of 'reading' nature. But there are other ways of 'reading' the natural world. The one I discovered many years ago, and which I continue to find intellectually robust and spiritually enriching, is this: 'The heavens declare the glory of God' (Ps. 19:1).

8. Koenig, H.G., and Cohen, H.J. *The Link between Religion and Health : Psychoneuroimmunology and the Faith Factor*, Oxford: Oxford University Press (2001), p. 101. For other works of relevance to this critically important point, see Miller, W. R., and Thoreson, C.E. 'Spirituality, Religion and Health: An Emerging Research Field', *American Psychologist* (2003) 58, 24-35; Galanter, M. *Spirituality and the Healthy Mind: Science, Therapy, and the Need for Personal Meaning*, Oxford: Oxford University Press (2005).

9. Medawar, P. *Advice to a Young Scientist*, London, Harper and Row (1979), p. 31; *The Limits of Science*, Oxford: Oxford University Press (1984), p. 66.

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