

Disbelieving Disbelief

*How the New Atheists make atheism unbelievable*

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Challenge books

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# ***Chapter 10: Grounds for Divorce?***

## ***Science, scientism and the Christian faith'***

**Chris Mulherin**

### **Introduction**

'Irreconcilable differences' is the catch-all phrase that, in many legal jurisdictions including Australia, is the sole ground for no-fault divorce. The phrase is deliberately vague, avoiding the need to specify exactly where the differences lie and whether they are irreconcilable. A 12 month period of separation is deemed to prove irreconcilability.

Like all lasting marriages, faith and the natural sciences have had to work at their relationship over many years. But despite their disagreements, reports of irreconcilable differences are simply untrue. Science and Christian faith are not only compatible but can look forward to a long and happy marriage as they work together in the pursuit of truth.

The so-called 'conflict thesis'—that science and religion are largely incompatible—is an old one that has been thoroughly debunked by both historians and philosophers of science. More recently however, the thesis has been given new life by an alignment of special interests: the financial interests of the publishing industry, the media's penchant for conflict stories, and the anti-theistic preaching of a new breed of would-be public intellectuals such as the figurehead of the so-called New Atheism, Richard Dawkins; people who have little respect for either serious historical or rigorous philosophical inquiry.

It is true that history records many conflicts between people or groups who have been seen as representatives of science and religion. However, historical examples of disagreement do not amount to philosophical or theological incompatibility (just as my wife and I have our differences but are not incompatible and not headed for divorce). So it is important to get

the conflict thesis clear to begin with: differences of opinion do not constitute serious conflict—after all, even science itself is rife with differences of opinion. If the conflict thesis is to have any credibility, it cannot be simply about whether representatives of religion or of science have had their differences; a conflict thesis worth pondering is one that suggests that there is a necessary and fundamental conflict between science and faith. In this essay I hope to illuminate some aspects of the nature of both science and faith, and in the process to show that the rumours of irreconcilable differences are based more on misunderstanding than on the real character of the parties concerned.

This chapter is written for the layperson, of whatever faith or none, in an attempt to clarify some key misunderstandings that arise when discussion of science and faith warms up. I am aware that I may frustrate the more philosophically minded reader as I neglect many nuances of the science-and-religion relationship. Unfortunately, more detailed crossing of philosophical t's and dotting of philosophical i's would only confuse the issue.

As my subtitle suggests I am going to tackle this topic by looking at three key terms: science, scientism and Christian faith. But why Christianity? It is notoriously difficult to define 'religion'; there are many religions, some theistic, some polytheistic and some which do not have a God or gods. So, for the sake of discussion in a Western context, where Christianity is the majority religion and is also the brunt of the most vigorous attacks of the so-called New Atheism, it is the relationship between science and orthodox Christian belief that I will discuss here.

I will suggest ten ideas that are central to a clear understanding of the science-Christianity relationship. Each of these is an attempt to clarify the commonly used words and concepts caught up in common thinking about a so-called conflict between science and religion. Just as in any marriage much depends on clear communication; unless we clarify some aspects of the nature of science, and also clarify what we mean by religion, there is no possibility of clear-headed discussion and it may appear that differences are irreconcilable. So, let's start with religion and then turn to

science before finishing with an aberration of science, known as scientism.

## **Christianity**

The first idea worth remembering is this: Christianity is a worldview; it's about meanings and not mechanisms.

*Christianity is a worldview: It's about meanings, not mechanisms*

One of the dangers of referring to the so-called science-religion relationship is that this very description suggests a symmetry between two comparable entities: science on the one hand, and faith on the other. But science and Christian faith are not directly comparable, because Christianity is a worldview while science is not and never can be.

A worldview is a set of ideas and beliefs that offers a coherent framework with which to interpret the universe and the human condition. It's a sketch of the 'big picture.' It answers such questions as: 'How should we live?' 'What happens after death?' 'Does life have a meaning?' 'Does God exist?' 'What does it mean to be human?' We could say that it answers questions about meaning. Although a worldview may not answer every question, it still tells us where the answers lie and it aims to be coherent in the answers it does give. This means that it cannot contain glaring contradictions within its set of core beliefs.

What sort of beliefs does the Christian worldview consist of? Christian orthodox belief includes a 'supernatural' creator God who made the universe and everything in it. Christianity includes the possibility of miracles, the death and bodily resurrection of Jesus Christ and the linear nature of history from creation through to final consummation. It also includes an understanding of the purposes of humanity, which is shaped in the image of God and made for relationship with God. And Christianity holds that humanity is incapable of knowing and loving God perfectly, so humans are dependent on God for both revelation and for restoring the relationship with their Creator.

This description of the Christian worldview implies that it is answering questions about meaning and not mechanics; about the purposes, and not the particles, of the universe. But it doesn't answer all possible questions and it would be a mistake to think that it should, just as it would be a mistake to think that science has answers to every type of question. The implications of this are clear: Christianity is not directly comparable to science because science is not a worldview and Christianity is not science.

### *Christianity is not science*

For the sake of discussion, let's think of science in terms of physics or biology or chemistry or astronomy. These are natural sciences which search for the mechanisms and laws of the universe in the hope of answering the 'how' questions; they look for the physical causes and constituents of what goes on in our world.

Christianity is different: on the one hand, as a worldview Christianity is much more encompassing than science because it answers the big questions such as: 'Why are we here?' or 'Why is there something rather than nothing?' Conversely, Christianity has little interest in other sorts of issues, some of which we might call the 'how' questions. Think for example of the vexed question of the New Testament model for a perfect church. At my church, we wrestle with how best to structure a multi-congregation and multi-site church. We would love a blueprint, but while the Bible tells us the meaning of the Church and offers some general principles, it contains no description of the mechanics of setting up the perfect church. In the area of moral guidance too, the Bible offers a general foundation for our thinking and acting, but it does not tell us exactly how to run a country or how to order our finances.

So Christianity is not science and it is a mistake to think that the Bible is a political treatise or a scientific textbook. In fact when it comes to Biblical interpretation, the Christian tradition has always recognised that there are various ways of reading scripture and that the Bible is made up of a

number of different types of literature. In short, to quote Galileo Galilei, 'The Bible teaches how to go to heaven not how the heavens go.'<sup>2</sup>

It's time now to turn to the second area of discussion, that of science.

## **Science**

*Science is not a worldview: It's about mechanisms, not meanings*

Science for its part is not a worldview. Physics and chemistry do not make claims about the meaning or purposes of particles or molecules. Biology and astronomy do not tell us the meaning of spiny anteaters or spiral galaxies. That's simply not what they're about, and if we look to science to answer such questions we ask more than it can offer.

As for the difference between a worldview (which answers questions of meaning and purpose) and the pursuit of science (which answers questions about mechanisms and natural causes), perhaps an illustrative cup of tea will help clarify matters. If I ask, as I put the kettle on the stove to boil, 'Why is the water boiling?', how might we answer the question? That depends on how we understood the 'why' in the question: is the 'why' asking about meaning or mechanism? The alert physics student, focusing on the mechanics of the situation, might answer that the water is boiling due to the raised energy levels of the molecules of water induced by the heat from the stove. To which I might reply by putting a tea bag in a cup and suggesting that actually the water is boiling because I want a cup of tea. Both answers are correct, but what they show is that the question, 'Why is the water boiling?' is ambiguous. In fact it is two questions in one. It could be a question about mechanics—'What causes the water to boil?'—or it could be a question about meaning—'What is the purpose of the water boiling?'

There are many such questions that can be understood in two ways and it is helpful to clarify how we interpret them before we try to answer them. 'Why are we here?' has both a theological and a scientific answer, and

‘Why is she crying?’ has an answer in terms of brain chemistry and neuronal firings that is hardly a sufficient answer in a pastoral setting.

So, we have clarified at least two sorts of questions and answers, which, as shorthand, I am referring to as those about meanings and those about mechanisms. And if, as I have suggested, science is about mechanisms and not meanings then we can see that there are limits to science imposed by the nature of the sorts of questions we ask of it and the sorts of answers we expect.

These limitations of science can be seen in at least two different sorts of difficulties it faces. First are the sort of questions that we might imagine science answering one day, and second are the impossible issues which science will never explain because they lie outside its domain. Let’s turn first to some of the difficult questions in science that may one day be resolved. After that we will look at the sorts of questions that science by its nature will never be able to answer.

*Science has practical limits: It can’t know everything*

While science has been enormously successful in revealing the truth of the world around us there are some questions that make us realise that we are very far from knowing everything about the natural world and there may even be practical limits to our knowledge. Of course the limits of current science are not an argument for some form of theism—that would be to fall into a ‘God of the gaps’ argument—but they do serve to make us wary about making overly bold claims about scientific knowledge. I’m thinking of challenges to science such as the following:

- *How the universe began:* Stephen Hawking, the world’s most famous cosmologist, postulates the spontaneous creation of the universe. He says, ‘The universe began with the Big Bang, which simply followed the inevitable law of physics. Because there is a law such as gravity, the universe can and will create itself from nothing ... The universe didn’t need a God to begin; it was quite capable of launching its existence on its own.’<sup>3</sup> Now this sort of statement is wonderful for newspaper headlines but is a particularly clear case of



passing the explanatory buck from one level of explanation to another. Even if his theory is right, Hawking hasn't explained how the universe comes into existence out of nothing; he has proposed that it comes into existence out of the laws of physics, which existed prior to the universe as we know it. While atheists frown on Christians for using God as an explanation, Hawking uses the laws of physics, and gravity in particular, as if they themselves demand no explanation.

- *Gravity*: speaking of gravity, a popular history of science subject at The University of Melbourne ended last year with the following memorable words: 'After 2500 years of searching for the answer, natural philosophers and scientists still don't know why things fall down.'<sup>4</sup>
- *Dark matter*: according to current theories, most of the universe (about 83%) seems to be made up of 'dark matter' which cannot be seen because it does not reflect or emit light. We have no idea what type of matter it is but its existence is postulated in order to explain observations about the known stars and galaxies.
- *Fine tuning*: the laws of the universe appear to be fine-tuned for the existence of life. There are various fundamental constants of the universe that if they were slightly different would render it impossible for life to have developed at all. Is it coincidence that we live in such a universe? The main proposed explanation extends the bounds of believability. It's called the multiverse theory and postulates myriad parallel universes covering all the possible values of the fundamental constants. Physicist Paul Davies says this about the multiverse theory: 'Invoking an infinity of unseen universes to explain the unusual features of the one we do see is just as ad hoc as invoking an unseen Creator. The multiverse theory may be dressed up in scientific language, but in essence it requires the same leap of faith.'<sup>5</sup>
- *The origins of life* or abiogenesis (not to mention the definition of 'life', but that's another story): while evolutionary theory assumes that all life is descended from an original life form, we seem as far as ever from seriously explaining the spontaneous generation of the

first replicating life from non-life. And, in the words of Francis Collins, the ex-head of the Human Genome Project and now Director of the US National Institutes of Health, 'Now, if you were able in a laboratory situation to create something that was capable of self-replication, that wouldn't prove that's how it happened; it probably would be way off from whatever happened.'<sup>6</sup>

- *Consciousness*: the struggle to understand the subjective aspects of consciousness has recently extended from philosophy to neuroscience. But while correlations have been revealed between brain states and the feelings and attitudes that we attribute to consciousness, we are no closer to understanding how any particular brain state can be mapped on to 'what it is like to be me'. As one respected physicist puts it, 'it is the only major question in the sciences that we don't even know how to ask.'<sup>7</sup>
- *Free will*: while we all act as if we have free will, a strictly naturalistic view of human beings seems to lead to the conclusion that everything that we do or say or think is ultimately determined by strict causal laws or by random sub-atomic events. Normal life including science itself assumes and depends on human freedom of choice, yet explaining how a strictly biological view of human beings is compatible with that freedom is scientifically and philosophically out of our reach at present.

These are some of the difficult questions that science faces. However, that does not mean they are insurmountable; it is conceivable that one day science will have answers to most of them. But let's turn now from the difficult to the impossible questions; those issues that science can't explain because they lie outside science altogether. We will particularly focus on some unprovable assumptions that underlie the scientific enterprise. These are not like the practical limits to science which seem very difficult to overcome because they are philosophical or logical limits; they are limitations imposed on science by the very nature of science itself.

*Science has philosophical limits: It relies on presuppositions*

As a pursuit of knowledge about the natural world, the natural sciences cannot delve into philosophical, logical or religious questions. The sciences cannot do so because such questions are not the subject matter of science. But that does not mean that science can leave such issues aside.

The life and breath of science lies in its rigorous approach to uncovering the truth of the natural world based on certain working assumptions, which it does not question. This recognition that science doesn't start from a blank slate, that science must assume some things to even get off the ground, is captured by atheist philosopher Daniel Dennett, who warns of the risk of a naïve attitude to science that fails to see its philosophical foundations: 'There is no such thing as philosophy-free science; there is only science whose philosophical baggage is taken on board without examination.'<sup>8</sup> So, as C S Lewis explains in his excellent little book *Miracles*, the philosophical question must come first.<sup>9</sup>

One way of thinking about these philosophical assumptions is that they are like tools of the trade, which we use to produce results. In order to drive a nail, the carpenter uses a hammer without questioning it. The focus is on the nail; the hammer is taken for granted. So too science takes for granted its foundational assumptions, but it cannot justify them scientifically; they must come first, before science begins its work.

So what are some of these foundational philosophical assumptions of science?

- Science can only be practised by assuming that **the universe is governed by laws**; that there are laws of nature which result in the possibility of repeatable experiments. This means that in the laboratory, the scientist must assume that the results of an experiment are due to the laws of nature and not to either random or supernatural causes. This assumption governs the scientist's methods of going about science and it is an assumption that cannot be proven.

- This regularity or uniformity that science is based on is revealed in the way that **science depends on induction**. Inductive argument is the process of observing repeated events or experience or experimental results and drawing the conclusion that future or unobservable events will follow the same pattern. For example, if I observe a million swans and they are all white I might conclude that all swans are white. But as this case shows, induction is not foolproof; Charles Darwin arrived in Australia and found black swans. Science simply has no way of justifying its confidence in induction. And if you are tempted to say that induction is obviously valid because it has worked in the past, think again: that would involve an inductive justification of induction, which is the very thing we are seeking to justify. This conundrum is what philosophers call ‘the problem of induction’ and the logical fallacy involved is known as ‘begging the question’.
- Science must assume, as we all do, that **there is a world ‘out there’** independent of whatever human beings might think or say about it. And science must also assume that the world is knowable. It is notoriously difficult to rigorously prove the existence of the ‘external world’. It is something we simply accept as true without question and it seems absurd to demand proofs for what we take to be so obviously true.
- Science must also assume that **human reasoning leads to truth**. Why do we believe that our reasoning and memory and sensory functions are sound and lead to truth? Again, we cannot prove these presuppositions because they are assumptions we must make in order to even think about any sort of proofs or argument. The possibility of truth and the validity of basic rules of logic are also assumptions we must make before we can begin a rational conversation. You can’t argue for the reliability of logic without using logic. So, for example, we must take for granted that you cannot assert one thing and its contradiction without falling into incoherence. Either all swans are white or they are not, but you can’t have it both ways, and if you think you can then you leave yourself out of rational conversation.

- Meanwhile, talking of rational conversation, another ‘pre-scientific’ assumption that we rely on—even as your eyes scan the black marks on this page—is that our **language is adequate to describe the external world** and to converse with others about it.

Such are some of the foundational but unprovable beliefs of science. Now we turn to one more limit of science and it’s the one that presents the most problems in the science and religion discussion. It’s the crucial issue of the relationship of science to naturalism.

*Philosophical naturalism is a worldview*

Philosophical naturalism (usually just called naturalism) is the view that there is no God or gods and that the natural world that science investigates is all that there is. According to philosophical naturalism, reality is only made up of ‘natural’ components such as matter and energy. Negatively, philosophical naturalism claims that the supernatural does not exist. In its cruder forms it equates Christianity and other faiths to belief in fairies at the bottom of the garden, celestial teapots, and the Flying Spaghetti Monster. Or in the words of philosopher Friedrich Nietzsche, Christians believe in things that don’t exist.<sup>10</sup>

Expressed this way we can see that philosophical naturalism is a worldview in competition with other worldviews. It is a belief system that answers (mostly negatively) the questions of meaning we mentioned above. Now let’s complicate matters by introducing another sort of naturalism: *methodological* naturalism. At the heart of a good understanding of the relationship between science and faith is the difference between *philosophical* naturalism and *methodological* naturalism, which is not a worldview and is an essential foundation of science.

*Science is based on methodological naturalism*

Methodological naturalism is simply the assumption that when we do science there is no supernatural intervention taking place. The role of science is quite appropriately to look for natural explanations, so

supernatural causes are ruled out in the laboratory and in scientific thinking. Like the carpenter's hammer, methodological naturalism is a tool used in order to get on with the job. So although the scientist who uses the tool of methodological naturalism may be a religious believer, their religious belief plays no part in the way they do their experiments.

*The success of science does not prove that philosophical naturalism is true*

Now we arrive at a major source of confusion. Much of the claimed conflict between science and faith arises from confusing the tool of *methodological* naturalism with a commitment to the worldview of *philosophical* naturalism (or simply naturalism). This is particularly evident when people ask a question such as, 'But doesn't science disprove religion?' It seems that what lies behind such thinking is an argument that goes something like this:

- Science is based on naturalism.
- Science is successful.
- So naturalism must be true.
- Naturalism and Christianity are mutually exclusive worldviews.
- So, Christianity must be false.

Now there is a major flaw in this argument. There is sleight of hand where the word 'naturalism' is used in two different ways. We can see this if we rewrite the first part of the argument more clearly as follows:

- Science is based on *methodological* naturalism ('God does not intervene in our experiments.')
- Science is successful.
- *Philosophical* naturalism ('there is no God') must be true.

But as we can see, the conclusion doesn't follow because the conclusion talks about *philosophical* naturalism while the first line talks about *methodological* naturalism which is another thing altogether. In simple terms and without the formalities,

In simple terms, and without the formalities, just because science assumes that God does not intervene in scientific experiments (*methodological naturalism*) it does not follow that God does not exist (*philosophical naturalism*). So the success of science can only lead us to conclude, at most, that if God exists then God normally allows the laws of nature to take their course. Science seeks truth about the natural world by using the tool of methodological naturalism but it is not committed to philosophical naturalism which is a worldview.

Before turning to *scientism*, which reveals the logic of philosophical naturalism taken to its extreme, we will first look a little more at an aspect of science that is often forgotten. That is, the intrinsically human element in science.

*Science is a human enterprise relying on human judgment and integrity*

We have seen that science has philosophical limits and that it must take many things for granted without proving them. One corollary of this is that there are no foolproof means of arriving at scientific conclusions. In the words of atheist physicist Richard Feynman, ‘scientific knowledge is a body of statements of varying degrees of certainty—some most unsure, some nearly sure, but none absolutely certain.’<sup>11</sup>

Science never ‘proves’ a theory (except perhaps in mathematics). It is true that some theories become so taken for granted that they become ‘laws’, but strictly speaking, they have not been proven so much as rigorously tested and supported by the evidence. The human causes of climate change for example will never be proven or found with absolute certainty to be true. So the skeptics have a point: we cannot prove that anthropogenic climate change is occurring. This is because, in the words of scientist and philosopher Michael Polanyi, scientific findings ‘could conceivably be false.’<sup>12</sup> Or, as Simon Conway Morris says when comparing faith and science, ‘both depend on passionate beliefs, where questioning of received dogma can swiftly lead to raised voices and dangerously flushed faces.’<sup>13</sup>

If we can never prove the truth of a scientific theory, some philosophers of science have suggested that at least we might be able to know conclusively that a theory is false. This view of science (called ‘falsificationism’) says that theories can be falsified by the results of an experiment. In fact what happens more often than not is that, rather than questioning a theory, we assume there is a problem with the experiment or the observations. Do you remember your high school science experiments, which invariably produced aberrant results? If observations contradicted the theory, did you assume you had falsified a long-held truth of science? More likely you did what is standard practice in science: you made a judgment call about where the problem lay, recognising that there could be any number of reasons why your experimental results didn’t match the theory.

So, despite widespread misunderstanding, there is not a rigid scientific method that guarantees truth. Instead scientists rely on rules of thumb or maxims such as ‘Ockham’s razor’ which says that a simpler theory should be preferred over a complex one if both have the same explanatory power. So in the end, every conclusion of science and every interpretation of experimental results is just that: an interpretation. It is one interpretation—in a sense, subjective—made by a real flesh-and-blood human being about what their senses are telling them and about its significance. And the history of science is full of cases where different scientists have interpreted the same data differently—think of Copernicus who reinterpreted the astronomical data and suggested that the sun and not the earth was at the centre of the solar system.

This dependence of science on human factors is also shown up in its corporate nature. Think back again to the school laboratory. One reason that you were happy to abandon your high school experimental results was because you trusted the integrity of those who had gone before you: your teacher, the authors of the textbook, the peer reviewers of scientific papers and the authors of those papers, some living, some centuries dead. Isaac Newton, perhaps the world’s most famous scientist, was under no illusion about his own dependence on those who had gone before him. In a letter to his rival Robert Hooke, he says, ‘If I have seen further it is by



standing on the shoulders of giants.’<sup>14</sup> Every scientist is similarly dependent on the results, judgments and theories of others that together make up the web of science.

To sum up, the practice of science is an intrinsically human pursuit, full of the subjective judgments that that implies, and it is dependent on a web of trust between scientists who are assumed to share personal moral commitments to truth and integrity. But this picture of science I have described is disconcerting to many and especially to those who see in science the one and only means of access to truth.

## **Scientism**

### *Scientism is an aberration of science*

So far, we have teased out a little of the nature of science and we have highlighted the importance of clarifying what we mean when we speak of religion. We have also seen that there are many differences between science and faith, the most obvious being that they focus on different objects of enquiry and that they attempt to answer different sorts of questions. We have seen that by clarifying those sorts of questions, as well as the nature of the underlying assumptions of science, the threat of an inevitable and fundamental conflict diminishes.

Let’s turn now to an extreme version of naturalism, often referred to as scientism. In the discussion of naturalism we saw the danger of making overly bold claims for science. We also saw that there are many presuppositions of science that underlie scientific practice but which cannot be arrived at by using science; that is, science cannot show that its own presuppositions are valid. But scientism rides roughshod over these subtleties.

Scientism is a word which is usually used in a derogatory manner to describe a naive, almost blind, faith in science. It is the idea that only scientific knowledge is authentic and any other sort of knowledge is

meaningless nonsense. The thinking behind scientism goes like this: if a naturalistic worldview is correct—that is, if there is no God or gods and the natural world is all that there is—then the only possible knowledge we can have of anything is scientific knowledge. So all that ‘is’ and all that ‘can be known’ is verifiable or falsifiable through the scientific method, and whatever can’t in principle be analysed and measured by science is empty belief and fantasy. So, where naturalism is a belief about what sorts of things exist in the world, scientism takes this one step further and says that the only things we can know, and know about, are revealed by science. The corollary is that anything that cannot (in principle) be known by ‘the scientific method’ cannot even be discussed sensibly.

Thus science is held up as the absolute authority in every area of human life and thinking. Instead of science being a tool in the search for truth it has become an ideology—some would say a quasi-religion—that constrains what sort of truths are allowed to exist. Philosopher Daniel Dennett, one of the prominent so-called New Atheists, captures this view when he says, ‘When it comes to facts, and explanations of facts, science is the only game in town.’<sup>15</sup>

So what is the problem with scientism? To put it bluntly, scientism is a faith and blind faith at that. It is one thing to humbly and cautiously adopt naturalism as a worldview—one can believe that the natural is all that there is without being dogmatic—but it is another thing to make bold claims about science being ‘the only game in town’ or to suggest that science can show that naturalism is correct.

At the heart of scientism lies a logical contradiction. Scientism claims to be rigorously scientific and says that we should believe something along the following lines: ‘The only things you should believe are those things that science shows us to be true.’ Let’s call that the ‘S-thesis’. Now reread the S-thesis again. A moment’s thought reveals the contradiction at the core of scientism. If we are to believe the S-thesis (that is, that we should believe only scientific claims) then why should we believe the S-thesis, which is not a scientific claim? In fact taking the S-thesis seriously means that we should disbelieve the S-thesis itself. In this way scientism seems to

be an attempt to lift itself up by the bootstraps, or, to change the metaphor, the S-thesis shoots itself in the foot.

There are many things we believe that are not the result of science. And as we have already seen, there are many presuppositions that science depends on but which science cannot show to be true. If science were the only game in town then it would put itself out of business because the game of science depends on so many 'non-scientific' beliefs. But as most scientists, religious or otherwise, know well, science is not scientism and scientism does not follow from science: it is one thing to affirm the validity of scientific knowledge but it is another thing to say that all knowledge must be scientific.<sup>16</sup>

### **Conclusion: Conflict? What conflict?**

For most Christians with a healthy respect for natural science it comes as no surprise that science and faith are not locked in mortal combat. For the Christian, all truth is God's truth and, to use Francis Bacon's metaphor, both the book of God's word and the book of his works reveal something of the creator of all things. Science and Christianity are neither in conflict nor are they completely independent. They are, as Simon Conway Morris points out, more like conjoined twins and if they are seen as mutually incompatible the consequences are dire:

Science without Christianity is actually rudderless, doomed to investigate a universe in ever greater detail, but in a way that Nietzsche would have appreciated, as a completely meaningless exercise. And Christianity? Without science it risks sinking back into pantheism, abandoning rationality for a gobbledegook of syncretistic tosh.<sup>17</sup>

To those convinced that a divorce is imminent, let me suggest that the marriage will endure. Truly 'the church of God is an anvil that has worn out many hammers' and while the New Testament exhorts Christians to 'be prepared to give an answer' to those who ask the reason for their hope,<sup>18</sup> there is, from a Christian perspective, no cause for alarm. The

universe is in good hands and they are not those of Stephen Hawking or Richard Dawkins.

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<sup>1</sup> This chapter is based on Chris Mulherin, "The Marriage of Heaven and Hell? Faith, the Natural Sciences and Rumours of Divorce," in *God and Science in Classroom and Pulpit*, ed. Graham Buxton, Chris Mulherin, and Mark Worthing (Preston, Victoria: Mosaic Press, 2012).

<sup>2</sup> Galileo is the central figure in the most famous so-called conflict between science and religion. Some of his thoughts on the Bible and science are worth quoting:

‘The reason produced for condemning the opinion that the earth moves and the sun stands still is that in many places in the Bible one may read that the sun moves and the earth stands still. Since the Bible cannot err, it follows as a necessary consequence that anyone takes an erroneous and heretical position who maintains that the sun is inherently motionless and the earth movable. With regard to this argument, I think in the first place that it is very pious to say and prudent to affirm that the Holy Bible can never speak untruth—whenever its true meaning is understood. But I believe that nobody will deny that it is often very abstruse, and may say things which are quite different from what its bare words signify. Hence in expounding the Bible if one were always to confine oneself to the unadorned grammatical meaning, one might fall into error. ... Thus it would be necessary to assign to God feet, hands and eyes.’ Galileo Galilei, *Discoveries and Opinions of Galileo*, trans., Stillman Drake (Garden City, N.Y.: Doubleday, 1957), 181.

<sup>3</sup> Stephen Hawking and Leonard Mlodinow, *The Grand Design* (NY: Bantam Books, 2010).

<sup>4</sup> HPSC10001 ‘From Plato to Einstein’ is taught by Dr Kristian Camilleri.

<sup>5</sup> Paul Davies, ‘A brief history of the multiverse.’ *NY Times*, April 12, 2003. At <http://www.nytimes.com/2003/04/12/opinion/a-brief-history-of-the-multiverse.html>. Last accessed 15/02/12.

<sup>6</sup> Interview, May 10, 2005.

At <http://www.pbs.org/wgbh/nova/tech/collins-genome.html> Last accessed 29/2/12.

<sup>7</sup> James Trefil, *One hundred and one things you don't know about science and no one else does either* (NY: Mariner Books, 1997), 15.

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<sup>8</sup> Daniel Dennett, *Darwin's Dangerous Idea: Evolution and the Meanings of Life* (London: Penguin Books 1995), 21.

<sup>9</sup> C. S. Lewis, *Miracles* (Glasgow: Collins, 1977), 8.

<sup>10</sup> Friedrich Wilhelm Nietzsche, Aaron Ridley, and Judith Norman, *The Anti-Christ, Ecce Homo, Twilight of the Idols, and Other Writings*, Cambridge Texts in the History of Philosophy (New York: Cambridge University Press, 2005), 183.

<sup>11</sup> Richard P. Feynman and Jeffrey Robbins, *The Pleasure of Finding Things Out: The Best Short Works of Richard P. Feynman* (Cambridge, Mass.: Perseus Books, 1999), 146.

<sup>12</sup> Michael Polanyi, *Personal Knowledge* (London: Routledge and Kegan Paul, 1958), 214.

<sup>13</sup> Simon Conway Morris. 'Skin-deep differences? The mystical marriage of science and religion.' Address given at Magdalen College Chapel, Oxford, February 12, 2012.

At: [www.magd.ox.ac.uk/data/assets/pdf\\_file/0019/15760/12-Feb-12-SCM.pdf](http://www.magd.ox.ac.uk/data/assets/pdf_file/0019/15760/12-Feb-12-SCM.pdf).

Last accessed 29/2/12.

<sup>14</sup> Isaac Newton, *The Correspondence of Isaac Newton, Volume 1*, ed. HW Turnbull (NY: Cambridge University Press, 1961), 416.

<sup>15</sup> Daniel Dennett, interview in *New Statesman*, April 10, 2006. At <http://www.newstatesman.com/200604100019>. Last accessed 29/2/12.

<sup>16</sup> Alex Rosenberg is one of the few philosophers or scientists happy to accept the label of scientism. In his book *The Atheist's Guide to Reality: Enjoying Life without Illusions* (NY: WW Norton, 2011) Rosenberg challenges the cowardice of scientists who cover up the truth rather than admit that science (and in particular physics) offers all the answers that there are. For a summary version see the article by Rosenberg at <http://onthehuman.org/2009/11/the-disenchanted-naturalists-guide-to-reality/>. Last accessed 29/2/12.

<sup>17</sup> Conway Morris.

<sup>18</sup> 1 Peter 3:15