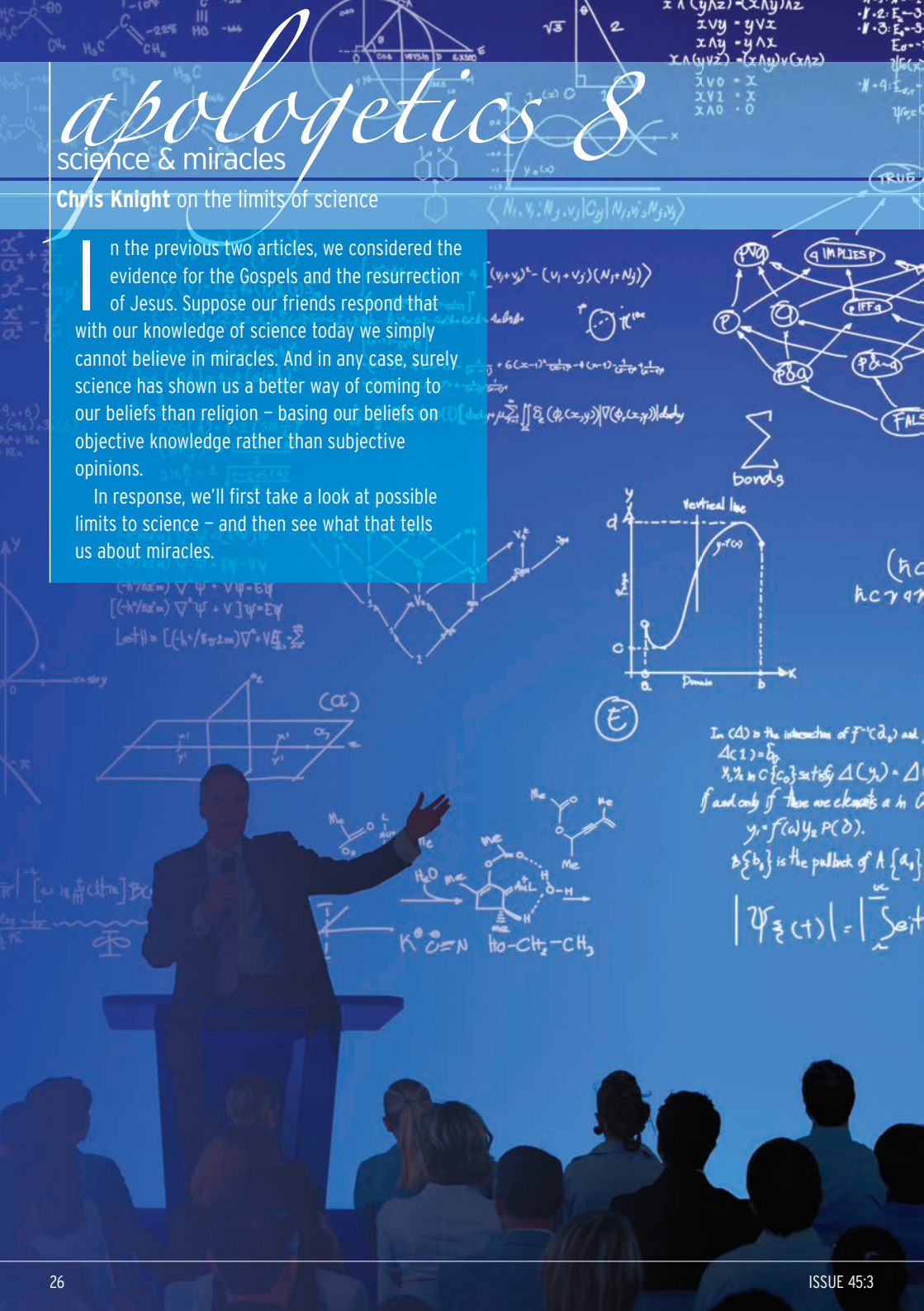


apologetics & science & miracles

Chris Knight on the limits of science

In the previous two articles, we considered the evidence for the Gospels and the resurrection of Jesus. Suppose our friends respond that with our knowledge of science today we simply cannot believe in miracles. And in any case, surely science has shown us a better way of coming to our beliefs than religion – basing our beliefs on objective knowledge rather than subjective opinions.

In response, we'll first take a look at possible limits to science – and then see what that tells us about miracles.

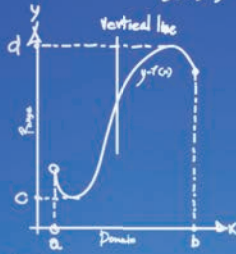


$$\langle N_1, \nu_1, N_2, \nu_2 | C_j | N_2, \nu_2, N_3, \nu_3 \rangle$$

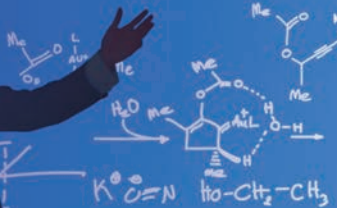
$$(v_1 + v_2)^2 - (v_1 - v_2)(N_1, N_2)$$

$$+ 6(x-1)^2 \cos^2 \theta - 4(x-1) \cdot \frac{1}{x^2} \cdot \frac{1}{x^2}$$

$$\int \int \partial_x (\phi(x, y)) \partial_y (\phi(x, y)) dx dy$$



$$\begin{aligned} (\nabla^2 \psi + V\psi) &= E\psi \\ [(-\hbar^2/2m)\nabla^2 + V]\psi &= E\psi \\ \text{Let } \psi &= [(-\hbar^2/2m)\nabla^2 + V]^{-1} E\psi \end{aligned}$$



In (d) is the intersection of $f^{-1}(c_d)$ and $A(c_1) = E_2$
 $x, y \in C \{c_0\}$ satisfy $\Delta(c_1) = \Delta$
 if and only if there are elements $a, b \in C$
 $y = f(a) \wedge y = P(b)$
 $B \{b_0\}$ is the pullback of $A \{a_0\}$

$$|\Psi_{\Xi}(t)| = \left| \sum_{\nu} \dots \right|$$



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the limits to science

Science has limits, beyond which it doesn't work. 'Scientism' maintains that the scientific method is the only way to know anything about the world we live in. Scientism can take a number of forms. What they tend to have in common is that questions about God, religion and morality are treated as if they were purely scientific issues. If science cannot give a response on such matters, then any statements in these areas are either meaningless or must be viewed as speculative and uncertain. So scientism would maintain that if science does have limits, they are the limits of human knowledge.

Biologist Richard Dawkins states that 'truth means scientific truth'. Philosopher Alex Rosenberg writes:

*The methods of science are the only reliable ways to secure knowledge of anything... Science provides all the significant truths about reality, and knowing such truths is what real understanding is all about.*²

Now if this is the case, then we will need to reject belief in God, because God is not some 'thing' within the universe – an 'object' that we can investigate scientifically, like a protein. Of course, if science does disprove God, then it also negates other disciplines such as history, literature and philosophy. Our universities should close down all departments apart from the sciences.

We could make a number of responses, apart from the obvious request for a description of the scientific procedures by which Dawkins and Rosenberg came to their conclusions given above. As their conclusions are actually not

scientific conclusions, then if their overall conclusions are right, surely their statements are either false or it cannot be known with any certainty that they are true. Either way, these statements show that their authors do not adhere strictly to scientific procedure when thinking about what we can and cannot know.

Apart from this internal contradiction within scientism itself, there are a number of other reasons to believe that science has limits in its application. We will consider three.

1. use the right tool for the job

Science is a tool. It's a very fruitful tool, as the prevalence of modern technology demonstrates. But if we try to use the wrong tool for a job, the results can be misleading. Consider a scientific analysis of a book. It could be very revealing, identifying the composition and source of the paper, the pages' dimensions, the ink composition and so on. If I was then to ask you what you have found out about the author, you would probably tell me that your scientific investigation found no evidence of an author. That's hardly surprising – the author is not a 'thing' in the book to be investigated scientifically. Science is the wrong tool to find the author, who is outside the book. A different type of investigation is needed to understand anything about the author.

In the same way, of course, God is not a 'thing' in the universe. If God exists, he is 'outside' the universe in the same way that the author is outside his book. So analysing the universe scientifically, however thorough it is, will never find God in the way that it might find a new type of star.

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2. description and explanation

A scientific view also fails to distinguish between two types of knowledge: description and explanation. Science principally describes the universe – producing scientific laws and theories that make sense of the data obtained through our scientific investigation of the world. If we ask, however, why those particular laws apply rather than any others, we come to a point where we simply have to acknowledge that that is how the world is. The description of the laws of nature does not explain those laws. The philosopher Ludwig Wittgenstein wrote:³

The great delusion of modernity is that the laws of nature explain the universe for us. The laws of nature describe the universe, they describe the regularities. But they explain nothing.

Thus there are complementary ways of talking about the universe. Asking for an explanation of the universe, rather than purely a description of it, cannot be ruled out as meaningless by the scientific method. We need to investigate the matter to determine whether an answer can be found.

My favourite example of these complementary levels of talking concerns a kiss. If my wife is upset, I might approach her and say: 'Let me give you a kiss'. However, the response would be very different if I used the scientific description: 'Would you like to engage in a mutual juxtaposition of our orbicular muscles in a state of contraction along with a reciprocal transmission of carbon dioxide, bacteria and viruses?'. That may well be a very 'scientific' way of describing a kiss, but in this context (and probably almost all others) it is not a very helpful way.

The explanation of an event cannot simply be broken down into a more basic 'scientific'

description, because the two are not directly equivalent. Attempts to 'reduce' every phenomenon to basic scientific descriptions (called 'reductionism') inevitably omits significant levels of meaning in the attempt.

The atheist scientist and Nobel Prize winner, Sir Peter Medawar, wrote in his book *The Limits of Science*:⁴

That there is indeed a limit upon science is made very likely by the existence of questions that science cannot answer and that no conceivable advance of science would empower it to answer. These are the questions that children ask... How did everything begin? What are we all here for? What is the point of living?

Thus science cannot answer every question that we might have about the world. It can answer many. But some types of question are simply not susceptible to the scientific method. We must look elsewhere to answer them.

3. why trust science?

Science is also limited because doing science fundamentally depends on a number of assumptions, none of which can be proven (by science or any other method). For example, science requires that there is:

- Regularity in nature
- Reality of the external world
- Reality of other minds
- Reliability of our senses
- Reliability of our reasoning

We cannot prove these assumptions and yet science cannot proceed without them. Cosmology assumes that the laws of physics on earth also operate at the furthest reaches of the universe. Observing a falling apple requires that we assume the reliability of our senses and that there is a real external world. And so on. Of course, if we were to try to prove these

assumptions scientifically, we would first need to assume them in order to prove them, which is not allowed! We cannot even argue that they are all reasonable assumptions to make, because the validity of our reasoning processes is itself one of the assumptions we are trying to prove.

In asking the question, 'Why trust science?', we can go even further. C.S. Lewis argued that 'Men became scientific because they expected Law in Nature, and they expected Law in Nature because they believed in a Legislator'.⁵ Indeed, only such an intelligent, powerful lawgiver, the creator of our universe, gives us justification for thinking that these assumptions are true and that they will continue to hold in our future experience. Thus without God, we could say, science cannot be justified.

counter-argument

So we have three reasons to doubt that science is the sole and final arbiter of all 'truth'. This allows us to reject any notion that science has dispensed with the possibility of belief in God. But someone may object that what they really meant was not that we should always use the formal scientific approach to gain knowledge we can trust, but that we should always use our reason and judgment in assessing evidence before coming to our considered beliefs – which we can then honour with the term 'knowledge'.

There is much to be said for such an approach, but we need to notice the concessions that have already been made from the view of 'scientism'. Firstly, however, we should note that all of the bullet point assumptions in point three above apply equally to advocates of the use of 'reason' rather than 'science'. Again, these assumptions can only be justified if God exists to give order and

regularity to the world.

Secondly, the suggested rational process no longer limits human knowledge to what science can obtain nor to physical (or 'naturalistic') descriptions of the universe in which we live. It leaves entirely open the nature and content of the knowledge that we can obtain. Therefore the existence of God or the truth of the resurrection (and hence of Christianity itself) becomes an open, and quite valid, question, which we can discuss and debate, reaching conclusions based only on the strength of the appropriate evidence and arguments on each side.

miracles

If we are prepared to base beliefs on the strength of the appropriate evidence, rather than any assumption about what might or might not exist within reality, then looking for the best explanation of the evidence requires us to be open to the best hypothesis – whether that suggests the existence of a God or not. Similarly, the existence of miracles needs to be based on the appropriate evidence. Is the world we live in the type of world in which miracles happen – or not? We can only decide this by investigating that world.

Much of modern science, including Einstein's relativity, requires a careful investigation of the world to formulate its theories, particularly as they go against our common sense view of how the world works based on everyday experience. Common sense does not indicate that there is an upper speed limit, as relativity indicates. Only investigation reveals this truth to us. Reality must determine our scientific beliefs. It must also be allowed to determine our religious or theological beliefs, just as much as it determines our historical (and all other) beliefs.

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The question of miracles depends largely on our worldview. Naturalism states (broadly) that only matter and energy exist – so miracles cannot exist. They may indicate an unknown law of nature or a misinterpretation of the evidence, but nothing more. However, if God is indeed the Lawgiver responsible for the laws by which the universe works, then it is reasonable to suggest that he can, if he so desires, continue to operate within such a world. Whether he does or not needs to be determined by the evidence, but not by an arbitrary assumption that miracles cannot happen or are always less likely than some naturalistic explanation.

In talks, I have sometimes asked people what will happen if I release an apple which I am holding in my hand. The answer is, of course, that it will fall to the ground. I then throw it towards one of the more sceptical looking members of the audience – who instinctively catches it (no-one has dropped it so far!). I then ask why it didn't fall to the ground. The reply is usually 'Because I caught it'. 'Ah!', I reply, 'Because of your personal intervention in the way the world works, you 'broke' the law of gravitation!'

God can 'amend' his own laws, by an external application of power which does not really 'break' any of the laws of nature, but adjusts and diverts how those laws operate by introducing an external action – just as catching an apple does not really 'break' the law of gravitation.

conclusion

Science is powerful at what it does. But it has limits. There are questions it cannot answer and types of knowledge for which its methods are not relevant. In arguing that there are limits to

science, we are not proposing adopting irrational or arbitrary beliefs, but the proper and humble use of reason, applied to God's world and to God's word. Miracles are best viewed, not as impossible breaks in established laws of nature, but as evidence-based conclusions based on the best interpretation of the available evidence about reality.

key points

- science is limited to certain types of knowledge
- science describes but does not explain
- science needs to make assumptions, which are unfounded without belief in God
- if we call God's action in his world 'miracles', they do not break the laws of nature any more than catching an apple breaks the law of gravitation

further resources

- Are miracles possible? bit.ly/1gtffjgV
- Did Jesus do miracles? bit.ly/1DCldXO
- John Lennox, *God's undertaker: Has science buried God?* Oxford: Lion, 2009
- John Lennox, *Gunning for God: Why the new atheists are missing the target.* Oxford: Lion, 2011, especially chapter 7
- Peter S. Williams, Is science the only way to know anything about anything? bit.ly/1lz5zvi

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3. Quoted in Lennox JC. *Gunning for God: Why the new atheists are missing the target.* Oxford: Lion, 2011:228.
4. Medawar PB. *The limits of science.* Oxford: Oxford University Press, 1984:66.
5. Lewis CS. *Miracles: A preliminary study.* New York: Touchstone, 1996 (first published 1947):140.