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e need to remember that our goal is to introduce our friends to a personal and saving relationship with God through Jesus Christ. For some people, the journey to saving belief begins with belief in God after which they are prepared to consider the historical evidence for the saving death and resurrection of Christ. C.S. Lewis is an example of this. Others come to belief in the resurrection of Christ and hence to belief in the God who raised Christ from the dead. Frank Morison, for example, became a Christian as a result of a direct and initially sceptical investigation into the resurrection.

Both routes to faith are legitimate, but some people do need to clarify the issue of God's existence before they will even consider the miracle of a resurrection. However, we must start where our friends are and with the questions that they are asking. We might encourage additional questions, but ultimately the issues and questions they raise are our starting point.

making a difference

I would like you to consider for a moment why you believe in God (if you do). What evidence or arguments or experience led you to that belief? If you were asked, how would you reply?

Your reply would probably be based on some aspect of your experience of the world, for which you believe that God is the best explanation. In other words, a universe created by God would be different to one without a God. As Richard Dawkins says:

'...a universe with a creative superintendent would be a very different kind of universe from one without' ²

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I agree with him that the existence of a 'creative superintendent', ie 'God', should make a difference to the universe in which we live – or at the very least the world should bear something of the imprint of God's hand behind it. If nothing in the world really needs God to explain why it is how it is, then why should we believe that God really does exist?

In this article, we will consider two arguments for belief in a creator God, both based on scientific findings. In the next article, we will look at some non-scientific reasons.

where did the universe come from?

The first argument for a creator God is based on two fairly straightforward statements which most people would agree are reasonable. If you hear a loud bang from the room next door, and someone then walks in from that room, you're likely to ask 'What made that bang?' You might accept the reply 'I don't know', but you should definitely be unhappy with the response 'Nothing, it just happened'. Our consistent experience is that things don't just happen – they have a cause. The letter that comes through our letter box did not simply appear from nowhere – someone had written and posted it.

So we might say that all our experience of the world leads us to believe the principle: 'Whatever begins to exist has a cause' (statement 1).

Next, consider how scientists say that the universe came into being. The majority view is that our universe came into existence about 13.7 billion years ago with the 'Big Bang'. In other words: 'The universe began to exist' (statement 2).

But if we put these two statements together, we can see the conclusion that follows:

- (1) Whatever begins to exist has a cause.
- (2) The universe began to exist.

 Therefore. (3) the universe has a cause.

It seems rather arbitrary to exclude the universe itself from statement (1). Everything else we know of follows this law. It is quite reasonable, therefore, to believe that the universe itself abides by it. So if the universe does have a cause, what could it be?

Clearly the cause needs to be 'something' very powerful and purposeful; something that existed outside of time and space (as scientists tell us that these only came into existence at the Big Bang). So the cause must be eternal, uncreated, existing outside of time and space, immensely powerful and acting with purpose – which sounds rather like a creator God to me. This is usually called the *Kalam* Cosmological Argument, developed and popularised by William Lane Craig.

Now although this argument is powerful, some sceptics will dispute it. ³ But, at the very least, most people would agree that belief in these statements (1) and (2) is reasonable – and so belief in the conclusion, that the universe has a creator, is also reasonable.

Interestingly, early in the scientific debate about the Big Bang, some atheists were very disturbed by it, because they realised that it was just the sort of evidence that went to support belief in a creator God. John Maddox was at one time editor of the scientific journal *Nature*, perhaps the most prestigious scientific journal in the world. He stated that the concept of the universe having a beginning was 'thoroughly unacceptable' because it implied an 'ultimate origin of our world', giving those who believe in a creator God 'ample justification' for this belief. ⁴ An interesting admission!

Let's return to the idea of this 'creator' being purposeful. The next argument looks at that in more detail and provides even more reason to believe that there is purpose behind the

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creation of the universe – which strengthens the idea that this 'something' is really a 'someone' – a personal being.

why is the universe 'just right' for life?

This is sometimes called the 'Goldilocks effect'. Goldilocks explored the three bears' house until she found the chair, porridge and bed that were 'just right' for her. Similarly, the universe is 'just right' to allow life to occur. But it exists on a knife-edge. The laws of nature that express how matter and energy interact with each other can be given in mathematical equations, using a number of constants determining the strength of each law. We might imagine the values of these constants being controlled by a series of controls on a complex machine.

If we slightly change one control, we might vary the constant determining the attraction between masses, changing the strength of gravity. Each control changes one constant. Physicists have found that there are all sorts of control settings that could produce a universe – but in the vast majority of cases the resulting universe does not produce a universe capable of sustaining life. This is usually called 'fine-tuning', by comparison with the need to make very fine adjustments on the tuning dial of an analogue radio to get the best reception.

As one example of fine-tuning, the laws that describe how stars develop involve the ratio between the electromagnetic force (that attracts electrons to protons in an atom) and the gravitational force. If that ratio *increased* by just one part in 10 to the power of 40, that is a 1 followed by 40 zeros or 1 in 10,000 million million million million million, stars would all be very small. But if the same ratio *decreased* by just one part in 10 to the power of 40, stars

would all be very large. Astrophysicists tell us that in either case, no planets could form and hence there would be no life. This is just one of very many examples showing that the laws of nature are on a knife-edge that just allows a universe which can produce life.

Now, is this an accident or not? After all, one could argue, if the universe weren't like that, we wouldn't be alive to think about it. But we are here, so the universe has to be as it is!

This is a good point, but it still doesn't stop us being surprised by the fact that our universe does allow life to exist, whereas the vast majority of universes with random settings of the constants would not allow life to develop. So it is still reasonable to seek an explanation. Consider an analogy. You are in front of a firing squad of 50 sharpshooters, all armed with fully loaded sub-machine guns. The commander shouts 'Take aim!' and all the guns are aimed at you. You hear the word 'Fire!' just as you close your eyes tight. You hear the sound of the guns being fired and hear the wall behind you being torn to shreds. You open your eyes and are unharmed. Is it reasonable to ask why you are still alive, when the firing squad should have killed you? Of course it is! It may be very, very unlikely that you did survive, but you will almost inevitably seek an explanation for your good fortune. 5 So it is with the universe - we should not expect to be here at all and so we have every right to ask why the fine-tuning of the universe 'just happens' to be as it is. As the atheist Fred Hoyle once remarked. 'A common sense interpretation of the facts suggests that a super intellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature.'6

Again, the sceptic can object with concepts such as the multiverse – the notion that our

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universe is just one of a huge number of universes, and perhaps most of the others don't allow life. Now discussion on such matters can start to get technical and guite difficult - but also guite unscientific. I enjoyed Michael Hanlon's article 'Reality Check Required', 7 in which he states: 'When physicists whisk us into the realms of multiverses and universe-gobbling particles, it's time to ask whether there's something amiss.' A personal, purposeful creator God is the simplest explanation for fine-tuning, negating the need to postulate a trillion, trillion (or more) unobservable universes.8

the limits of scientific arguments for God

In this article, we have looked at two arguments for the existence of God, which each use scientific data about the universe we live in to show that belief in a creator God is not only reasonable, but the best explanation of the evidence.

The arguments above provide neither a knock-down argument nor a scientific proof for the existence of God. But for many who consider that they approach the world in a scientific way, these arguments can start to unsettle their atheistic worldview. Wasn't science supposed to do away with belief in God? But now it seems to be supporting it!

But what else can we know about this creator God? Is this the Christian God or not? In the next article, we will look at other reasons to believe in God and how they support the arguments made above. The article after that will look at the evidence for the resurrection and see where that can take the sceptic on their journey to faith.

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key points

- Remember the goal introducing our friends to a personal and saving relationship with God through Jesus Christ
- There are many different reasons to believe in God
- This article gives two arguments based on current scientific findings
- The *kalam* cosmological argument shows the universe has a creator
- A personal creator is the best explanation for the fine-tuning of the universe
- We are using scientific findings with those for whom these are important
- There is still some distance to go in a journey to saving faith

further resources:

- William Lane Craig. On guard: defending your faith with reason and precision. Colorado Springs: David C. Cook, 2010. See especially Chapters 4 and 5.
- John Lennox. God's undertaker: has science buried God? Oxford: Lion, 2007
- Lee Strobel. *The Case for a Creator*. Grand Rapids: Zondervan, 2004
- Peter May. Fine Tuning the Multiverse Theory. bit.ly/18zDL9i

NEXT TIME - more evidence for God

Morison F. Who moved the stone? Carlisle: OM Publishing, 2. Dawkins R. The God delusion. Bantam Press, 2006:55

- For discussion of objections, see Craig WL. On guard, chapter 4
- Maddox J. Down with the Big Bang. Nature 1989;340:425
- This example is given by philosopher John Leslie in Universes. London: Routledge, 1996:13ff
- Hoyle F. The Universe: past and present reflections. Annual Reviews of Astronomy and Astrophysics. 1982;20:16. Quoted at: bit.ly/1gm0H0s
- Hanlon M. Reality Check Required. New Scientist 2008; February:22
- For discussion of objections, see Lennox J. God's undertaker: has science buried God? Oxford: Lion Books, 2007 especially pp.68-75

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