

*Also by Stephen Law*  
The Philosophy Files

# The Philosophy Gym

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25 SHORT ADVENTURES IN THINKING

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# WHERE DID THE UNIVERSE COME FROM?

About twelve billion years ago an unimaginably violent explosion occurred. Expanding outwards at incredible speed, this cataclysmic blast gave birth to space, energy, matter and indeed time itself. The universe we see around us is the debris from this Big Bang.

But why did the Big Bang happen? What brought the universe into existence? What lies on the other side of the Big Bang?

## What Caused the Big Bang?

*The scene: Mathers, a theologian, and Figgerson, a physicist, are fellows of one of the grander Oxford colleges. Both love to engage in philosophical disputes. They have just sat down to dinner at High Table.*

*Figgerson:* What philosophical mystery shall we discuss this evening?

*Mathers:* I have been thinking about the origin of the universe. Could we perhaps discuss that?

*Figgerson:* Why not? Except there's little mystery there. We scientists have solved that particular conundrum. I can tell you that the universe began about twelve thousand million years old. It started with what we call the Big Bang, a colossal explosion in which space, energy, matter and time itself began.

*Mathers:* That's no doubt true. But you're wrong to suggest that there's no mystery. We know the Big Bang happened. My question to you is: *why* did it happen?

*Figgerson:* I'm not sure I follow.

*Mathers:* What I mean is: what *caused* the universe to exist? Where did it come from? Why is it here? Indeed, why is there *anything at all*?

*Figgerson:* Why, as it were, is there something, rather than nothing?

*Mathers:* Yes. That surely is a mystery.

## Did God Cause the Big Bang?

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The puzzle Mathers raises is perhaps the deepest and most profound mystery of all. The traditional solution is to appeal to the existence of God, which is precisely what Mathers now suggests.

*Mathers:* It seems to me that there is only one possible solution. God. God must have caused the universe to exist.

*Figgerson:* Ah, God. I wondered how long it would be before you brought God into the conversation.

*Mathers:* But surely we must introduce God at this point? Look, when we entered this dining room we found two chairs here. Now, it would be absurd – would it not? – to suppose that these two chairs just popped into existence for no reason at all? The existence of these chairs must surely have had a cause. Don't you agree?

*Figgerson:* Yes.

*Mathers:* Similarly with the universe, then. It just isn't plausible that it popped into existence for no reason. It, too, must have a cause. But then God must exist as the cause of the universe.

Let's call Mathers' argument the *cause argument*. It's an example of what is commonly known as a *cosmological argument*. Cosmological arguments begin with two observations: that the universe exists and that the events and entities we find around us always turn out to have a cause or explanation. The arguments then conclude that the universe must also have a cause or explanation and that God is the only possible (or at least the most likely) candidate.

## What Caused God?

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The cause argument certainly has some *prima facie* appeal. It's associated particularly with the thirteenth-century philosopher and theologian St Thomas Aquinas (1225–74). Aquinas constructed five arguments for the existence of God, of which the cause argument is the second. Unfortunately, the argument is flawed. Figgerson explains why.

*Figgerson:* I'm unconvinced. As you know, I don't believe in God. But let's suppose for the sake of argument that God does exist. Your appeal to Him as the explanation of the existence of the universe still ultimately fails to remove the mystery with which we began.

*Mathers:* I don't see why.

*Figgerson:* Well, then, let me ask you *what caused God to exist?* You say that it is absurd to suppose that something might come into existence uncaused. As you said about the chairs, they cannot have just popped into existence for no reason. But then it follows that God's existence also requires a cause.

*Mathers:* Well, God is the exception to the rule that everything requires a cause. God is the supreme being to which the rules that govern other things do not apply. The existence of the universe requires a cause. The existence of God does not.

*Figgerson:* But if you're going to make an exception to the rule that everything has a cause, why not make the universe the exception? Why do you posit the existence of a *further* entity – God – in addition to the universe?

*Mathers:* I'm not sure I follow.

*Figgerson:* You argue that everything has a cause. Then you make God the exception to this rule. But why not make the Big Bang the exception to the rule? What reason have you given me to add God to the beginning of this chain of causes as an extra link? You have given me none. But then you have given me no reason at all to suppose that God exists.

As Figgerson points out, the most obvious flaw in the cause argument – a flaw also pointed out by the philosopher David Hume (1711–76) – is that it involves a contradiction. The argument begins with the premise that everything has a cause, but this is then contradicted by the claim that God does not have a cause. If we must posit a God as the cause of the universe, then it seems we must also posit a second God as the cause of the first God, and a third God as the cause of the second, and so on *ad infinitum*. So we shall have to accept that there are an infinite number of Gods. Either that or we must stop with a cause that itself has no independent cause. But if we must stop somewhere, why not stop with the Big Bang itself? What reason is there to introduce even *one* God?

Of course, some might be willing to accept an infinite chain of Gods. But such a chain *still* wouldn't remove the mystery with which we began. For then the question would arise: why is there such an infinite chain of Gods, rather than no chain?

Here's an analogously bad causal explanation. When struck by the question of what holds up the earth, some people posited a great creature – an elephant – as its support.

But then the question arises: if the earth is held up by an elephant, then *what holds up the elephant?* A second creature – a vast turtle – was then introduced to hold up the elephant. These people decided to stop with the turtle. But why stop there? For, of course, the question with which they were really grappling – the question of why *anything at all* gets held up – has still not been answered. In fact, if we pursue their reasoning to its logical conclusion, the earth will end up perched on top of a huge tower of creatures – an infinite number of creatures – stacked up one on top of the other.

But they didn't do this. They stopped with the turtle. But if it's claimed that the turtle requires no support, then why not just say that the earth requires no support and leave it at that? What reason is there to introduce *any* supporting creatures at all? There is none.

Despite being a poor argument, the cause argument has always been popular. In fact, when asked to give some reason why they suppose that God exists, the cause argument is the one to which those who believe in God often first appeal. The question of what brought God into existence is simply overlooked.

### What's North of the North Pole?

Figgerson and Mathers continue to argue, each becoming more and more infuriated with the other. Eventually, to Mathers's intense annoyance, Figgerson suggests that Mathers's original question – what caused the universe? – may not even *make sense*.

**Figgerson:** Look, while it may make sense to ask what caused this chair, that mountain or this tree to exist, it surely does not make sense to ask what caused the universe *as a whole* to exist.

**Mathers:** H'm. You suggest my question does not make sense. But what *reason* do you have to suppose that it doesn't make sense? Justify your suggestion.

**Figgerson:** Very well. It seems to me that to ask for the cause of something is to ask what other thing *within the universe* brought it about. That is how the game of asking for and giving causes is played out. When I ask, for example, what caused that tree outside the window to exist, I am asking for you to identify some other thing or event *within* the universe that brought that tree into existence. Someone might have planted an acorn in that spot, for example, or someone might have moved a tree there to improve the view from this window. But if to ask for the cause of something is to ask what other thing *within* the universe brought it about, then *it cannot make sense to ask what is the cause of the universe as a whole*. That would be to pursue the question of causes outside the context in which such questions can meaningfully be raised.

**Mathers:** I'm not sure I follow.

**Figgerson:** Very well. Let me explain by means of an analogy. Suppose I ask you what is to the north of England. What would you say?

**Mathers:** Scotland.

**Figgerson:** And what lies to the north of Scotland?

**Mathers:** Iceland.

**Figgerson:** And to the north of Iceland?

**Mathers:** The Arctic Circle.

**Figgerson:** And to the north of the Arctic Circle?

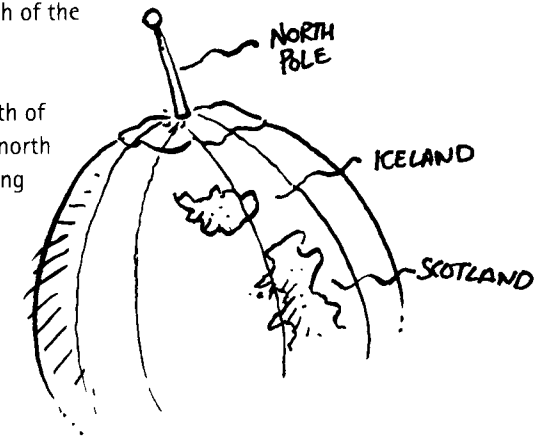
**Mathers:** The North Pole.

**Figgerson:** And what lies to the north of the North Pole?

**Mathers:** Er. What do you mean?

**Figgerson:** If there is something north of England, and something north of Scotland, and something north of Iceland, then surely there must be something to the north of the North Pole too?

**Mathers:** You're confused. Don't you understand what 'north' means? Your



question doesn't make sense. It doesn't make sense to talk about something being north of the North Pole. To say that something is north of something else is to say that it is nearer to the North Pole than that other thing. But then it can't make sense to talk about something being north of the North Pole, can it?

*Figgerson:* Aha. So my question doesn't make sense. Well, then, neither does your question about the cause of the universe.

*Mathers:* How so?

*Figgerson:* One can ask what is the cause of an earthquake? One can then ask for the cause of the cause of the earthquake, and so on. One can trace the chain of causes right back to the Big Bang if one likes. But it makes no sense then to ask: and what caused the Big Bang? That is like asking: and what is to the north of the North Pole? That would be to ask a question outside the context within which such questions can meaningfully be raised.

Still, as Mathers points out, his question about the origin of the universe does at least *appear* to be cogent.

*Mathers:* But my question does *seem* to make sense, doesn't it? And it seems to me that you haven't actually shown that the question about causes cannot legitimately be raised about the universe itself.

*Figgerson:* Why not?

*Mathers:* You seem to argue that if we don't *normally* ask a question outside a certain context, then it cannot *meaningfully* be raised outside that context. But your argument is fallacious. Here's a counterexample. It seems probable, I think, that for long periods of our history mankind considered only *practical* questions, questions the answers to which it would be *useful* for us to know. For example, no doubt we wanted to know what causes plants to grow, what causes the seasons to come and go, what causes storms and diseases, and so on. We wanted to know the causes of these things because they affect our day-to-day lives. Probably we weren't interested in asking questions that didn't have any practical relevance for us. For example, perhaps we didn't bother asking ourselves what causes the sky to be blue. But it doesn't follow that if we didn't *normally* ask such impractical questions, then

such questions, if they had been asked, would have *made no sense*. Surely, even if we never did ask ourselves what causes the sky to be blue, we *might* have done, and, if we had, our question would certainly have made sense.

*Figgerson:* I suppose it would.

*Mathers:* Thank you for that admission. But then why do you suppose that it makes no sense to ask what caused the universe? Just because we don't *normally* ask this question doesn't mean that it is senseless. In fact, it seems perfectly clear to me that, unlike your question about what is to the north of the North Pole, my question *does* make sense, even if it is difficult to see how it might be answered.

*Figgerson:* H'm. Perhaps your question does make sense.

*Mathers:* Aha! In that case, what I want to know is this: if God did not cause the universe to exist, then *what did?*

## The Unsolvable Mystery

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Figgerson stares wistfully into his spotted dick and custard. Then he gazes out over the heads of the assembled undergraduates eating below.

*Figgerson:* Perhaps *nothing* caused the universe to exist. Perhaps its existence is simply a *brute fact*. After all, we physicists are inclined to accept that some things are just brute fact and inexplicable. Often we explain why one law holds by appealing to others. One can explain, for example, the law that water freezes at zero degrees Celsius by appealing to the laws that govern the atoms and molecules out of which water is composed. But few suppose that this process can go on for ever. Presumably one must eventually come up against laws that cannot be accounted for or explained in terms of yet other laws. The obtaining of these basic laws is just a brute fact. And if we are to allow that there are at least *some* brute facts, then why not suppose that the existence of the universe is also a brute fact, a fact that requires neither a further cause nor an explanation? Why suppose that it, too, must also have a cause, an explanation?

*Mathers:* It seems to me that the existence of the universe cannot be a brute fact, as you suggest. It isn't plausible to suppose that the universe

popped into existence for no reason. The Big Bang didn't *just happen*, surely? There must be a reason *why* it happened.

Figgerson closely examines his pudding as if searching for an answer. He watches as the spotted dick crumbles into the custard, the currants swirling slowly outwards like the stars in some huge pudding galaxy.

Figgerson furrows his brow. He hates to admit it, but Mathers does appear to be right.

*Figgerson:* I must say, I do feel confused. I agree that it doesn't seem adequate to say that the Big Bang happened for no reason at all. And yet it seems we can say nothing else. Why *is* there something, rather than nothing?

*Mathers:* The answer is God.

*Figgerson:* But that answer will not do, as we have already seen.

*Mathers:* So what does explain the existence of the universe, if not God?

*Figgerson:* That's a mystery.

## Conclusion

It seems that when it comes to the question *what is the ultimate cause or origin of the universe?* there are four options available to us. These are to:

1. Answer the question by identifying a cause of the universe.
2. Claim that, though the universe has a cause, we cannot or at least do not yet know what this cause is.
3. Claim that perhaps the universe has no cause – it's existence is simply a brute fact.
4. Deny the question even makes sense.

The problem is that on closer examination none of these four options seems satisfactory. The difficulty with the first option is that as soon as one offers God or indeed something else as the cause or explanation of the universe, the 'something' to which one appeals in turn becomes the focus of the demand for a cause or explanation. So it seems that the first kind of answer can never be adequate. Rather than answering the question about ultimate origins, we merely sweep it under

the carpet. The difficulty with the second option is that if one suggests that the universe has an as yet unknown cause, the question then arises: and what is the cause of that unknown cause? So the mystery is merely postponed. The claim that the universe simply has no cause, on the other hand, also seems unsatisfactory – is it really plausible to suppose that the universe simply popped into existence for no reason at all? Surely not. And yet the fourth and final option seems equally implausible – certainly, no one has yet succeeded in providing an uncontroversial explanation of *why* the question about the cause of the universe makes no sense.

So it seems that, while no explanation can be acceptable, yet neither can the question of the ultimate origin of the universe simply be set aside or dismissed. Which is why this particular philosophical mystery remains so perplexing. It appears that the question of the ultimate origin of the universe is a mystery that can be neither explained nor explained away.

### What to read next

See Chapter 7, Does God Exist?, Chapter 10, Can We Have Morality without God and Religion?, and Chapter 23, Miracles and the Supernatural, for more arguments for the existence of God.

For some other examples of circular explanations, see Chapter 16, The Meaning Mystery.

### Further reading

A good introduction to the philosophy of religion containing a thorough discussion of many of the issues raised here is:

J. L. Mackie, *The Miracle of Theism* (Oxford: Clarendon Press, 1982), especially Chapter 5.

Also see:

Nigel Warburton, *Philosophy: The Basics*, second edition (London: Routledge, 1995), Chapter 1.