



Responding to the Goldilocks Enigma

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Responding to Goldilocks

Paul Davies is a brilliant science writer. As an eminent physicist and cosmologist, he knows his subject matter with distinction. Better still, he has a real enthusiasm for explaining complex scientific issues to a lay audience. His book, *The Goldilocks Enigma* [1], examines the extraordinary 'bio-friendliness' (i.e. the fine-tuning) of the universe. In ten chapters and nearly 300 pages he explains the mysteries of the universe with singular clarity. However, it is the nine pages at the end of the book that I would like to draw to your attention.[2] They are entitled *Afterword: Ultimate Explanations*.

It is a strength for most readers that Davies comes to this subject as an unbeliever. That is not to say he is an atheist but he certainly does not accept Christian or any other theistic orthodoxy. In fact, it would be very difficult to say he is peddling a viewpoint. However, he is very well placed to consider the range of possible explanations to account for our bio-friendly universe. He puts forward eight options, which I will summarise. He lists them as options A to H.

A. The Absurd Universe

In this view, the universe just happens to permit life but there is no design, purpose or point to it at all. There is no intelligence behind it and no coherent scheme of things. There is no point in searching for its meaning – it has none. It is all one great accident, the product of chance, including the evolution of mind and intelligence. Ironically, he believes that most scientists adopt this view, even though it implies an unjustified faith in the

rationality of the scientific method. The fact that scientific and rational minds are capable of understanding the universe is just part of the absurdity. As they say in popular parlance, "Stuff happens!"

B. The Unique Universe

The second view is that this is a unique universe which has a deep underlying rationality. It can all be explained ultimately by a grand unified Theory of Everything (ToE). If this mathematical theory can ever be elucidated, it would leave no room for adjustment or variation. Everything will be explained by some deep mathematical principle. This view appeals to physicists, he notes. There was inevitability from the outset that the universe would be like this or not exist at all. The bio-friendliness of the universe is incidental, as is the evolution of intelligence. It is just the way it is. It would not be possible for the universe *not* to produce human life.

Stephen Hawking has been one of the enthusiasts for this approach. However, in 2004 he went on record [3] as saying that he believes the grand unified ToE cannot be found because we live within the system we seek to understand. This is not to say it doesn't exist but one would need also to have an external view of the system in order to comprehend it. In this he refers to Gödel's Incompleteness Theorem and concludes that we shall therefore never arrive at the ToE.

C. The Multiverse

This supposes there is an utterly vast number of quite different universes, allowing the statistical chance that one of them would be like ours, capable of producing intelligent life. It avoids the riddle of fine-tuning (with its implications of a Fine-tuner) by replacing it with a way of resolving the statistical improbability of a bio-friendly world like ours existing. There is also an extreme multiverse theory which maintains that *all* possible worlds really do exist. The multiverse theory would then explain everything because it contains everything!

Among the major questions that advocates of the Multiverse Theory need to face are the quite incomprehensible number of universes that would be required to significantly alter that statistical probability, the force of Occam's Razor in the face

of such extravagant ideas and whether the multiverse can be considered a scientific idea since it is beyond the reach of scientific observation and testing. There is, of course, a delicious irony here. Richard Dawkins, who insists we should not believe in anything without scientific evidence to support it, believes the unverifiable multiverse theory explains the fine-tuning of the universe. On his own criteria, he really shouldn't believe that! No wonder the New Atheists agree that this is their biggest intellectual difficulty.

If a multiverse does exist, does it impact Christian theology? Not really. Firstly, we will presumably never know if it exists. Secondly, if God has created it, then it is God's problem (or pleasure). We need not speculate about matters we cannot verify and which are beyond our concern. The multiverse, anyway, runs into the same problem of causation as a universe. It either requires an infinite regress of causes or, at some point, a necessary, uncaused, first cause.

Davies views the multiverse as an extravagant way to explain bio-friendliness, which would be very difficult to test scientifically. It is held, he believes, by a growing minority of scientists.

E. The Life Principle

According to Davies, this view *"builds purpose into the workings of the cosmos at a fundamental level... which must be accepted as a brute fact, along with the laws of physics, existing without any explanation."* An overarching law somehow constrains the universe towards bio-friendliness and the development of intelligent life. He concedes that this idea does not escape the problem of causation and cannot answer the question as to how the universe knows about life in order to set up its development. Atheistic scientists regard such directional principles as a covert means of reintroducing God into the discussion.

F. The Self-explaining Universe

All the explanations so far depend on an infinite regress of causes. This view entails a causal loop which enables the universe to create itself! The system is therefore self-contained, supposedly avoiding questions of external causation. We are

still left with not knowing why this self-creating system actually exists, or whether it is one of many.

G. The Fake Universe

Finally, he describes a fake universe, a simulation, *"an ingeniously contrived virtual reality show"*. This universe implies an intelligent designer but undermines the scientific quest because it is essentially a sham.

H. None of the above

Of this he says nothing.

He then comments, *"Did I leave anything out?"* Logically, he cannot have left anything out, as any other suggestions would be grouped under H. The fact that he makes no comment about them suggests that he anyway does not feel there are any other serious contenders worth considering.

Now literate readers with a firm grasp of the order of the letters of the alphabet, might have noticed that we have yet to consider his Option D, which I thought would be better considered in the light of its rivals. So...

D. Intelligent Design[4]

Paul Davies also considers and dismisses the monotheistic religious view that the universe is designed and created by God. However, before considering his stated objections, it is worth noting some comments he makes in the closing paragraphs of the book:

I do take life, mind and purpose seriously, and I concede that the universe at least appears to be designed with a high level of ingenuity. I cannot accept these features as a package of marvels which just happen to be, which exist reasonlessly. It seems to me that there is a genuine scheme of things – the universe is 'about' something.

I take the human mind and our extraordinary ability to understand the world through science and mathematics as a fact of fundamental significance... I do believe that life and mind are etched deeply into the fabric of the cosmos.[5]

What then are his objections? He lists just four:

<ol type="1" start="1"> § Belief in God is a natural

explanation for those people who have already decided on other grounds that God exists.

§ He says, *"It suffers the obvious disadvantage of being a conversation-stopper"* as it does not actually explain how or why God did it.

§ It raises the question as to who designed the designer, unless a necessary being can be shown to be superior to a necessary universe.

§ The identity and character of the designer remains unknown. He says it could be a committee of gods, or a super-mind in another universe or within our universe, or a supercomputer simulating the universe, so we are all part of The Matrix.

Hence he concludes that the idea of belief in a creator God is *"fraught with problems"*.

But is it? Surely, this is the most elegant and simple explanation for reality: an intelligent mind designing a rational, ordered universe that produces intelligent beings capable of understanding that universe. As 16th century German astronomer Kepler expressed it, the scientist *"is thinking God's thoughts after him."* To address his specific objections:

1. We don't first need to decide that God exists *on other grounds*. The fine-tuning of the universe has been the grounds for many people coming to believe in a creator God. Famously, the philosopher Antony Flew changed his mind in old age.[6] In the last month, I have heard the testimony of Southampton University space scientist Graham Swinerd, who after 50 years of agnosticism, came to believe in a creator directly because of the fine-tuning question, which was otherwise inexplicable. Subsequently he attended an Alpha course and became a Christian.[7]

Fifty year old Rod Liddle, a leading journalist in the UK, who was formerly editor of BBC Radio's *Today Programme* and is currently a columnist for *The Sunday Times*, now admits to returning to the Christianity he had abandoned in his early teens. What brought him back?

"I was the opposite to Richard Dawkins: the more science I read – particularly the formation of the universe – the more it seemed to me that a Christian explanation is both more compelling and less far-fetched than some of the man-made explanations ... you know, you look at the stars on

the balance of the universe and what needed to be in place and the likelihood of it."[8]

Even atheist Fred Hoyle concluded that someone had been monkeying around with the universe, saying, much to his disquiet, that *"the universe seems to be a put-up job"*!

2. As for stopping the conversation, the opposite is the case. The scientific endeavour was initially started by people who believed that an intelligent God had created an ordered universe which was worthy of investigation – and Davies himself has become a strong advocate of that position. He was interviewed on BBC Radio 3 last week. Physics he said, *"came out of Europe. The monotheistic world produced science because they believed in an ordered creation, which was not found in other cultures. Scientists must believe in order that can be decoded. They have to take on faith that the universe makes sense."* Well, if he thinks theism started the conversation – why should it stop it now? It also starts an entirely new conversation, of course, as we reflect on why God created it.

3. Certainly the Christian answer doesn't explain how he did it or who designed the designer. But explanations in themselves don't need to be explained. When we discovered that my wife's jewellery had disappeared and a back window had been forced open, the obvious explanation was that we had been burgled. The police accepted that explanation but never explained it, either as to who it was or why they did it. But the explanation was entirely sufficient to account for the observation of the missing jewels, without that explanation itself needing to be explained.

Furthermore, an intelligent necessary being – that uncaused, first cause – who brought the universe into existence has to be superior to the idea of a necessary universe, which has no intelligence yet supposedly accounts for its own existence.

4. Finally of course, the design hypothesis does *not* tell us much about the designer, but it does imply some fundamental theological truths about his power and intelligence, as well as his immaterial existence, his transcendence not just of space but of time as well, so that consequently there never was a time when he did not exist nor a time when he came into existence. We have

however to look to Christ to discover the character of God. Why should we look there? Simply, because he has no rivals. No other religion makes the extraordinary claim that the creator of the universe has revealed himself, by taking on human flesh and entering our world. The claim is that God has revealed himself within the system, in personal terms which we can all understand. As Antony Flew put it, "*This is the one to beat.*"^[9]

References:

[1] Paul Davies *The Goldilocks Enigma – Why is the Universe just Right for Life?* (Penguin Allen Lane, 2006).

[2] *Ibid.*, pp.295-302.

[3] www.hawking.org.uk/index.php/lectures/91.

[4] The phrase is used here to speak of an intelligent designer who brought the universe into existence. It has nothing to do with that current speculation that sees designed features within the evolutionary process itself.

[5] *Goldilocks Enigma*, p.302.

[6] Antony Flew *There is a God – How the world's most notorious atheist changed his mind* (Harper One, 2007).

[7] See 'A Deeper Story?' video in God: new evidence Part 2. Also available on DVD produced by Focus, Southampton - for more details and further resources see www.focus.org.uk.

[8] Interviewed by Nick Spencer *Third Way Magazine*, April 2010.

[9] *There is a God*, p.186.

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