**The Lottery Fallacy, Fine-Tuning, and the Multiverse**

**February 26, 2021 by Philip Goff (in italics)**

**I replied to his claims (in normal font)**

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***Our best current science suggests that our universe is fine-tuned for life.***

**How do you support the assertion that our universe is fine-tuned FOR life**

**in a universe that, so far, has found life in ... only one place?**

**If anything, that would suggest a universe fine-tuned AGAINST life.**

**We’ve searched every planet in our solar system, many of its moons and**

**asteroids; we’ve sent spacecraft beyond our own solar system, and our**

**telescopes have peered into distant galaxies. So far, your side’s score is ...**

**one.**

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***That is to say, certain numbers in basic physics – e.g. the strength of gravity,***

***the mass of electrons, etc. – are, against improbable odds,***

***exactly as they need to be for life to be possible.***

**I’ll let Douglas Adams address that one:**

***“This is rather as if you imagine a puddle waking up one morning***

***and thinking, ‘This is an interesting world I find myself in –***

***an interesting hole I find myself in – fits me rather neatly, doesn’t it?***

***In fact it fits me staggeringly well, must have been made to have me in it!’ ”***

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***Many scientists and philosophers think this is evidence for a multiverse,***

***but I disagree. What we have evidence for us that our universe is fine-tuned***

***and postulating a huge number of other universes doesn’t explain this.***

**We are all still waiting for your evidence to support your assertion that the**

**universe is fine-tuned FOR life (directly contradicting all our observations).**

**Hopefully you’ll offer something more convincing than “science suggests.”**

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***Steve Novella accuses me of committing the lottery fallacy.***

***But what is the lottery fallacy? Suppose against improbable odds my lottery***

***numbers come up. Clearly there’s something going wrong if I think there***

***needs to be some special explanation of the fact that I won. Steve suggests***

***that the error consists in focusing on the particular person who won – Philip***

***Goff – rather than merely the fact that someone won. Similarly, by focusing***

***on the fact that our universe – rather than just some universe – is fine-tuned,***

***he thinks I’m committing the same fallacy.***

**I’m more concerned that you have committed the “no evidence” fallacy.**

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***What about the fine-tuning case? I think we’re struck by the fine-tuning not***

***because it’s improbable – whatever numbers had come up would be equally***

***improbable – but because it’s improbable that it happened by chance.***

**What evidence do you have that the physical constants happened by chance?**

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***And, again, this is because there’s a non-chance hypothesis that would***

***render it much more probable, namely the hypothesis that considerations of***

***value were involved in determining the values of the constants.***

***If the process that determined the constants***

***was sensitive to the value of the resulting universe,***

***then it wouldn’t be surprising that the constants would end up fine-tuned,***

***much less surprising that it would be if they were selected at random.***

**If that were the case, then you would have to answer this question:**

**why would the process (sensitive to considerations of value)**

**fine-tune a universe for life**

**and then fill 99.99999999999999999999999999% of it with ... non-life?**

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***So I don’t think the lottery fallacy is anything to do with***

***focusing on the particular individual rather than the general fact;***

***rather it’s a matter of fallaciously inferring from***

***the fact that something is improbable to***

***the fact it’s improbable that it happened by chance.***

**Okay, I see one fact: “something is improbable” is a fact**

**(as defined by statistics) but your second *fact* is still just an assertion**

**since you cannot provide evidence that the universe happened by chance.**

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***But the fact that our universe in fine-tuned is not only improbable,***

***it’s also improbable that it happened by chance.***

**“our universe in [sic] fine-tuned” is an assertion – not a fact.**

**“improbable” is not “impossible” so that isn’t a very strong argument ...**

**you can ask the dinosaurs about that one.**

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***Therefore, focusing on the fact that our universe is fine-tuned – rather than***

***that some universe is fine-tuned – does not commit the lottery fallacy.***

**But you did just commit a fallacy by claiming that an assertion is a fact.**

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***Let me try a different way of making the case for my position.***

**Why not?**

**It’s not like you could do any worse than you’ve been doing.**

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***We can only gain support for a hypothesis with the evidence we in fact have.***

***We can either think of evidence as our actual observations, or as the***

***concrete, physical states of affairs we know about through observation.***

***Whether you think of the fine-tuning evidence as our actual observations, or***

***you think of it as the concrete fine-tuned physical universe we live in, in***

***either case our evidence is not made more probable by the multiverse***

***hypothesis. Yes, the existence of some fine-tuned universe is made more***

***probable by that hypothesis. But we have to work with the evidence we in***

***fact have, and the evidence we in fact have is constituted by the properties***

***of this concrete, physical universe (or our observations of it), and this is not***

***made more probable by the multiverse hypothesis***

**Fact: we have no evidence to indicate that life can exist without atoms.**

**Referring to just our universe (as you wanted),**

**how do you explain the scientific consensus**

**that our universe, as originally created,**

**was created without atoms - making life impossible**

**and stayed that way for 380,000 years.**

**Did the universe change its mind?**

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**I read, and then deleted, the rest of the debate between Goff and Novella.**

**I just couldn’t take any more.**

**Now I understand how those 60 U.S. judges felt**

**when they begged Trump’s lawyers**

**to produce their evidence that the election had been stolen;**

**and 60 times ... they got nuthin.**