

Multiverse theory and the design argument¹

Teleological or design arguments infer from the order and regularity that we see in the universe, the existence of a God that designed the universe. In traditional forms, the design they appeal to is especially evident in life. The way in which living things work requires a huge coordination of lots of tiny bits, each doing their specific job. However, it seems that we can explain the organisation of parts for a purpose in terms of evolution. No appeal to a divine designer is necessary. More recent design arguments appeal to the laws of nature themselves as evidence of order and regularity.

‘Fine-tuning’ arguments put these thoughts together. Obviously, we live in a universe in which the laws of nature, and other fundamental physical properties of the universe, enable life to exist. But the evolution of life is exceedingly unlikely. As Richard Swinburne puts it,

[p]resumably...the matter-energy at the time of the Big Bang when the universe began...had just the quantity, density, and initial velocity as to lead in the course of time to the evolution of organisms.... Only a certain sort of critical arrangement of matter and certain kinds of laws of nature will give rise to organisms. And recent scientific work on the fine-tuning of the universe has shown that the initial matter and the laws of nature had to have very, very special features indeed if organisms were to evolve.

What explains this? One response is the existence of God. If God created the universe intending life to exist, and being omnipotent and omniscient, had both the power and the knowledge to do this, that would explain why the universe has just the right conditions for life to evolve. In this handout, we discuss a challenge to this inference from ‘multiverse’ theory.

MULTIVERSE THEORY

There are two completely different theories in physics that are sometimes called ‘multiverse’ theory. In its most common use, it refers to a theory most famously associated with the physicist Leonard Susskind and developed in the early 2000s. According to this theory, there are (or have been) many different universes, each with different physical parameters (e.g. the speed of light, the strength of gravity, etc.), different fundamental physical particles (e.g. bosons, leptons, etc.), and even different numbers of dimensions of space-time. With such fundamental differences, the different universes also have different scientific laws.

In another use of the term, ‘multiverse theory’ refers to what is more commonly called the ‘Many Worlds Interpretation’ of quantum mechanics. This theory was first developed in the 1950s by the physicist Hugh Everett and renamed and popularised in the 1960s by Bryce Seligman DeWitt. Quantum mechanics is

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famously ‘indeterminate’. There is no apparent explanation for why, when two outcomes are possible in a quantum event, this rather than that outcome occurs. On the Many Worlds Interpretation, both do - one in ‘this’ universe, the other - the one we don’t observe - in another universe. However, this theory doesn’t suppose that these other universes have different laws or fundamental physical properties.

It is only the first type of multiverse theory that is relevant to the design argument.

MULTIVERSE THEORY AS AN ALTERNATIVE TO FINE-TUNING

Suppose, as multiverse theory does, that instead of just this universe, there are or have been millions of universes, each with different scientific laws. Suppose in most cases, the laws didn’t allow the universe to continue to exist - as soon as it began, it ended. Others existed for a time, but the development of order was limited, e.g. there was no life. Given all the possible universes, and all the possible variations in scientific laws, a universe such as ours would come to exist through chance eventually. We don’t need to explain the supposed ‘fine-tuning’ of the universe in terms of a designer. There was no ‘fine-tuning’ involved.

This explanation can be compared to winning the lottery. It is very unlikely that *you* will win, but it is highly likely that *someone* will win. For whoever wins, that *they* won is a huge coincidence; but we don’t need any special explanation for it (such as ‘someone intended them to win, and rigged the lottery’). So, likewise, there is nothing special about this universe, except that it has, by chance, the right laws for order to exist.

RESPONSE

Defenders of the fine-tuning argument, such as Swinburne, can respond that just as the lottery explanation assumes that millions of people are playing, multiverse theory assumes the existence of *huge* numbers of other universes. These other universes are completely inaccessible to us, and we have little evidence for their existence.

So which is the better explanation? Is the hypothesis that there are millions of universes better than the hypothesis that there is a designer? Three considerations:

1. We might think that the existence of a designer is a simpler explanation: just one designer, not millions of universes. On the other hand, the designer is a new *kind* of thing, whereas we already know that universes can exist.
2. We have no idea how universes are produced. We know that lotteries can and do operate by chance, so that there is an equal probability of any set of numbers coming up. But does this apply to universes and their laws? Perhaps something in the production process prevents universes normally having laws that permit life... Is there *any* chance of a life-producing universe occurring without interference by a designer?

3. If the designer is God, then God's existence is also supported by other evidence, e.g. religious experience. On the other hand, we also have evidence *against* the existence of God, namely the problem of evil. At least we don't have evidence against the existence of other universes.