

God, Faith, and Infinity

Short Essay

Does the fact that we wouldn't exist to offer an argument for the existence of God if the universe wasn't fine-tuned for life undermine arguments for God that are based on those sorts of considerations?

The existence of life is dependent upon the fine-tuned physical structure of the universe. Considerations of fine-tuning have been used to formulate a design argument for the existence of God. The purpose of this essay is to show that the requirement of a fine-tuned universe for our existence undermines the design argument for God based on these requirements. I will argue that the weak anthropic principle offers a challenge to the design argument's major premise, that life evolving in a finely tuned universe is more probable under the design hypothesis. Firstly, I will outline fine-tuning and exemplify the razor's edge on which our universe sits. Secondly, I will show the design argument and illustrate why it might be considered a compelling explanation for the fine-tuned universe. Furthermore, I will introduce the weak anthropic principle to explore why fine-tuning is necessary for life, and how this principle suggests a problem for the design argument. Moreover, Sober's (2003) anthropic objection will be used to characterise the problem faced by the design argument. Next, I will contrast Sober's objection with a defence for the design argument offered by Leslie (1989) and Swinburne (1990), in the form of a firing squad analogy. I will conclude by deliberating points from Sober (2003, 2009) and Davis (1987), revealing that the WAP ineffectively explains fine-tuning, but still challenges the design argument.

Fine-Tuning

The universe seems to be unusually fine-tuned for the existence of life. Its stability depends upon parameters such as the gravitational force, the mass of fundamental particles, and the strength of electromagnetic forces (Davis, 1987). Had the initial conditions and physical constants been slightly different, the universe would not have been stable enough for life to evolve. The parameters appear to be sitting on a razor's edge. For example, if the gravitational force had been slightly weaker, planets and stars would have been unable to form. Moreover, if matter were not spread out at a certain low density, the universe would have collapsed in upon itself. Additionally, if the expansion rate of the universe were slightly lower, this would preclude the appearance of carbon compounds. Small changes in parameters such as these, prevent the required physical conditions for the development of life (Davis, 1987; Lewis, Barnes & Schmidt, 2017). The sensitive balance of physical parameters is termed 'fine-tuning' (Barrow, 1986; Carter, 1974; Leslie, 1989; Zycinski, 1996).

Design

Considering the narrow range of parameters that allow for the development of life, our existence might be considered surprising. A common response to our finely tuned conditions is to infer the existence of a designer, namely, God (Craig, 2003; Davis, 1987; White, 2000). Conversely, fine-tuning may be considered a result of chance processors in a causal chain (Carter, 1974; Saward, 2013). The theists position proclaims that we should not rationally expect to be in such a narrow region of finely tuned possibilities. Assuming there is a vast potential for different parameters, the chance of a single life-permitting universe is extremely improbable (White, 2000). Therefore, a designer may be considered a more compelling explanation than that of coincidence.

The cosmological design argument asserts that the balanced parameters are best explained by a designer. It claims that fine-tuning is more probable under the design hypothesis than by chance (Craig, 2003; White 2000). Without a designer, the parameters could presumably have held a plethora

of life averse values. Accordingly, the argument claims that fine-tuning should be considered extremely improbable if due to chance (Davis, 1987; White, 2000). For example, one million rolls of a dice that consecutively land six will be considered surprising. However, if the dice was specially designed to only roll six, or all sides were painted six, the unexpected outcome becomes unsurprising. Similarly, if the fine-tuning of the universe is a roll of the dice, it appears extremely improbable if deemed the result of a chance process. Subsequently, A more compelling explanation might involve a fine-tuner, namely God. Thus, fine-tuning is potentially best explained by a designer that has rigged the parameters to allow for the evolution of life.

The Weak Anthropic Principle

The weak anthropic principle (WAP), first introduced by Carter (1974), suggests that the ostensible fine-tuning of the universe may be the result of an ‘observation selection effect’. The WAP claims that the parameters of our universe are necessary for the genesis of life. Carter (1974) argued that most arbitrary physical parameters could not give rise to observers. He contended that what we can expect to observe in our universe must be restricted by the conditions necessary for our presence as observers. Expressly, because certain parameters are *required* for our existence, their observation should be expected. Carter (1974) termed this the WAP. If we exist, the fine-tuned parameters must be seen. Therefore, fine-tuning will be equally evident in a universe that has come about through design and coincidence. Because observers are contingent on the fine-tuning of the universe, all observations are subject to a bias termed the ‘observation selection effect’ (Leslie, 1989; Sober, 2003; Weisberg, 2005; White, 2000). Due to this effect, all observer’s actions, such as formulating an argument for the existence of God, must necessarily be performed within a fine-tuned universe.

Undermining Design

The WAP challenges the design argument’s proposition that fine-tuning is highly improbable without a designer. The WAP shows that we *should* expect to observe a narrow region of finely tuned parameters. This directly contradicts the design argument’s claim that it is less probable to find life in a finely tuned universe generated by coincidence than design (White, 2000). In contrast, the WAP demonstrates that it is equally certain to find life in a finely tuned universe, irrespective of whether the parameters were set by a designer or chance processors. According to the WAP, the constants *must* be fine-tuned for our existence, because we exist (Carter, 1974). Therefore, it is certain that our universe is fine-tuned, not improbable (Sober, 2003, pp.42). Consequently, the development of life in a fine-tuned universe cannot support probabilistic arguments for a designer. Life requires these parameters. Therefore, its evolution within them does not support that the observation of a fine-tuned universe generated through chance processors is less probable than a universe generated by design. Sober (2003) believes the WAP undermines the probability difference between the competing hypotheses and successively contests the design argument for God. Clearly, this is because the WAP reveals that observing fine-tuning is certain, not highly improbable. The design arguments major premise is directly challenged by this. Therefore, the design argument is flawed, and it does not hold that God is the best explanation for fine-tuning (Sober, 2003, pp.47).

Leslie (1989) and Swinburne (1990) defend against Sober’s (2003, 2009) contention by illustrating the following ‘firing-squad’ analogy. Twelve expert marksmen, each with twelve rounds, are aimed to fire at a prisoner awaiting execution. On this occasion, all 144 shots miss the prisoner. The prisoner proclaims that if they had not all missed, he would not have observed them doing so. The condition of the prisoner observing the missed shots is contingent on him being alive. Subsequently, the prisoner concludes that the missed shots are explained by the circumstance of being alive to observe it. Leslie (1989) and Swinburne (1990) argue that the prisoners reasoning is absurd and does not offer an adequate explanation for why the shots missed. Moreover, Leslie (1989) claims that the prisoner should naturally conclude that there was some reason, other than chance, that the shots missed. The prisoner’s existence would be highly improbable if the shots missed by chance, and less improbable if the marksmen were bribed to miss. Hence, the survival of the prisoner (existence of life) indicates that bribed marksmen (design) are more probable than all 144 shots missing by chance.

The firing squad analogy demonstrates that the WAP may be an inadequate explanation for fine-tuning.¹ This potentially incites the use of a stronger anthropic principle.² Nevertheless, the WAP still possesses a potential challenge to the design argument. Sober (2003, pp.44) points out, if the analogies intention is to defend the design argument against the WAP, the matter is not whether the prisoner's survival requires an explanation, but whether the prisoner's observation provides evidence as to whether the marksmen were bribed (designed) or missed by chance. Regarding the analogy, all shots missing by chance is reasonably improbable. This is because the range of possible outcomes is known (Davis, 1987, pg. 145-146). Leslie (1989) and Swinburne (1990) assume the prisoner understands how firing squads' work. They mostly follow orders, rarely produce fake executions, almost certainly never fire randomly, and practically always succeed with their intention. The prisoner knows that firing squads have firm control over the outcome. Sober (2003, pp.46) argues that the prisoner has information to ground the probability of outcomes and their causes. Unlike the prisoner, we lack adequate data to ground the probability and causes of fine-tuning. Subsequently, the analogy cannot be applied to the design argument and Leslie's (1989) conclusion, that the firing squad must be rigged, is not equivalent to the design hypothesis. Sober (2003) determines that the design argument erroneously makes claims about probabilities that are not understandable in terms of objective claims about nature. Unlike the prisoner's justified probabilities, there is no reason to accept the probabilities in the design argument. One simply does not have enough information of the possibilities to conclude that the design hypothesis is less improbable than alternative hypotheses (Sober, 2003, 2009). Therefore, the analogy does not effectively defend the design argument against the WAP's challenge.

In conclusion, the WAP proposes why life exists in such a finely tuned universe and offers a challenge to the design argument's major probabilistic premise. The WAP undermines the argument by demonstrating that observation of a fine-tuned universe is certain, not extremely improbable. The firing squad analogy attempts to defend against the anthropic objection and indicates that the WAP's explanation for fine-tuning may be inadequate. However, the analogy does not offer a successful defence for the design argument as intended. Sober (2003, 2009) and Davis (1987) demonstrate that the analogy is not effective due to the lack of adequate data to ground the design argument and accept its probabilities. The WAP gives us reason to reject the probabilities in the design argument. Consequently, the WAP appears to undermine the cosmological design argument for the existence of God.

¹ The prisoner's conclusion that the missed shots are explained by the circumstance of remaining alive, is clearly an inadequate explanation. Consequently, the analogy indicates that the WAP is likely an inadequate explanation for fine tuning. Davis (1987, pp.142) argues that the WAP is only 'trivially true' as it offers no explanation for why the physical parameters are in fact what they are. Comparatively, one would not be reading this essay if their parents had not met. Nonetheless, this truism does nothing to demonstrate why one's parents met. Davis (1987) explains it may be the case that certain conditions are necessary for the occurrence of life, but this notion fails to explain why these conditions should obtain in the first place (Davis, 1987).

² Considering the WAP, why bother to attempt any explanation of fine-tuning? If the observation of fine-tuning is certain in conditions of design and coincidence, our existence cannot offer any enlightenment towards fine-tuning. The WAP alludes to a potentially erroneous explanation of fine-tuning. Namely, that the finely tuned parameters are selected by the existence of observers. Barrow (1986) proposed this notion as the strong anthropic principle (SAP), claiming that the universe is compelled to fall into a narrow range of parameters that admit the creation of observers. This anthropocentric formulation suggests that the conditions of the physical universe are contingent on the existence of life. Attempts to refute the SAP tend to illustrate the absurdity of future effects (existence of life) causing the appropriate initial conditions of the parameters (Davis, 1987; Leslie, 1989). Such a reversal of cause-and-effect relationships appears to be incoherent with our temporally linear conception of reality. Thus, we are left with the WAP, which also falls short at explaining fine-tuning.

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