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Modern Day Teleology

Brianna Cunningham

Introduction

The nature of the universe is a long and well-debated topic in both scientific and philosophical fields. Many explanations for why our universe has its particular attributes have been offered, countered, and rejected over the years. Intelligent Design is a relatively new theory, proposed in the 1990s to counter Darwinian Evolution, and has been very controversial during its short existence. This theory is a derivative, or modern form of, the teleological argument advocated by William Paley in his 1802 book *Natural Theology*. As part of Intelligent Design theory, the concept of fine-tuning serves as an example of modern day teleological reasoning in its explanation of why universal parameters are life-permitting. There are various forms of the Intelligent Design argument, but the theistic version is the most clear and explanatory. The modern field of teleology indicates a theistic designer, as I will show through examining the ideas of Intelligent Design, irreducible complexity, and fine-tuning.

Definitions

As these concepts are often misunderstood, it is best that some terms are here defined. Teleology, from which Intelligent Design theory (ID), irreducible complexity, and arguments of fine-tuning stem, is simply the idea that things develop in order to attain a certain end or purpose; there is an ultimate direction in which everything is moving. Paley's Design Argument compared a watch to an eye, citing that both are so complex that they could not have come into being by chance events.¹ This is the basic idea of Intelligent Design theory: that all aspects of the complex universe could not have occurred naturally or randomly, and therefore the best explanation for teleology is that the universe must have been designed. This design accounts for the purposeful evolution of everything. While the theory does demand some sort of designer, it "does not attempt to identify the designer nor does it make explicit reference to God."² Intelligent Design Theory is not inherently Christian, and one can be a firm believer in the theory without believing the Bible.³ Two specific areas of teleology that Intelligent Design theory seeks to explain are irreducible complexity and fine-tuning.

¹Ed L. Miller and Jon Jensen. *Questions That Matter: An Invitation to Philosophy*, Sixth ed. (New York: McGraw-Hill, 2009), 260.

²H. Wayne House, *Intelligent Design 101: Leading Experts Explain the Key Issues* (Grand Rapids: Kregel Publications, 2008), 45.

³Bradley John Monton, *Seeking God in Science: An Atheist Defends Intelligent Design* (Toronto: Broadview Press, 2010), 8.

Evidences

Irreducible Complexity

A major component of the Intelligent Design theory is the concept of “irreducible complexity.” This is defined as “a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning.”⁴ Michael Behe in his book *Darwin’s Black Box*, cites several different examples of this in science. To illustrate in laymen’s terms, he uses the concept of a mouse trap needing each of its parts to perform the essential function of catching the mouse. A wooden base would never catch mice by itself, and then successively catch more mice as the spring and hammer were added over a figurative random mutation.⁵ Behe, however, does consider that while a complex mousetrap could not evolve from a simplified version of itself, it could, by natural selection, evolve from something else complex that serves an unrelated purpose, such as a paperweight.

A well-known example of the concept of irreducible complexity is cellular cilia. Cilia are hair-like structures often lining the outer surface of cells, used for movement. Each cilium is composed of a ring of nine double microtubules, with two single microtubules in the center. Each doublet is composed of thirteen

⁴ Michael Behe, *Darwin's Black Box*, Second ed. (New York: Free Press, 2006), 39.

⁵ *Ibid.*, 40.

filaments made of alpha and beta tubulin. The doublets are held together by a protein called nexin, they are joined to the central microtubules by radial spokes, and the two central microtubules are connected to each other by a connecting bridge. All of these components are essential for the movement of the cilia, which occurs when the dynein arms (attached to the doublets) “walk” up one another so that two doublets are sliding past each other. The cross-links prohibit the arms from sliding too far, creating an overall bending motion of the whole, eleven-microtubule structure.⁶ If there were no microtubules, there would be no strings to slide; if there were no motor, there would be no means of sliding, and if there were no connectors, there would be nothing to hold together the structures and allow for the joint bending motion. This system is irreducibly complex. It also exhibits fine-tuning in that the system must be whole and exact to complete its function and sustain life.

Fine-Tuning

Irreducible complexity relates to the idea of “fine-tuning” in that this concept, though more indirectly, also advocates for a designer. Fine-tuning speaks to the specificity of the universe and its ability to maintain human life. According to this argument, if natural conditions or parameters changed in any way, life would be dramatically altered on earth. For example, if the strong nuclear force constant were just 2% larger, diprotons would become stable, allowing for any Hydrogen atoms

⁶ Michael Behe, “Evidence for Intelligent Design from Biochemistry,” presentation at Discovery Institute's God & Culture Conference, Seattle, WA, August 1996.

formed to be quickly absorbed into these diprotons and not useful for any life chemistry.⁷ Another example is that if the gravitational force were slightly larger, the stars would burn too quickly and unevenly, whereas if this constant were slightly smaller the stars would be too cool to initiate nuclear fusion, leaving many essential elements for life unformed.⁸ There are about forty-five universal boundaries of this type; it is estimated that the probability for each of those things to have occurred naturally and precisely enough to maintain life on just one planet is “much less than one in one hundred billion trillion trillion trillion.”⁹ With a virtually zero chance of these things all occurring randomly, the fine-tuning argument lends quantifiable support to Intelligent Design.

Explanations

This teleological fine-tuning has had various philosophical explanations offered for it, though many do not offer much substance. One such explanation is that the universe has these physical parameters simply because humans exist. This argument, known as the Anthropic Principle objection, is often used to say that it is not improbable for the universe to have these conditions as they necessarily

⁷ Paul Davies, *The Accidental Universe* (Cambridge: Cambridge University Press, 1990), 70-71.

⁸ Hugh Ross, “Big Bang Refined by Fire” in *Mere Creation: Science, Faith, and Intelligent Design*, ed. William A. Dembski (Downers Grove: Intervarsity Press, 1998), 372.

⁹ *Ibid.*

follow the existence of intelligent life.¹⁰ This argument says nothing of the why or how of fine-tuning, but rather accepts it as a consequence of existence; it could never be otherwise, because if it were, there would be no humans to know the difference. Other arguments like this are the Life Principle and Unique Universe. The Life Principle states that there is merely some sort of constraint on the universe that makes it “evolve toward life and mind.”¹¹ The Unique Universe argument appeals to a Theory of Everything that will unify and explain the connection and purpose of all physics, including supposed fine-tuning.

The most popular explanation of fine-tuning, however, is that of the Multiverse. In this explanation, individuals use the complexity of life on Earth to assume the existence of many other universes. These people acknowledge the preposterously small probability of Earth being so fitted for life in the context of our universe; they then make the assumption that, for the probability to be larger, there must be a multitude of other universes. This thought process requires a universe generator of sorts, randomly assigning different laws of physics to each universe it creates. Naturally, this makes the probability of one planet being suited for life much more feasible. The Multiverse explanation is an alternative to theistic fine-tuning, as one

¹⁰ Robin Collins, "The Fine-Tuning Design Argument," Discovery Institute (September 1, 1998. Accessed April 22, 2017. <http://www.discovery.org/a/91>), 1.

¹¹ Paul Davies, *The Goldilocks Enigma: Why Is the Universe Just Right For Life?* (Boston: Houghton Mifflin, 2008).

could assume that just the existence of these other universes raises the probability enough to minimize the need for a God or designer to fix specific constants of a planet for life.¹²

The first few “explanations” offered simply lack substance. More than anything, they seem to evade an explanation by presenting more hypotheticals. The argument of the Multiverse is more substantial than its opponents, yet still cannot fully explain fine-tuning. A significant problem with this theory is that there has been no evidence of other universes existing, though there has been no evidence otherwise, either. However, with the vast number of universes that would need to exist in order for this universe to be probable, it seems unlikely humans would have no inkling of them. Another problem is that a universe generator would likely require some design. The generator would have to be governed by its own laws that make it possible for it to create these universes, allowing the hypothesis that if any one of the generator’s specific laws were different, it would not be able to correctly produce universes, bringing us back to the fine-tuning in Intelligent Design and seemingly just moving the answer of “designer” one level up.¹³

Though one cannot technically refute the Multiverse theory, the theistic explanation of fine-tuning offers far more clarity on the topic. As humans already

¹² Bradley Monton, "God, Fine-Tuning, and the Problem of Old Evidence," *The British Journal for the Philosophy of Science* 57, no. 2 (2006): 422.

¹³ Collins, "Fine-Tuning," 1.

know that fine-tuned, complex things like watches or engines are the result of intelligent minds on Earth, it should be natural to conceive that the universe with all its specificity also came from a greater mind. In addition, though the probability factor of obtaining our specific universe would increase with the number of possible universes, it could not work without the generator, and consequently, designer, previously mentioned. It would be infinitely more probable for the universe to have a designer than for Earth to be a physical anomaly among a plethora of universes.

Conclusion

Teleology, an a posteriori thought process, has continued to pervade society since its inception. Its modern-day derivative, Intelligent Design theory, and the irreducible complexity and fine-tuning observations within it, are still quite relevant to the question of the beginning of the universe. Though many explanations of universal origins have been proposed, the theistic explanation is the best, as it would account for all of the things the others cannot, such as the apparent design in creation, the “universe generator,” and the existence of such a precise universe despite its unlikelihood. A conclusion cannot be definitively drawn as proper “tests” cannot be completed with a topic such as this. However, given the specificity of the universe’s physical constants, the existence of a God offers the best account for the evident fine-tuning in this world.

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