In Search of a Creator: Infinity and Existence in the Kalam Cosmological Argument

LEONARDO SALVATORE

o we exist within an infinite temporal chain? Does all contingent, physical existence require a necessary cause? Is there a Creator behind reality? These inquiries have inspired curious humans to ponder the Earth's marvelous sky and the vast universe that homes it. To make sense of a seemingly infinite canvas, many have resorted to exciting explanations that invoke eternity, freedom, and God. Curiosity has guided me to consider a notable attempt at substantiating the necessary existence of a Creator, one who willed the universe into being and whose volition is the cause of all that is. It has been named the Kalām Cosmological Argument ("the Argument") by the contemporary theologian William Lane Craig. This essay aims to evaluate each element of the Argument. I first examine premise (2) and one popular objection to it. I do the same for premise (1). Second, I propose my original objection to premise (1), and then refute it. In my self-refutation, I share two insights into the nature of philosophical inquiry. I finish with an overview of the Argument's conclusion. But before we begin, a brief genealogy is in order.

Leonardo Salvatore graduated in May 2022 with a BA in Liberal Arts from Soka University of America focused on philosophy and education. He will be writing essays and reading books for one year, after which he hopes to begin a graduate degree in philosophy. His interests include Ancient Greek philosophy, meaning and perception, and the philosophy of nature. He aspires to become a professor and to expose youth to the joys of philosophical thinking.

The Kalām Cosmological Argument

Kalām (Arabic: פונישטוו לינים) means "science of discourse," or more simply "speech," "word," or "utterance." It also refers to the general study of Islam's theological tenets. According to medieval historians, Islamic philosophers established kalām as a full-fledged scholarly movement to reinforce and defend their creed against doubters and defamers.² Among its illustrious scholars is the Persian polymath Al-Ghazali (1058–1111 CE), to whom belongs one of the Argument's formulations. Craig paid homage to Al-Ghazali and the rich Islamic tradition with a popular book on the subject, which situates Al-Ghazali amidst the philosophical currents that inspired this set of propositions.³ However, the Argument's blueprint developed over a millennium before, with Aristotle's Prime Mover, a concept with which Al-Ghazali was likely familiar. We can go even farther and find sketches of Aristotle's Prime Mover in the ancient writers who posited a universe that had not always existed and was therefore created. As the first verse of Genesis declares, "In the beginning God created the heavens and the earth." Looking forward, we find bridges between kalām formulations and the ruminations of such outstanding medieval Christian philosophers as St. Bonaventure and St. Thomas Aquinas.

In 1979, Craig brought Al-Ghazali's Argument to the attention of Western theologians. It is now one of the most prominent contemporary cases for the existence of a Creator. It begins with the following syllogism:⁵

- (1) Whatever begins to exist has a cause of its existence.
- (2) The universe began to exist.
 - (2.1) Argument based on the impossibility of an actual infinite.

¹Tim Winter, "Introduction," in *The Cambridge Companion to Classical Islamic Theology*, ed. Tim Winter (Cambridge: Cambridge University Press, 2008), 4-5.

² Madeleine Cosman and Linda Jones, *Handbook to Life in the Medieval World* (New York: Facts On File, 2008), 391.

³ William Lane Craig, The Kalām Cosmological Argument (Eugene: Wipf and Stock, 2000).

⁴Genesis 1:1 (New International Version). For an introduction to Aristotle's plausible connection to Judaism, see Hans Lewy, "Aristotle and the Jewish Sage According to Clearchus of Soli," *The Harvard Theological Review* 31, no. 3 (1938): 205–235.

⁵William Lane Craig, "The Existence of God and the Beginning of the Universe," *Truth:* A *Journal of Modern Thought* 3 (1991): 4–5. The original article runs from page 85 to 96. However, the version I accessed (https://personal.lse.ac.uk/ROBERT49/teaching/ph103/pdf/Craig_KalamCosmologicalArgument.pdf) runs from page 1 to 40. My page references follow the online version.

- (2.11) An actual infinite cannot exist.
- (2.12) An infinite temporal regress of events is an actual infinite.
- (2.13) Therefore, an infinite temporal regress of events cannot exist.
- (2.2) Argument based on the impossibility of the formation of an actual infinite by successive addition.
 - (2.21) A collection formed by successive addition cannot be actually infinite.
 - (2.22) The temporal series of past events is a collection formed by successive addition.
 - (2.23) Therefore, the temporal series of past events cannot be actually infinite.
- (3) Therefore, the universe has a cause of its existence.

Let us examine each premise, starting from the major premise (2).

Hotels, Time, and Existential Necessity

Premise (2) revolves around the crucial difference between actual infinity and potential infinity. Craig contends that potential infinities are logically, conceptually, *and* metaphysically coherent, whereas actual infinities are both logically and conceptually coherent, but they are metaphysically absurd and physically impossible.⁶

Actual and potential infinities are mathematical concepts. On the one hand, a potential infinity (∞) is a set of particulars that increases towards infinity but never reaches it. It is *not* infinite; it is rather *indefinite*, becoming, or unfinished. On the other hand, an actual infinity (ω) is

⁶ "Metaphysical" refers to the set of necessary principles that underlie and enable physical existence. See also footnote 11.

a *finished* set of particulars with *infinite value*. An actually infinite set of particulars has reached infinity and is thus complete. Premise (2.11) states that an actual infinity cannot exist in factual reality, for it would generate paradoxes that are antithetical to reality itself. The German mathematician David Hilbert may help us to illustrate this point.

Hilbert asked us to imagine a hotel with an actually infinite number of rooms. To allow a few guests to check-in, the receptionist tells an equal number of checked-in guests to move rooms. But if Hilbert's Hotel were actually infinite—that is, if it has an infinite number of rooms *and* is also full—the total number of checked-in guests would not change. As Craig notes, this Hotel can only exist conceptually. An addition to a set of entities always increases the number of entities. Adding 12 guests to the Hotel should increase the Hotel's checked-in list by 12. However, an addition to an actually infinite set of rooms does not change the number of rooms, for an infinite value is by definition innumerable and limitless. The Hotel has an actually infinite number of rooms when the new guests arrive, and it also has an actually infinite number of rooms once the new guests check-in. But, the Argument goes, reality is not like that.

So, Hilbert's Hotel tells us that actual infinities are factually impossible based on the absurd conclusion that addition would not change the numerical value of its rooms. We can now add another layer: spatiotemporal entities—i.e., entities that begin to exist within time and space like a planet, a table, a person—necessitate an identifiable beginning; that is, a precise point in time at which they begin to exist. Now, if by infinite temporal regress we mean an actually infinite regress (2.12), then it follows that an infinite temporal regress is impossible (2.13). Since the existence of the universe is not only conceptual but also factual, Craig deduces that the universe must at least have a beginning. If it were an actually infinite entity with no beginning, there would be an actually infinite number of past events prior to the present moment. In Craig's view, this conclusion must mean that nothing could begin at all, for the moment at which an entity would begin to exist would never arrive: "the series of past events must be finite and have a beginning. [And] since the universe is not distinct from the series of events, it follows that the universe began to exist" (Existence of God 9). In other words, an actually infinite series of causes precludes the existence of spatiotemporal entities altogether.

If the universe or spacetime began to exist and is thus not an actual infinity, then it is also not self-explanatory, for it did not cause its own beginning. As an entity that begins to exist from something else, the universe requires a causal explanation beyond itself, which needs to be

⁷For brevity's sake, let this formulation represent (2.2).

independent of other causes. Hence we need to introduce a self-explanatory entity. A personal Creator may satisfy this logical requirement, to which we will soon return.

Before examining premise (1), let us survey a common objection to premise (2). One of the reasons the following objection is prominent may be that it purports to demonstrate the existence of actual infinities through mathematical notations. I chose to discuss it because Craig's rebuttal illustrates a crucial distinction between concepts and reality.

What Makes Sense is not Always Real

The common objection to (2) maintains that the premise must mean that actual infinities are *logically* impossible. On this reading, (2.1) should say, "Argument based on the *logical* impossibility of an actual infinite." In 1965, Wallace Matson argued that we can represent and talk about actual infinities through mathematical notations, such as {..., -1, 0, 1, 2, 3, ...}. Our ability to do so, it is claimed, warrants the real existence of an actual infinity. Matson then suggested that if (2.1) and (2.2) mean that actual infinities are logically impossible, we can refute them by claiming that actual infinities do indeed exist.

However, this objection mistakenly equates logical possibility with factual reality. Infinite set theory is a well-established subfield of mathematics that uses specific conventions to talk about infinities logically and coherently. There are also other logically coherent entities (i.e., transfinite numbers). But, the fact that a concept is logically coherent does not mean that the concept can exist in factual reality. This is true of Hilbert's Hotel, Thompson's Lamp, and similar counterintuitive, paradoxical notions. They are logically coherent and understandable thought experiments, but, as Craig emphasizes, they do not and *cannot* exist in the world of the physical and metaphysical.¹⁰ Therefore, those who object that actual infinities are

⁸Craig, "Existence of God," 9.

⁹The conclusion that there must be such a cause resembles the conclusions of the Contingency Argument put forth by Mohammed Hijab and other contemporary Islamic scholars, St. Thomas Aquinas' Argument of the First Cause, and Aristotle's Prime Mover argument.

¹⁰I am separating mathematical facts (including actual infinities) and our ability to apprehend them through our cognitive faculties from metaphysical reality. Philosophers have argued in all directions—some maintain that metaphysics and mathematics are the same or closely related; some say that the mathematical realm is the only legitimate "metaphysical" realm; and some negate the existence of a metaphysical stratum altogether. We may even argue that the universal human ability to understand the veracity of mathematical statements (including actual infinities) substantiates the existence of actual infinities beyond the conceptual realm; but that is beyond the scope of this investigation. Suffice it to say that my use of "metaphysical" excludes logic and mathematics and refers narrowly to necessary principles that underlie physical existence.

logically possible and hence metaphysically tenable are mistakenly equating the metaphysical with the logical. They are lumping together the real and the purely conceptual. But what makes sense is not always real: "What the premiss expresses is the real or factual impossibility of an actual infinite. [I]n the conceptual realm of mathematics one can [. . .] speak consistently about infinite sets of numbers, but this in no way implies that an actually infinite number of things is really possible" (Craig, Existence of God 10). Finally, we arrive at premise (1).

Everything Comes from Something, Right?

According to Craig, the truth of premise (1) is self-evident, for it is "based on the metaphysical intuition that something cannot come out of nothing," which is "so obvious that [. . .] we are justified in foregoing an elaborate defense" (29). Indeed, obvious examples abound: a baby is born from the union of two parents, a wooden chair comes from trees, and a star arises from the collision of dense molecular clouds. Regardless of what the "something" is, every one of these entities comes from something—none of them come from nothing. But what about the universe itself?

This is the crux of the matter: if originally there were "absolutely nothing—[no God], no space, no time—then how could the universe possibly come to exist?" (29). For Craig, the universe could not possibly come to exist from *absolutely nothing*.¹¹ Since the universe *did* begin to exist, it follows that there could *not* have been "absolutely nothing" beyond it, and that some kind of thing or entity must have engendered its existence.¹²

So goes Craig's reasoning with respect to the "self-evident" nature of premise (1). Yet, even though he treats it as his minor premise, we may find it edifying to investigate its allegedly self-evident truth. Before I present my response, let us survey a powerful objection to premise (1). The core of this objection forces us to walk the fine line between theology and physics. Today's theoretical physicists are striving to provide plausible explanations of the universe's origin. The objection below stands as one of few alternatives available to the contemporary mind—it promises to replace a Creator as the ultimate explanation, hence its powerful appeal. It is also an explanation whose subtle variations feature in the work of such renowned physicists as Peter Atkins and Lawrence Krauss. Whether or not physicists intend to, the proposal directly invokes theological questions. As such, it deserves our attention.

¹¹The alternative is to claim that the universe is a self-explanatory, and actually infinite entity. But that brings us back to premise (2).

¹²This thing or entity need not be material.

Something Out of Nothing, and Why Words Matter

In a slogan, the objection maintains that "something can come out of nothing." When Craig wrote The Kalām Cosmological Argument, the most prominent rebuttal of this kind came from Paul Davies, who suggested that spacetime could spring uncaused out of absolutely nothing. As Davies wrote in 1983, "[a satisfactory theory of quantum gravity] would allow spacetime to be [...] uncaused. Thus, spacetime could pop out of nothingness as the result of a causeless quantum transition" (Davies 215). Numerous physicists have since made similar claims. Among them is Lawrence Krauss, who recently proposed that "all signs suggest a universe that could and plausibly did arise from a deeper nothing," and that "the case that our universe arose from nothing seems by far the most compelling intellectual alternative" (Krauss 181). In other words, the universe may have begun to exist without a cause, in which case "absolute nothing" has causative power. Like an electron-positron pair that pops out of empty space, all other objects in the universe can have "absolute nothing" as their ultimate origin. If there is a possibility that things come out of nothing, and if empirical observations can shed light on this possibility—the objection goes—a scientific account of the causeless origin of the universe can replace God.

It is worth noting that the "nothing" of which Davies, Krauss, and many others speak is not the "absolute nothing" to which theologians usually refer (i.e., *creatio ex nihilo*). For the physicist, "nothing" differs from absolute non-being. Rather, it is "the simplest version of nothing, namely empty space" (Krauss 151). As Chapter 9 of Krauss' book suggests, this "nothing" is actually something, which "[assumes] space exists, with nothing at all in it, and that the laws of physics also exist" (144).¹³ While these discussions are the hotbed of semantic screeds, we should remember that the philosopher's "nothing" is not the physicist's "nothing." To use the latter to address the former is like promising someone to alleviate their anguish by scanning their brain. The method is inadequate by definition.

We can now move to this essay's twofold contribution. First, I present an objection to premise (1). I then follow with a response to my objection.

A Special Kind of Existence

Premise (1) states that "Whatever begins to exist has a cause of its existence." I will try to refute this through a conceptual distinction. In a nutshell: the only thing that can begin to exist is the universe.

¹³ The title of Chapter 9 is "Nothing is Something." We might then ask, how does the presence of the laws of physics qualify as "nothing"? From where do those laws come?

In order to understand what this statement means, let us consider what assumptions we hold when we say that something begins to exist. For instance, what do we mean when we say that a table begins to exist? We could say that a table begins to exist once a carpenter finishes assembling its separate parts. But is there a specific point in time at which the assembled parts cross an existential threshold and begin to exist as the table? It seems not. And that seems to be the case for all physical objects—there is no one point in time at which an object begins to exist. It follows that the existence of any given physical object begins not because of a fixed property of the object, but because of an arbitrary judgment each of us makes based on our unique perceptions of the object's formation in time.

Moreover, it follows that the physical existence of any object can only be said to begin when the universe began to exist. Why? Because the materials that form it have existed since the universe began to exist. To take the table again, they may not have existed as wood, nails, or any other specific part; but the matter that makes up the table precedes the table's existence by a cosmic lifetime. As per the law of conservation of energy, the total energy of a self-contained system (i.e., the universe) remains constant; only its forms change. This scientific detail seems to support the proposition that none of the materials that make a physical object begin to exist in the sense that would substantiate (1)—they have only rearranged themselves (or have been rearranged).¹⁴ It is our consciousness that arbitrarily labels this rearrangement of particles into a specific form as "table" or "tree" or "planet." But is this arbitrary qualification the kind of "beginning to exist" to which (1) refers?

To help us answer, we may introduce a second conceptual distinction: the universe is a special kind of existence that differs from anything else. When Craig employs the Argument to substantiate the existence of a Creator, what he means by "things coming into existence" is "things coming into being from nothing." However, the universe is the only thing that

¹⁴A friend recently asked whether or not using a scientific fact in support of a philosophical proposition is inconsistent. She pointed to the previous section's conclusion that the physicist's language of "nothing" precludes the very explanation it seeks to offer and suggested that, by the same logic, I should not use the law of conservation of energy or any other scientific fact to support my argument about the existence of material objects. This is a valid objection, but I think it misses an important distinction. In the case of the origin of the universe, the discussion is about the alleged absence of anything, and the possibility that the universe emerged from that absolute absence. That discussion invokes an issue that is completely beyond the scope of empirical observations. In the case of the status of material objects, the discussion is about the status of material forms, *once the universe begins to exist*. In my view, there is no inconsistency in using a scientific fact about material objects to support a philosophical argument about material objects. The inconsistency only lies in applying scientific insights to an investigation whose very scope precludes them.

meets the criterion, for it is the "area" in which all things exist and beyond which is either the philosopher's nothing or something else—God. That is, the universe is the only thing that begins to exist in a sense that would give meaning to the Argument because, as the Argument implies, it is the only thing that begins to exist out of nothing. This is different from the kind of arbitrary beginning discussed above. Planets, tables, and humans are such because previously existing matter was rearranged (or rearranged itself) in one of its possible forms. This is not the case for the universe. Nothing ever begins to exist in the meaningful sense that interests us, but the universe. It is a special kind of existence.

That said, let us now recall Craig's statement that (1) is "constantly confirmed in our everyday experience." The "beginning to exist" that would substantiate or negate the Argument only refers to the universe, and not to objects whose existence begins arbitrarily in our consciousness. But our ordinary experience only allows frequent confirmation of objects whose existence begins in our consciousness, which excludes the universe. Hence, Craig applied his "beginning to exist" inconsistently. On this reading, "universe" and "everything" become synonyms, for the universe is the *only* thing that can begin to exist in our philosophically meaningful sense. Premise (1) becomes "The universe has a cause of its existence," which is the same as the conclusion (3). But such an argument is meaningless because its premise is identical to the conclusion it seeks to confirm. The Argument thus becomes circular and illogical.

Preposterous Conclusions: An Attempt at Self-Refutation

Can we seriously say that "nothing ever begins to exist but the universe," or that "the only thing that begins to exist is the universe"? Or that "the conceptual existence of any given physical object begins not because of a fixed property of the object, but because of our arbitrary judgments based on our unique perceptions of the object's formation"? Are we thinking this through, or merely engaging in an intellectual exercise?

Linguistic Jugglery

The sentences above do not invalidate the Argument. To say that "nothing ever begins to exist but the universe" only means that the universe is the only thing that begins to exist. It does not mean that the universe does not begin to exist. We can rewrite premise (1): "if the universe begins to

¹⁵At least at the time of writing!

exist, the universe has a cause." This simple change leaves the Argument unscathed.

Fundamentally Nothing, and the Preposterous Implications of Non-Existence

For the sake of argument, let us assume that the universe is the only entity that can begin to exist. What do we mean by "universe"? The word "universe" refers to a set of fundamental material units. As such, the sentence must mean that the only material entities that begin to exist are the elementary units with which "universe" is synonymous. Leucippus and Democritus would maintain that these units are indestructible atoms. More recent empirical discoveries tell us that atoms are made of protons, neutrons, and electrons, and that those are in turn composed of quarks and neutrinos. Whether or not these units will give way to more fundamental units as the probing power of scientific instruments increases is irrelevant. What matters is that the concept of "universe" is synonymous with the building blocks of physical existence. This set of building blocks is what may have come into being out of nothing, and it is everything that begins to exist independently of our arbitrary judgments.

To accept the claim that "nothing ever began to exist but the universe," is exactly what we have to conclude. If we are to accept the proposition that nothing exists but fundamental particles, it follows that there are no such things as screens, tables, and chairs. All these "entities" are but rearrangements of fundamental particles that have no direct claim to existence. Furthermore, if nothing exists but fundamental particles, it also follows that there are no human beings.

The claim that "nothing ever began to exist but the universe" is similar to the tenet of a philosophical current named *mereological nihilism*. Much like philosophical nihilism denies that values and ethical truths exist in the universe, mereological nihilism posits a world where there are no composite objects (i.e., a planet, a table). The only objects that exist are mereological *simples*, which are objects without proper parts (i.e., the fundamental units of existence). Philosophers have objected to this view on the grounds that, for one, it allows for the existence of far fewer objects than the human mind typically identifies. It is unclear what one might mean by asserting that a table or a planet does not exist because they are made of units and are not a unit in themselves. The fact remains that in our ordinary experience we cognize a table or a planet as objects that exist. We may argue about *when* they begin to exist. But even if we disagreed about when they begin to exist,

¹⁶ And who knows of what those are made.

we would eventually agree that they do exist after identifying the characteristics that are unique to that object and thus separate it from others. Perhaps we would reject that, say, a table exists *in principle*, as a matter of theoretical deconstruction of the kind that mereological nihilists perform. Yet, we still act and speak and think as though it does. The claim that only mereological simples exist contradicts our strongest intuitions.

When it comes to the existence of humans, the mereological view also has a nihilistic undertone: if human beings are but rearrangements of fundamental units, we are to claim that human beings do not exist. In my estimation, this conclusion implies that human beings cannot be treated as properly existing entities because they are on par with lifeless particles. The step between this position and the claim that human beings can be treated in the same way we treat inanimate objects is small. We can easily imagine the appalling consequences if we translate this line of thinking into our daily experiences.

One way to escape the trap we set for ourselves is to distinguish between living beings and non-living things. On the one hand, living beings are properly existing composite entities. On the other hand, non-living things are collections of parts with no direct claim to existence. The difference between the two is, of course, the fact that living beings carry out the various activities we call "life," whereas non-living things do not. Therefore, an entity has a direct claim to existence insofar as it carries out the activities that amount to life. It might be difficult to extend this argument to all "living beings," especially if we consider the claim that "life" as we observe it in an animal or a plant may only be an anthropomorphic projection. But, with the help of Peter van Inwagen, we can at least apply it to humans.

First, suppose you and I exist. This supposition is arguably among the most solid and indubitable suppositions from which we can begin, for doubting it would confirm the presence of a doubter, who can only doubt if she exists.¹⁷ Now, neither you nor I are mereological simples. Even though we are composed of many parts that are composed of many parts (and so on until we arrive at the fundamental particles), you and I are

¹⁷ It is worth highlighting the parallels between Al-Ghazali and Descartes on this matter. Descartes is often dubbed the "father of modern Western philosophy" for his skeptical method, which led him to utter the famous *cogito*, *ergo sum*. However, some have argued that the roots of Descartes' *cogito* lie in the thought of Al-Ghazali, who existed some four centuries before the French philosopher. In short, Descartes may have borrowed the format of the skeptical methodology as well as the examples he used to prove the *cogito* from Al-Ghazali. For a closer comparison between the two, see Nazeem Goolam, "The Influence of Al-Ghazali and Ibn Sina on Descartes," *Codicillus* 44, no. 1 (2003): 35–45.

not reducible to any part by itself.¹⁸ If we are not mereological simples, at least two entities exist that are not mereological simples. We can easily extend this to all humans as long as we accept that all humans exist. Hence, human beings do have a direct claim to existence, unlike non-living arrangements of particles. This also means that humans begin to exist. But saying that humans begin to exist negates the exclusive claim to existence of fundamental particles and dissolves the objection to (1).

Another way out of the mereological absurdity is to simply affirm that every material object, from fundamental particles to planets, has an equal claim to existence. We may not be able to identify the boundaries of, say, an atom as we would a table or a planet, but all three units exist nonetheless. As Craig told us, this intuitive conclusion is "so obvious that [. . .] we are justified in foregoing an elaborate defense," and it leaves the Argument unscathed.

Returning to a Personal Creator

The first part of the Argument features arguments about infinity, but the second part points to the conclusion it was intended to warrant:

- (3) The universe has a cause.
- (4) If the universe has a cause, then an uncaused, personal Creator of the universe exists who sans (without) the universe is beginningless, changeless, immaterial, timeless, spaceless and enormously powerful.
- (5) Therefore, an uncaused, personal Creator of the universe exists, who sans the universe is beginningless, changeless, immaterial, timeless, spaceless and enormously powerful. (Craig and Moreland 194)

The questions that immediately arise from (4) take us right back to actual infinity: if actual infinity is metaphysical nonsense, and if God is an actually infinite being, does that mean that God is metaphysical nonsense? How does God's infinite nature differ from the universe's? The first option is to accept that God is an actually infinite being precisely like the mathematical actual infinity and thus deny His existence altogether. However, the literature abounds with options to posit God's timelessness without equating His existence to the mathematical actual infinity. The option I deem most reasonable to deal with these questions reminds us

¹⁸ See Peter van Inwagen, "When Are Objects Parts?" Philosophical Perspectives 1 (1987): 34-35.

that the actual infinity of which the Argument speaks is a mathematical concept that concerns physical existence. The claim is that an actually infinite spatiotemporal continuum is impossible. That is true of both an actually infinite collection of physical particulars (i.e., the Hotel's guests) and an actually infinite collection of past events that would determine the existence of *physical objects*. Therefore, the actual infinity that the Argument negates is a sum of particulars, a *quantitative* infinity. But the Creator Craig has in mind is beyond the physical and the temporal. His infinity is rather qualitative. This means that He exists beyond *both* an actually infinite and a potentially infinite spatiotemporal sequence: "God would completely transcend time, having neither temporal location nor temporal extension. He would simply exist in an undifferentiated, timeless state" (Craig, "Divine Eternity" 1).

We can add the last step in the Argument's progression: God must have free will. According to Craig, the most convincing proposition that substantiates the claim that the universe's cause must be a personal Creator with freedom of the will is that it is the only way to explain how a temporal effect can begin from a (qualitatively) eternal cause. In other words, the only way for the universe to have a beginning in time and for its eternal cause to exist is to have an eternal cause beyond time with a will to initiate time. As Craig asks, "how else could a temporal effect arise from an eternal cause?" ("Divine Eternity" 35). If such a will were not there, we should expect the effect of the eternal cause to be eternal, for the cause would be perpetually active and perpetually causing its effect. For instance, if the cause of a water ripple were eternal, the water ripple would be perpetual. If the cause of our thinking were eternal, our thinking would be perpetual. Similarly, if the cause of the universe's existence were eternal, the universe would be eternal. This goes back to the impossibility of an actual infinity and an infinite temporal regress.

The universe must have a cause. But its cause needs to be more than just (qualitatively) eternal. It needs to have a property that enables it to begin a universe. Thus, an eternal cause with the ability and freedom to initiate a universe—a personal Creator—seems to be the only reasonable explanation for the universe's coming into existence. To my knowledge, this explanation has yet to be refuted.

¹⁹ Craig has written and spoken about this particular alternative, though it is unclear whether he still adopts it in support of the Argument as it appears in the formulation I referenced herein. See William Lane Craig, "Divine Eternity," Reasonable Faith, accessed May 1, 2022, https://www.reasonablefaith.org/writings/scholarly-writings/divine-eternity/divine-eternity.

Works Cited

- Cosman, Madeleine and Linda Jones. Handbook to Life in the Medieval World. New York: Facts On File, 2008.
- Craig, William Lane and James Moreland. The Blackwell Companion to Natural Theology. Oxford: Blackwell Publishing, 2009.
- —. "Divine Eternity." Reasonable Faith. Accessed May 1, 2022, https://www.reasonablefaith.org/writings/scholarly-writings/divine-eternity/divine-eternity.
- —. "The Existence of God and the Beginning of the Universe." *Truth*: A *Journal of Modern Thought*, 3 (1991): 1–40.
- —. The Kalām Cosmological Argument. Eugene: Wipf and Stock, 2000.
- Davies, Paul. God and the New Physics. New York: Simon & Schuster, 1983.
- Goolam, Nazeem. "The Influence of Al-Ghazali and Ibn Sina on Descartes." Codicillus 44, no. 1 (2003): 35–45.
- Krauss, Lawrence. A Universe from Nothing. New York: Simon & Schuster, 2012.
- Lewy, Hans. "Aristotle and the Jewish Sage According to Clearchus of Soli." *The Harvard Theological Review* 31, no. 3 (1938): 205–235.
- Matson, Wallace. The Existence of God. Ithaca: Cornell University Press, 1965.
- Van Inwagen, Peter. "When Are Objects Parts?" Philosophical Perspectives 1 (1987): 21-47.
- Winter, Tim. The Cambridge Companion to Classical Islamic Theology. Cambridge: Cambridge University Press, 2008.