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THE NEW NOTHINGNESS:

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SYNOPSIS

Lawrence Krauss writes that recent scientific discoveries show the universe could have come from nothing. He qualifies his definition of nothingness, though, to mean “empty space,” and then he fills that “empty space” with matter and antimatter ruled by the laws of quantum physics. So Krauss’s “nothing” is not really no thing, but is in fact something. Well into his book, Krauss addresses what came “before” the Big Bang. He proposes that a “more fundamental nothingness” is what came before the Big Bang, and he then applies several of God’s attributes—omnipotence, infinity, and necessity—to that “more fundamental nothingness.” It’s impossible, though, for a “more fundamental nothingness,” which has no being, to possess such attributes. Krauss himself raises the question as to where the laws of quantum physics could have resided before the Big Bang since “the more fundamental nothingness” is not sufficient to hold such ideas. By raising that question, Krauss inadvertently makes a case for the existence of a necessary Being that has a Mind in which such laws could have existed, thereby giving an apologetic for the God of the Bible. Since, after all is said and done, we cannot rise above that which is ultimate, Krauss’s view that ultimate reality is a nothingness eliminates all hope of our personal survival after death. Just as the universe came from nothing, as Krauss claims, so then in the end we will become nothing. Only the God who “has life in Himself” (John 5:26 NIV) can be a sufficient explanation for how the contingent universe came to be and is able to give us life.

Nothing comes from nothing. It would seem there is no more well-established truth than that. It has come under scrutiny, though, by Lawrence Krauss in his book *A Universe from Nothing: Why There Is Something Rather than Nothing*. Krauss, the director of the Origins Project at Arizona State University, writes that recent scientific discoveries have “produced remarkable new support for the idea that our universe arose from precisely nothing.”¹ What we will see as we look at Krauss’s system of belief is that he

has replaced God with nothingness and then given several of God's attributes to that nothingness.

While Krauss affirms that the universe had a beginning ("The Big Bang picture is in good shape"²), he denies that God is the One who caused it to come into existence. So what was its cause? What "created" all things? As the title of his book says, nothing. Krauss states in his preface that, when it comes to answering the question as to why something rather than nothing exists, "something from nothing is not a problem. Indeed, something from nothing may have been *required* for the universe to come into being."³ But, of course, because something really can't come from nothing, Krauss has to fill his nothingness with something. He expresses his frustration with the philosophers and theologians who object to his concept of nothing as not being a true nothingness:

*"Nothing," they insist, is not any of the things I discuss. Nothing [they say] is "nonbeing," in some vague and ill-defined sense....Some philosophers and many theologians define and redefine "nothing" as not being any of the versions of nothing that scientists currently describe. But therein, in my opinion, lies the intellectual bankruptcy of much of theology and some of modern philosophy. For surely "nothing" is every bit as physical as "something," especially if it is to be defined as the "absence of something."*⁴

That last sentence just doesn't make sense, though. Nothing (even a "nothing" in quotes) can't be every bit as physical as something because nothing is not something. Christian apologist William Lane Craig gives a good definition of nothingness: "The word nothing isn't the name of something. It's simply a term of universal negation. It means 'not anything.'"⁵

NOTHINGNESS REDEFINED

Krauss qualifies what he means by the term "nothing": "By *nothing*, I do not mean nothing, but rather *nothing*—in this case, the nothingness we normally call empty space."⁶ Just as nothing is not really nothing, so, too, empty space is not really empty because Krauss fills it with energy in the form of matter and antimatter. The reason "empty space" can be considered empty, according to Krauss, is because, while the empty space is filled with matter and antimatter, those two forces cancel each other out through mutual annihilation. One wonders, when the matter/antimatter forces of empty space annihilate each other, to what level of nothingness do they go since they already "reside" in one level of nothingness? Nevertheless, such mutual annihilation is called "symmetry."

So how does Krauss explain the way in which the universe came to exist out of this "nothingness" he calls "empty space"? Here's how:

Scientists began to understand in the 1970s...that it is possible to begin with equal amounts of matter and antimatter in an early hot, dense Big Bang, and for plausible quantum processes to "create something from nothing" by establishing a small asymmetry, with a slight excess of

matter over antimatter in the early universe. Then, instead of complete annihilation of matter and antimatter, leading to nothing but pure radiation today, all of the available antimatter in the early universe could have annihilated with matter, but the small excess of matter would have had no comparable amount of antimatter to annihilate with, and would then be left over. This would then lead to all the matter making up stars and galaxies we see in the universe today.⁷

Notice the time frame Krauss is talking about here—the “early, hot, dense Big Bang.” Through the phrase “in the early universe,” he affirms that time frame twice more in this paragraph. How early in the Big Bang? He says “it is possible to *begin* with equal amounts of matter and antimatter.”⁸ So, apparently, Krauss is talking about the beginning of the Big Bang. The beginning of the Big Bang, however, is not supposed to be the issue of the book. The nothingness *before* the Big Bang is because it is at the moment of the Big Bang that space, time, and energy came into existence *out of nothing*. Very few people dispute that. But Krauss doesn’t start at the moment *before* the Big Bang. Instead, he starts *during* the event of the Big Bang, and he does so by plunking matter and antimatter into this creation scenario without even addressing the origin of that energy. He merely says, “It is possible to begin with equal amounts of matter and antimatter.” But how? Where did that matter/antimatter come from? Again, isn’t that the issue Krauss claims he will address in his book *A Universe from Nothing*?

“BEFORE” THE BIG BANG

Well into his book (page 174 of 202 pages), Krauss finally addresses what he thinks came “before” the Big Bang:

When I have thus far described how something always can come from “nothing” I have focused on either the creation of empty space or the creation of empty space from no space at all. Both initial conditions work for me when I think of the “absence of being” and therefore are possible candidates for nothingness. I have not addressed directly, however, the issues of what might have existed, if anything, before creation, what laws governed the creation, or, put more generally, I have not discussed what some may view as the question of First Cause. A simple answer is of course that either empty space or the more fundamental nothingness from which empty space may have arisen, preexisted, and is eternal. However, to be fair, this does beg the question, which might of course not be answerable, of what, if anything, fixed the rules that governed such creation.⁹

Again, the timeframe Krauss addresses in the first part of this paragraph is the “initial conditions” of the Big Bang, or what Krauss consistently refers to as “creation.” He then moves on to ask what was the “First Cause” of that creation event during the Big Bang? Here’s Krauss’s answer (as seen in the above quote): “A simple answer is of course that either empty space or the more fundamental nothingness from which empty space may have arisen, preexisted, and is eternal.” So Krauss gives two options as to what caused the Big Bang: (1) “empty space” or (2) “the more fundamental nothingness.” We will consider both options.

Concerning the first option of empty space, Krauss is saying that the empty space existed prior to the Big Bang, which is also the moment when the empty space came into existence. Understand that up to now Krauss has addressed only the “initial conditions” of the Big Bang, not what came prior to the Big Bang. The Big Bang is generally accepted as the moment when time, space, and energy came into existence. A true nothingness—a no thingness—“existed” prior to that. So Krauss is saying that the empty space existed prior to itself in order to create itself. Such a concept clearly makes no sense. Philosopher Gregory Ganssle writes, “Nothing can cause *itself* to come into existence. In order to cause itself to come into existence, something would have to exist before it exists.”¹⁰

Concerning the second option of “the more fundamental nothingness,” I have to admit that I’m hesitant to believe Krauss at this point. He’s already “burned” me once by redefining nothing to include something, so why should I believe that this “more fundamental nothingness” is really a true nothingness? Is Krauss again going to fill this deeper “nothingness” with more stuff? And will that be the end of it? Will not the “more fundamental nothingness” need an “even more fundamental nothingness,” which leads to an infinite regression? Then, too, how can a true nothingness have something “more fundamental” to it? If nothing is indeed not anything—the total absence of something—then nothingness, since it does not exist, does not need a “more fundamental nothingness” as an ontological foundation to uphold it.

So what is “the more fundamental nothingness”? To answer that, consider again this sentence found in the above quote: “A simple answer [to the question of First Cause] is of course that either empty space or *the more fundamental nothingness* from which empty space may have arisen, *preexisted, and is eternal.*”¹¹ Krauss’s language here is confusing because it’s unclear as to what exactly he’s saying preexisted and is eternal: the “empty space” or “the more fundamental nothingness”? If I understand Krauss correctly, he’s saying that the empty space preexisted in the more fundamental nothingness and is therefore eternal because the more fundamental nothingness is eternal. Krauss’s statement is significant because in it he lists several divine attributes and places them squarely on the shoulders of this “more fundamental nothingness.” A close reading of that sentence shows that he applies the attributes of omnipotence, aseity (self-existence, one’s existence is necessary), and eternity to “the more fundamental nothingness.”

GIVING GOD’S ATTRIBUTES TO THE NOTHINGNESS

Concerning the attribute of omnipotence, Krauss is asking the question as to what is the First Cause, and he’s locating that First Cause in “the more fundamental nothingness.” Therefore, according to Krauss, “the more fundamental nothingness” must possess the attribute of omnipotence by virtue of the fact that he claims it caused the universe to come into being. This would explain why Krauss uses the term “creation” so consistently, even though that term implies the need for a Creator, which is exactly what he is arguing against.

Concerning the attribute of God as a necessary being, Krauss applies that attribute of being necessary to the nothingness. Why do I say that? Because Krauss says that the empty space “preexisted” in “the more fundamental nothingness.” As such, that which is contingent—the “empty space” of the Big Bang—had its previous “existence” in the “more fundamental nothingness,” which, short of an infinite regression, must therefore be necessary. Krauss seems to be saying that the nonexistence of nothingness is a necessary nonexistence; it is necessary because the nothingness could not have been otherwise.

Concerning the attribute of eternity, Krauss calls “the more fundamental nothingness” “eternal,” which means that the nothingness has always not existed, does not exist now, and will always not exist.

I realize how crazy those last two sentences sound. I’m trying, though, to be as fair to what Krauss is communicating as I can. What else is one to do, though, with the statements of someone who says that an *empty space*, which is *absent of being*, *preexisted* for an *eternity* in *the more fundamental nothingness*, which would also seem to lack existence? “Preexistence,” after all, is a form of existence, not of nonexistence. To “pre-exist” does not mean to not exist, but “to exist previously or before.”¹² How, then, can something that is absent of being *preexist* in something that is an even more basic nothingness and that also lacks existence? I’m simply attempting to explicate Krauss’s own language. What I see Krauss doing is that, after denying God’s existence, he maintains that he can still explain through his concept of nothingness how the finite universe came into being. Such an explanation inevitably involves, though, applying some of the attributes of God to that which he believes is prior to the universe coming into existence, which is “the more fundamental nothingness.”

AN INADVERTENT APOLOGETIC FOR GOD

At the end of the quote given above, Krauss admits that his theory of creation from nothingness is insufficient: “To be fair, this does beg the question, which might of course not be answerable, of what, if anything, fixed the rules that governed such creation.”¹³ Such a statement raises the question as to whether or not the “rules”—the laws of nature—do indeed need a foundation for their existence. At one point in his book, Krauss attempted to minimize the uniqueness of our universe’s laws of nature by presenting the theory of the multiverse:

The question of what determined the laws of nature that allowed our universe to form and evolve now becomes less significant. If the laws of nature are themselves stochastic and random, then there is no prescribed “cause” for our universe. Under the general principle that anything that is not forbidden is allowed, then we would be guaranteed, in such a picture, that some universe would arise with the laws that we have discovered. No mechanism and no entity is required to fix the laws of nature to be what they are. They could be almost anything. Since we don’t currently have a fundamental theory that explains the detailed character of the landscape of a multiverse, we cannot say. (Although to be fair, to make any scientific progress in calculating possibilities, we generally assume that certain properties, like quantum mechanics, permeate all possibilities. I

*have no idea if this notion can be usefully dispensed with, or at least I don't know of any productive work in this regard).*¹⁴

Krauss is saying that, even if we could explain away the need for the general laws of nature through the theory of the multiverse, we would still be left with the laws of quantum mechanics, and even those laws need a cause.

What, though, is a sufficient cause for the laws of nature such as quantum physics? An abstract realm? But such an abstract realm—like Plato's Forms—lacks two things: (1) a foundation for its existence and (2) causative power. Concerning the need for a metaphysical foundation, think of the laws of nature as being like the laws of morality. Contrary to the moral relativity prevalent in today's culture, when we make moral judgments, we are pointing to moral principles that exist and that are transcendent to us. Where do such moral principles exist? It's a truism, but it's also true: moral laws need a moral law Giver. In the same way, the laws of nature need an ontological foundation beyond nature itself, which is contingent. What philosopher Doug Groothuis has written in regard to the relationship between beliefs and minds is relevant here: "Beliefs depend on minds for their existence. There can be no beliefs without minds to hold those beliefs."¹⁵ The laws of nature and of morality, which are essentially ideas or thoughts (forms of belief), are most sufficiently located in a mind, specifically in the mind of God, whose being is necessary.

Moreover, even if the laws of nature could exist in some abstract realm, they would not have causative powers, which means they could not have caused the Big Bang. Persons, on the other hand, do have causative powers. Therefore, the God who has existence within Himself, who has a Mind, and who has personal attributes provides a fitting answer to Krauss's question as to "what, if anything, fixed the rules that governed such creation."¹⁶ He said that such a question "might of course not be answerable." There is indeed an answer; it's just that Krauss is not open to it. By admitting that the laws of nature need a foundation and by asking that question, Krauss has inadvertently given an apologetic for God's existence and for God as the Creator of the universe.

LEIBNIZ LIVES ON

The subtitle of Krauss's book is "Why There Is Something Rather than Nothing." That statement is built on the question asked by seventeenth-century philosopher Gottfried Leibniz (1646–1716), "Why is there something rather than nothing?"¹⁷ Leibniz answered that question by saying that every contingent thing has a cause, and such a cause is either itself contingent or necessary. William Lane Craig puts it this way: "Everything that exists has an explanation for its existence, either in the necessity of its own nature or in an external cause."¹⁸ There is nothing in Krauss's system, though, that has necessary existence.

Concerning the "empty space" at the moment of the Big Bang, Krauss simply posits the matter/antimatter energy there without giving any explanation as to where that energy came from. Even if that energy did somehow "preexist" in the nonexistence

of the nothingness prior to the Big Bang, such energy, being by nature physical, could not have necessary existence. There are two reasons for this: (1) Energy is subject to entropy (the energy becomes increasingly inaccessible). (2) Energy is inherently finite. Anything that is measurable, which is true of energy, is finite, not infinite. Finite energy, then, cannot have existed infinitely because all the energy would have been used up by now if there were an infinite past. Moreover, being finite, energy must then be contingent, not necessary; it might not have existed. Energy, then, needs something outside itself that is necessary to cause its existence.

Concerning the qualification of “the more fundamental nothingness” as that which is the necessary foundation for the contingent universe, nothingness might indeed be necessary in its nonexistence. Being nonexistent, however, it cannot, also be causative.

WE BECOME NOTHING

In the end, we become what we worship.¹⁹ What I mean by that is that we can never rise above our view of ultimate reality. For example, if that which is ultimate is nothing more than matter and energy, as in atheism, then at death we lose our consciousness and personhood, and our bodies return to the “dust” from which they came. If ultimate reality is an impersonal oneness, as in monistic Hinduism, then our eventual fate is to merge back into the oneness. Concerning Krauss’s claim that ultimate reality is nothingness, just as the universe came from nothing, so then in the end we will become nothing. That is the fate Krauss offers us. The good news, though, is that the true God offers us life because He “has life in Himself” (John 5:26). The only sufficient cause for a contingent universe is the God whose being is necessary. Only that kind of God is able to give us life, and He has demonstrated that life-giving, death-conquering power by raising Jesus from the dead.

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NOTES

- 1 Lawrence Krauss, *A Universe from Nothing: Why There Is Something Rather than Nothing* (New York: Free Press, 2012), xvii.
- 2 Ibid., 21.
- 3 Ibid., xiii.
- 4 Ibid., xiv.
- 5 William Lane Craig, “A Universe from Nothing (Part 1),” Reasonable Faith Podcast, February 14, 2012, <http://www.reasonablefaith.org/reasonable-faith-podcast> (accessed June 5, 2013).
- 6 Krauss, 58. Emphasis in original.
- 7 Ibid., 157.
- 8 Emphasis added.
- 9 Krauss, 174.

- 10 Gregory Ganssle, *Thinking about God: First Steps in Philosophy* (Downers Grove, IL: IVP Academic, 2004), 47.
- 11 Emphasis added.
- 12 David Guralnick, ed., *Webster's New World Dictionary of the American Language* (New York: Simon and Schuster, 1982), 1121.
- 13 Krauss, 174.
- 14 Ibid., 176–77.
- 15 Doug Groothuis, *Truth Decay: Defending Christianity against the Challenge of Postmodernism* (Downers Grove, IL: InterVarsity Press, 2000), 89.
- 16 Krauss, 174.
- 17 Quoted in William Lane Craig, *On Guard: Defending Your Faith with Reason and Precision* (Colorado Springs: David C. Cook, 2010), 53.
- 18 Ibid., 56.
- 19 G. K. Beale, *We Become What We Worship: A Biblical Theology of Idolatry* (Downers Grove, IL: IVP Academic, 2008).