

FIRST THINGS

Not Understanding Nothing

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*A Universe from Nothing:
Why There Is Something Rather than Nothing*
by Lawrence M. Krauss
Free Press, 204 pages, \$24.99

A critic might reasonably question the arguments for a divine first cause of the cosmos. But to ask “What caused God?” misses the whole reason classical philosophers thought his existence necessary in the first place. So when physicist Lawrence Krauss begins his new book by suggesting that to ask “Who created the creator?” suffices to dispatch traditional philosophical theology, we know it isn’t going to end well.

In general, classical philosophical theology argues for the existence of a first cause of the world—a cause that does not merely happen not to have a cause of its own but that (unlike everything else that exists) in principle does not require one. Nothing else can provide an ultimate explanation of the world.

For Aristotle and Thomas Aquinas, for example, things in the world can change only if there is something that changes or actualizes everything else without the need (or indeed even the possibility) of its being actualized itself, precisely because it is already “pure actuality.” Change requires an unchangeable changer or unmovable mover.

For Neoplatonists, everything made up of parts can be explained only by reference to something that combines the parts. Accordingly, the *ultimate*

explanation of things must be utterly simple and therefore without the need or even the possibility of being assembled into being by something else. Plotinus called this “the One.” For Leibniz, the existence of anything that is in any way contingent can be explained only by its origin in an absolutely necessary being.

But Krauss simply can't see the “difference between arguing in favor of an eternally existing creator versus an eternally existing universe without one.” The difference, as the reader of Aristotle or Aquinas knows, is that the universe changes while the unmoved mover does not, or, as the Neoplatonist can tell you, that the universe is made up of parts while its source is absolutely one; or, as Leibniz could tell you, that the universe is contingent and God absolutely necessary. There is thus a principled reason for regarding God rather than the universe as the terminus of explanation.

One can sensibly argue that the existence of such a God has not been established. (I think it has been, but that's a topic for another day.) One *cannot* sensibly dispute that the unchanging, simple, and necessary God of classical theism, if he exists, would differ from our changing, composite, contingent universe in requiring no cause of his own.

Krauss' aim is to answer the question “Why is there something rather than nothing?” without resorting to God—and also without bothering to study what previous thinkers of genius have said about the matter. Like Richard Dawkins, Stephen Hawking, Leonard Mlodinow, and Peter Atkins, Krauss evidently thinks that actually *knowing* something about philosophy and theology is no prerequisite for pontificating on these subjects.

Nor is it merely the traditional theological answer to the question at hand that Krauss does not understand. Krauss doesn't understand the question itself. There is a lot of farcical chin-pulling in the book over various “possible candidates for nothingness” and “what ‘nothing’ might actually comprise,” along with an earnest insistence that any “definition” of nothingness must ultimately be “based on empirical evidence” and that “‘nothing’ is every bit as physical as ‘something’”—as if “nothingness” were

a highly unusual kind of stuff that is more difficult to observe or measure than other things are.

Of course, “nothing” is not any kind of *thing* in the first place but merely the absence of anything. Consider all the true statements there are about what exists: “Trees exist,” “Quarks exist,” “Smugly ill-informed physicists exist,” and so forth. To ask why there is something rather than nothing is just to ask why it isn’t the case that all of these statements are false. There is nothing terribly mysterious about the question, however controversial the traditional answer.

The bulk of the book is devoted to exploring how the energy present in otherwise empty space, together with the laws of physics, might have given rise to the universe as it exists today. This is at first treated as if it were highly relevant to the question of how the universe might have come from nothing—until Krauss acknowledges toward the end of the book that energy, space, and the laws of physics don’t really count as “nothing” after all. Then it is proposed that the laws of physics alone might do the trick—though these too, as he implicitly allows, don’t really count as “nothing” either.

His final proposal is that “there may be no fundamental theory at all” but just layer upon layer of laws of physics, which we can probe until we get bored. But this is no explanation of the universe at all. In particular, it is nowhere close to what Krauss promised his reader—an explanation of how the universe arose *from nothing*—since an endless series of “layers” of laws of physics is hardly “nothing.” His book is like a pamphlet titled *How to Make a Million Dollars in One Week* that turns out to be a counterfeiter’s manual.

The spate of bad books on philosophy and religion by prominent scientists—Dawkins’ *The God Delusion*, Hawking and Mlodinow’s *The Grand Design*, and Atkins’ *On Being*, among others—is notable not only for the sophomoric philosophical and theological errors they contain but also for their sheer *repetitiveness*. Krauss’ fallacious account of how something can

come from nothing, though presented as a great breakthrough, and praised as such by Dawkins in his afterword, is largely a rehash of ideas already put forward by Hawking, Mlodinow, and some less eminent physics popularizers. Dawkins has been peddling the “Who created the creator?” meme since the eighties.

Critics have exposed their errors and fallacies again and again. Yet these writers keep repeating them anyway, for the most part simply ignoring the critics. What accounts for this? To paraphrase a famous remark of Ludwig Wittgenstein’s, I would suggest that a picture holds these thinkers captive, a picture of the quantitative methods of modern science that have made possible breathtaking predictive and technological successes.

What follows from that success is that the methods in question capture those aspects of reality susceptible of mathematical modeling, prediction, and control. It does *not* follow that there are no *other* aspects of reality.

But as E. A. Burtt noted over half a century ago in his classic book *The Metaphysical Foundations of Modern Physical Science*, the thinker who claims to eschew philosophy in favor of science is constantly tempted “to make a metaphysics out of his method,” trying to define reality as what his preferred techniques can measure rather than letting reality dictate what techniques are appropriate for studying it. He is like the drunk who thinks his car keys *must* be under the lamppost because that is the only place there is light to look for them—and who refuses to listen to those who have already found them elsewhere.

Without a trace of irony, Krauss approvingly cites physicist Frank Wilczek’s unflattering comparison of string theory to a rigged game of darts: “First, one throws the dart against a blank wall, and then one goes to the wall and draws a bull’s-eye around where the dart landed.” Yet that is exactly Krauss’ procedure. He defines “nothing” and other key concepts precisely so as to guarantee that only the physicist’s methods he is comfortable with can be applied to the question of the universe’s origin—and that only a nontheological answer will be forthcoming.

As noted already, Krauss has merely changed the subject. Perhaps realizing this, he completes his bait-and-switch with a banal anticlimax. In the end, he tells us, “what is really useful is not pondering [the] question” of why there is something rather than nothing but rather “participating in the exciting voyage of discovery.”

Exciting or not, Krauss’ voyage does not take his reader where he thought he was going. To the centuries-old debate over why any universe exists at all, Krauss’ book contributes—precisely nothing.

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