

Mark Nowacki, *The Kalam Cosmological Argument for God* (Studies in Analytic Philosophy), Prometheus Books, 2007; 315pp., \$59.98 (hbk), ISBN 1591024730.

William Lane Craig launched the kalam cosmological argument (KCA) back into philosophical discussion with his 1979 monograph on the argument. The argument is simple:

- (1) Whatever begins to exist has a cause
- (2) The universe began to exist
- (3) Therefore, the universe has a cause

Craig's defense of the KCA has been so influential that it is often presented as "the" cosmological argument, as if the countless other versions vanished over night. Despite having maintained a steady flow of attention in academic journals, Craig's 1979 monograph has sailed solo until now, being greeted by Mark Nowacki's *The Kalam Cosmological Argument for God*.

Nowacki begins by detailing Craig's presentation of the KCA as it has been refined over the years. In addition to an exhaustive survey of Craig's articles and debates on the subject (the endnotes virtually constitute a second book), Nowacki does the reader the favor of putting Craig's 1979 work into modern terminology, complete with two concise appendices on Cantor's theory of the actual infinite and operations with transfinite numbers. Especially needed was a contemporary sketch of reactions to Cantorian transfinite number theory, as it has enjoyed significant contributions in the past few decades. Even after considering these new developments, Nowacki concludes Craig's original work remains relevant and largely unaffected. "While remaining true to the substance of Craig's argument," Nowacki slightly modifies Craig's original presentation before proceeding to "[clarify] the logical relations among the various subarguments of the KCA" (261). Nowacki is concerned exclusively with philosophical rather than scientific support for premise (2).

With a new tidy outline of the KCA in hand, chapter systematically surveys major objections that have been advanced against the KCA. In suggesting how to use the book, Nowacki writes in the introduction: "Few readers, for instance, would derive great pleasure from reading chapter 2 in a straightforward, linear fashion: Taxonomies are marvelous reference tools, but providing a gripping narrative is not exactly their chief virtue" (19). Pace Nowacki, this chapter is very engaging. Though not exhaustive, as Nowacki himself recognizes, each objection is cited as it is found

in current literature alongside their respective replies, often by Craig. The result captures just how influential the KCA has been, spanning such diverse topics as set theory, philosophy of mathematics and time, the nature of causation, Zeno's paradoxes, Kant's antinomies, and scientific cosmology. Nowacki adds to this list nature of substance, thought experiments, and modality in the following sections.

Chapter three begins the second, more substantial part of the book. In Nowacki singles out one important species objection to the KCA, championed by Graham Oppy. The objection attempts to refute the KCA by appealing to the logical possibility of the existence of the actual infinite. Nowacki maintains that a response to this species of objection can be achieved by situating the KCA's thought experiments (e.g., Hilbert's Hotel) in their proper modal context. Such a context, Nowacki argues, is narrower than mere logical possibility. Nowacki cites Craig approvingly on this point (170). Nowacki turns to David Braine's work on modality to help identify the appropriate modal context of the KCA's supporting thought experiments. I was surprised to see Nowacki pass over Alvin Plantinga's work, confessing that "although Plantinga's scheme has won wide acceptance, I am frankly unable to make much sense of his modal distinctions" (174). Nowacki settles instead with the restricted modal domain of "factual possibility," according to which "ascriptions of possibility (and of necessity and of impossibility) are context relative" (176). Here, modal designations only make sense when "the context of the situation has been sufficiently determined" (176).

After presenting the requisite details of Braine's account of modality, Nowacki turns to Roy Sorensen's work on the nature of thought experiments in order to justify and clarify those used in the KCA. To counter a thought experiment, one must be sensitive to the conceptual constraints implicit in the experiment. For example, it would be absurd to object to Plato's Gyges Ring thought experiment on the grounds that light could not strike the retina of an invisible man, rendering him blind. Or consider the famed Trolleyology thought experiments; one simply fails to engage the thought experiment by asking questions like "What if the brakes on the Trolley start working again?" This is not a possibility within the context of the thought experiment. Correctly identifying the modal context of a thought experiment, then, is crucial to challenging it. To counter a thought experiment, one must offer what Sorensen calls a "possibility refuter." A possibility refuter is a counterexample to the original thought experiment that operates in the same modal context. Nowacki argues that Oppy's objections to the KCA fail in this respect. Oppy may well succeed in demonstrating that it is broadly logically possible that an actual infinite exist, but "insofar as Oppy's objections involve construing the KCA

thought experiments in an improper modal sense his counterarguments are non sequiturs and hence fail as objections to the KCA.” The proper modal context of the KCA, Nowacki argues, is not broadly logical possibility, but factual possibility.

Situating the KCA’s thought experiments within the narrower modal domain of factual possibility is most effective given a substance-based metaphysics. A great deal of chapter four, therefore, argues for a particular metaphysics of substance, drawing much from the work of G. E. M Anscombe and Sarah Broadie. Defending a substance-based metaphysics in turn provided Nowacki the resources to justify a subdomain of factual possibility he calls “substantial possibility.” Substantial possibility is that which is “determined by the naturally possible causal relations open to substances as a function of the particular natures they possess” (220). Here I found the novelty of Nowacki's approach most admirable. Contra the standard regularity theories of causation, Nowacki follows Rom Harré and E. H. Madden’s analysis of causation in terms of substances and their active power. “[I]t is through the operations of a substance that we discover, a posteriori, what its nature is” (214). This has significant implications for the kind of causation at work in the KCA, as much of the force of its conclusion comes from just such an analysis of the cause of the universe. Unfortunately, Nowacki draws no explicit connection between the cause of the universe and this substance-based account of causation.

Assimilating the modal tools now at Nowacki's disposal, he applies them to the KCA by offering several new arguments in cumulative case fashion against the substantial possibility of an actual infinite. The first important application is to the notion of “event.” Crucial to a defense of the KCA is an argument against the possibility of an infinite regress of past events. For Noacki, an event is “to be identified with (pragmatically) significant, causally connected, real changes in substances” (235). Given that the notion of an event is conceptually tied to that of substance, the impossibility if an infinite regress of events, therefore, will follow from the substantial impossibility of an actually infinite. Nowacki spends the bulk of chapter 5 presenting a new “hyperlump” thought experiment. A hyperlump, according to Nowacki, is “an actually infinite lump of clay that is composed of a denumerably infinite quantity of different colored handfuls of clay that have been firmly pressed together” (243). Even though “the same operations Craig performs with his actually infinite library have analogs in the hyperlump thought experiment,” (243) it is unique in its modal implications: “What the hyperlump thought experiment amply illustrates is that real differences in substances fail to receive an adequate model in Cantorian transfinite arithmetic” (248). Nowacki argues that the hyperlump thought experiment demonstrates the substantial

impossibility of an actual infinite existing in reality as well as the substantial impossibility of an infinite regress of past events. I appreciate the hyperlump though experiment, but I can't help but wish Nowacki would have chosen a more intuitively favorable one. For example, he mentions how his purposes could be equally served “by supposing a World Tree with infinite roots and branches such as described in Norse mythology” (259n21). I think this would have achieved more intuitive force than the somewhat abstract notion of a hyperlump (as a modified version of David Lewis's hypergunk).

The final chapter is a brief summary of the aims of the book and some prospects for future discussions. Most notably would be effort regarding the exact theory of causation required by the KCA. Nowacki wonders “what theory of causation is required for the KCA to be sound” (264). Here is a good place to register a few disappointments. Often referring to Craig's views on causation “underdetermined and somewhat quirky” (28), Nowacki does not interact with what Craig has said on the matter. Craig clearly holds to some version of agent causation, which seems like it would fit well with the kind of substance-based metaphysics Nowacki defends. But Nowacki makes no connection between agenthood and substance. Also disappointing is the lack of attention given to the KCA's first premise. Nowacki offers no more than a succinct outline of the defense Craig typically gives, a defense which Nowacki himself calls “extremely sketchy” (27). Finally, there is an amusing typographical foible Ch. 3. Beginning on p. 173 with endnote 22, the numbered endnotes do not correspond to the numbers in-text. They are all one number behind (e.g., in-text note 22 actually corresponds to endnote 23). This pattern continues for some 50 endnotes, resulting in a mysterious missing endnote!

*The Kalam Cosmological Argument for God* is an original and refreshingly positive contribution to the growing literature on the KCA. Nowacki has written a worthy successor to Craig's original *The Kalam Cosmological Argument*.