Three Contemporary Defenses of the Cosmological Argument

In recent years William Craig, Bruce Reichenbach, and Richard Swinburne have developed versions of the cosmological argument. Craig and Reichenbach can be understood as presenting deductive forms of the argument, while Swinburne's cosmological argument is inductive. Although there are other contemporary versions of the cosmological argument, these are among the most sophisticated and well argued in contemporary philosophical theology. We can therefore be fairly sure that if these arguments are found to be unsound, those left unexamined here would also be found lacking.

Craig's Defense of the Kalam Cosmological Argument

The Argument

William Craig has recently defended the Kalam cosmological argument, a version of the cosmological argument originating in the work of the sixth-century Alexandrian philosophical commentator and Christian theologian Joannes Philoponos. He argued against Aristotle's proofs that the universe was eternal, and his argument was developed with greater subtlety by medieval Islamic theologians of the Kalam school. The argument was carried to the Christian world in the thirteenth century and became a source of great philosophical debate between Bonaventure, who supported it, and Aquinas, who opposed it. Unlike the second way of Aquinas, the attempt is made in this version of the argument to demonstrate that the universe was created at a particular moment in time.

The basic argument Craig presents is as follows:

1. Everything that begins to exist has a cause of its existence.
2. The universe began to exist.
3. Therefore, the universe has a cause of its existence.

According to Craig, the key premise in the argument is (2). Craig argues that those who deny it presuppose the possibility of an actual, in contrast to a potential, infinity of events. According to Craig, critics of the argument must assure that the temporal regression of events has no beginning and thus that these events, stretching back forever in time, form an actual infinity. Craig maintains that the notion of actual infinity, even in the realm of pure mathematics, has paradoxical implications—for example, the number of even numbers is the same as the number of natural numbers—and that some mathematicians (for example, intuitionists) have therefore rejected the notion of an actual infinity. He argues that as it is analyzed by Georg Cantor, although the notion of an actual infinity in the realm of number theory may form a consistent mathematical system, it "carries with it no ontological import for the
existence of actual infinity in the real world.” Indeed, he maintains that the supposition that there are actual infinities in the real world entails absurdities. Suppose, Craig says, there is a library with an infinite number of books:

Suppose further that each book in the library has a number printed on its spine so as to create a one-to-one correspondence with the natural numbers. Because the collection is an actual infinity, this means that every possible natural number is printed on some book. Therefore, it would be impossible to add another book to this library. For what would be the number of the new book? Clearly there is no number to assign to it. Therefore, there would be no number for the new book. But this is absurd, since entities that exist in reality can be numbered.19

According to Craig, not only does the notion of actual infinity have absurd implications, but it is also impossible to form an actual infinity by successive addition. In order to form a collection by successive addition, each item in the collection must be added sequentially. He maintains that a collection formed in this way cannot be an actual infinity, since no matter how many items have been added, one more item can be added. Since the events that constitute our world up to this point in time are a collection formed by successive addition, one event following after another, these events cannot constitute an actual infinity.19

In addition to these essentially a priori arguments, Craig believes that evidence from science supports the idea that the universe had a beginning. He maintains that the evidence from scientific cosmology supports the hypothesis that the universe had an absolute beginning about 15 billion years ago and that alternative hypotheses such as the steady state theory and the oscillating model of the universe are not as well supported.19 He argues also that the second law of thermodynamics predicts that if the universe had existed for an infinite length of time, then it should have reached a state of maximum entropy; that is, all energy in it should have become evenly distributed. But clearly this has not happened. Hence the universe had a beginning.19

Craig believes that premise (1) of the argument does not need as elaborate a defense as premise (2): “the idea that anything, especially the whole universe, could pop into existence uncaused is so repugnant that most thinkers intuitively recognize that the universe’s beginning to exist entirely uncaused out of nothing is incapable of sincere affirmation.”17 Nevertheless, he outlines two possible lines of support for (1). He claims that the empirical evidence is overwhelming for the proposition that everything that has a beginning has a cause. He also takes a Kantian approach, suggesting that it is plausible to suppose that causality is an a priori category of the mind. In other words, causality is a precondition of thought.

It should be clear, however, even if the premises of Craig’s argument are accepted: The only conclusion one can draw is that the universe has a cause. This need not be a person, let alone an all-knowing, all-powerful, all-good person. Craig freely admits that the Kalam cosmological argument he presents does not prove the existence of God.19 But he believes that other considerations support his view that the cause of the universe is a person. Unfortunately, this aspect of his argument is very condensed and obscure.19

To prove his case, Craig relies on the principle of determination found in Islamic philosophy. According to this principle, “when two different states of affairs are equally possible and one results, this realization of one rather than the other must be the result of the action of a personal agent who freely chooses one rather than the other.” If the universe was created at some particular moment in time, then the question arises as to why it was created at that moment and did not exist from eternity. One might suppose the universe’s creation could be accounted for by an alternative to the explanation that it was the result of a choice of a personal agent. Following the teachings of some Islamic philosophers, Craig rejects all alternative explanations and maintains that “if a mechanical cause” existed from eternity, then so would the universe. But if such a cause did not exist from eternity, then the universe could not have come into existence at all. On the other hand, in a Newtonian view of absolute time, a personal agent might freely choose to create the universe at any moment of time and, alternately, on a relational view of time a personal agent could choose timelessly to create the universe and with it itself. Craig, in fact, opts for this last alternative, arguing that the universe was created by a personal Creator “who exists changelessly and independently prior to creation and in time subsequent to creation.”19

Evaluation
It should be obvious that Craig’s conclusion that a single personal agent created the universe is a non sequitur. At most, this Kalam argument shows that some personal agent or agents created the universe. Craig cannot validly conclude that a single agent is the creator. On the contrary, for all he shows, there may have been trillions of personal agents involved in the creation.

Furthermore, Craig in one place goes further than assuming a personal agent and claims that “our whole universe was caused to exist by something beyond it and greater than it.”21 It is hard to see, however, why the creator or creators of the universe must be greater than the universe itself. Indeed, experience by no means uniformly supports the hypothesis that a creator is greater than its creation. Parents, for example, give birth to children who turn out to be greater than they are. Craig supplies no
reason to suppose that the relation between the universe and its creator or creators would be any different.

Moreover, Craig also claims to have shown that the universe was created ex nihilo, but again there seems to be nothing in his argument to justify this conclusion. According to his argument, the universe is not eternal but was created. From this it does not follow that the universe was not created out of something else. One possibility is that the creator or creators of the universe created it out of something that existed in some timeless realm. Another is that the material existed from eternity and that the creator or creators took this and formed the universe at a particular moment and, with it, causality and change. The sort of a priori arguments that Craig brings to bear against infinite causal sequences would not hold, for there is no causality operating with respect to the state of affairs that existed before the universe was created. Craig may have answers to these problems, but they are not presented explicitly in his book.

Craig's argument that the cause of the universe is the action of a personal agent or agents remains to be considered. Although it turns on the truth of the principle of determination—if there are two equally possible results and one occurs, the result must be explained in terms of the choice of a personal agent—he makes no serious attempt to defend this principle. Yet it is especially in need of defense, since it seems to find no uniform support in existence. In ordinary life and in science one would be ill-advised to appeal always to the choice of a personal agent to explain what happens when two events are equally likely and one occurs. For example, if heads come up in a flip of our unbiased coin, one would try to explain this event by causal factors operating on the coin, none of which might be the result of the choice of a personal agent or agents. It is unclear why the situation should be any different in cosmology. It is unclear also why a mechanical, nonpersonal cause could not have brought about the universe. Perhaps some nonpersonal causes are nontemporal and yet create events in time. Why these events are created at one moment rather than some other by these mechanical causes is surely no more mysterious than how a personal agent operating timeless creates something at one moment rather than another.

So far nothing has been said about Craig's argument that the universe has a beginning in time. As we have seen, this has two aspects: First he presents a priori considerations that an actual infinity is impossible, and then he presents scientific evidence that the universe had an absolute beginning in time. Let us consider these in turn.

Craig's a priori arguments are unsound or show at most that actual infinities have odd properties. This latter fact is well known, however, and shows nothing about whether it is logically impossible to have actual

infinities in the real world. Craig admits that the concept of an actual infinity in pure mathematics is perfectly consistent. But he fails to show that there is anything logically inconsistent about an actual infinity existing in reality. Moreover, in some of his examples he even fails to show that there is any nonlogical absurdity.

Consider his example of the library with an infinite number of books. Craig maintains that since each book had a number on its spine, no new books could be added to the library. But this, he concludes, is absurd (presumably in some nonlogical sense), since "entities that exist in reality can be numbered." This argument is unsound, however, for books can be added and numbered by simply renumbering the books already in the library. The new books would then be given the numbers of old books—the books that had already been assigned numbers—and the old books would be assigned new numbers.

Although it is condensed and enthymematic, Craig's argument that one cannot construct an actual infinity by successive addition can perhaps be reconstructed as follows:

(1) For any point, it is impossible to begin at that point and construct an actual infinity by successive addition.

(2) In order to construct an actual infinity by successive addition, it is necessary to begin at some point.

(3) Therefore, an actual infinity cannot be constructed by successive addition.

It should be clear that (2) begs the question, since there is an alternative—namely, that an actual infinity can be constructed by successive addition if the successive addition is beginningless. To suppose that an actual infinity cannot be constructed in this way is to assume exactly what is at issue.

Craig's claim that scientific evidence can support the hypothesis that the universe had an absolute beginning is completely misguided. For to say that the universe had an absolute beginning would preclude any scientific investigation of this beginning. As Milton Munitz has argued:

Science is grounded in the use of the Principle of Sufficient Reason and, therefore, always leaves open the possibility of finding the explanation of any event. To say there is some unique event marking the beginning of the universe for which no [scientific] explanation can be given, is to say something contrary to the method of science. It is for this reason that any conception of the beginning of the universe, when defended under the aegis of some supposedly scientific cosmology, is an indefensible notion.

Of course, given the present state of scientific theory there may be no
scientific explanation of what came before the beginning of the universe. But the possibility cannot be excluded that further developments in science will provide answers. As Munitz argues:

Even if there is reason to prefer a model whose account of the past history of the universe includes a reference to an event called in that theory "the origin of the universe," it does not exclude the possibility of finding some more refined theory, in which inference can be made to events even earlier than the one identified as "the beginning" in the theory of the coarser grain. The search for a more refined theory that would explain the event considered "the beginning of the universe" (in the cruder theory) would be part of the normal interest of science.\textsuperscript{27}

Moreover, as I suggested above in evaluating Aquinas’s argument, even if the universe has a beginning in time, in the light of recently proposed cosmological theories this beginning may be uncaused. Despite Craig’s claim that theories postulating that the universe “could pop into existence uncaused” are incapable of “sincere affirmation,” such similar theories are in fact being taken seriously by scientists.\textsuperscript{28}

One can conclude that Craig’s defense of the cosmological argument fails.