Craig, Mackie, And The Kalam Cosmological Argument

by Graham Oppy

In "Professor Mackie And The Kalām Cosmological Argument" (Religious Studies, 1984, Vol.20, pp.367-375), Professor William Lane Craig undertakes to demonstrate that J. L. Mackie's analysis of the Kalām cosmological argument in The Miracle Of Theism (Oxford University Press, Oxford, 1982) is "superficial", and that Mackie "has failed to provide any compelling or even intuitively appealing objection against the argument". (p.367) I disagree with Craig's judgement; for it seems to me that the considerations which Mackie advances do serve to refute the Kalām cosmological argument. Consequently, the purpose of this paper is to reply to Craig's criticisms on Mackie's behalf.

This paper has three parts. In the first part, I outline the Kalām argument, and introduce the objections which Mackie makes to it. In the second part, I present the replies which Craig makes to Mackie's objections. Finally, in the third part, I explain why I think that Craig's replies are unsuccessful.

I

In outline, the Kalām argument runs as follows:

1. Whatever begins to exist has a cause of its existence.
2. The universe began to exist.
3. (Hence) The universe has a cause of its existence.

Since this argument is obviously valid, the only question is whether the two premises are true. (Whether this argument would then establish that God exists is of course a further question. However, I shall postpone this consideration until some other occasion.) I shall begin by considering the second premise.

There are two sub-arguments which proponents of the Kalām cosmological argument have given in defence of 2. These sub-arguments may be schematised as follows:

2.10 If the universe did not begin to exist, then an infinite temporal regress of events exists.
2.11 An actual infinite cannot exist.
2.12 An infinite temporal regress of events is an actual infinite.
2.13 (Hence) An infinite temporal regress of events cannot exist. (From 2.11, 2.12.)
2 (Hence) The universe began to exist. (From 2.10, 2.13.)

2.20 If the universe did not begin to exist, then the temporal series of past events is actually infinite.
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 (Hence) The temporal series of past events cannot be actually infinite. (From 2.21, 2.22)
2.24 (Hence) The temporal series of past events is not actually infinite. (From 2.23)
2. (Hence) The universe began to exist. (From 2.20, 2.24)

Since both of these sub-arguments are clearly valid, the question of the truth of 2. would be decided affirmatively by the truth of either 2.10-2.12 or 2.20-2.22. On the other hand, if it could be shown that one of 2.10-2.12 and one of 2.20-2.22 is false, then it would follow that proponents of the Kalām argument have not succeeded in showing that 2. is true. Of course, this would not show that the initial argument is unsound -- but it would show that we haven't yet been given any good reason to believe its conclusion.

There may be arguments which can be given in defence of 1. However, in this initial presentation of the argument, I shall suppose that proponents of the Kalām argument are content to rest their case for 1. in intuition.

Not surprisingly, Mackie contends that neither of the sub-arguments can be shown to be sound. Furthermore, he contends that there is no good reason to suppose that 1. is true. And, finally, he contends that, even if the above objections fail, there are reasons for supposing that the theist cannot consistently hold that God can exist uncaused and yet the universe cannot exist uncaused.

Against the first sub-argument, Mackie objects that 2.11 is not supported by the considerations which are normally advanced to underwrite it. For, once one has grasped the principles of infinite set theory, one can see that there are no real contradictions involved in the notion of an actual infinite. Consequently, we need to be given some further reason to suppose that 2.11 is true. But no further reasons seem to be forthcoming.

Against the second sub-argument, Mackie objects that 2.21 just expresses a prejudice against actual infinities. As Craig notes, the traditional (medieval) version of the argument which is most often given in support of 2.2 may be schematised thus:

2.221 An infinite distance cannot be crossed.
2.222 (Hence) If the past were infinite, then today would never arrive.
2.223 (But) today has arrived.
2.224 (Hence) The past must be finite.

But Mackie's objection is that 2.221 simply begs the question. What reason is there to suppose that an infinite distance cannot be crossed?

Against 1., Mackie objects that it is surely conceivable that things might exist uncaused. Given this prima facie case against 1., the defender of the argument needs to provide some countervailing argument. But none seems to be forthcoming.

Moreover, Mackie suggests that the assumptions which are required for the argument may be inconsistent with other assumptions which the theist is required to make. The difficulty is that the intuitions which are used to support 1. and 2. may well be unavailable to the theist: for there is a question about the nature of God's existence which the theist needs to face. If the theist supposes that God began to exist at a certain point in time, then the theist is not entitled to suppose that 1. is true. But if the theist supposes that God's existence has no beginning in time, then it seems that the theist must suppose that God has existed for an infinite amount of time -- and so the theist is not entitled to the assumptions which are used to support 2.

Finally, Mackie objects that even if the theist claims that 2. is supported by the empirical evidence (of the big bang) -- and hence is not in need of philosophical support -- there is still a question about the explanation of the existence of God which needs to be addressed. Presumably the theist will say that God's existence and power are "self-explanatory"; but it is hard to see how we can make sense of this while also denying that the universe can be "self-explanatory".

II

In response to Mackie's objection to the first sub-argument, Craig objects that Mackie has done nothing to justify the assumption that the conditions which give rise to the existence of an actual infinite may hold in the real world. "[T]he question is not whether infinite set theory, granted its conventions and axioms, constitutes an internally logically consistent system. The issue is whether such a system can be instantiated in the real world. ... Mackie has said nothing to resolve the absurdities or to commend to our thinking the real existence of an actual infinite." (pp.370-371) Moreover, Craig offers what seems to be intended to be an independent justification of the position which is adopted by the proponent of the Kalām argument: "The proponent of the Kalām argument ... may grant ... the practice of adopting the principle of correspondence as a convention in infinite set theory in preference to Euclid's principle, but he reminds us that this carries with it no ontological commitment concerning the real world. In the real world the absurdities in question do not arise because no actual infinite exists. Only finite collections actually

exist, and therefore both Euclid's principle and Cantor's principle hold of them." (p.371)

In response to Mackie's objection to the second sub-argument, Craig claims that the proponent of the Kalām argument does not have a prejudice against the actual infinite; rather, the proponent of the Kalām argument rejects the idea that an actual infinite can be formed by successive addition (i.e. that it can be "traversed"). Moreover, Craig claims that Mackie is mistaken to suppose that the proponent of the Kalām argument rejects the idea that an actual infinite can be formed by successive addition because s/he (i.e. the proponent of the Kalām argument) supposes that such a "traversal" would require an infinitely distant starting point; rather, Craig suggests, it is the very "beginningless character" of an infinite temporal series which serves to underscore the difficulty of the formation of such a series by successive addition. "It is not the proponent of the Kalām argument who fails to take infinitely seriously. He is all too aware that the order type of the series in question would be w*, the order type of the negative numbers. For the past to have been formed by successive addition, to have been "traversed", would be equivalent to saying someone has just succeeded in enumerating all the negative numbers ending at 0. But this seems to be inconceivable; as G.J. Whitrow urges: ' ... Since the set of order type w* is non-constructible, there is no reason for assuming it could represent an infinite series of past events.'" (pp.369-370)

Furthermore, Craig also objects that it is simply irrelevant to note that, from any specific moment in past time there is only a finite stretch to the present. "The defender of the Kalām argument may grant the point with equanimity. The issue is how the whole series can be traversed or formed by successive addition, not a finite segment of it. Does Mackie think because every finite segment of the series can be so formed or traversed that the whole can? That would be to commit the fallacy of composition." (p.370)

In response to Mackie's objection to 1., Craig objects that all that Mackie has done is to demand to be given a good a priori reason to accept 1. "What the defender of the Kalām argument maintains is that it is really impossible for something to come from nothing. But how can this be shown? I think that one could produce arguments for the principle, but that since that principle is so intuitively obvious in itself, it would be perhaps unwise to do so, for one ought not to try to prove the obvious via the less obvious. After all, does anyone sincerely think that things can pop into existence uncaused out of nothing?" (pp.371-372)

Furthermore, in response to Mackie's claim that the intuitions which are needed to support 1. and 2. may not be available to the theist, Craig replies that what the theist will want to insist is that God's existence is not temporal. "[The theist holds] that God without creation exists changelessly and timelessly with an eternal determination for the creation of a temporal world and that with

creation God enters into temporal relationships with the universe, time arising concomitantly with the first event. This may be mysterious ... but it is not so far as I can see unintelligible, as is something's coming into being uncaused out of nothing." (p.373)

Next, in response to Mackie's claim that the theistic notion of the "self-explanatory" nature of God in indefensible, Craig replies that Mackie is here confounding the Kalām cosmological argument with the Leibnizian cosmological argument. "[The Kalām cosmological] argument only commits one to the necessity of God as an eternal and uncaused being, properties that characterise what philosophers for the last 20 years have been calling a "factually necessary" being. Mackie can hardly object to the intelligibility of this sort of necessary being, since it is precisely what he as an atheist thinks the universe could be." (p.374)

Finally, in response to Mackie's claim that we need not suppose that the current standard physical model of the universe requires creation ex nihilo, Craig objects that the Big Bang model does actually require creation ex nihilo. "The further one regresses in time, the denser the universe becomes until one finally reaches a point at which the universe was contracted down to a single mathematical point, from which the universe began to expand. But a point of infinite density is synonymous with "nothing". There can be no object in the real world which possesses infinite density, for if it had any extension whatsoever it could be even more dense. ... In [the models which Mackie is canvassing], the universe would have to pass through a singularity with each oscillation, then with every contraction, the universe would have to disappear into non-being and with each expansion emerge de novo from nothing. It is difficult to see what has been gained from this." (p.374)

III

Craig's reply to Mackie's criticism of the first sub-argument for 2. is rather puzzling. He concedes that infinite set theory is a logically consistent system; consequently, it seems that he concedes that there are logically possible worlds in which various "infinites" obtain. However, he then insists that the important question is whether such infinites "can be instantiated or obtain in the real world" (my emphasis). But how is this question to be understood?

One suggestion is that the question is whether there are any infinites in the actual world. Another suggestion is that the question is whether it is possible for there to be any infinites in the actual world. And a third suggestion is that the question is whether it is possible for there to be any infinites in any world.

We can dismiss the third suggestion immediately; for Craig has already conceded that there are worlds in which there are infinites. Moreover,

we can also dismiss the first suggestion -- for Craig offers us no defence of this claim. (He does tell us that the proponent of the Kalām argument is committed to the claim that there are no infinites in the actual world; however -- at this point in his paper -- he provides no further evidence for the truth of the claim that there are no infinites in the actual world beyond the thought that it would be absurd to suppose otherwise. Since Mackie does not share this intuition, this consideration cannot be decisive; at best, we have a stalemate.)

What about the second suggestion? Well, in order to distinguish this claim from the third suggestion, it seems that we shall need to interpret it to be asking whether the existence of infinites is compatible with the actual laws of physics (or, more generally, the actual laws of nature). However, in this case, the argument ceases to be an a priori argument -- for it is clearly an a posteriori question what are the actual laws of nature. Moreover, since we don't yet know what are the laws of nature, we are not very well placed to make a judgement on this question. (Perhaps, on the basis of our current knowledge of the actual laws of nature, we can judge that it is fairly likely that there are no actual infinites; however, it is hard to see that we have much reason to be very confident about this. I shall return to this issue later.)

In sum, then: Mackie's reply to the first sub-argument for 2. is decisive if this sub-argument is meant to be based on a priori considerations; for Cantorian set theory shows that it is possible for there to be worlds in which there are infinites. Consequently, the only way that this sub-argument can be defended in on a posteriori grounds.

Craig's reply to Mackie's criticisms of the second sub-argument for 2. is more interesting. The core of this reply is the idea that actual infinites could not be "traversed" (i.e. could not be formed by successive addition).

A first suggestion which one is inclined to make is that it all depends upon the nature of the infinite in question. Prima facie, it does seem that a collection of order type w* could not be traversed (because it has no starting point). However, there are infinite collections of different orders: consider, for instance, the collection which we might represent by 1, 2, 3, ... 3, 2, 1. Consequently, it seems that there are infinites which can be traversed -- and hence it seems that the second sub-argument is unsound.

However, this can't be the end of the matter -- for, of course, this new infinite collection has a starting point. If we were to rely on this response to Craig, then we would be conceding that -- whether or not it is infinite -- time must have an initial instant; and this, after all, is what the proponent of the Kalām cosmological argument really wants to establish.

But let's look at Craig's initial objection again. What he says is that it is a legitimate objection to infinites which have no first member that they cannot be traversed. But what does this mean? Well, as far as I can see, it means that it is a legitimate objection to infinites which have no first member that they have no first member! (As his subsequent discussion reveals, the intuition which grounds the claim that the infinites in question cannot be traversed is that there is no beginning for such infinites.)

But, as Mackie said originally, this is just the expression of a prejudice, against certain sorts of infinites, which relies on the unsupported assumption that any temporal sequence must have a first member. (Craig claims that Mackie's objection is that the proponent of the Kalām argument assumes that an infinite temporal sequence must have an infinitely distant starting point -- and Craig then remarks: "I know of no proponent of the Kalām argument who made such an assumption; on the contrary, the beginningless character of an infinite temporal series serves only to underscore the difficulty of its formation by successive addition." (p.369) But, of course, Mackie's point is not that there are proponents of the Kalām argument who explicitly assumed that an infinite temporal sequence must have an infinitely distant starting point; rather, Mackie's point is that all proponents of the Kalām argument implicitly suppose that every ("real") temporal sequence must have a starting point. Moreover, Craig's own remarks about "the beginningless character of an infinite temporal series" serves to show that he himself makes this same implicit assumption.)

In sum: As Mackie originally claimed, the second sub-argument for 2. merely expresses a prejudice against "actual" infinites. Once we grant -- as Craig does -- that Cantorian set theory reveals that worlds with actual infinites are logically possible, there can be no good a priori argument against actual infinite temporal sequences. (It should be noted -- contrary to Craig's last claim about this sub-argument -- that Mackie's point that, from any specific moment in past time, there is only a finite stretch to the present is relevant in the case of those sequences which have this property. For Mackie's point reveals that the whole series is formed by successive addition -- in the sense that, for each point in the series, there is an earlier one from which it derives by addition. To suppose that there is some further sense in which the series is not formed by successive addition is simply to express a prejudice against the claim that there might be such sequences.)

Craig's main reply to Mackie's criticisms of the use which the Kalām cosmological argument makes of 1. is very weak. Essentially, Mackie's view is that, given the standard test for judgements of possibility (viz. conceivability in which there is no appearance of logical inconsistency), we have good reason to suppose that it is possible for something to begin to exist uncaused. If the proponent of the Kalām cosmological argument wishes to deny that it is possible for something to begin to exist uncaused, then s/he needs to provide some argument

which shows that there is a logical inconsistency in this claim. But all that Craig says is that he thinks that it is possible that one could produce arguments which would establish this claim. This is all very well; however, those of us who are sympathetic to the thought that it is possible for something to begin to exist uncaused would like to see such an argument in order to judge for ourselves.

(Craig does mention, in a footnote, an argument which he attributes to Jonathon Edwards: "Something cannot come into existence uncaused because it then becomes inexplicable why just any and everything cannot or does not come into existence uncaused. It cannot be said that only things of a certain nature come into existence uncaused because prior to their existence they have no nature which would control their coming to be." There are two distinct arguments here. The one which claims that it becomes inexplicable why just any and everything does not come into existence uncaused need not detain us; the obvious answer is that some things are brought into existence by things which already exist (e.g. children are brought into existence by their parents). However, the argument which claims it becomes inexplicable why just any and everything cannot come into existence uncaused is more interesting. I would -- for the same sorts of reasons which sustained Mackie's original argument -- suggest that, in fact, just any and everything can come into existence uncaused. However, I would also add that there seems to be good reason to believe that our universe is governed by certain conservation laws which ensure that such things do not actually happen.)

Craig's further reply to Mackie's claim that the proponent of the Kalām cosmological argument is not entitled to the intuitions which are needed to support both 1. and 2. is rather puzzling. What Craig claims is that the theist will want to insist that God's existence is not temporal. But, as Mackie originally asserted, this claim is very hard to understand. Craig tells us that "God without creation exists changelessly and timelessly with an eternal determination for the creation of a temporal world and that with creation God enters into temporal relationships with the universe, time arising concomitantly with the first event". But I find that the meaning of this completely escapes me. How does God's existing "changelessly and timelessly" differ from his coming into existence uncaused at the very moment at which time is created? In the absence of further explanation (which I very much doubt can be provided), it seems to me that there is good reason to suppose that Mackie's initial charge is sustained.

More importantly, there is a question about the ground of Craig's claim that it is intelligible to suppose that God exists "changelessly and timelessly". Does he suppose that here it is good enough to resort to the criterion of conceivability? But if so, why is it good enough here, and yet not in the case of the supposition that some things might exist uncaused? (At best, all we have are intuitions which it is common knowledge are not shared by both parties to the dispute. So further insistence on there intuitions can hardly advance the argument.)

Finally, Craig's objection based on the claim that Mackie confounds the Kalām cosmological argument with the Leibnizian cosmological argument can also be seen to be misguided. Craig tells us that the Kalām cosmological argument is only committed to "the necessity of God as an eternal and uncaused being". But, if this "necessity" is not the (allegedly) unintelligible notion which is required by the Leibnizian cosmological argument, then it seems to me that one is entitled to suggest that perhaps the universe itself is "an eternal and uncaused being". I do not see how there can be a principled way of allowing that God has this property and yet the universe cannot have it. ("The universe exists changelessly and timelessly with an eternal determination to become a temporal world." Sounds fine to me!)

In sum, then: It seems to me that Mackie's original objections to 1. and 2. still stand. There is nothing that Craig says which restores any confidence which we may have in the Kalām cosmological argument, if that argument is intended to be purely a priori. Moreover, it is hard to see that there could be any a posteriori evidence which could support 1. -- i.e. it seems that the argument cannot be restored as an a posteriori argument. However, there is one point about the a posteriori evidence for 2. which still needs to be discussed.

As I noted earlier, Craig claims that the Big Bang model does actually require creation ex nihilo. However, his argument relies on the assumption that a point of infinite density is synonymous with "nothing". But what reason is there to assent to this claim? After all, it seems clear that a point of infinite density has various properties (e.g. possession of infinite density) which would not be instantiated in a world in which there was nothing at all!

Now, perhaps this is a misunderstanding of what Craig means -- for he goes on to say that there can be no object in the real world which possesses infinite density, since if it had any extension whatsoever it could be even more dense. But this argument is just based on his original prejudice against actual infinites. For, of course, if an extended entity which was infinitely dense doubled in volume, it would have exactly the same density as it had to begin with. No problem.

Consequently, it just doesn't follow that, in the models which Mackie canvasses, with every contraction the universe would have to disappear into non-being and with each expansion emerge de novo from nothing. Rather, on Mackie's models, the universe would shrink to a point of infinite density, and then expand from that point again. However, whether these models are physically plausible is not a question on which I am competent to judge.

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