Response to Bill Craig's Cosmological Argument

Before getting down to the business at hand, I'd like to express my gratitude to Westminster College for bringing us together here. A special thanks to Rich Geenan and Jim McRae and to the wonderful students in your philosophy club, who worked so long and hard to make this thing happen. I'd also like to thank the student organizations that supported this event and made it possible. Finally, I want to thank Bill Craig for being here. It's a great privilege and a distinct honor to have an exchange of views with a world-class philosopher like him, and I expect to learn a lot.

It's no secret, of course, that I don't share Bill's evaluation of this particular argument. He seems to think it's a real clincher, whereas I think it succeeds only in raising lots of deep and interesting questions that we're not in a very good position to answer. <CLICK 1> Since Bill has devoted most of his time to defending premise 2 – the one that says that the universe began to exist, I'll begin by taking a close look at the support he offers for that claim.

First, though, we need to make sure that the word "universe" is understood in a sense strong enough to help us reach the conclusion

that is needed at this stage of the overall argument. **<CLICK 2>** What Bill *needs* to show is that *the whole of physical reality* has a cause. And that includes whatever "universes" other than *ours* may exist, or have existed. If, for example, physical reality consisted in a series of "universes," each having a beginning and an end, and each somehow containing the seed of the next, we'd need to show – not just that *our* "universe" had a cause – but that there was a *first* member of the series and that *it* had a cause.

That's one reason why the two *purely philosophical* arguments Bill has given for thinking that a beginningless series of events is impossible are so important to his overall project. If either of them were successful, it would yield precisely the conclusion that's needed here.

The *scientific* considerations, on the other hand, are completely inadequate to do the job. **<CLICK 3>** Here's what the experts I have consulted tell me. At best, physics says that thirteen or so billion years ago "our" universe was in a state of *extremely high* energy and density. When the energy levels are that high, quantum effects are extremely significant, physics is entirely speculative, and just about everything is up for grabs. It isn't clear what physical laws would apply in a situation

like that. Consequently, science gives us no license whatever to jump to the conclusion that the whole of physical reality began "from literally nothing."

<CLICK 4> Anyone who occasionally glances at *Scientific American* – or at *Astronomy* magazine – knows that there is an ongoing riot of speculation about all this, much of it not at all friendly to the view Bill favors. But it's all just speculation, and until the physicists sort things out on empirical grounds, we have to rely on purely philosophical arguments. So, then, can philosophy deliver what physics cannot?

<CLICK 5> Consider the first of Bill's two philosophical arguments for saying that a beginningless series is impossible. Let's keep things simple. Suppose we're talking about a series of discrete, non-overlapping events of finite duration – each occurring after all the previous ones. If there was no first event, infinitely many have occurred.

Bill says this is absolutely impossible. An actual infinite can't exist in the real world, because infinite collections have weird properties that make them impossible. By way of illustration and argument, Bill asks us

to consider a hotel having infinitely many rooms, each occupied by exactly one guest. "Hilbert's Hotel" is full. **<CLICK 6>**

Nevertheless, room can be found for more guests – indeed, for infinitely many more. If the guests are moved to different rooms in just the right way, as many rooms as you like can be made available without kicking anyone out or making anyone double up. This allegedly absurd implication is blamed entirely on the fact that the hotel is *infinite*.

So just how impossible is an infinite hotel? So impossible, apparently, that even *God* could not create one. No one, no matter how powerful, could. This is supposed to enable us to see that a beginningless series of events is *also* absolutely impossible. Does it?

<CLICK 7> At this point, some people reply that the properties of the infinite are simply different from those of the finite. Of course *we* can't build an infinite hotel. But a God who could create the whole of physical reality out of nothing could make a universe as large as He liked – even an infinitely large one. And if He did, He could certainly put an infinite hotel into it. A hotel like that would indeed have the weird properties Bill has so vividly described. But that's normal for wholes with infinitely many parts.

This may well be correct, but I want to press a more subtle objection. The conclusion that an infinite hotel is impossible is based on the supposed absurdity of making room for new guests without kicking anyone out, or making anyone share. But of course this doesn't follow *merely* from the *infinity* of the hotel, but rather from what happens when infinity is *combined* with *other properties* of this imaginary hotel. We get the "weird" implication *only* because the guests can be *moved*. Were that not the case, new guests could *not* be accommodated – *not even in an infinite hotel*.

Let's return to the case we're interested in – that of a series of past events, each having occurred after infinitely many others. **<CLICK 8>** Unlike the guests in the hotel, who are not nailed down, past events are inseparable from their respective temporal locations. Once an event has occurred at a particular time, it can't be "moved" to some other time. The signing of the Declaration of Independence, for instance, cannot be "moved out of" July 4, 1776. Of course, time continued to pass, and new events were (and continue to be) added to those that had already occurred when the signing had been completed. But that's no more absurd than making space for new guests by building new rooms. It follows that the impossibility of a Hilbert's Hotel – if, indeed, it is

impossible – has no bearing on *our* question concerning the possibility of a beginningless series of past events.

<CLICK 9> To see that something must have gone wrong here, let's think about the possibility of an *endless future*. That's possible, isn't it? A favorite verse of a much loved hymn comes to mind: "When we've been there ten thousand years / bright shining as the sun / we've no less days to sing God's praise / than when we first begun."

So imagine an endless series of future praises, each taking the same amount of time, and each occurring after all the others. That's possible, isn't it?

It's true, of course, that we'll never arrive at a time at which we have *already said* infinitely many heavenly praises. At every stage in the future series of events as I am imagining it, we will have said only finitely many. *But that makes not a particle of difference to the point I am about to make.* If you ask, "How many distinct praises *will be* said?" the only sensible answer is, *infinitely many*.

By way of illustration, suppose that God makes it the case that two people – call them 'Bill' and 'Wes' **<CLICK 10>** – will take turns praising Him forever, and that each of their praises will take precisely one

"minute" of celestial time. Bill will do the even numbered praises, and Wes (given his contrarian nature) will do the odd ones. ~~If God is omniscient, He knows exactly who will say which words of praise during *each* of those infinitely many future moments.~~ How many distinct praises *will* they say? The only sensible answer is, *infinitely many*.

Now imagine someone (under the spell of Bill's reflections on Hilbert's Hotel) objecting, "If God could do that, He could instead have determined that Bill and Wes will stop after praise number six. *Infinitely many* praises would be prevented, and the number of their future praises would be *only six*. Alternatively, God could have determined that *Wes* be silent during the celestial minutes between Bill's future praises. In this case too, *infinitely many* praises would be prevented, but the number of future praises would instead be *infinite*. That's crazy." Here's another objection of the same kind. "But God could have determined that Bill and Wes will wait a celestial minute after each pair of praises, thus making 'room' for *infinitely many more* praises by a third creature. Infinitely many praises are added, but the number of distinct praises that will be said is no greater. That's crazy too."

Must we conclude from such reflections as these that an endless series of future events is *absolutely impossible*? Obviously not! But then neither should we say that a beginningless series of past events is impossible. **<CLICK 11>** As far as the paradoxes of infinity are concerned, the two cases are on exactly the same footing. The only difference is that at any time in an endless future infinitely many events *will* occur, whereas at any time in a beginningless past, infinitely many *have* occurred. The former is obviously possible. Why not the latter?

<CLICK 12> What about Bill's *second* philosophical argument against the infinite past? Even if an actual infinite were in principle possible, Bill thinks a beginningless series of past events would be impossible because it completes an infinite series that has been produced by successive addition – something that supposedly cannot be done.

Remember "the Count" in *Sesame Street*? **<CLICK 13>** He likes to "count things." "One banana, two bananas, three bananas . . ." The man can certainly count. But if he *started out* with the aim of counting *all* the natural numbers at the same rate, he would never finish. On the other hand, if time (and "the Count" himself) had no beginning, there would be

no bar to his having counted all the way down to zero without missing a single number.

Well, why not? Bill says this is impossible because ***no reason can be given why he is finishing now rather than at some earlier time***. After all, if the past has no beginning, then the Count has ***always already*** had enough time to complete the job. So, Bill concludes, he ***cannot*** be finishing now – or, indeed, at any earlier time.

This is a complete non-sequitur. **<CLICK 14>** From the fact that we know of no good reason *why* something is so, it does not follow that it's impossible for it to *be* so! **<CLICK 15>** But isn't "traversing the infinite" obviously impossible? I answer: That depends on what you mean by "traversing the infinite." **<CLICK 16>** If you mean that ***each*** *of infinitely many events (of equal duration) has occurred*, then no good reason has been given for thinking this is *impossible*. If, on the other hand, you mean, ***starting out on an*** *infinite series (of them) and completing it*, then of course ***that's*** impossible. But it's not relevant to the case we are interested in – that of an infinite series of past events ***with no starting point***. ~~It's true that no *member* of a beginningless series of past events is infinitely distant~~

~~from the present. But from this it does not follow that the number of events that have occurred must be finite.~~

So much for Bill's defense of premise 2 of his main argument. **<CLICK 17>** What about *premise 1?* What about the claim that *whatever begins to exist must have a cause*? **<CLICK 18>** I have serious doubts about the ***universal applicability*** of this principle, and I am unmoved by the considerations Bill has offered in its support.

The first of these – *the claim that something can't come from nothing* – is, charitably interpreted, merely a restatement of the principle. The second – *that without this principle no reason could be given for saying that bicycles and Beethoven and such couldn't pop into being uncaused* – is flat-out wrong. We have a ton of experience in favor of saying that things *like that* can't just pop into existence. We don't need to deduce it from a universal principle that applies to absolutely everything.

Does what's true of a bicycle apply to physical reality as a whole? It's not obvious that it would. **<CLICK 19>** We're talking about the origin of the whole natural order here. A bicycle comes into existence *within* the natural order. Given the way things work in our world, it is impossible for things *like bicycles* to pop into existence uncaused. But there is no

comparable *context* for the origin of the whole natural order – nothing that could make it *impossible* for it to come into existence.

Bill's third consideration – that his causal principle is constantly verified and never falsified – is a gross oversimplification. *At the level of medium sized objects*, it may hold up. But so do a lot of other generalizations that would be quite harmful to the case Bill wants to make for creation *out of* nothing. Here are a few. **<CLICK 20>**

- "*Material* things always come from *material* things."
- "Nothing is ever created *out of* nothing."
- "Nothing is ever caused by anything *that is not itself in time*."
- "Every event is *preceded in time* by other events."

Bill doesn't accept any of *these* well-attested empirical generalizations. Could he be applying a double standard? Accepting those that help his case, and rejecting those that don't?

<CLICK 21> Here's something else to think about. In the wonderfully strange world of quantum mechanics, things don't always seem to have a cause. In what's called "quantum fluctuation," pairs of particles spontaneously pop into existence in a quantum vacuum. What causes

this? There is no plausible candidate. A quantum vacuum has a very low level of energy, but nobody thinks that this is the cause.

So, then, one can have perfectly reasonable doubts even about premise 1 – both at the level of particle physics and with regard to the origin (if any) of the whole natural order.

<CLICK 22> But what if we did think that the whole of physical reality had a beginning and a cause? What does that have to do with the existence of God? Well, Bill thinks it follows straightaway that this cause must be non-temporal, unchanging, immaterial, and "unimaginably powerful." Finally, and most importantly, he says that this cause must be "personal." He gives a couple of *very* quick arguments for this last claim.

According to the first, **<CLICK 23>** "the only entities we know of which can be timeless and immaterial are either minds or abstract objects, like numbers." Numbers and the like aren't very plausible candidates for being the cause of the the whole of physical reality. So, Bill concludes, this cause "must" be a timeless and immaterial mind.

This is *much* too quick. **<CLICK 24>** Just because we don't "know of" something does nothing to show that it couldn't exist. I quite agree that

my favorite number is not the cause of the the whole of physical reality. But the realm of "timeless and immutable" objects is disputed territory in philosophy, and we are not in much of a position to say what it could or could not contain. Even if it *could* contain minds, it might, for all we know, contain other things that are capable of entering into causal relations.

Bill's second argument **<CLICK 25>** for saying that the cause of the universe must be personal implicitly assumes that there can be only two types of cause – free *personal agents*, and *impersonal sufficient conditions*. Bill argues that an *impersonal eternal* cause could have only an *eternal* effect. Since he thinks the universe is not eternal, he concludes that the cause of the universe can only have been an eternal personal agent who freely chose "to create the world in time."

I have time to voice just two worries about this argument. The first **<CLICK 26>** concerns Bill's example of an eternal and impersonal cause. It's actually an example of an impersonal *temporal* cause *that has no beginning*. If water had *always already* been around and had *always already* had a temperature below zero centigrade, it would *always already* have been frozen (without beginning). But on Bill's view, *God* is

not eternal in *that* sense, since that would involve beginningless temporal duration of just the sort that Bill believes to be impossible. So does this example show anything that's relevant to the timeless kind of eternity we're supposed to be talking about here?

Here, ***very* briefly,** is my second worry. **<CLICK 27>** Assume that God is eternal, all-knowing, and all-powerful, and that He decides to create the universe. It follows that God's *decision* to create must be as eternal as He is. God's mere existence isn't sufficient for the existence of the universe, but His eternal decision to create it *is*. So, by the logic of Bill's argument, we should conclude that the universe is just as eternal as God's decision to create it. Clearly, something has gone wrong.

I'll conclude with a brief comment on the exceedingly low standard Bill sets for a "good" philosophical argument. **<CLICK 28>** The premises don't even need to be "plausible," he says – "just more plausible than their opposites." But surely, when you don't know enough even to say, "This is plausible," you don't have a foundation on which to build an argument for a conclusion that you can *believe*!

To see just how bad the problem is, suppose that each of the logically independent premises Bill needs to get all the way to the

conclusion that *a personal God* created the universe meets this low standard. By way of illustration, suppose that there are just four logically independent premises, and make the very generous assumption that the probability is two to one in favor of each of them. **<CLICK 29>** Then the probability that all of them are true is less than 0.2, and the probability that at least one of them is false is greater than 0.8! **<CLICK 30>** Imagine a ladder with four rungs, and suppose that the probability that at least one of them will break is in the neighborhood of 0.8. Would you trust that ladder? No? **<CLICK 31>** Then you shouldn't put too awfully much weight on this version of the cosmological argument!

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