Cosmological Arguments from Contingency

Joshua Rasmussen*
University of Notre Dame

Abstract

Cosmological arguments from contingency attempt to show that there is a necessarily existing god-like being on the basis of the fact that any concrete things exist at all. Such arguments are built out of the following components: (i) a causal principle that applies to non-necessary entities of a certain category; (ii) a reason to think that if the causal principle is true, then there would have to be a necessarily existing concrete thing; (iii) a reason to think that the necessarily existing thing would be god-like. In this essay, I discuss various ways of developing each of these components to produce an argument from contingency, and I point out classic objections and replies along the way. I also make note of some of the most recent developments in arguments from contingency and point out avenues for future research.

1. Introduction

A cosmological argument from contingency (a CAC) is an argument that aims to show that there is a *self-existent* concrete being (or *Necessary Being*) on the basis of the fact that any concrete things exist at all. A central thought behind standard CACs is that there ought to be a reason or explanation for the existence of *contingent* (non-necessary) things, and that the only adequate explanation is in terms of the causal activity of a concrete entity whose non-existence is metaphysically impossible. This basic thought has been developed and defended in a number of ways, resulting in a variety of CACs.

In this essay, I will present the general argument structure of typical CACs. I will then explain the rationale behind each component of the argument using historically important CACs while considering classic objections and replies. In the final section, I will present some of the reasons that have been given for thinking that a Necessary Being would be god-like.

2. The General Structure of CACs

CACs exhibit the following general argument form:

Stage I:
Step 1. Causal *Principle*[1]: Every contingent reality of category C has (or possibly has) a cause or explanation.
Step 2. *From Contingency to a Necessary Being*: For reason R, there is a contingent reality *x* of category C, such that *x* could not have been caused or explained by a contingent reality alone.

Therefore: There is a non–contingent (self-existent) reality, N, that serves as at least part of the cause or explanation of *x*.

Stage II:

Step 3. *From a Necessary Being to God*: For reasons S, N has certain god-like features, such as immateriality, limitlessness, and/or volitional capacity.

Stage I represents the *core argument*; most discussions of various CACs have focused on the elements of this argument. The primary goal of Stage I is to show that those things that exist, but need not have existed, ultimately depend for their existence upon a Being whose non-existence is absolutely (i.e., metaphysically) impossible. In other words, contingent reality depends ultimately upon a self-existent, necessary reality. Some versions of CAC also include Stage II, which attempts to identify various god-like features of the necessarily existing reality. Let's take a closer look at each step of the argument.

3. Step 1: Choosing a Causal Principle

The first task when developing a cosmological argument is to select a causal principle. The causal principle is the *engine* of the argument: everything else in the argument is built around the causal principle, and the persuasive power of the argument critically hinges upon the credibility of the causal principle employed. For this reason, contemporary advancements in CACs are largely inspired by a search for the ideal causal principle (e.g., Koons 1997; Gale and Pruss 1999; Pruss 2004; O'Connor 2008; Rasmussen 2010). The ideal principle connects the feature of *being contingent* with the feature of *having a cause* or *explanation* in a systematic and plausible way.

In the sections to follow, I will discuss the four central elements of a CAC's causal principle: (3.1) the meaning of 'explanation' and 'causation', (3.2) the meaning of 'contingent reality', (3.3) the specification of the category C of contingent entities to be explained, and (3.4) the principle's logical strength. Then in section (3.5), I will briefly record some common reasons to accept a causal principle in a CAC.

3.1. EXPLANATION AND CAUSATION

Most causal principles in CACs rely on the concepts of both *explanation* and *causation* in tandem (though not all do[2]). An explanation is supposed to answer, at least to some extent, *why* a certain situation obtains.[3] For example, a faucet's being on explains why there's water in the sink, Alice's hunger explains why she went to the kitchen, 4's being divisible by 2 explains why 4 isn't prime, and so on. In each case, the explanation tells us why the *explanandum* (the situation being explained) actually obtains. Notice that explanations can connect facts involving either concrete or abstract entities. Causation, as it's usually conceived, exclusively involves interactions between *concrete* entities. Thus, a *causal* explanation includes the causal activity of one or more concrete things.

Since CACs propose an explanation in terms of a *concrete* Necessary Being, it is crucial that they make use of *causal* explanations – explanations in terms of the activities of concrete things. An argument doesn't count as a version of CAC if it merely shows that the ultimate explainer of contingent things is an abstract object or principle – e.g., the principle that *it is vastly improbable for there to be no contingent realities*.[4] Thus, a CAC requires that some contingent things be caused (or causable), though this requirement is often thought to be implied by a more general principle of explanation.

3.2. CONTINGENT VS. NECESSARY EXISTENCE

Contemporary defenders of CAC usually analyze contingent reality in terms of *possible worlds*. For example: *x* is a contingent reality if and only if x exists or obtains in some, but not every, possible world (where a possible world *W* is a proposition such that for every possibly true proposition, *W* either entails it or its denial).[5] Before the advances in modal logic (the logic of possibility and necessity) in the latter half of the twentieth century, the concept of a contingent *thing* – as opposed to a contingently true sentence or proposition – was less well-understood. These days, however, philosophers do not generally object to applying modal notions to the existence of things. This is perhaps because statements ascribing modal properties to things can be formulated in terms of possible worlds.[6]

In this essay, I will take it for granted that it makes sense to talk about a thing existing in some, but not all, possible worlds. I'll also take it for granted that it makes sense to talk about a concrete thing existing in all possible worlds (i.e., a Necessary Being), although I will not assume at the outset that there is, or even *could be*, a Necessary Being.[7] (To say that it *makes sense* to talk about something isn't to admit that this something is a genuine metaphysical possibility. For example, the thesis that *there is a greatest pair of twin primes* makes sense, but that doesn't mean there is a possible world in which that thesis is true.)

3.3. CATEGORIES AND CAUSAL PRINCIPLES

Consider next the *category* C of contingent realities to which the causal principle applies. Different causal principles focus on different categories. For example, some apply to contingent *events*, others to contingent *concrete things* (substances), and still others to contingent *facts*. A few examples of categories from classic and contemporary causal principles are as follows: Concrete Thing (Aquinas, *q. 2, a. 3*), Contingent Event (cf. *ibid.*), Fact (Leibniz, 301), Fact Concerning the Existence of Contingent Things (cf. Rowe, 150), Wholly Contingent Fact (Koons 1997), State of Affairs that Can be Explained (cf. Loux 1984, Pruss 2004), Basic Fact (O'Connor 2008). There are surely other categories yet to be considered that are potentially useful as well.

I will outline some of the most important advantages and disadvantages of using the following categories: Fact, Concrete Thing, and Fact Concerning the Existence of Contingent Things. The respective causal principles are as follows:

(C1) Every contingent fact has an explanation.
(C2) Every contingent concrete thing has a cause of its existence.
(C3) Every contingent fact concerning the existence of contingent things has an explanation.[8]

Begin with (C1). According to (C1), every contingent fact whatsoever has an explanation. In most cases, the explanation is a *causal* explanation, like when the wind's motion causally explains the scattering of the leaves. Principle (C1) might be the *simplest* principle that accounts for all the known cases in which a contingent phenomenon is explained. It marks no exceptions: simply *all* contingent facts have an explanation.[9]

The main disadvantage of (C1) is that its generality makes it susceptible to counter-examples. Take, for example, the fact that *there are the very things that there are* (where 'the very things that there are' is a rigid plural designator that refers to all the actual things). Call this fact 'the Big F'. The Big F is contingent as long as it contains at least one

contingent thing because the Big F would fail to obtain if any contingent thing failed to exist. But what could possibly explain why the Big F obtains, considering that *everything* (including any non-contingent things) is contained *within* the Big F? Wouldn't it be circular if one or more things within the Big F explained why the Big F obtained in the first place? As another example, consider a contingent fact C that entails every other contingent fact (e.g., the conjunction of all contingent facts). Fact C seems to pose a problem for a CAC relying on (C1) because C is supposed to be explained in part by the *contingent* causal activity of a Necessary Being.[10] This means that the very causal activity that's supposed to explain C is included in C. Isn't that circular?[11] There are other alleged counter-examples to (C1) as well: e.g., facts concerning free will actions, facts concerning indeterminate quantum events, and facts concerning what *doesn't* take place.

Advocates of (C1) have proposed various replies to such counter-examples.[12] I'll present just one reply to each circularity objection. Consider, first, the Big F. This fact can be explained if we accept the following proposal: if x is explained, and x entails y, then y is thereby explained. That is to say, if x (e.g., the fact that *there are the contingent things that there are*) entails y (e.g., the Big F), then y is adequately explained by (i) whatever explains x, plus (ii) the fact that x entails y. The fact that *there are the contingent things that there are* entails the Big F given that it trivially entails the existence of all the contingent things, and the existence of any *non*-contingent things is entailed by the existence of anything. Thus, if the fact that *there are the contingent things that there are* can be explained, then the Big F can be explained without circularity.[13]

Consider, next, the contingent fact C that entails all other contingent facts. What could explain C? The most promising proposal I've encountered is that C, which would include the contingent activity of a Necessary Being, is indeterministically explained by certain necessarily obtaining psychological states of that Necessary Being.[14] This proposal relies upon the crucial assumption that a complete and adequate explanation of an explanandum need not *entail* that explanandum. For example, it is assumed that (say) my desire to drink water can adequately explain why I grab a cup from the cupboard even if it doesn't *entail* that I grab a cup from the cupboard. Thus, if indeterministic explanations are possible, then perhaps C can have an indeterministic explanation in terms of certain necessarily obtaining initial conditions.[15]

On the other hand, one may question whether indeterministic explanations can provide an adequate explanation of every *part* of the explanandum.[16] Consider, for example, the decay of an atom. Assume that atomic decays are governed by *probabilistic* laws: no law determines when, if ever, a given atom will decay. Then, although there might be a statistical explanation that accounts for why the atom decayed, one might doubt that there is an explanation that accounts for why the atom decays *at the exact time that it does*. Even if one is able to respond to this doubt,[17] there is also a dialectical difficulty given that philosophers these days tend to be skeptical of causal principles as general as (C1). As a result, contemporary advocates of a CAC typically make use of a more restricted causal principle.

Consider, then, (C2), which says that every contingent concrete thing has a cause of its existence. What requires an explanation here is merely the *existence* of contingent concrete things. Principle (C2) is less bold than (C1) and is therefore less susceptible to counter-examples. Unlike (C1), (C2) does not require that there be an explanation for each and every action of a thing. All that is required is that if something exists, but need not have existed, then it must have been caused to exist.

The primary disadvantage of (C2) is that the pathway from (C2) to a Necessary Being is more difficult to mark out. To mark out such a path, advocates of (C2) typically propose that there cannot be an infinite regress of causes. Given this proposal, it is argued

that as a matter of necessity, every causal series contains a *first* contingent member, which itself could only have been caused by a non-contingent (necessary) being.[18] Naturally, the proposal that there cannot be an infinite causal chain is highly controversial, with arguments on both sides.[19]

Still, another strategy (which I have not seen in print) is to propose that it is merely metaphysically *possible* for there to be a finite causal chain. From here, one uses (C2) to show that there is a possible world in which there is a Necessary Being (which by definition would exist in every possible world). If we assume that whatever is possible is necessarily possible (given the modal axiom, S5), then it follows that the actual world contains a Necessary Being.

In reply to this argument, someone who accepts (C2) but doesn't already believe in a Necessary Being may question whether it is indeed possible for there to be a finite causal chain. She may motivate her skepticism by suggesting that whatever inclination one might have to think that there *could* be a finite causal chain is cancelled out by an equally strong inclination to think that there *could* be no Necessary Beings. The inclinations cancel each other because if (C2) is true, then only *one* of the above scenarios – the scenario in which there is a finite causal chain *or* the scenario in which there are no Necessary Beings – is metaphysically possible. Therefore, a CAC that relies upon (C2) will not likely be persuasive in the absence of an independent reason to accept the possibility (or necessity) of a finite causal chain.

Turn, finally, to (C3), which says that every fact concerning the existence of contingent concrete things has an explanation. This principle avoids the primary costs of (C1) and (C2): it is not as general as (C1) and so does not require an explanation of the Big F or of the causal activity of a being, and it can be used in an argument for a Necessary Being without presupposing the necessity or even the possibility of a finite causal chain. Here is a draft of an argument for a Necessary Being that uses (C3). Take *all* the contingent things. Given (C3), there should be an explanation as to why those contingent things exist. Intuitively, the fact that the contingent things exist would not be adequately explained solely by the causal activity of one or more of those very contingent things. Therefore, the activity of a Necessary Being must be part of the total explanation for why there are the contingent things that there are. We will consider some objections to this argument in the next section.

3.4. THE LOGICAL STRENGTH OF THE CAUSAL PRINCIPLE

Causal principles vary in logical strength. The strongest principles are stated as necessary truths. Other principles allow for the *possibility* of exceptions but deny that any exceptions occur in the actual world. Still others allow for exceptions in the actual world but shift the burden of proof to the skeptic to show how a given case is an exception. Causal principles of this last sort have been inspired by developments in defeasible reasoning.[20] Some recently developed causal principles say that contingent realities of a certain category merely *can* have a cause or explanation. CACs that use one of these modally weakened principles typically rely on a modal axiom, S5, to derive the actual existence of a Necessary Being from the metaphysical possibility of a Necessary Being.[21]

3.5. WHY BELIEVE IN A CAUSAL PRINCIPLE?

Naturally, different reasons might be offered in support of different causal principles. However, any given causal principle is usually motivated in the following ways: (i) one argues

that the principle in question is self-evident or supportable *a priori*; (ii) one argues that the principle provides the best or simplest explanation of data, usually empirical, concerning the causal transactions that are known to occur. Take, for example, (C3), the principle that *contingent facts concerning the existence of contingent things have an explanation*. Now imagine an arbitrary collection of contingent things. It could be a collection of sixty-seven purple balls; or it could be a collection of 10^{100} pieces of glass; or it could be a collection of six trillion chickens; or it could be a certain mix of glass, balls, and chickens; or it could be an infinite stack of plastic cups; and so on. For any of these collections – and any others that one might imagine – it may seem *a priori* that *if* its elements were to all exists, there ought to be an explanation as to why that is so, given that those elements needn't have all existed. If that's how things seem, then (C3) enjoys *a priori* support.

Alternatively, one may treat (C3) as an empirical hypothesis. The hypothesis predicts that for any collection of contingent things, there is some explanation as to why the elements of that collection exist. Our everyday experience is consistent with this hypothesis, as we observe that a wide range of facts concerning the existence of various things have an explanation, and it might be argued that the principle has never been disconfirmed (empirically or conceptually). Therefore, one might argue that the known cases of explanation provide evidence for (C3).

Certain causal principles have been defended by more sophisticated reasons, as well. Pruss argues that there are troubling epistemological implications of granting that there could be contingent facts that lack an explanation. For example, one's present perceptual states might, for all one knows, be occurring for no reason at all (Pruss 2009, 28). Another troubling implication could be that the seemingly *best* explanation of a given set of data would be no more likely than the data's simply having *no* explanation (*ibid*, 30-1). Or, we'd have no grounds for thinking it unlikely for arbitrarily large numbers of macro-sized objects to suddenly appear on your front porch without a cause (cf. *ibid*, 33).[22] To reply, one might try to show how these skeptical scenarios can be avoided without recourse to a general principle of explanation.[23]

4. Step 2: From Contingency to a Necessary Being

Let us now consider the second major step in a CAC, which is to supply a reason R for thinking that if a certain causal principle is true, then there is a Necessary Being. More specifically, one gives a reason R for thinking that there is a contingent reality *x* of category C, such that *x* could not have been causally explained by a contingent reality alone. The specification of R depends heavily on the specification of C, and the combination of R and C is what generates the many varieties of CACs. I'll discuss one classic example. Let C be the type, Fact Concerning the Existence of Contingent Things. Then, the CAC may proceed as follows:

(1) (C3): Every contingent fact concerning the existence of contingent things has an explanation.
(2) The Big C – the fact that there are (or ever were) the very contingent things that there are (or ever were) – is itself a contingent fact concerning the existence of contingent things.
(3) Therefore, the Big C has an explanation.
(4) No fact concerning the existence of contingent things can be explained solely in terms of one or more of those very things it contains.
(5) Every contingent thing is contained within the Big C.

Therefore: the Big C is explained at least in part by something that is *not* contingent (a Necessary Being).

In the argument above, reason R is expressed by premises (2), (4), and (5). The central point is basically this: a fact concerning the existence of certain things cannot be adequately explained solely in terms of those very things, for that would be circular. The idea is that causally linking up things to one another does not answer why those very things ever existed at all. Why do *those* things exist (rather than different ones)? Something other than those things seems to be needed if their existence is to be explained. If that's so, then the existence of contingent things can only be explained by a Necessary Being.

One might support the above reasoning by the following thought experiment. Imagine a world in which there are purple balls of an unspecified quantity. Suppose we want an explanation as to why those purple balls exist. Here's an answer that would not satisfy us: the fact that those balls exist is explained by the fact that each purple ball was itself produced by a purple ball. This answer is not satisfying because it in no way alleviates the sense of curiosity concerning why there should be those purple balls. Why are there *those* purple balls rather than red ones or none at all? The purple balls do not by themselves explain why there have ever been those very purple balls at all. To say that the purple balls themselves explain why the purple balls exist seems to be circular. Call this the 'No Circularity' reason.

Advocates of No Circularity maintain that the *quantity* of things to be explained makes no difference: even if there were an *infinite* number of purple balls, for example, where each one was produced by an ancestor purple ball, the fact that there have been those purple balls at all isn't explained solely by the purple balls themselves. Similarly, even if every contingent thing were caused by a preceding contingent thing, thereby forming an infinite causal regress of contingent things, the Big C would not thereby be adequately explained; an external cause would still be required to answer why there are those causally related things at all. One important advantage, then, of No Circularity is that it leaves open the possibility of an infinite causal regress. In other words, a version of CAC that makes use of No Circularity has a chance of being sound *even if* causal chains involving contingent things recede infinitely into the past.

However, there are several important objections to No Circularity. I'll mention three here. *Objection 1*: Why think that an explanation of a fact concerning the existence of certain contingent things cannot simply consist of whatever explains *each* of those things?[24] For example, if there are a bunch of Eskimos on the corner of Sixth Avenue and 50th Street, then doesn't one explain the fact that all those Eskimos are there by explaining why each one is there?[25] Similarly, if the existence of *each* contingent thing is causally explained by another contingent thing *ad infinitum*, then why think a *further* explanation is required? *Objection 2*: Even if every member of a collection is contingent, it would be a *fallacy of composition* to simply assume that the whole collection itself is contingent. For example, just because every human has a mother, it is a fallacy to assume that the whole of humanity itself has a mother.[26] *Objection 3*: Why think there is any such thing as the *whole* of all contingent things; perhaps, there are the individual contingent things but no whole consisting of all of them together.[27]

Advocates of No Circularity are not without replies to these objections. Consider first *Objection 3*. Advocates of No Circularity can concede that there is no *concrete whole* containing all contingent things. What is required for No Circularity is just that there be *facts* (or true propositions) concerning the contingent things. So, even if there is no concrete *thing* built up out of all contingent things, this is acceptable because the CAC under

discussion relies upon the relatively uncontroversial premise that there are facts concerning things.

In answer to the charge of the fallacy of composition (*Objection 2*), an advocate of No Circularity may point out that the *fact* that there are the very contingent things that there are would not have obtained had even one of those very contingent things not existed, for if any contingent thing had not existed, then the fact that there are the very contingent things that there are would not have obtained.

Consider, finally, *Objection 1* – that to explain a fact concerning the existence of certain things, it suffices to explain the existence of each of those things. Advocates of No Circularity have replied that an explanation of a fact concerning the existence of things is intuitively acceptable *only if* at least part of the explanation is in terms of explanatory factors wholly 'outside' the fact to be explained.[28] In the case of the Eskimos, it can be acceptable to explain why they are all on a particular street corner by explaining why each Eskimo is on that corner. For example, it might be that one Eskimo is there because he's meeting a friend; another Eskimo is there because the corner is on his path to work; and so on. These individual explanations can join together to explain why all the Eskimos are there. But notice that the total explanation includes factors outside the fact that all the Eskimos are there. By contrast, if one said that each Eskimo is on that corner because another of the Eskimos happens to be on that corner[29], then one wouldn't provide an acceptable explanation as to why all the Eskimos are there. This is supposedly so even for an infinitely complex explanandum: for example, we would not adequately explain why there have ever been the Eskimos there are by citing the fact that every Eskimo was produced by an Eskimo *ad infinitum*. We remain curious: why are there these Eskimos at all? Therefore, an advocate of No Circularity will maintain that a fact concerning the existence of things may be explained if each of those things is explained, but that this is only so if at least some part of the total explanation is in terms of something *other than* the things whose existence is being explained.

5. Step 3: From a Necessary Being to God

Although most work on cosmological arguments centers on specifying the causal principle and the reasoning from that causal principle to a Necessary Being (on specifying the C and the R), some cosmological arguments include a section devoted to identifying various divine features of a Necessary Being.[30] In this section, I will outline some typical strategies for deriving the following features: *being eternal*, *being immaterial*, *being personal*, and *being infinite* in certain respects.

5.1. ETERNALITY

Suppose there is one or more necessarily existing concrete things. Call it, or them, N.[31] A reason to think N would be eternal is as follows: (i) something is eternal if it *never started to exist* and will *never cease to exist*; (ii) if something starts to exist or ceases to exist, then its non-existence is possible; (iii) therefore, if something's non-existence is *not* possible, then that thing never started to exist and will never cease to exist; (iv) N's non-existence is not possible;[32] (v) Therefore, N is eternal.[32]

The inference from N's being necessary to N's being eternal has not generated a lot of controversy. However, one may question (ii) on the grounds that there is no strict entailment from a being's existing in every *possible world* to its existing at every *time*. Perhaps N must exist at *some* time or other but need not exist at every time. This possibility makes

the most sense on an *eternalist* view of time in which whatever exists at *any* time also exists simpliciter (or *tenselessly*) from the perspective of every time. On this view, if there is even one time at which N exists, then even during a time at which N does not exist, there is still a sense in which N exists simpliciter.

One reply is to explicitly build into the definition of 'necessary existence' the requirement that a necessarily existing thing must exist at every time in every world. (If one makes this reply, then the extension of 'contingent existence' must be broadened to include anything that exists in some worlds but not at all times in all worlds.)

Another reply is to suggest that *if* eternalism is true and if N is the ultimate cause of our space-time universe, then N exists ontologically *prior to* our time dimension and so is beyond time. The idea is that N would be eternal – lacking a start or end – because N wouldn't exist within the confines of time at all. One may question, however, whether it makes sense for a god, or any other concrete entity, to be utterly timeless.

A final reply is to suppose that *presentism* is true. Then, if there were any time *t* at which N didn't exist, then when *t* obtains, N wouldn't exist (simpliciter) and so wouldn't be necessarily existent.

5.2. IMMATERIALITY

The thought that N is immaterial is often based upon the thought that no material object exists in every possible world. This is sometimes motivated by appealing to our ability to conceive of a world lacking material objects.[33] One might reply, however, that if conceivability is a reliable guide here, then we should be able to infer there are no Necessary Beings on the grounds that we can conceive of a world lacking concrete objects (assuming that if there could be no Necessary Beings, then there actually aren't any).[34] According to this reply, either conceivability isn't a reliable guide to possibility, or else the conclusion of CACs is false.

In response, one might suggest that conceivability merely provides *defeasible* evidence for possibility, and when it comes to conceiving the situations of the existence or of the non-existence of a *Necessary Being* – situations whose possibilities are mutually exclusive (given modal systems S4 and S5)[35] – the evidence of possibility is defeated. No similar parity is evident when it comes to the possibility of the existence or non-existence of (say) quarks and other material objects.[36]

Still, one might object that when we conceive of a world that lacks material objects, we do not actually see that such a world is possible, or even that it is likely to be possible; rather, we merely *fail to see* that it is impossible.[37]

A different strategy is to suggest that the exact nature and quantity of fundamental particles (e.g., quarks or superstrings) in our universe seems to be a contingent matter.[38] According to this suggestion, it is self-evident that there could have been one fewer fundamental particle than there actually are. If so, then at least one fundamental particle is contingent, and it may be reasonable to suppose that if one is contingent, then every fundamental particle alike is contingent. From here, we may infer that there is a possible world lacking all material things if we assume that no fundamental particle's *non*-existence depends upon the existence of any other fundamental particles. It would then follow that N is not a fundamental particle or a material complex built up out of fundamental particles.

A final strategy is to argue first for other interesting attributes of N, such as *being eternal*, *being personal*, or *being infinite* in certain respects, and then to argue that any material objects that might serve as the ultimate explanation for all other material objects would

lack one or more such properties. We will consider reasons to think N is personal and infinite next.

5.3. PERSONHOOD

A standard argument for N's being personal is that if N lacked the capacity to *choose* to cause non-necessary things, then the effects of N would flow deterministically from N, which would entail that *everything* is necessary. Since it isn't the case that everything is necessary, N has the capacity of free choice and is therefore a personal agent.[39]

A standard reply is to question the assumption that indeterministic causation must be volitional. A popular view among contemporary theorists of causation (e.g., Hugh Mellor[40] and Michael Tooley[41]) is that there can be impersonal causes that do not necessitate their effects. These theorists typically analyze non-volitional causation in terms of statistical probabilities: for example, if *A* causes *B*, then *A*'s existence fixes a certain probability that *B* exist. Therefore, according to this reply, there is no reason to think that N might not have causally explained its effects by virtue of a necessarily-obtaining probabilistic causal law relating N's nature to the nature of N's effects.

In counter-reply, it has been argued that any probabilistic law would be contingent and so would have (or at least *could* have) a causal explanation, but that no non-circular causal explanation is possible.[42] Thus, N cannot be related to its effect by virtue of a probabilistic law (without circularity). The most plausible alternative, according to this argument, is that N is related to its effects by virtue of a free, uncaused action, for only a free action can spring forth independently of a law.[43]

5.4. INFINITENESS

There are several different arguments on the market for the proposition that N is *infinite* in certain respects.[44] A common premise in many of these arguments is this:

(L) Limitation implies the possibility for increase or decrease.

Consider how (L) might apply to N's power. Suppose N is limited in power and that (L) is true. Then it should be possible for N to slightly increase or slightly decrease in its power. That means that the exact profile describing the degrees of power that N *has had* throughout the ages might have been different. For example, N might have increased from having exactly 14.18 units of power at time t_1 to having 14.19 units at time t_2; in a different world, it might have instead decreased from having 14.18 units of power at t_1 to having 14.17 units at t_2. Suppose, then, that the fact P that *N has had the various degrees of power that it has had* is a contingent fact. Suppose also that any fact concerning the intrinsic attributes a thing has had could be causally explained. (Principle (C3) is ill-equipped for this part of STAGE II; so, a different causal principle is needed here.) Then, P could be causally explained. But it is evidently impossible for P to be causally explained if N is essentially the *first* cause in the causal order (STAGE I of a CAC), for N would then have to posses causal power *prior to* its having had the various degrees of power it has had, which is viciously circular. Therefore, we should deny the starting assumption that N's power is limited. For arguments applying (L) to N's knowledge and goodness, see Rasmussen (2009, 7–9).

Naturally, one might reply by questioning whether (L) is true: for example, perhaps it is simply necessary that N has a certain, finite degree of power. Alternatively, one may question the causal principle that every contingent fact concerning what intrinsic attributes a thing has could be causally explained.

6. Taking Stock

I have marked out the basic steps for constructing a wide variety of CACs. We may wonder whether it is possible to construct a CAC that could actually persuade a skeptic. Clearly no CAC has been successful in persuading all rational subjects who consider it; no philosophical argument for a substantial conclusion has been able to do that. Graham Oppy, at the completion of a penetrating survey of cosmological arguments, isn't persuaded. He suggests that it is unlikely that any short and simple cosmological argument succeeds in establishing its conclusion.[45] On the other hand, it is certainly an open question whether there can be a CAC that increases the plausibility of its conclusion for at least *some* rational skeptics. In my estimation, the most promising strategies for making progress in the development of potentially persuasive CACs will depend upon spelling out detailed arguments for various causal principles, identifying logically weaker causal principles, and investigating old and new arguments for N's having divine characteristics. These are the widest open entrances to future research on CACs.[46]

Short Biography

Joshua Rasmussen is a Research Fellow at the University of Notre Dame. His primary research is in metaphysics, with a focus on the nature of propositions and facts. Current research also involves investigating causal principles in cosmological arguments. Rasmussen has a BS in computer science from Arizona State University and was recently (in 2010) granted a PhD in philosophy from the University of Notre Dame.

Notes

* Correspondence: Joshua Rasmussen, University of Notre Dame. Email: jrasmus1@gmail.com

[1] For simplicity, I will talk about the argument's *causal principle*, but it should be understood that many (though not all) cosmological arguments root their causal principle in a more general principle of explanation.

[2] For example, Thomas Aquinas' CAC in the Third Way makes no explicit reference to a principle of explanation (see *Summa Theologica I, q. 2, a. 3*).

[3] Cf. Ruben (1990).

[4] See van Inwagen (1996).

[5] I say exists *or obtains* because the contingent reality in question might be a *fact*, and some philosophers think of facts as *necessarily existing* abstract states of affairs that happen to obtain. Yet, a necessarily *existing* fact still counts as contingent as long as it doesn't necessarily *obtain* (and doesn't necessarily fail to obtain).

[6] E.g., see Plantinga (1974, 14-26).

[7] Immanuel Kant famously argued that the cosmological argument presupposes the ontological argument given that it presupposes that a Necessary Being is possible, which is a critical premise in the ontological argument (Kant, 47). However, the possibility of a Necessary Being may be viewed as an *implication* of the conclusion of a CAC rather than as a presupposition of it. Cf. 'Objection 5' in Rasmussen (2010).

[8] This principle might be stated more precisely using plural quantification: for all xs, if those xs are contingent, then the fact that those xs exist has an explanation. Note: the principle concerns what *does* exist, not what *doesn't*.

[9] A causal version of (C1) is sometimes expressed as a consequence of the more general principle that every fact has an explanation either in the *necessity* of its obtaining or in the causal activity of one or more things that bring it about. The idea is that any fact that isn't explained by the necessity of its obtaining is contingent and so is causally explained. However, (C1) as stated leaves it open whether some contingent facts might have a non-causal explanation.

[10] If C were a necessary result of a Necessary Being, then C would itself be necessary, which it is not by definition.

[11] For representative defenses of these types of circularity objections, see van Inwagen (1983, 202-4), Rowe (103–11), O'Connor (2008, 79-80), and Ross (295–304).

[12] For representative replies, see Pruss (2006, 75–188) and Pruss (2009, 97-103).

[13] Peter van Inwagen has suggested to me an alternative, perhaps simpler explanation of the Big F: i.e., God exists necessarily, and God created all the contingent things. Compare that explanation with an instance of the type of explanation proposed in the main text: e.g., God created all the contingent things, and necessarily, if the contingent things exist, then the Big F obtains.

[14] If someone asks what explains why the necessary conditions explain C, one proposal is that the fact that *the necessary conditions explain C* is itself explained by the necessary conditions themselves (perhaps in combination with certain additional necessary truths). This logically results in a non-causal regress. This proposal has been expressed in terms of God's psychological states (cf. Pruss 2009, 86-7): e.g., the reason that God chose to create this world is because of the necessary fact that God was impressed by certain reasons, R, to create this world; the fact that *his being impressed by R explains why God created this world* is itself explained by the necessary fact that R is *about* this world plus the fact that God was impressed by R. For a defense of explanations involving non-causal, intentional psychological states, see O'Connor (2000, 85-107).

[15] That isn't to say that the very same initial conditions would have explained any contingent state of affairs that might have obtained. If the Necessary Being had decreed a *different* state of affairs, then that decree may have been indeterministically explained by *different* necessarily obtaining psychological states – e.g., the Necessary Being's belief that the state of affairs in question would be compatible with his desires.

[16] See Oppy (2009, 41).

[17] One reply is to suggest that there is still a *partial* explanation as to why the atom decayed at the particular time that it did, and then to propose that every contingent fact has at least a partial explanation (see Brueckner 2001). An alternative avenue to explore is this: argue that (i) indeterminisitc explanations can be full explanations if they are psychological in nature and are *about* their explanandum (cf. O'Connor 1995), and (ii) argue that quantum events might, *for all we know*, be fully explained by 'hidden' deterministic laws or else by psychological states.

[18] An alternative strategy is to argue that every *essentially ordered* causal series has a first member, where a causal series is essentially ordered if no effects within the series can exist without their causes also existing (e.g., the movement of a stone depending upon the pressure of a stick). The thought is that even if some causal series can be infinite, no essentially ordered can be. A proponent of this strategy faces the challenge of explaining why a *first cause* in an essentially ordered series could not have been caused by things within a non–essentially ordered causal series. Cf. Davis (1997, 70-3).

[19] For a couple arguments against the possibility of an infinite causal regress, see Craig (1991). For replies and counter-replies, see Oppy (1991), Craig (1993), Morriston (1999, 2003), and Oppy (2006).

[20] See Koons (2009). For a critical discussion of defeasible reasoning in cosmological arguments, see Oppy (2004, 242-9).

[21] See, for example, Loux (1984), Gale & Pruss (1997), and Rasmussen (2010).

[22] For additional arguments and an elaboration of the ones mentioned, see Pruss (26-47). Cf. Koons (2008).

[23] See, for example, Oppy (forthcoming).

[24] See Hume (58-9).

[25] This illustration comes from Edwards (1959).

[26] Cf. Russell & Copleston 1986, 131.

[27] See Hume (58-9).

[28] Cf. Swinburne (73-92), Rowe (151-67), and Pruss (1998).

[29] Of course, one could imagine that each of the Eskimos is on that corner because he planned to meet another of the Eskimos there. But in that case the fact that they all planned to meet each other is outside the fact being explained.

[30] Or instead, for a naturalistic account of a necessarily existing concrete being, see Smith (2001).

[31] The simplest hypothesis is that there is just *one* Necessary Being. However, sometimes an argument is given for thinking that if there *were* more than one Necessary Being, they would be bound together in a tight, unchangeable unity. See, for example, O'Connor (2006) and Rasmussen (2009).

[32] A different argument is this: (i) the existence of a Necessary Being cannot be causally explained by anything; (ii) if something starts to exist or ceases to exist, then its existence must have a causal explanation; (iii) therefore, a Necessary Being cannot start to exist or cease to exist. See Rowe (225-6).

[33] See Craig (2003, 115).

[34] Cf. Hume (58-9).

[35] From S5, if it is possible that there is a Necessary Being, then it is true that there is a Necessary Being. From S4, if it is true that there is a Necessary Being, then it is necessary that there is a Necessary Being. If it is necessary that there is a Necessary Being, it then follows that the non-existence of Necessary Beings is impossible.

[36] For a nuanced defense of conceivability as evidence for possibility with an application to material objects, see Taliaferro (2001).

[37] Cf. van Cleve (1983).

[38] See O'Connor (2006, 429-33).

[39] See Scotus (53-5).

[40] Mellor (1995, 21-30).

[41] Tooley (1997, 43-71).

42 One reason to think a probabilistic law would be contingent is that it specifies a precise probability of an event, and it might seem that any such probability *could* have been at least slightly higher or lower. See Rasmussen (2009, 7-9). Some theorists will disagree, however: they will say that all natural laws, be they statistical or not, are a matter of metaphysical necessity. See, for example, Shoemaker (1998).
43 For an outline of some additional arguments for N's being a person, see Pruss (1999, 91-3).
44 E.g., see Clarke (33-6), O'Connor (1996, 450-3), Koons (1997, 199-200), Gellman (2000), Rasmussen (2009, 5-7).
45 Oppy (2006, 173).
46 Special thanks to Peter van Inwagen, Felipe Leon, Arnold Guminski, and Rachel Rasmussen for their helpful comments on previous drafts.

Works Cited

Aquinas, Thomas. 13th c., *Summa Theologica*.

Brueckner, Anthony. 'Van Inwagen on the Cosmological Argument'. *Philosophical Papers* 30 (2001): 31–40.

Clarke, Samuel and Vailati, E (ed.) *A Demonstration of the Being and Attributes of God And Other Writings*. Cambridge: Cambridge University Press, 1998.

Craig, W. L. 'The Existence of God and the Beginning of the Universe'. *Truth: A Journal of Modern Thought* 3 (1991): 85–96.

——. 'Graham Oppy on the *Kalam* Cosmological Argument'. *Sophia* 32 (1993): 1–11.

——. 'The Cosmological Argument' in Copan, Paul, Moser, Paul (eds.) *The Rationality of Theism*. London: Routledge (2003): 112–31.

Davis, Stephen. *God, Reason, and Theistic Proofs*. Grand Rapids: Wm. B. Eerdmans, 1997.

Edwards, Paul. 'The Cosmological Argument.' in *The Rationalist Annual for the Year*. London: Pemberton (1959): 63–77.

Gale, Richard and Pruss, Alex. 'A New Cosmological Argument'. *Religious Studies* 35 (1999): 461–76.

Gellman, Jerome. 'Prospects for a Sound Stage III of Cosmological Arguments'. *Religious Studies* 36 (2000): 195–201.

Hume, David. *Dialogues Concerning Natural Religion*. New York: Hafnew Publishing Company, 1959.

Kant, Immanuel. *Critique of Pure Reason*. New York: Macmillan & Co, 1925.

Koons, Robert. 'A New Look at the Cosmological Argument'. *American Philosophical Quarterly* 34 (1997): 193–212.

——. 'Epistemological Foundations for the Cosmological Argument'. *Oxford Studies in Philosophy of Religion* 1 (2008).

——. 'Defeasible Reasoning'. *Stanford Encyclopedia of Philosophy* 2009.

Leibniz, Gottfried. *Die philosophischen Schriften*. 7 vols. C. I. Gerhardt (ed.). Berlin, 1875–90. Reprint, Hildesheim: Georg Olms, 1965.

Loux, Michael. 'A Scotistic Cosmological Argument for the Existence of a First Cause'. *American Philosophical Quarterly* 21 (1984): 157–66.

Mellor, D. H. *The Facts of Causation*. London: Routledge, 1995.

Morriston, Wesley. 'Must Metaphysical Time Have a Beginning?' *Faith and Philosophy* 20 (2003): 288–306.

——. 'Must the Past Have a Beginning?' *Philo* 2 (1999): 5–19.

O'Connor, Timothy. *Theism and Ultimate Explanation: The Necessary Shape of Contingency*. London: Wiley-Blackwell, 2008.

——. 'And This All Men Call God'. *Faith and Philosophy* 21 (2006): 417–34.

——. *Persons and Causes: the Metaphysics of Free Will*. Oxford: Oxford University Press, 2000.

——. 'From first efficient cause to god: Scotus on the identification stage of the cosmological argument' in L. Honnefelder, R. Wood, M. Dreyer (eds.), *John Duns Scotus: Metaphysics and Ethics*. Leiden: E. J. Brill (1996): 435–54.

——. 'Agent Causation' in Timothy O'Connor (ed.), *Agents, Causes, and Events: Essays on Indeterminism and Free Will*. Oxford: Oxford University Press, 1995.

Oppy, Graham. 'Epistemological Foundations for Koons' Cosmological Argument?' *European Journal for Philosophy of Religion* (forthcoming).

——. 'Cosmological Arguments'. *Nous* 43 (2009): 31–48.

——. *Arguing about Gods*. Cambridge: Cambridge University Press, 2006a.

——. *Philosophical Perspectives on Infinity*. Cambridge: Cambridge University Press, 2006b.

——. 'Faulty Reasoning about Default Principles in Cosmological Arguments'. *Faith and Philosophy* 21 (2002): 242–9.

——. 'Craig, Mackie, and the *Kalam* Cosmological Argument'. *Religious Studies* 27 (1991): 189–97.

Plantinga, Alvin. *The Nature of Necessity*. Oxford: Oxford University Press, 1974.

Pruss, Alexander. 'Leibnizian Cosmological Arguments' in William Lane Craig, J.P. Moreland (eds.) *Blackwell Companion to Natural Theology*. Wiley-Blackwell, 2009.

——. *The Principle of Sufficient Reason: A Reassessment*. Cambridge: Cambridge University Press, 2006.

——. 'A Restricted Principle of Sufficient Reason and the Cosmological Argument'. *Religious Studies* 40.2(2004): 165–79.

——. 'The Hume-Edwards Principle and the Cosmological Argument'. *International Journal for the Philosophy of Religion* 43 (1998): 149–65.

Ross, James F. *Philosophical Theology*. Indianapolis: Bobbs-Merrill, 1969.

Rowe, William. *The Cosmological Argument*. Fordham: Fordham University Press, 1998.

Rasmussen, Joshua. 'From States of Affairs to a Necessary Being'. *Philosophical Studies* 148 (2010): 183–200.

——. 'From a Necessary Being to God'. *International Journal for Philosophy of Religion* 66 (2009): 1–13.

Ruben, David-Hillel. *Explaining Explanation*. London: Routledge, 1990.

Russell, Bertrand. and Copleston, F 'A Debate on the Existence of God' in *Bertrand Russell on God and Religion*. Buffalo, NY: Prometheus, 1986.

Scotus, Duns, Wolter, A (ed.), *OFM. Duns Scotus: Philosophical Writings*. Indianapolis: Hackett Publishing Company, 1987.

Shoemaker, Sydney. 'Causal and Metaphysical Necessity'. *Pacific Philosophical Quarterly* 79 (1998): 59–77.

Smith, Quentin. 'An Atheist Explanation of Spacetime' in Gegansall G., Woodruff D. (eds.), *God and Time*. New York: Oxford University Press, 2001.

Swinburne, Richard. *The Existence of God*. Oxford: Oxford University Press, 2004.

Taliaferro, Charles. 'Sensibility and Possibilia: A Defense of Thought Experiments'. *Philosophia Christi* 3 (2001): 403–20.

Tooley, Michael. *Time, Tense, and Causation*. Oxford: Clarendon Press, 1997.

van Cleve, James. 'Conceivability and the Cartesian Argument for Dualism'. *Pacific Philosophical Quarterly* 64 (1983): 35–45.

van Inwagen, Peter. 'Why Is There Anything at All?' *Proceedings of the Aristotelian Society* 70 (1996): 95–110.

——. *An Essay on Free Will*. Oxford: Oxford University Press, 1983.