A Scotistic Cosmological Argument Remixed

Josh Rasmussen

I. Introduction

John Duns Scotus developed an intricate and subtle cosmological argument. In recent times, at least a few theorists have developed cosmological arguments that use Scotus' insights.[1[1]] In this paper, I will sketch a novel Scotistic-*style* argument while utilizing a contemporary metaphysical framework. I mean to indicate *where* the steps of the argument lie, not *how* to defend each step in detail: I will draw up a map, identifying a novel trail from premises to conclusion. The journey has two stages. In the first stage, I indicate how to reach the conclusion that a necessarily existing thing exists. In the second, I indicate novel avenues to the conclusion that the necessarily existing thing is an infinitely powerful and knowledgeable personal agent. Many theorists have identified obstacles for routes between cosmological premises and theistic conclusions. With Scotus as a guide, I mark out a new route to avoid the obstacles. I believe the map will be useful for future work on cosmological arguments of this sort.

[1[1]] Timothy O'Connor, "Scotus on the Existence of a First Efficient Cause," *International Journal for Philosophy of Religion* 33, no. 1 (1993), 17-32; *idem*, "From First Efficient Cause to God: Scotus on the Identification Stage of the Cosmological Argument," in *John Duns Scotus: Metaphysics and Ethics*, ed. L. Honnefelder, R. Wood, and M. Dreyer (Leiden: E. J. Brill, 1996), 435-54; Michael Loux, "A Scotistic Cosmological Argument for the Existence of a First Cause," *American Philosophical Quarterly* 21, no. 2 (1984): 157-66.

II. A Contemporary Metaphysical Framework

I will begin by outlining the metaphysical framework in which the argument shall be deployed. Two important products of 20th century metaphysics relevant to the argument are (i) systems of modal logic, which enable reasoning about the possible and the necessary, and (ii) theories of states of affairs, which enable thinking about non-actual situations. I will briefly outline their key features.

I'll start with S5 modal logic. The key insight of S5 is that if it is *possible* that it is *necessary* that *A*, then it follows that it is simply *necessary* that *A*.[2][2] For example, if it is possible that it is necessary that Goldbach's conjecture is true, then it is necessary that Goldbach's conjecture is true. S5 applies to broad *metaphysical* possibility—that is, to the way things could have been. I believe that S5 is the correct way to formulate a logic of the necessary, and it will be the one with which I will work.

Turn to states of affairs. I will adopt a *soft actualist* theory of states of affairs. According to such a theory, a state of affairs *S* is a complex of *ante rem* properties—that is, properties that *actually exist* even if they are not instantiated by any concrete objects. *S* obtains just in case the properties in *S* are instantiated. But since the properties that constitute *S* exist even if they are not instantiated, *S* also exists even if it does not obtain.[3][3]

It may be helpful to review some terms relevant to our theory of states of affairs. First, to say that property *P* is a *constituent of* or *included in S* is just to say that

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[2][2] The axioms of S5 are as follows:

Necessitation Rule: If A is a theorem of K, then so is □A
Distribution Axiom: □(A→B) → (□A→□B).
(M) □A→A
(4) (4) □A→□□A
(5) (5) ◊A→□◊A

[3][3] Examples of soft actualists include Alvin Plantinga, John Pollock, and Gustav Bergmann.

necessarily, if S obtains, then P is instantiated. States of affairs can also be said to be included in states of affairs. A state of affairs S_1 *includes* a state of affairs S_2 if and only if, necessarily, if S_1 obtains, then S_2 obtains. A state of affairs S_1 *precludes* a state of affairs S_2 if and only if it is not possible that both S_1 and S_2 obtain. A state of affairs, W, will be called *maximal* if and only if for every state of affairs, S, either W includes S or W precludes S. A *possible world* (or possible situation), then, is a maximal state of affairs that can obtain.[4[4]]

Scotus' argument makes reference to possible individuals (concrete particulars[5[5]]).[6[6]] However, I do not wish to introduce *merely possible* individuals into our ontology or in any way get tangled in the difficulties of referring to possible individuals. I will therefore adopt Loux's strategy and talk about unique essences or *haecceities*. As Loux points out, haecceities are "Scotistic in spirit."[7[7]] As for the letter, Scotus apparently believed in individual essences, and a haecceity is basically that.[8[8]] To be precise, a haecceity is an exemplifiable property such that necessarily every individual has one both essentially and uniquely.[9[9]] An individual, then, is included in a state of affairs S, just in case its haecceity is included in S. With haecceities and states of affairs

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[4[4]] These terms are defined by Alvin Plantinga in *The Nature of Necessity* (Oxford: Clarendon Press, 1974).

[5[5]] The argument of this paper will, I believe, be consistent with a wide range of analyses of what it is for a thing to be a concrete particular. The properties of a concrete particular may be understood as Aristotelian forms, tropes, universals, or perhaps something else. And the relation between a concrete particular and its properties can be analyzed as a constituent relation or else a non-constituent, exemplification, membership, or even identity (in case one thought God was an individual identical to his properties) relation or tie.

[6[6]] E.g., Duns Scotus, *Philosophical Writings*, trans. Allan Wolter (Indianapolis: Hackett Publishing Company, 1987), 46.

[7[7]] Loux, "A Scotistic Cosmological Argument for the Existence of a First Cause," 158.

[8[8]] However, Scotus apparently thought that individual essences could not exist uninstantiated (whereas haecceities can exist uninstantiated). See Peter King, "Duns Scotus on Singular Essences," *Medioevo* 30, no. 1 (2005): 111-37.

[9[9]] I adopt this formulation from Loux, 158.

in hand, we may now articulate a distinctively Scotistic cosmological argument within a contemporary framework.

III. The Contemporary Scotistic Cosmological Argument

The argument has two stages. In STAGE 1, I will mark out a route to the conclusion that there is a necessarily existing first cause. In STAGE 2, I will speculate how the route might be extended to reach the conclusion that the first cause is infinitely powerful, knowledgeable, and good.

STAGE 1: A necessarily existing first cause

I will begin by introducing a few definitions.

(1) (1) Necessary haecceity def= A haecceity that is included in all possible worlds.[10][10]

(2) (2) Contingent haecceity def= A haecceity that is not necessary.

(3) (3) Necessary individual def= An individual whose haecaity is necessary.

Scotus offers the following key premise, "Anything to whose nature it is repugnant to receive existence from something else, can exist of itself if it is able to exist at all."[11][11] Scotus proceeds to argue that if it is possible that a thing exist of itself, then it is actual that it do so.[12][12] Since a necessary individual is such that if it possibly exists, then it actually exists, I will understand Scotus' premise as follows:

(4) (4) Necessarily, for every individual *x*, if *x* is essentially uncaused, then *x* is necessary.

The contrapositive of (4) is

(4*) Necessarily, for every individual *x*, if *x* is contingent, then it is possible that *x*

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[10][10] Recall that a property *P* is included in a state of affairs, *W*, if and only if, necessarily, if *W* obtains, then *P* is instantiated. Thus, even if all *ante rem* properties *exist* necessarily, it is not the case that they all are *instantiated* necessarily and thereby are included in all possible worlds.

[11][11] Scotus, 46.

[12][12] Ibid.

be caused,

which in turn is equivalent to a premise found in Loux's redition of Scotus' argument:

(4**) Necessarily, for every haecceity *H*, if *H*'s exemplification is contingent, then it is possible that *H*'s exemplification be caused.

(4**) appears to be a modest causal principle. Cosmological arguments standardly rely on a stronger causal principle. For example, Leibnitzian cosmological arguments usually include the premise that for *every* contingent state of affairs, if it obtains, its obtaining *must* have a cause or explanation. (4**) merely claims that if a *certain sort* of state of affairs obtains, then it is *possible* that its obtaining have a cause.

To see just how modest (4**) is, compare it to cosmological principles used in recent cosmological arguments. One argument developed by Richard Gale and Alexander Pruss relies on the following principle of sufficient reason:

W-PSR: For every contingent state of affairs *S*, if *S* obtains, it is *possible* that *S*'s obtaining has an explanation.[13][13]

But W-PSR has been shown to entail the principle that if a contingent state of affairs obtains, its obtaining *necessarily* has an explanation.[14][14] And this stronger principle faces notoriously difficult problems, none of which threaten (4**).[15][15]

(4**) also seems to be superior to a causal principle offered by Robert Koons, which can be expressed like so:

K-P: Normally, for every *wholly contingent* state of affairs *S*, if *S* obtains, then *S* has a cause, where a state of affairs is wholly contingent just in case if it

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[13][13] Richard Gale and Alexander Pruss, "A New Cosmological Argument," *Religious Studies* 35, no. 4 (1999): 461-76.

[14][14] Gale and Pruss, "A Response to Oppy and to Davey and Clifton," *Religious Studies* 38, no. 1 (2002) 89–99.

[15][15] For example, consider the state of affairs *S* consisting in there being the contingent individuals that there are. *S* is a contingent state of affairs and yet apparently could not have a sufficient explanation. *S* could not be explained by one of the contingent individuals (or else circularity), and neither could *S* be sufficiently explained by a necessary thing (or else *S* would be necessary). See Peter van Inwagen, *Metaphysics*, 2nd ed. (Boulder, CO: Westview Press, 2002), 119.

obtains, then the properties included in *S* are solely instantiated by contingent entities.[16][16]

K-P avoids some of the difficulties that W-PSR faces.[17][17] It is much stronger, however, since (4**) only requires that wholly contingent states of affairs of a limited variety are such that *if* they obtain, their obtaining is *possibly* caused. Also, the state of affairs consisting in a contingent individual freely performing an action is a *wholly contingent* state of affairs. But those attracted to libertarian views of agency may doubt that such a state of affairs could even possibly be caused to obtain. (4**), however, is restricted to individuals, such as rocks, jellybeans, people, fundamental particles, and so on. I do not offer a definition of an individual, but I believe that we have enough grasp of individuals to say that *actions* are not among them. So, (4**) has an advantage over K-P.

Finally, consider the principle in William Lane Craig's Kalam cosmological argument:

C-P: Whatever begins to exist has a cause.

C-P suffers from a similar difficulty as K-P. The beginning of *an agent's freely causing her arm to rise* may not be the sort of thing that can have a cause. If it were, then as William Rowe observes, it seems that we must posit a further beginning (event): *the causing of the agent's causing his arm to rise*, and this beginning (event) too would require a cause, *ad infinitum*.[18][18] This objection might be met by modifying C-P.[19][19]

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[16][16] Robert Koons, "A New Look at the Cosmological Argument," *American Philosophical Quarterly* 34, no. 2 (1997): 193-212.

[17][17] For example, consider the state of affairs *S* consisting in there being all the contingent individuals that there are. The obtaining of *S* can be explained by the obtaining of *W*, where *W* is the state of affairs consisting of a *necessary individual* contingently causing (or willing) that *S* obtain. Although *W* is a contingent state of affairs, *W* is not a *wholly contingent* state of affairs since it contains a necessary individual, and so the obtaining of *W* does not require an explanation. If it did, then it would be difficult to see how any contingent state of affairs could obtain (see footnote 15).

[18][18] William Rowe, "Reflections on the Craig-Flew Debate," in *Does God Exist?: The Craig-Flew Debate*, ed. Stan W. Wallace (Aldershot, U.K.: Ashgate, 2003), 73.

But it is avoided altogether by (4**).[20][20] Plus, (4**) requires only the *possibility* of a cause. It is true that C-P is explicitly concerned with *beginnings*, which might be thought to give C-P a sight advantage.[21][21] But I doubt it would be enough of an advantage to make C-P more plausible than (4**). Therefore, it appears that although causal principles in notable contemporary cosmological arguments are more modest than earlier principles, they do not exceed or even reach the level of plausibility enjoyed by the causal principle offered by Scotus in the late-thirteenth century.

So, how are we supposed to derive the existence of a necessarily existing first cause using (4**)? Scotus combines (4**) with a defense of

(5) (5) It is possible that an essentially uncaused individual exist;

and (5) is equivalent to

(5*) There exists a haecceity whose exemplification by an individual cannot be caused.

It is not hard to show that (4**) and (5*) together entail the existence of a necessary individual. (4**) entails that every contingent individual can have a cause, and (5*) entails that an individual can exist which *cannot* have a cause. It follows, therefore, that an individual can exist which is *not* contingent—that is, it is possible that there be a necessary individual. By S5, it follows that there *actually is* a necessary individual.

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[19][19] See William Lane Craig, "A Reply to Objections," in *Does God Exist?*, 157.

[20][20] Consider, in addition, that Craig relies on a distinct causal principle—the principle of determination—in order to show that the first cause is a personal agent. But, as we shall see, the second stage of Scotus's argument does not require an additional causal principle. (4**) combined with a principle of modal continuity may have sufficient power to yield some of the divine attributes.

[21][21] The advantage is only gained if it is possible for an individual to be *both* essentially eternal *and* contingent. If that were not possible, then every possible contingent individual could possibly begin to exist. Thus, if C-P were true, then for every possible contingent individual it would be possible for it to be caused to exist. C-P would entail (4**). But if C-P entails (4**), then no advantage is gained.

Scotus' defense of (5*) is not obviously successful. O'Connor expresses pessimism about adequately filling out Scotus' defense;[22][22] Loux surmises that it is question-begging.[23][23] Nevertheless, both think that something similar to (5*) is intuitively plausible on its own.[24][24] Loux says that only the hardened skeptic should demur,[25][25] and O'Connor concludes that "the onus is upon a would-be objector to provide some positive reason why we should withhold our assent from this claim."[26][26]

The judgments of Loux and O'Connor are too quick, it would appear. There is a crucial difference between one's failure to see that something is impossible and one's seeing that something is possible. Yet, intuitive support for (5*) seems to be based solely on the former.[27][27] The trouble is that mere failure to see that (5*) is impossible should not be evidence that (5*) is possible. The reason is that there is *equally* good evidence to believe a premise that is inconsistent with (5*):

(6) (6) It is possible that an essentially uncaused individual does not exist.

Notice that (6) does not claim that there *actually* is no uncaused individual: according to (6), it is *possible* that there be no such individual—that there be some possible world lacking an essentially uncaused individual. It is no more difficult see what should make (6) impossible than it is to see what should make (5) impossible. But if (6) is true, then given (4**), (5*) is necessarily false. For given (4**), any essentially uncaused thing

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[22][22] O'Connor, "Scotus on the Existence of a First Efficient Cause," 11.

[23][23] Loux, 159.

[24][24] O'Connor's version of (5*) is that "essentially independent effectivity can occur in some nature" (O'Connor, 13). Loux's version is that "some haecceity is eminent," where an eminent haeceeity is one which can only be instantiated by an essentially uncaused first efficient cause that is free with respect to every exercise of its causal powers (Loux, 158-9). (5*) is clearly no *less* modest than O'Connor's and Loux's.

[25][25] Loux, 158.

[26][26] O'Connor, 14.

[27][27] It is evident that Loux's belief in his counterpart to (5*) is based merely on a failure to see that it is impossible given that he says on behalf of it that "there appears to be nothing objectionable in the idea…" See Loux, 159.

must be a necessary individual. So if (6) is true, then it is possible that there not exist a necessary individual, which entails that it is necessary that there not exist a necessary individual. But recall that (4**) and (5*) jointly entail that a necessary individual exists. Therefore, (6) is inconsistent with (4**) and (5*).

So if we want to retain (4**), then either (6) or (5*) must go. But which one should we give up? I confess that I see no obvious way to decide.[28][28] At least I see no way to decide *apart from* defending (5*).

As I have noted, a successful Scotistic defense of (5*) is difficult to produce. But I believe one *can be* produced if we countenance a tweaked version of (4**). To show how, I will introduce a few defintions:

(7) (7) Producible haecceity def= A haecceity whose exemplification is capable of being caused.[29][29]

(8) (8) Producible state of affairs *S* def= For some consistent collection of producible haecceities, *S* is the state of affairs of that collection being jointly instantiated.

(9) (9) Necessarily, for every producible state of affairs *S*, if *S* obtains, then it is possible that there be a causal explanation as to why *S* obtains rather than not.

(9) (9) is like (4**), except that (9) says that it is possible that the obtaining of *many* haeceeities can be caused, whereas (4**) is only concerned with the obtaining of single haecceities. (9) can be interpreted as a weak version of the principle of sufficient reason that is discussed by Rowe. Rowe's principle is that for every collection of individuals,

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[28][28] One might notice that (6) is analogous to certain principles used against Plantinga's modal ontological argument. His argument relies on the premise that being maximally perfect in all possible worlds is possible. But even if one thought there was no internal contradiction in the notion of such a property, there also seems to be no internal contradiction in the notion of such a property not being instantiated or in the notion of gratuitous evil. Yet these latter notions can only pick out genuine possibilities if being maximally perfect in all possible worlds is impossible. [clarify]

[29][29] Given (4**), every producible haeceeity is also a contingent one. But we may put that observation to the side for now.

there is an explanation for why those individuals exist rather than none at all.[30][30] (9), however, requires only that the existence of a collection of individuals *possibly* have an explanation for their existence.[31][31]

In order to dodge the worry that *collections* might not exist over and above their members, I will say that the obtaining of *S* is explained just in case every individual in *S* has a cause and at least one individual in *S* has a cause that is not in *S*.[32][32] It seems that a full explanation would include an individual "outside of" *S* that contributes to the causal chain. The existence of a collection of individuals, no matter the size, is not explained solely by causally linking the individuals to one another. Something outside of the collection must provide causal contribution if the existence of the collection is to be explained. I suspect that few would reject the principle that no collection of individuals can explain its own existence.[33][33] But even if that principle were false, (9) makes the modest claim that every collection *could* have an external explanation. It's unclear why anyone would deny that. But for caution's sake, I will treat (9) as a defeasible principle:

(9*) Normally, for every producible state of affairs *S*, if *S* obtains, then it is possible that there be a causal explanation as to why *S* obtains rather than not.

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[30][30] William Rowe, *The Cosmological Argument* (Princeton: Princeton University Press, 1975), 106-09.

[31][31] Scotus defense of (5*) rests on a premise reminiscent of (9): "even if the group [of accidentally ordered causes] were infinite they would still depend on something outside the group" (Scotus, 42). In other words, every collection of producible individuals has a cause external to the collection. (9), however, is more modest and has the advantage of not being tied to a theory of accidentally and essentially ordered causes.

[32][32] The present formulation avoids the objection by David Hume (in 1779) and again by Paul Edwards (in 1959) that there is no such thing as the *whole* of all contingent things.

[33][33] Notice that Edward's famous example of the Eskimos provides no counter-example. Edwards points out that if we can explain why each Eskimo in a group exists at a certain place, we do not need a further explanation to answer why they *all* exist at that place. We can set aside the point that our principle is only concerned with explaining the *existence* of individuals and not their locations. For the more important point is that the explanation for each Eskimo is not given in terms of the *other* Eskimos alone. Their locations are caused by factors that are *outside* the collection of Eskimos. So the principle that a group of individuals cannot explain their own existence remains intact. See Paul Edwards, "A Critique of the Cosmologcal Argument," in *Philosophy of Religion: An Anthology*, ed. Louis P. Pojman, 4th ed. (Belmont, CA: Wadsworth Publishing Co., 1994), 46-55.

According to (9*), for every producible state of affairs, one should think that its obtaining can be caused unless one has a good reason to think otherwise.

Surprisingly, (5*) can be established if we grant (9). Here's how. Let *M* be a state of affairs consisting of a maximal collection of producible individuals. To see that there *can be* such a state of affairs, one only needs to show that it is possible for there to be an effective individual. If an effective individual is possible, then there will be a state of affairs that includes any and all possible individuals consistent with that individual. So, we need the following:

(10) A producible individual is possible.[34[34]]

If (4**) is correct, then any individual that is not necessary is producible. So, a producible individual is possible if it is possible that there is an individual that is not necessary. And surely it is possible that there is an individual that is not necessary: take *me* for instance. But if anyone thinks that every individual must be necessary, she may immediately proceed to STAGE 2**.**

For the rest of us, we recognize the possibility of *M*, given (10). Now if *M* is possible and if (9) is true, then it should be possible that *M*'s obtaining is causally explained. But it would be impossible for a producible individual to cause *M*'s obtaining since *M* consists in a *maximal*, consistent collection of producible individuals. So any producible individual consistent with *M* is included in *M* and so cannot (by definition) be the cause of *M*. Therefore, if it is possible that *M*'s obtaining be causally explained, then

[34[34]] Scotus, 44.

it is possible that there is an individual that is *not* producible—that is, not possibly caused. Therefore, (5*) follows.[35][35]

By way of summary, then: on the basis of Scotistic-styled causal premises, we can derive the existence of a necessary individual that is capable of causing a maximal, consistent collection of individuals.

STAGE II: From a necessarily existing first cause to God

I will now propose how one might continue the journey to the conclusion that an infinitely powerful, knoweledgeable, and good individual exists. To ease our travels, it will be handy to take along a slightly more powerful causal principle. Here are definitions and the causal principle:

(11) Gridscape *S* def= For a collection of individuals *C*, *S* is a state of affairs that specifies the intrinsic, non-haecceitous properties and relations instantiated by *C*.

(12) Wholly contingent gridscape *S* def= A gridscape that includes only contingently exemplifiable properties and/or relations.

(9§) Normally, for every wholly contingent gridscape *S*, if *S* obtains, then it is possible that there be a causal explanation as to why *S* obtains rather than not.

(9§) basically says that the exemplification of a bunch of contingent, intrinsic properties and relations can be causally explained. It is difficult to see why one would accept (9) and not (9§). If the exemplification of a bunch of contingent haecceities is possibly causally explained, then it seems that the exemplification of a bunch of contingent,

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[35][35]It might be objected that if (9) is *defeasible*, then, perhaps, (6) gives us a reason to make an exception in the case of *M*. For (6), recall, gave us a reason to think that it was possible that there not be an essentially uncaused cause. But such a reason will also be a reason to think that *M's* obtaining cannot be caused. In reply, recall that (5*) is no less evident than (6). Therefore, it seems that (5*) and (6) *epistemically cancel* each other out. Those principles, then, give us no reason to think that an essentially uncaused individually is possibly existent or possibly non-existent. Thus, I see no (non-question begging) reason why *M* should be an exception.

For more on the use of defeasible reasoning in cosmological arguments, see Graham Oppy, "Faulty Reasoning about Default Principles in Cosmological Arguments," *Faith and Philosophy* 21, no. 2 (2004): 242-9.

intrinsic properties and relations should also be. As before, I will say that the cause is external—it is not *itself* an exemplification of one of the properties and relations.

Using (9§), we can construct an argument for the conclusion that if there are *many* necessary individuals, they form a closely-knit family. I will say more about this later. I wish to develop a different argument first. So for now, I will *assume* that if there are many necessary individuals, they form a closely-knit family. I will come back to an argument for that assumption. Let's call the necessary individual or the family of necessary individuals *N*.

Infinite Power:

I will now offer two independent arguments for thinking that *N* has infinite power. The first is based on Scotus' argument that there are an infinite number of things that a necessary individual is capable of producing at any given moment.[36[36]] Let's say that a *power* is a capacity to bring about a state of affairs (cause it to obtain). If it is correct to say that some state of affairs require *more* power to bring about than others, then we can talk about *degrees* of power that *N* might have. We can then infer that *N* has an *infinite* degree of power from the following premises:

> (13) Necessarily, for every individual *x* and every producible state of affairs *S*, if *x* alone causes *S* to obtain, then there are no individuals included in *S* that have more power than *x*.
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> (14) Necessarily, for every contingent individual *x*, if *x* has causal power, it is possible that there is an individual *y,* such that *y* causes *x*, and *y* has at least *slightly more* power than *x*.

(13) basically says that an individual cannot be less powerful than any individual(s) it brings about—not unless there are *additional* causes, vitamins and minerals, say, that

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[36[36]] Scotus thinks that *N* must have infinite power to produce all those things simultaneously, even if it is not possible that *N* actually produce all of them simultaneously (given that certain combinations of things may be inconsistent with one another.) See Scotus, 64-5.

contribute to the powers of the produced individuals. (14) says that every contingent individual could be caused by a more powerful individual. The premises deserve further explication and defense. But let us adopt them provisionally.

I wish to show how they mark off a trail to the existence of an infinitely powerful necessary individual. If (13) is true, then for every a state of affairs consisting of a maximal collection of producible individuals, there is *another* such state of affairs containing a *more powerful* individual. In STAGE 1, we saw that any maximal collection of producible individuals can be brought about by *N*. But if *N* can bring about any maximal collection, then given (13), *N* cannot have a finite power. For if it did, then there would be a possible maximal collection of individuals that contains an individual *more powerful* than *N*, and according to (13), *N* could not bring it about. So, if *N* can bring about each possible maximal collection (STAGE 1), then *N*'s power cannot be finite.

A second argument for the same conclusion is based on a premise recommended by O'Connor[37[37]] and which is inspired by Scotus' statement, "if it is finite, it can be exceeded or excelled."[38[38]] Koons offers a precise formulation of the premise:

> (15) For any measurable [finite] attribute *A*, where *A* consists in having determinable *D* to degree μ, and any individual *x* that have *A*, there is some degree such that it is possible for *x* to have *D* to degree $\mu - e$ or $\mu + e$.[39[39]]

(15) says that if an individual has an attribute to a certain finite degree, then *its having the attribute to exactly that degree* is a contingent state of affairs (since it could have the attribute to slightly greater or lesser degree). Suppose that is correct. Then we can show that *N* has infinite power if having power is an intrinsic property (which it appears to be).

[37[37]] O'Connor, 21-3.

[38[38]] Scotus, 71

[39[39]] Robert Koons, "A New Look at the Cosmological Argument," (http://www.utexas.edu/cola/depts/philosophy/faculty/koons/cosmo.pdf), 10.

To see how, suppose *N* has finite power and also that (13) is true. We will not assume (14) for this argument. Then any maximal collection of individuals containing an infinitely powerful one could not possibly be caused to exist by *N*. But from STAGE 1, any maximally collection *can* possibly be caused to exist by *N*. So, no maximal collection of individuals contains an infinitely powerful one: individuals are necessarily finitely powerful. Therefore, according to (15), a state of affairs, *S*, which specifies the various degrees of power instantiated by a maximal collection of individuals, is a wholly contingent gridscape. It includes only contingently exemplifiable properties, such as *being capable of causing a volcanic eruption*. According to (9§), it is possible that the obtaining of *S* be caused. But since every individual consistent with *S* is included in *S*, a cause of *S* can only be due to the *causal activity* of an individual in *S*. This is a problem because no individual in *S* can bring about *S* unless that individual *already* has power. Yet, *S* specifies how much power each individual in *S* has. So if an individual in *S* causes *S*, then an individual in *S* causes *itself* to have the power that it has, and surely *that*'s not possible. But if it's not possible, then it's not possible that the obtaining of *S* be caused, which violates (9§). Therefore, the hypothesis that *N* is finitely powerful is false. *N* is infinitely powerful.

Volitional Agency:

Let's proceed on the route to the conclusion that *N* is a *volitional* agent(s). Scotus' most promising argument for volition is based on the premise that

(16) If a necessary individual *N* does not possess the capacity to act freely, then it is *necessary* that *N* exercise its causal power and thereby produce an effect.[40[40]]

[40[40]] Scotus, 54.

The intuition for (16) is that what makes an action volitional is that it is not causally necessitated. If an individual *x* is not causally necessitated to exercise its causal power (either by its own nature or by the causal action of another individual[41][41]), then *x*'s exercise of causal power is contingent and so free.[42][42] Some are content to grant (16).[43][43] However, a popular view among contemporary theorists is that there can be "exercises of causal power" that do not necessitate their effects (e.g. Hugh Mellor[44][44] and Michael Tooley[45][45]). These theorists typically analyze non-volitional "exercises of causal power" in terms of statistical probabilities. For example, if *A* non-volitionally causes *B*, then *A*'s existence fixes a certain probability that *B* exist.[46][46] Therefore, it would be nice if we could get away with a more modest premise:

(17) If *N* does not possess the capacity to act freely, then it is necessary that *N fix a probability P* that an effect exist, where

(18) *N* fixes a probability *P* def= *N* has a property *Q*, such that necessarily, for every individual, *x*, and set of laws, *L*, governing the behavior of *x*, if *x* has *Q* and if *L* obtains, then there is an objective probability *k* and a possible effect *E*, such that $P(E) = k$.[47][47]

According to (17) and (18) together, *if N* is incapable of freely acting to bring about an effect, *then* if *N* causes an effect, it does so *in virtue of* exemplifying a property and thereby fixing a probability that it exist. The basis for (18) is the premise that if an individual's behavior is not a result of volitional actions, then deterministic or

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[41][41] For Scotus, God is identical to his nature, and so God's nature would not be an external cause. In this paper, I will assume that *N* is not identical to its nature (or properties), though the success of my argument will not depend on that assumption.

[42][42] I say "normally," because I do not wish to make any assumptions about whether or not Frankfurt-styled counter-examples to the principle of alternative possibilities succeed or are relevant.

[43][43] Though he is less confident about how it can be used to establish that *N* has volition. See O'Connor, "From First Efficient Cause to God: Scotus on the Identification Stage of the Cosmological Argument," 16-7.

[44][44] D.H. Mellor, *The Facts of Causation* (London: Routledge Press, 1995), 21-30.

[45][45] Michael Tooley, *Time, Tense and Causation* (Oxford: Clarendon Press 1997), 43-71.

[46][46] Mellor, 21 – 30.

[47][47] I am assuming that *Q* is not the property of *being such that P(E) = k*. Rather, it's a property *in virtue of which* P(E) = k.

indeterministic laws govern its behavior. Such a premise deserves more careful attention. But let's grant it and see what work can be done using it.

Here's how (17) can be used to reach the conclusion that *N* is a volitional agent(s). Let *M* be a state of affairs consisting of a maximal collection of contingent individuals. According to STAGE 1, *N* is capable of causing *M*. Suppose *N* fixes a probability of 1 that *M* obtains. In that case, *N*'s existence *entails* that *M* obtains. But whatever is entailed by a necessary state of affairs is *itself* necessary. Thus, the obtaining of *M* is necessary. Yet, *M* is, by definition, contingent. Therefore, it is not the case that *N* fixes a probability of 1 that *M* obtains.[48[48]]

Suppose, then, that *N* fixes a probability *P*, where $0 < P < 1$. In that case, there is a probability that *M* obtains in virtue of *N's* exemplifying a property *Q* together with the obtaining of laws *L*. Properties like *Q* are *probability-fixing properties*. If *Q* and any other probability-fixing properties that *N* might have are not essential to *N*, then the gridscape, *S*, that specifies that *N exemplifies Q* and any other probability-fixing properties is wholly contingent: every intrinsic property included in *S* is contingent. And if *S* is a wholly contingent gridscape, then according (9§), *S* is possibly caused to obtain.

Such a result is problematic because no possible individual is capable of causing *S* to obtain. *N* is not capable of causing *S* since *N* must *already* have causal capacities (probability-fixing properties) in order to cause itself to have whatever causal capacities it has. Nor is any individual besides *N* capable of causing *S* to obtain. For any such individual is possibly caused only if *N* is *already capable* of bringing about a state of affairs that contains it.

[48[48]] O'Connor appears to miss this line of reasoning. He recognizes that if a necessary individual causes necessarily, it need not follow that everything is necessary. But he evidently fails to realize that a necessary individual could not necessarily cause *any* individual (O'Connor, 21).

To avoid these vicious circles, either *N* must have an *essential* probability-fixing property, or else, if (17) is true, *N* must be capable of volitional activity. One reason to think that none of *N*'s probability-fixing properties are essential to it is that probability-fixing properties appear to be degreed properties, since they fix a precise probability within a range of possible probabilities. Suppose for example that *N* has a property *Q* in virtue of which *M* has a 0.2 chance of obtaining. Should it not be possible for *N* to have fixed a slightly different chance, say 0.201, instead? Is it *necessary* that *N* exemplify *Q* rather than a very similar probability-fixing property? If we grant (15) it would appear not. For according to (15), for any degree of a property *N* has, it should be possible for *N* to have that property to a slightly higher or lower degree. True, probability-fixing properties are not ordinary degreed properties. Yet, they are *like* degreed properties in that they specify a precise value—a probability—among a range of possible values. If it is a contingent matter that an individual have an attribute, such as height or lifting capacity, to a certain degree among a range of possible degrees, then it seems that it should *also* be a contingent matter than an individual have an attribute that fixes a certain probability among a range of possible probabilities. If so, then none of *N*'s probability-fixing properties are essential.

Recall that if none of *N*'s probability-fixing properties are essential, then if (17) is true, *N* is capable of volitional activity. Thus, we have cleared a path to the conclusion that *N* is capable of volitional activity.

One might raise an objection that goes likes so. If *N* is capable of volitional action, then there is a ratio *R* of worlds in which certain laws obtains and in which *N* performs action *A*. If so, then *N* fixes a probability equal to *R* that *A* occurs. Hence, *N* has

a probability fixing property *Q* that specifies the probability that *A* occur. So, aren't we back to the vicious circle described above, namely, that *N*'s having *Q* can only be possibly caused if *N* already has its probability fixing properties? Not really. The reason is that *N*'s having *Q* is explanatorily *posterior* to *N*'s acting in the way that it does. *N* has *Q because* of the way it acts, not the other way around. Therefore, any probability fixing properties *N* has are explained by whatever actions *N* does or does not perform in whatever circumstances in which *N* find itself.

Unity:

Previously, I assumed that if there is more than one necessary individual, they form a closely-knit family. It is now time to indicate the basis for that assumption. Assume that there are multiple necessary individuals, and let *S* be the gridscape specifying any *accidental, contingent* properties or relations instantiated by them. For example, if the necessary individuals could move around in space, then the spatial relations between them would be contingent. *S* is wholly contingent since it includes solely contingent relations. Thus, according to (9§), *S* is possibly caused to obtain. But candidate causes necessarily involve individuals included in *S*. As a result, a cause that is *external* to *S* is an event, state of affairs, fact, action, or *something or other* that involves an individual *in S* having a probability-fixing property or performing an volitional action *not in S*. Well, we've seen reasoning against the cause involving a *probability-fixing property*: any such property would be an essential property and so would not be probability-fixing. So *S* can only be caused by volitional activity. Therefore, any contingent properties and relations instantiated by multiple necessary individuals are the result of volitional activity. All

other properties and relations are essential and necessary. Thus, if *N* consists in multiple necessary individuals, then the members of *N* are tightly knit together.

Infinite Knowledge:

Let us now consider a route to the conclusion that *N* is infinitely knowledgeable. Scotus suggests how we might infer infinite knowledge when he says, "to be a cause of something, it must possess knowledge of what it can cause."[49][49] I suggest, therefore, the following:

> (19) If *N* is capable of freely acting to cause a state of affairs *S* to obtain, then *x* is capable of knowing at least something.

It is difficult to imagine how an individual could possibly *choose* to bring about a state of affairs if it were impossible for it to possess any knowledge. Perhaps such a situation *is* possible. But for any given individual, I think it's quite unlikely that that individual be capable of volitional actions and yet be *incapable* of any knowledge. (19) seems plausible.

Now suppose that *N* is finitely knowledgeable. Suppose also that

> (20) If *N* alone causes a state of affairs *S* consisting of a maximal collection of contingent individuals to obtain, then there are no individuals included in *S* that are more knowledgeable than *S*.

According to (20), *N* cannot be less knowledgeable than any individual(s) it brings about—not unless there are *additional* causes, vitamins and minerals, say, that contribute to the knowledge of the produced individuals. Although the premise deserves further scrutiny, it does not sound unreasonable. Let's adopt it.

Given (20), any maximal collection of individuals containing an infinitely knowledgeable one could not possibly be caused to exist by *N*. But from STAGE 1, any

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[49][49] Scotus, 61.

maximal collection *can* possibly be caused to exist by *N*. So, no maximal collection of individuals contains an infinitely knowledgeable one. Therefore, if state of affairs *S* specifies the various degrees of knowledge and various causal capacities (probability-fixing properties) that are instantiated by some maximal collection of individuals, then *S* is a wholly contingent gridscape; and according to (9§), the obtaining of *S* is possibly caused. But *S* cannot possibly be caused to obtain. For any *candidate* cause is included *in S*, and yet *no* cause of *S* can be included in it. For example, any event that involves an *individual having a causal capacity* is included in *S*; thus, no such event can cause *S* to obtain. Therefore, the hypothesis that *N* is finitely knowledgeable is inconsistent with the premises that we have identified. The conclusion they yield is that *N* is infinitely knowledgeable.

Infinitely Good:

Turn, finally, to a route towards infinite moral goodness. Let us say that an individual exemplifies *positive moral status* if there is a state of affairs in which it would freely bring about a *good state of affairs*, where a good state of affairs is one such that it is morally praiseworthy to bring it about. An individual exemplifies *negative moral status* if there is a situation in which it would freely bring about a *bad state of affairs*, where a bad state of affairs is one such that it is morally disdainful to bring it about. Individuals, then, can be said to possess varying degrees of moral status (both positive and negative) depending on which states of affairs they would freely bring about in certain situations.

Now suppose that *N* is finitely good (has finite degree of positive moral status) or finitely bad (has finite degree of negative moral status) or both. Suppose also that

(21) *N*'s having the degree of positive or negative moral status that it has cannot be caused.

According to (21), neither *N* nor any contingent individual could be the cause of *N* having the moral status that it has. Suppose that's correct. Then *N* cannot have a finite degree of moral status (positive or negative). For if *N* has a finite degree of moral status, then it should be possible for *N* to have been slightly more or less morally praiseworthy instead [recall (15)]. Thus, *N*'s having its moral status is a wholly contingent gridscape and its obtaining possibly has a cause, which contradicts (21). The conclusion, then, is that *N* does *not* have a finite degree of moral status. If it has any moral status at all, *N* is either infinitely good or infinitely bad (I assume that it could not be *both*).

It may appear, then, that we can reach the conclusion that *N* is infinitely good if we grant that

> (22) *N* has at least some positive moral status: there is a situation in which *N* would freely bring about a good state of affairs.

If (21) is true, then if *N* has any positive moral status, its moral status is *infinitely* positive. And if (22) is true, then *N* has positive moral status. Therefore, if (21) and (22) are true, then *N* has infinitely positive moral status.

Unfortunately, the road to infinite goodness is crowded with obstacles. First, it is unclear whether moral status can be quantified so that it is sensible to talk about *finite degrees* of positive moral status. Second, there is no guarantee that any necessary individual would *freely* bring about *any* state of affairs, even though it is *capable* of doing so. Third, it is far from obvious that (21) is true. Why can't a contingent individual, for example, confer moral status on *N*? Perhaps there are avenues in the neighborhood that get past these obstacles.[50][50] But there is a larger obstacle: how do we know that *N* would

[50][50] For example, in reply to the second objection, one might defend a tweaked version of (9§), which says that if a state of affairs is possibly caused, then its cause is within our "galaxy" of worlds—that

bring about a *good* state of affairs rather than a *bad* one. It is widely believed, for example, that if our world[51][51] has a single instance of gratuitous suffering, then it is a *bad* one, namely, one which a perfectly good individual would not bring about. Why think our world (or any other) that *N* is capable of bringing about is good, rather than bad or morally neutral?

It is tempting to reply that our world has too much good for it to possibly have been brought about by an individual of *infinitely negative* moral status. But such a reply is notoriously difficult to defend. "Theodicies" may be offered to explain why the joys and pleasures in this world might be part of an infinitely evil individual's schemes to bring about some greater horror.[52][52] Therefore, it is not obvious how we can break the symmetry between good and evil, such that (22) will be established. Perhaps it is better to ask whether our world looks more like the work of an infinitely bad individual, an infinitely good one, or one having no moral status at all.

IV. Objections and Replies

I will now examine some of the most challenging objections to be raised against cosmological arguments in recent centuries to see how the Scotistic-styled argument fares. I'll begin with objections from Hume and Kant.

> **OBJECTION 1**: Hume – the concept of necessary existence is incoherent or does not apply to anything in reality since whatever can be conceived of as existing can be conceived of as not existing.[53][53]

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is, within those worlds consistent with what every free individuals would freely do in every possible circumstances. For more on galaxies, see Thomas Flint, *Divine Providence: The Molinist Account* (Ithaca, NY: Cornell University Press), 51-4. One might search for a route around the first obstacle by providing a detailed account of the ontology of moral properties.

[51][51] By "our world," I mean that state of affairs that includes everything, excluding necessary individuals.

[52][52] For a defense of theodicies for an infinitely evil individual, see Wes Morriston, "The Evidential Argument from Goodness," *The Southern Journal of Philosophy* (2004) 42, no. 1: 87-101.

[53][53] David Hume, *Dialogues Concerning Natural Religion*, ed. Henry Aiken (New York: Hafnew Publishing Company, 1959), 58-9.

Hume's objection requires the assumption that conceivability entails possibility, and further, that every entity can be conceived as not existing. In reply, given our metaphysical framework, an individual is necessary if it is included in all possible worlds. This definition is logically consistent and in *that sense* perfectly conceivable. Suppose, then, that there *were* a necessary individual, *N*. *N*'s non-existence would either be conceivable or not be. If it were, then conceivability would not entail possibility. If, on the other hand, its non-existence were *not* conceivable, then it would be false that the non-existence of every entity is conceivable. Thus, either way, if there *were* a necessary individual, then OBJECTION 1 would be unsound. Thus, that objection is question begging unless Hume's two assumptions can be successfully defended. But it is difficult to see how a defense would go in light of the development of modal logics and frameworks for modal discourse. Necessary entities, such as properties and states of affairs are essential components of such frameworks. So there appears to be no principled reason to rule out necessary individuals *a priori*. Hume's objection, therefore, has little force against our Scotistic argument.

> **OBJECTION 2**: Hume – If the concept of necessary existence were coherent, why cannot matter have a quality, such that its non-existence is inconceivable?[54[54]]

If our Scotistic argument is sound, then even if matter *were* necessary, there is a necessary individual that is *not* matter, given that matter is evidently not infinite in power and knowledge.

[54[54]] Ibid.

> **OBJECTION 3**: Hume – It makes no sense to inquire as to the cause of the whole of all contingent things, since the uniting of parts into a whole is merely a mental abstraction which does not apply to reality.[55][55]

My argument asks for an explanation of the *obtaining of states of affairs*. And I defined such an explanation in terms of causing properties to be exemplified or concrete individuals to exist. Therefore, nothing in my argument presupposes that concrete individuals are parts of wholes whose existence can be caused. I do, however, include abstract states of affairs that can be caused to *obtain* (though their *existence* cannot be caused). But there are independent theoretical reasons for including states of affairs—one of which is to account for the referents of modal discourse.

> **Objection 4**: Hume – We cannot rationally justify the belief that contingent events are caused since there is no contradiction in an event being utterly uncaused.[56][56]

Our Scotistic argument makes use of the modest premise that the obtaining of a state of affairs *could be* caused. Thus, OBJECTION 4 does not apply to it.

> **OBJECTION 5**: Kant – The cosmological argument relies on the ontological argument.

Kant argues that if the concept of necessary existence is logically equivalent to the concept of *ens realisimum* (maximally great individual), then the "possibility of [a necessary individual] is perceived." [57][57] But the possibility of a necessary individual is the dubious premise in the ontological argument.

Kant's criticism assumes that if the concept of an individual *x* exists, then the existence of *x* is possible. This assumption, however, faces a problem raised by Russell.

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[55][55]Ibid.
[56][56]Ibid.

[57][57] Immanuel Kant, *Critique of Pure Reason*, trans. Max Muller (New York: Macmillan & Co., 1925), 47.

If every concept picks out a possible entity, then the concept of *being a property that does not exemplify itself* should do so. But there can be no such property, for if there were, it would neither exemplify itself *nor* not exemplify itself. Thus, not every concept picks out a possible entity. As a result, we might have the concept of a maximally great individual even if such an individual is impossible.[58][58]

> **OBJECTION 6**: Kant – There is nothing in the concept of a contingent individual, such that the concept of that individual having a cause is to be derived.[59][59]

This criticism assumes that the only way to know a necessary truth *T* about some entity *x* is for the concept of *x* to logically entail *T*. Kant would say that such a derivation must be either synthetic or analytic. If it is analytic, then *Y* is contained in the meaning of *X*; and if it is synthetic, then *Y* follows from *X* by some necessary connection in possible experience or the phenomenal world.

Developments in abductive reasoning seem to undercut Kant's objection. Physicists, for example, posit unobservable forces to *explain* observable events. Thus, *T* might be justified given a principle of explanation that seems at least more evident than its denial. The premise that every contingent individual is *possibly caused* appears to be one such principle.

OBJECTION 7: The argument commits the fallacy of composition.

A popular and important objection to many cosmological arguments is that they assume that if every part of the universe is contingent, then the entire universe is contingent. In reply, our Scotistic argument was concerned with the obtaining of *states of*

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[58][58] Kant or someone of his ilk might have another objection nearby. He might think that the cosmological argument cannot get off the ground unless it is *already assumed* that a necessary individual is possible. I'll address this criticism in my response to OBJECTION 8.

[59][59] Ibid., 491.

affairs, and a state of affairs is contingent if anything included in it is contingent. Therefore, our argument does not commit a fallacy of composition.

> **OBJECTION 8**: (9) mistakenly presupposes the unsound assumption that a necessary individual is possible.

If my argument is sound, then (9) entails the existence of a necessary individual. This means that if a necessary individual did not possibly exist, then (9) would be false. As a result, a necessary individual must be possible for (9) to be true. But by S5, if a necessary individual is possible, then it is actual. Thus, a necessary individual can only be possible if it is actual. And this means that (9) can only be true if a necessary individual is actual. Thus, (9) seems to beg the question.

The proper response to this objection, it seems to me, is to point out that one need not *believe* that a necessary individual exists or even possibly exists in order to be justified in believing (9). One might be agnostic about whether the existence of a necessary individual is possible and yet find (9) to be evidently true. If the mere fact *that (9) entails that a necessary individual's existence is possible* were enough to prevent one from rationally inferring a necessary individual from (9), then there is no principled reason why one should be able to make *any* rational inferences. For the premises in *every* deductively valid argument jointly entail their conclusion. To rationally infer a conclusion from a premise, one should only be required to find the premise evident without *already believing* the conclusion and see that the conclusion follows.

> **OBJECTION 9**: It is conceivable that a necessary individual does not exist; therefore, probably, it is possible that a necessary individual does not exist; therefore, probably, (9) is false.

In reply, notice that it should be *just as easy* conceive of the possibility that there *is* a necessary individual. So if conceivability is evidence for possibility, then the ability to

conceive of a necessary individual's existence should equally count as evidence for the possibility that a necessary individual exists. Therefore, conceiving a necessary individual's existence "epistemically cancels" any considerations gathered by conceiving that a necessary individual *not* exist. Thus, the conceivability test should leave one agnostic about whether or not it is possible that there is a necessary individual.

OBJECTION 10: Weaker causal principles are arbitrarily restrictive and *ad hoc*. Peter van Inwagen has raised OBJECTION 10 against cosmological arguments that rely on principles of explanation that are weaker than the full-blown Leibnitzian principle of sufficient reason.[60][60] It might be thought, for example, that whatever reason there is to think that there should be a possible explanation of why something, say, is round, there is precisely as much reason to think that there should be a possible explanation of the obtaining of *any* state of affairs. But since *some* states of affairs *cannot* be caused to obtain without contradiction (for example, the state of affairs of a monster truck popping into existence *uncaused*), generalized principles of causation (or explanation) are false. So we should not be confident that any weaker version is true either.

Among the objections examined here, OBJECTION 10 may be the most challenging. However, the objection is typically offered against principles that have exception clauses explicitly built in to them. For example, Pruss offers a principle according to which every contingent proposition that *possibly* has an explanation *actually does*.[61][61] His goal is to avoid notorious consequences of saying that *all* contingent propositions have an explanation. But notice that none of our causal principles have

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[60][60] van Inwagen, 119-21.

[61][61] See his "The Hume-Edwards Principle and the Cosmological Argument," *International Journal for the Philosophy of Religion* 43, no. 3 (1998): 149-65.

exception clauses built in them. They were not designed to avoid intolerable paradoxes and consequences. Rather, they are modest iterations of the seemingly obvious principle that every contingent individual *could be* caused to exist. Therefore, it is far from clear that our principles are arbitrarily restrictive or *ad hoc*.

V. Conclusion

In conclusion, we have marked off a novel trail from cosmological premises to the existence of a necessary individual having various theistic properties. Although we did not clear a path to the conclusion that it is morally perfect, we were able to reach rather significant theistic conclusions from fairly modest premises taken together. These conclusions say that there exists a necessarily existing individual that has infinite power, infinite knowledge, and which is capable of volition actions. I hope that the terrain I have marked out will be explored further.