## **Global Tides**

Volume 9

Article 1

5-26-2015

## The Problem of Infinity in Meditation III

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## **Recommended** Citation

Creech, Peter B. (2015) "The Problem of Infinity in Meditation III," *Global Tides*: Vol. 9, Article 1. Available at: http://digitalcommons.pepperdine.edu/globaltides/vol9/iss1/1

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The trademark argument for the existence of God in Meditation III is unsound because although it makes valid inferences, not all of its premises are true. Specifically, the premise in which Descartes claims that we can conceive of God as actually infinite is one I believe to be problematic. Descartes argues that because we can hold the idea of an infinite God and that we ourselves are not infinite, then that conception must be generated from a place beyond ourselves—namely, from God's formal reality.

I will argue in this paper that we cannot conceive of an actually infinite being, at least not in the sense that Descartes needs in order to fulfill his proof, because we cannot properly conceive the relevant kind of infinity itself. Furthermore, since we cannot properly conceive of infinity, there is no necessary formal cause greater than what is available to us in our finite world.

Jeffrey Tlumak succinctly sums up Descartes' trademark argument in Meditation III in nine premises, however this essay will focus specifically on the move Descartes makes within premises 4-7:

- 4. Every idea must have a first and principal cause with at least as much formal reality as the idea represents its object as having. [...]
- 5. I have an idea of God as an actually infinite, eternal, immutable, independent, allknowing, all-powerful substance by whom I (and anything else which may exist) have been created.
- 6. I myself do not have all the perfections which my idea of God represents God as having.
- 7. [Therefore,] I am not the first and principal cause of my idea of God. (This follows from premises 4, 5, and 6.) (Tlumak, 35)

While premise seven appears to be a valid inference from premises four, five, and six, it is not at all certain that we do hold an idea of God as an actually infinite being. If premise five can be refuted, then Descartes' argument crumbles. In fact, this paper will show that premise five may contain devastating contradictions.

Premise five is Descartes' boldest move in Meditation III. It is here where he claims to grasp the infinite —the major premise he will use to move through his rules of causal reality. Descartes asserts that we properly conceive, by understanding, of a being which is infinite. "I understand by the name 'God' a certain substance that is infinite, independent, supremely intelligent and supremely powerful..." (Descartes, 25). The particular quality here of real substance is that of infinity, for it is not difficult to imagine something that maximally contains the other traits listed simply by observing our finite world. For example, we don't need to work very hard to think of the concept of the smartest individual human being on earth, i.e. a "supremely intelligent" person. However, the concept of infinity is far more complex.

The concept of supreme exists in our world so as to not be dependent on an infinite being. Therefore, because the concept of supreme traits—even in terms of intelligence and power—can be conceived from finite things, simply by observing one being superior to all others existing. Therefore, Descartes needs to show that we are able to properly conceive of *actual infinity* itself if his argument is successful in claiming that we cannot conceive of God's perfections from within our finite world.

Let us consider Lawrence Nolan and Alan Nelson's comments regarding what it means to contemplate actual infinity:

"The meditator's knowledge is imperfect insofar as he has doubts, and desires more knowledge. This knowledge, for example, could be endlessly augmented. Since it can be augmented without end or limit, it might be termed "infinite," but this is a potential or incomplete infinity. Descartes preferred the term "indefinite" for this imperfect kind of infinity. The crucial move now comes in understanding that if something might be endlessly augmented, this is the same as understanding that its augmentation will never be completed. But to understand that it will never be completed is to understand what it is that the process of augmentation can never reach. And that unreachable end is a completed, actual infinity." (Nolan/Nelson, 107.) The claim here is that the idea that we know something can be changed an infinite number of times—the concept of endless augmentation—is a sufficient concept of infinity itself. However, this notion of augmentation is extremely linear. Nolan and Nelson have therefore reduced the concept of actual infinity to just one of its characteristics, instead of grasping the whole of it:

"In other words, the modern mathematical idea of the cardinality of the natural numbers functions in a way similar to the idea of complete infinity (God) in Descartes' philosophy. The case of numbers is merely analogical, but Descartes thinks we can draw this distinction non-analogically in the case of our own knowledge... Applying the point about numbers to knowledge, we get the idea of actually infinite knowledge..." (Nolan/Nelson, 108.)

The problem with this strategy of comparing simple mathematics to actual infinity is that, while there exists a mathematical concept of infinity, it is a deficient comparison of the infinity that Descartes needs in order to necessitate an actually infinite formal cause. It seems obvious that we are capable of understanding that a chain of numbers can always be augmented without the aid of an actually infinite formal reality. The set of all real numbers is an abstract concept that surely is not clearly and distinctly perceived, but rather (weakly) postulated and pondered over. We do not immediately grasp it, and it is not clear that we ever fully do. At best, it is theorized. Even so, this concept is not relevant to what Descartes must claim about God. For Descartes, the nature of infinity must extend beyond mathematics so as not to make God deficient in any way. Contra Nelson and Nolan, augmentation is not the sort of infinity Descartes is after: "I judge God to be actually infinite, so that nothing can be added to his perfection" (Descartes, 26).

Descartes' reasoning behind the need for a formal cause is based upon the principal of sufficient reason, which states that everything must have a reason or a cause. In other words, something cannot come from nothing. Consider the powerful and irreducible *Cogito*, in which Descartes, after destroying all of his perceptual evidence, grounds his entire work on the concept

that his mere existence cannot be an abstraction—he knows he exists, formally, merely by virtue of his self-awareness. I think; therefore, I am; therefore, I am not nothing.

In Meditations III, he claims that we can conceive of a being that is infinite, and that idea must necessarily come from something at least as formally real as it is objectively real. In other words, the cause of something must contain exactly as much or more reality and perfection as its effect. I do not challenge Descartes' notion of formal causation. Rather, I argue that our conception of infinity—and therefore its objective reality—is actually limited. Therefore, our conception of infinity does not necessitate a formal reality that is *actually infinite*. This argument is not grounded in the fact that we cannot grasp all of what is entailed to be infinite all at once, or even if we took an indefinite amount of time to consider it. Descartes is not committed to that, as Harry Frankfurt points out:

"A concept or a proposition may, of course, contain a great deal that is not thought of by a person who enunciates it and who to some extent grasps its meaning. Descartes uses the term 'adequate knowledge' to refer to the highest possible degree of clarity: 'in order for any knowledge to be adequate,' he says, 'absolutely all the properties that are in the known thing must be contained in it.' This definition is formulated in terms of concepts, but an analogous definition in terms of propositions is easy to provide: adequate knowledge of a proposition embraces all that the proposition entails." (Frankfurt, 213)

We can see from this that Descartes only needs to embrace the *potential propositions* that the concept of infinity entails, not all of them at once or ever. This sounds like a manageable task, and it is roughly where Nolan and Nelson left off. However, my claim is that it is not enough to simply say that an infinite being contains all *true* propositions, for we can assert that there is an *indefinite* number of true propositions about something we can properly conceive, like that of a triangle. Frankfurt explains:

"[Descartes] comments as follows on his remarks... concerning adequate knowledge: 'Let us take a triangle, for example—apparently a very simple thing—one of which we seem able easily to acquire adequate knowledge.

**Nevertheless we cannot acquire adequate knowledge of it** [emphasis added]. For even if we were to demonstrate all the attributes we can conceive in it, still, after a thousand years or so, another mathematician will detect more properties in it; and so we are never certain that we have comprehended all that could be comprehended about that thing. And the same can also be said of body and its extension and all other things.' ... Since it is impossible to be certain that everything that is logically derivable from a concept or a proposition has actually been derived, no one can ever be altogether confident that his knowledge is adequate." (Frankfurt, 195.)

Descartes admits here that he may not have adequate knowledge of something as clearly and distinctly perceived as a triangle, because he does not know every true proposition contained within it. This may appear to block my objection so far that Descartes does not adequately know or conceive of infinity in the way that he is claiming we do, because he admits that we cannot even adequately know a triangle. It seems as though Descartes could be off the hook if the threshold he sets for adequate knowledge seems fairly attainable. But there still exist problems for Descartes' trademark argument. We can conceive of a triangle, and we can understand that a new, necessarily true proposition can be stated of it as frequently as we wish. It is not a new discovery every time we add a new proposition. But the simple act of adding these propositions is enough to provide us with the idea that we can do so indefinitely. So, there must be a significant difference between the kinds of propositions we are adding if we are to say that the concept Descartes is looking for cannot be derived from a finite resource.

The difference, and the key to undermining Descartes' argument, lies in the nature of the potential propositions that are available about a triangle versus those of an infinite being. While the number of propositions that we can come to know about a triangle may go on indefinitely, they cannot logically be in conflict with one another. They are all true all at once with no exceptions and no contradictions. This is not the case, I argue, among propositions available to a being that is infinite. That is to say, the concept of an infinite being necessarily implies

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contradictions. And as long as we are abiding by the laws of logic, upon which Descartes' entire method of skeptical inquiry rests, it cannot simultaneously be true that both *P* and *not-P*. Or, at the very least, it cannot be the case that we can hold a belief as such. Yet, a being that is actually infinite would not be deficient of *any* propositions. And therein lies the real problem for the trademark argument: we cannot attend to logical incoherency—something that is necessarily implied in the concept of an infinite being.

Descartes does not need to know all of the true propositions about a triangle to adequately perceive of it, but if he were to perceive several of them clearly and distinctly and simultaneously, he would necessarily affirm them. However, we cannot conceive of that which defies the laws of logic, namely the law of non-contradiction (for to deny the law of noncontradiction is, in effect, to affirm it). Thus, because it is psychologically impossible to simultaneously affirm two conflicting propositions, and the concept of an infinite being necessarily implies contradictions, Descartes (or any human being), I argue, is not able to conceive of the concept of actual infinity outside of finite terms. We cannot entertain two conflicting propositions about God simultaneously, thus we cannot have the idea of an actually infinite objective reality, and thus we cannot claim that there must be an infinite formal reality from which it is derived.

Even Nolan and Nelson, who are generally coming to the aid of Descartes, cannot help but appeal to this. "Perceiving something clearly and distinctly is essentially a matter of perceiving certain logical relationships." (Nolan/Nelson, 183.) As we have shown that the propositions regarding an *actually infinite* being are not bound by logic, it follows that we cannot fully grasp the full idea of it. So the claim that, "The meditator discovers his clear and distinct idea of actual infinity while investigating the process of augmenting and compounding ideas

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with finite objective reality. It follows that he cannot be the cause or sufficient reason of his idea of infinite objective reality" (Nolan/Nelson, 110) is full of hot air. The mediator will necessarily run into contradicting propositions, at which time she will either separate the concept into two distinct parts, or deny one of the propositions—either way, the singular *actual infinite* is lost. What's more, the mediator *can* be the cause of perceived infinity, by practicing the kind of repeated augmentation that is available in our finite world.

None of these claims thus far have been in contention with Descartes' causal reality principle, which suggests that all things must have at least as much or more formal reality than it has objective reality. Instead the opposite is true: it has been shown that because our conception of an infinite being is deficient and limited, it follows, according to Descartes' own causal reality principle, that a less-than-actually-infinite formal reality is required to support them. Thus, without the necessity of an actually formal infinite reality, the proof for the existence of God fails. Jill LeBlanc also argues that even though we can know that an infinite being would be able to create logical contradictions, we would not be able to attend to them, and from that springs a series of problems for Descartes. She writes in her critical essay:

If infinite power can create what we should regard as logical contradictions, then we can see why the infinite must be beyond our grasp [emphasis added]. We know that God must be able to create these inconceivable states of affairs—power utterly without limits is power without *logical* limits also. Knowing that this is what infinite power would entail, however, is not knowing, in any deep sense, what these states of affairs—we should not recognize them were we to see them. ... What we can conceive is a measure for what the infinite being can do, but it is no measure of what the infinite being cannot do. The infinite must be beyond our grasp, or there would remain the possibility that we had created this idea, a possibility that would block the Third Meditation proof for the existence of God." (LeBlanc, 279-282.)

The last bit here is a bonus that we could use to create a dichotomy for Descartes: either a being that is actually infinite inherently contains logical incoherencies and therefore we are unable to

properly conceive it, or we are able to properly conceive it within our finite objective reality, which would eliminate the cause of a formal reality. Though I have argued and I maintain that we cannot conceive of infinity, either way, we are left with no reason to assert that there is a necessary formal cause.

Since we have seen here that the infinite is beyond our grasp, we have shown that a key premise in Descartes' trademark argument is false, rendering the argument, as it stands, unsound. Namely, the premise that we have an idea of a being that is actually infinite contains devastating contradictions. Descartes is simply not able to make the claim that our conception of the infinite is as robust as it needs to be to have a cause outside of, or greater than, our own being.

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