Logic and Existence

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Can existence be proved by analysis and logic?

Are there merely possible objects?

Is existence a predicate?

Could there be a real unicorn?

I am going to talk today about the ontological argument for the existence of God as formulated by the 11th Century Archbishop of Canterbury, St. Anselm. I want to assure you in advance that I have not chosen this topic because I think the ontological argument is especially persuasive. In fact when I first heard the argument at college from some of my fellow students, I thought they were pulling my leg. I thought it was a kind of parody of philosophy. And I still find it remarkable that so many important philosophers--Descartes, Spinoza and Leibniz in previous centuries, and Hartshorne and Malcolm in our own, have thought that commitment to a religious life could be justified by some questionable formal manipulations with murky concepts like existence and perfection. But I do think that thinking about the ontological argument and some of the classical objections to it is an excellent way of thinking about the themes--logic and existence--that I chose for the title of this talk and that I want to think about during my stay at the Institute.

In the next 45 minutes or so, therefore, I will tell you about Anselm's ontological argument and four objections to it that are suggested by the four questions on the blackboard.

One virtue of the ontological argument as a device to raise interesting questions is its brevity. I have typed on a single page handout almost all of Anselm's Proslogion II and III where the argument (or arguments, as I shall explain in a second) is propounded. On a separate page, I have listed my own "paraphrases" of Anselm's writing, in a kind of deductive form. My "paraphrases" follow the common practice of replacing Anselm's notions of "conceivability" or "that which can be thought of" by "possibility". This is to prevent the mistaken idea that the proof is supposed to hinge on facts about the limitations of the human mind. To save time I will not go over these handouts in detail, but I will just summarize the argument for you.

We start from the simple observation that some people sincerely claim not to believe in God.

It follows that there must be some <u>possible</u> object whose existence these people are denying. Now God is a being than which nothing greater is possible. (Otherwise, as the British philosopher J.N. Findley has observed, it would be idolatrous to worship Him.) Suppose, for the sake of argument, that God did not exit. In that case something greater <u>is</u> possible, namely an existing god. Contradiction. So our supposition must have been false and god exists.

That, at least, is the rough form of the argument in Proslogion II. In Proslogion III, it appears that Anselm is merely trying to strengthen the conclusion of his previous argument. He says that a very similar argument can be used to establish not only that God exists, but that he couldn't possibly not exist. For if He could possibly not exist then he wouldn't be as great as he could be (by being such that he couldn't possibly not exist). I should mention that two contemporary philosophers -- Hartshorne and Malcolm -- think that the Proslogion III version of the argument is valid, but the Proslogion II version is not. Hartshorne, in particular, lambasts other philosophers for concentrating on the II version, which he views as just a kind of warm-up or a foreshadowing of the real argument, which is contained in III and elsewhere.

The first question on the list is not really an objection to this particular argument, but rather a negative reaction to the whole enterprise. Many people think you just can't do this kind of thing. You can't prove the existence of anything just by the analysis of concepts and principles of logical deduction. Findley, for example, denies that there could be a bridge from "mere abstractions" to "concrete existence". Immanuel Kant believed that all judgements of existence were "synthetic", whereas Anselm's argument would make God's existence analytic. This general complaint, it would seem to me, is no easier to establish than the argument it is directed against. Hartshorne goes so far as to say that the general claim would rule out all metaphysics: "to say that logical questions are 'merely' logical and therefore 'not about existence' is an anti-metaphysical dogma, not a self-evident truth." I don't know whether this is true or not, but it does seem plausible that questions about the existence of universals or of absolute space or of primary qualities are questions that might be settled by argument and conceptual analysis. Similarly in mathematics, questions about the existence of prime numbers between given limits, or the existence of perfect solids with a given number of sides can be settled by logical reasoning from axioms, which it <u>might</u> be argued at any rate have the same sort of status as the assumptions on which Anselm's argument rests. Finally, it is worth pointing out that certain existence claims can be proved in logic itself, as it is standardly conceived. I am thinking here of formulas like $(\exists x)(Fx \vee \neg Fx)$. So it may be that logic + conceptual analysis establishes existence claims in metaphysics, mathematics and logic. All of these claims might be disputed, of course, but I am just saying that it isn't obvious that existence claims can never be so proved. Furthermore, even if it were obvious that in general they cannot be, Anselm might well argue that

his case is special. He does in fact say that God is the only being whose non-existence is inconceivable, which would make such a claim plausible.

There is a related question, not about Anselm's enterprise, but about the enterprise of those of us who are trying to represent his argument in some kind of system of logic. I am assuming that such a representation is possible and desirable. If the argument is sound, the representation would demonstrate that in a graphic way. If it is not, then we could find either a false assumption or fallacious step. This assumption is not trivial. Somebody might argue that if the argument is bad then the fact that a particular system of logic can't represent it is a virtue of that system. It seems to me, however, that logic should enable us to represent fallacious argument as well as valid ones--perhaps not every fallacious argument, but at least ones with as much of the flavor of a real argument as this one. (On the other hand, somebody could argue that the ontological argument is a valid argument, but one that transcends all our systems of logic. This is quite possible. We know from Goedel's theorem that there are arithmetic truths that transcend all our axiomatic systems of arithmetic. But once a particular argument or a particular arithmetic conjecture is proposed we know that there are systems that decide it. Whether in arithmetic or logic, it would seem quite reasonable to try to find such systems.)

Recent philosophy, I think, has shown that the first few steps of the argument are not valid, though the argument would still be quite interesting without them. Let me explain. The idea behind the first few steps is that if we can meaningfully say "so-and-so is made of green polyethylene" or "so-and-so swam under London Bridge" or even "so-and-so does not exist", then "so-and-so" must denote at least a possible object--otherwise what would we be talking about? Now Bertrand Russell has shown that if the "so-and-so" in these sentences is a definite description, we need not assume that these sentences are about any possible object so-and-so.   To use Russell's example, "The King of France is bald" can be regarded as asserting that there is at least one object such that: it is a king of France, it is unique (any king of France is identical to it), it is bald. In symbols we can write $(\exists x)(Kx$ & $(\forall y)(Ky \rightarrow y=x)$&$Bx)$ Notice that on this analysis the meaningfulness of the assertion does not depend on whether the phrase "the King of France" denotes any object, whether actual or possible. The American philosopher W.V. Quine, in a famous essay titled "On What There Is" argues that this point remains true even if "so-and-so" is a proper name. We can meaningfully say "Pegasus has wings" without committing ourselves to the existence of Pegasus. What we are really saying, according to Quine, is "There is one and only one object that 'pegasizes' and that object has wings." --in symbols $(\exists x)(Px$ & $(\forall y)(Py \rightarrow y=x)$&$Wx)$ Now maybe we aren't really saying this--I don't know--but we can at least see that it is possible to attribute meaning to sentences with proper names without assuming that those names denote possible objects. And this possibility completely

undermines the first few steps of the argument. Just because somebody says in his heart, with conviction, meaningfully, etc., that God does not exist, we cannot assume that there is a possible object corresponding to the concept of God. For there may be a way to construe his remarks so that they do not presuppose the existence of anything--for example he might be saying ¬(∃x)Gx.

The initial steps of the argument are just intended to establish that God is a possible object. Many modern treatments of the ontological argument simply take this as a premise. Thus the ontological argument is seen as a proof that if God might exist, he does exit. As Hartshorne, puts it would make theism and positivism the only alternatives. Since most atheists probably grant that God might exist, we still would have an interesting and important argument. So let us investigate further.

We said that Quine holds that use of a proper name does not commit us to the existence of its referent. What does commit us to the existence of something? Notice that in Quine's paraphrase of "Pegasus has wings" and Russell's paraphrase of "The King of France is bald" proper names and descriptions are replaced by quantifiers and bound variables. These, according to Quine, are the real indicators of ontological commitment. If you want to know what objects we think there are, look at the range of the bound variables in the formulas we accept. In Quine's words--"to be is to be the value of a bound variable". This slogan would seem to express an important bridge between the two themes of this talk. There are a couple caveats, however. First, the slogan was not intended to be a way of determining what really exists, but rather what somebody thinks exists. Quine himself is quite explicit on this point. He says that he was interested in "ascribing" ontologies rather than "evaluating" them. Yet many people have read him the other way. (One reason for this might be that if our theory of the world is true, then presumably the range of the quantifiers will determine the existing objects. But it isn't clear that it is any easier to determine the truth of a theory than the existence of the objects over which its quantifiers range.) Second, we have to understand that the slogan is understood to apply to sentences rendered in classical first order logic. Quine himself, in some more technical papers, showed that anything that can be said in classical logic with bound variables can also be expressed in languages that are completely variable-free. But in looking for ontological commitment we must look at the sentences in classical logic.

By Quine's criterion or anybody else's, it seems clear that we can only accept the ontological argument if we accept the existence of merely possible objects. As we saw, one step of Anselm's formulation was that God exists "in the understanding". Suppose we try to interpret this in the weakest possible way, namely that God might exist. In modal logic we might represent this as Poss (∃x) Gx--a formula which does not appear to quantify over possible objects. But according to the

standard interpretation of modal logic this formula is expressed classically by $(\exists w)(\exists x)Gwx$, i.e., there is a world w and a possible object x such that x is divine at w. Even if we were to find a way of interpreting the claim that God might exist without quantifying over possible objects it seems very unlikely that we could so interpret the rest of the argument. Consider for example the claim--under the temporary assumption that God does not exist--that if he did exist he would be greater. Being greater is not a property; it is a relation. Now what two objects are being related here? The only possibility I can see is that the objects are an existing God and a non-existing God. Now clearly at least one of these must be merely possible.

What is wrong with assuming the existence of objects that are merely possible? Personally I don't think anything is, if it is done carefully. But there is a long-standing controversy about this in philosophy. Quine, for example, rejects them because they "offend the aesthetic sense of us who have a taste for desert landscapes" and because they are "disorderly". The first reason is certainly not telling. I like desert landscapes as much anybody, but if I happen to live in a jungle I can't really pretend the landscape is barren. The second reason is more troubling. Quine diagnoses two particular disorders in possible objects. These are troublesome, but they are also suffered, to some extent, by more respectable kinds of entities. First Quine asks how possible objects are distinguished--are the possible bald man in the doorway and the possible fat man in the doorway the same or different? I would think that we don't know that until we know more about these two possible objects. Is the man at this table the starting first baseman of the Baltimore Orioles? Not if the man at the table is right-handed and the starting first baseman of the Orioles is left-handed. Two objects--whether actual or possible--are the same if and only if all their properties are the same. Second, Quine asks about enumeration: How many possible fat men are there? Are there more thin ones than fat ones? I ask: How many sets are there? How many functions are there? Are there more sets than functions? The point is that for an entity to be of a certain kind it is not required that we be able to count or assign a number to all the entities of that kind that there are.

The most famous critique of the ontological argument is probably the one contained in Immanuel Kant's Critique of Pure Reason. Kant's objection is often expressed by the dictum "existence is not a predicate." When we say "this chalk is white" we are predicating the property of whiteness of the chalk. But whenever we predicate a property of a thing we presuppose the existence of that thing. So "predicating" existence would be superfluous. To use Norman Malcolm's example, imagine that a King asked his counsellors to draw up lists of attributes that the King's chancellor should possess. Suppose one list said "wisdom, knowledge, patience and courage" and the other list said " wisdom, knowledge, patience, courage and existence". Would the second list really say more than the first? It is interesting that even somebody like Malcolm, who defends the second version

of the ontological argument thinks that with Kant's criticism is telling against the first version. But if we admit possible objects into our ontology and if we take existence in the right sense, then existence does not seem to be superfluous at all.

Let me explain. Existence can be taken in a world-relative sense or a world-independent or "absolute" sense. To says that Pegasus might exist is to say that there is a possible world at which Pegasus exists. Call that world w. So Pegasus does exist at w. At w there is a real flesh-and-blood winged horse. Here, on the other hand, he is a merely possible object. Existence in the world-independent sense is merely existence here, in the actual world. So pegasus does not "exist" in this sense, but Margaret Thatcher does. Now existence in the world-independent sense does seem to be a non-superfluous property of possible objects. It is a kind of predicate of location. To say "Bigfoot exists" is analogous to saying "The Hume Tower is in Edinburgh". It is true that we normally assume the objects we are talking about exist in the world-independent sense, and that when we make this assumption adding absolute existence is superfluous. But in other circumstances it can be significant. The same is true of other predicates. In Malcolm's chancellor example, it might also seem redundant to add qualities like "being human" or "being alive". If it does not seem redundant that is because we are assuming a wider class of possible objects under the term "chancellor", including perhaps, Martians or computers. But under some circumstances we might consider an even wider class. Suppose the King's assignment had been to describe the characteristics of some chancellors in literature. Then a list with existence would rule out Polonius, but not Machiavelli, whereas a list without existence wouldn't rule out either.

The last question on the list is motivated by an objection often attributed to Caterus. Caterus was one of several contemporaries of Descartes who wrote "objections" to Descartes Meditations that Descartes replied to. The objections and replies were included in subsequent editions of the Meditations. I don't think this objections is really Caterus's or at least not the main one Caterus raises, but it is often attributed to him. Although it was intended as an objection to Descartes version of the argument it would seem to apply generally to any version of it and it would seem to raise very fundamental questions. The objection is this. The ontological argument assumes two basic principles: first, that every consistent description picks out a possible object and second, that the possible object picked out has the properties attributed to it. Once we grant these two properties we can prove the existence of anything. I will prove, for example, the existence of a unicorn. There is nothing inconsistent about the phrase "existing unicorn" so by the first principle there is a possible object corresponding to it. By the second principle this unicorn exists. (As an aside: let me mention a similar argument discussed in a book by the logician Raymond Smullyan called What is the Name of this Book?. Smullyan's argument goes as follows. Either an existing unicorn exists or an existing

unicorn does not exist. The second disjunct is contradictory so the first must be true. So an existing unicorn exists.) I do not feel I have a complete reply to this objection. I will give you a few of my thoughts and maybe you can suggest others when I finish. I want to concentrate on the first principle--that every consistent description picks out a possible object. There is some difficulty first in understanding what a consistent description is. In logic consistency is a property of a set of sentences. A set of sentences is logically consistent if a contradiction cannot be derived from it. If our logic is sufficiently strong we can actually prove a property like the principle in question--that every consistent set of sentences is true "somewhere". Let us say that a description is a set of sentences all containing some name x. (When we say x is a name we must be careful not to assume that x denotes anything. That would beg the question.) Since descriptions are now sentences we can try to keep our old definition of consistency. But the rules for deriving the contradiction can't be mere logic in any narrow sense. There is no strictly logical contradiction in the description 'x is a bachelor' and 'x is married', yet clearly this is not a consistent description. An extra rule permitting substitution of synonymous phrases might do here, but it is not clear that such a rule would enable a contradiction to be derived from the description "x is water" and "the molecules of x contain three atoms of hydrogen" or from "x is human" and "x is made of stone". Yet these might be thought to be inconsistent in some metaphysical sense. Perhaps what is meant by consistency of a description is just that no contradiction can be derived by rules of logic or semantics or metaphysics. There still remains the question of whether every consistent description picks out a possible object. I think that as long as the description is purely world-relative, the principle is true. Consider a description like 'x is red' and 'x is heavy' and 'x is a table'. Surely there is a possible object meeting this description. But consider the description 'x is red-at-u' where u is a particular possible world. Whether or not there is an object x in some possible world w such that x is "red-at-u" depends on whether there are any red objects in u. It does not seem fair to say that because "redness-at-u" is consistent there must be a world w containing objects red at u. There is a sense in which u and w are independent--no matter how we change w, we cannot affect whether x is red at u. We can make an analogy with time. Suppose John was a precocious child and suppose he is now 70 years old and has a full head of hair. We can imagine making various descriptions of John true. We might be able to make it true that John is happy and John is red-faced and John is rich and maybe even that John is bald. But we cannot do anything to make John fit the description "prematurely bald" or to make him fit the description "late bloomer". Premature baldness and being a late bloomer are properties that hold or fail to hold of John in virtue of the way he was before. There is nothing that can be done now to change them. Now lets get back to existing unicorns. Clearly existence here is to be taken in the world-independent sense. Otherwise we are just proving that existing unicorns exist in their worlds, which, of course, they do. So when we say that the description x exists and x is a unicorn is a consistent description we mean that x exists here and x is a unicorn is consistent. According to the

first principle it should follow that there is a world w at which x is a unicorn and at which x exists here. But that is not fair. If x does not exist here, there can be no world in which he exists here-- though there may be many at which he exists there. "Real existence" is one sort of world-independent property. "Necessary existence" or existence in every possible world is another. The phrase "necessarily existent being" might be consistent in the sense that we get no contradiction by applying laws of logic, semantics or metaphysics. This does not mean there is a world containing a necessarily existent being. For to have necessary existence in u is to have existence in a,b, and c. And we should not think that there is any way to build u that will guarantee any properties in a,b,c.

My answers to the first three questions are roughly, why not?, why not?, and why not?. My answer to the fourth question is "no, not if a real unicorn means a unicorn here." But in the case of the last question I feel that I don't really have a full argument. It just seems plausible that consistent descriptions pick out possible objects when they are world-dependent, but not when they are world-independent. I would like to have a more complete explanation, of course, but since I was asked to give a talk on work in progress I feel justified in ending on this note. If any of you can help resolve the problem, of course, that would make me feel even better.

Logic and Existence--Reference Sheet

Texts

FROM PROSLOGION II

...And, indeed, we believe that thou art a being than which nothing greater can be conceived. Or is there no such nature, since the fool hath said in his heart, there is no God (Psalm xiv .1). But, at any rate, this very fool, when he hears of this being of which I speak--a being than which nothing greater can be conceived-- understands what he hears, and what he understands is in his understanding; although he does not understand it to exist...Hence, even the fool is convinced that something exists in the understanding, at least, than which nothing greater can be conceived. For, when he hears of this, he understands it. And whatever is understood, exists in the understanding. And assuredly that, than which nothing greater can be conceived, cannot exist in the understanding alone: then it can be conceived to exist in reality; which is greater.

   Therefore, if that, than which nothing greater can be conceived, exists in the understanding alone, the very being, than which nothing greater can be conceived, is one, than which a greater can be conceived. But obviously this is impossible. Hence, there is no doubt that there exists a being, than which nothing greater can be conceived, and it exists both in the understanding and in reality.

FROM PROSLOGION III

And it assuredly exists so truly, that it cannot be conceived not to exist. For it is possible to conceive of a being which cannot be conceived not to exist; and this is greater than one which can be conceived not to exist. Hence, if that, than which nothing greater can be conceived, can be conceived not to exist, it is not that, than which nothing greater can be conceived. But this is an irreconcilable contradiction. There is, then, so truly a being than which nothing greater can be conceived to exist, that it cannot even be conceived not to exist; and this being thou art, O Lord, our God...

Logical Paraphrases

1) The fool sincerely asserts there is no God. (assumption)

2) God is a being than which no greater is possible (henceforth, g). (assumption)

3) The fool understands g.   (from 1 and 2)

4) Whatever is understood is a possible object. (assumption)

5) g is a possible object.   (from 3 and 4)

6) Suppose g is merely possible (i.e., suppose g does not actually exist). (temporary assumption)

7) It is possible for g to actually exist.   (assumption)

8) If g did actually exist it would be greater.   (assumption)

9) g is not an object than which no greater is possible.   (from 7 and 8)

10) Supposition 6 must be false, i.e., g exists.   (because it led to 9, which is contradictory)

11) God exists. (2 and 10)

6') Suppose g is merely contingent (i.e., suppose g's non-existence were possible).

7') It is possible for g to be necessary (i.e., for g's non-existence to be impossible).

8') If g were necessary it would be greater.

9') g is not an object than which no greater is possible.

10') Supposition 6 must be false, i.e., g exists necessarily.

11') God exists necessarily.