College of Saint Benedict and Saint John's University
DigitalCommons@CSB/SJU

Philosophy Faculty Publications
Philosophy

2004

A New Formalization of Anselm's Ontological Argument

Timothy A. Robinson
College of Saint Benedict/Saint John's University, trobinson@csbsju.edu

Follow this and additional works at: https://digitalcommons.csbsju.edu/philosophy_pubs

Part of the Philosophy Commons

Recommended Citation
Robinson, Timothy A., "A New Formalization of Anselm's Ontological Argument" (2004). *Philosophy Faculty Publications*. 6.
https://digitalcommons.csbsju.edu/philosophy_pubs/6

This Article is brought to you for free and open access by DigitalCommons@CSB/SJU. It has been accepted for inclusion in Philosophy Faculty Publications by an authorized administrator of DigitalCommons@CSB/SJU. For more information, please contact digitalcommons@csbsju.edu.

A NEW FORMALIZATION OF ANSELM'S ONTOLOGICAL ARGUMENT

Tim Robinson
2004

Recent writers have offered various proposals for recasting Anselm's ontological argument in modern logical notation.[1] Building on these efforts, I here propose a formalization which is both simpler than its predecessors, in that it makes use of less advanced logical devices, and also immune to some of the criticisms which have been directed at other interpretations.

By "the ontological argument" I mean the argument of *Proslogion* II. While there has been some debate about the appropriateness of treating this argument in isolation from the rest of the work, it has become commonplace to do so, particularly for purposes of logical analysis.[2] This is surely correct. The text clearly draws a conclusion from asserted premises and it is fair to inquire whether this conclusion follows validly from those premises before broaching further questions of the connections between this chapter and the rest of the work. On the other hand, later arguments, particularly that of chapter III, raise some of the same logical issues as the argument of chapter II, and I have therefore readily drawn on works that focus on these other arguments where they seemed relevant.[3]

For ease of reference, I offer the following uncontroversial (I hope) outline of the argument, using 'S' to abbreviate 'something than which none greater can be conceived':[4]

---

[1] Noteworthy efforts include Robert Merrihew Adams, "The Logical Structure of Anselm's Arguments," *The Philosophical Review* 80:28-54 (1971); Jonathan Barnes, *The Ontological Argument* (London: Macmillan, 1972); Paul E. Oppenheimer and Edward N. Zalta, "On the Logic of the Ontological Argument," in James Tomblin, ed., *Philosophical Perspectives 5: The Philosophy of Religion* (Atascadero: Ridgview Press, 1991), pp. 509-529 and reprinted in *The Philosopher's Annual: 1991*, XIV: 255-275 (1993)—my citations are to the pdf version available at http://mally.stanford.edu/ontological.pdf and therefore reflect a different pagination; and Gyula Klima, "Saint Anselm's Proof: A Problem of Reference, Intentional Identity and Mutual Understanding," in Ghita Holmström-Hintikka, ed., *Medieval Philosophy and Modern Times* (Dordrecht: Kluwer, 2000), pp. 69-87, available on Klima's website at http://www.fordham.edu/gsas/phil/klima/anselm.htm. Here, too, my citations are to pages as printed from the website.

[2] For an overview of the debate, see Gregory Schufreider, *An Introduction to Anselm's Argument* (Philadelphia: Temple University Press, 1978), pp. 39-50; his own views are defended on pp. 50-60. The major figures in the debate are D.P. Henry, *The Logic of St. Anselm* (Oxford: Oxford University Press, 1967), pp. 142-150, who agrees with the traditional view that the argument of chapter II is complete, and Richard R. Lacroix, *Proslogion II and III: A Third Interpretation of Anselm's Argument* (Leiden: E.J. Brill, 1972), who rejects the traditional view.

[3] I have paid special attention to Dale Jacquette's analysis of chapter III in his "Conceivability, Intensionality, and the Logic of Anselm's Modal Argument for the Existence of God," *International Journal for Philosophy of Religion* 42:163-173 (1997), and to Jacquette's major source, Graham Priest, *Beyond the Limits of Thought*, 2d ed. (Oxford: Clarendon Press, 2002), pp. 56-60 (the first edition was published in 1995 by Cambridge University Press). Priest touches on chapter II but is primarily interested in chapter XV.

[4] I revert to the older translation 'conceive' for *cogitare*, for the same reason that I suppose it was first selected: like the Latin word, 'conceive' can take as its object either a noun or a clause. Jonathan Barnes's 'imagine' works, too, but that term invites confusion between the medieval and the modern understandings of the faculty so named.

1. The fool understands the expression ‘S’.
2. What the fool understands is in his understanding.
3. Therefore, S exists at least in the understanding.
4. If S exists in the understanding alone, then it can be conceived to exist in reality as well,
5. Which is greater.
6. Therefore, if S exists in the understanding alone, S is not S. But that is impossible.
7. So, S exists both in the understanding and in reality.

I shall follow common practice in making the following assumptions:

A. The expressions ‘x is in the understanding’ and ‘x is conceived’ can be regarded as synonymous.[5]

B. The argument moves essentially from the conceivability of S to its real existence. Accordingly, the argument proper begins with premise 3, ‘S is in the understanding’, construed as ‘S is conceivable’ rather than as ‘S is conceived’. On this view, the assertions (1 and 2) that the fool understands the expression ‘S’, and that S exists in the fool’s understanding offer a subargument for this first premise, and the change in expression from ‘S exists in the fool’s understanding’ to ‘S exists in the understanding’ signals a shift from ‘is conceived’ to ‘is conceivable.’[6]

If these assumptions are rejected, an accurate formalization of the argument will have to be more complex than the one I offer here. But I believe my simpler version would still appropriately serve as the basis for developing the more complicated symbolization.

Debates about the existence of things require that we be able to make assertions about things in ways that do not *ipso facto* commit us to their existence. Most recent commentators on Anselm have accepted the strategem of allowing existence to function as a predicate. Among formalizers of the argument, this is accompanied by a stipulation that the “existential” quantifier shall not be construed to have existential import. In this context, it would be better denominated the “particular” quantifier. I shall adopt this approach as well.[7]

---

[5] Henry, p. 143-145, insists on the difference between ‘understanding’ and ‘thinkability’, at least when interpreting *Proslogion* III, but it is not clear to me whether he thinks we must respect this difference in chapter II as well. In any event, I follow the majority in ignoring the difference and (I presume) in supposing that if this assumption is wrong, the deficit can be made good later.

[6] This assumption is seldom stated explicitly, but is implicit in any interpretation which takes premise 3 as the beginning of the argument and treats it as equivalent to ‘S is conceivable’ (or takes a comparable approach to the arguments of later chapters). These include Oppenheimer and Zalta, p. 11; Jacquette, p. 169 (on chapter III); and Priest, pp. 57-58 (on chapters II and XV).

[7] This is the method of Adams, pp. 32-34, Jacquette, p. 166; Oppenheimer and Zalta, pp. 1-2, 8; and Barnes, pp. 88-89. This approach rejects the criticism, traditional since Kant, that “Existence is not a predicate,” or as Kant himself put it, “Existence is not a determining predicate.” A good exposition of this criticism, sensitive to the complexity of Kant’s account, is that of R.E. Allen, “The Ontological Argument,” *The Philosophical Review* 70: 56-66 (1961). The criticism has been answered, specifically in connection with

To deprive the particular quantifier of existential import is to reject the traditional view that the domain of discourse for formal languages (at least in philosophical applications) must be limited to real objects. But if that is not the domain of discourse, what is? Barnes does not address the issue. Jacquette does little better, saying only that the quantifier indicates "domain membership by an existent or non-existent object."[8] Oppenheimer and Zalta appeal to Terence Parson's theory of non-existent objects, and claim that Anselm's notion of a thing's being in the understanding "corresponds" to the kind of being that Parsons represents with the particular quantifier, while Anselm's 'existing in reality' matches what Parsons symbolizes with the existential predicate.[9] Robert Adams goes further toward pinning down the domain of discourse. He considers and rejects a Meinongian universe, but says, "Anselm's formulation of his argument . . . is consistent with the supposition that his universe of discourse is restricted to things which either exist in reality or are actually thought about."[10] Finally, Gyula Klima points out that according to views of the nature of language current in Anselm's time, "terms that are actually not true of anything may have referents . . . in the context of intentional verbs, such as 'think', 'want', 'imagine' and the like. But to be sure, these referents are not to be construed as beings (*entia*), or objects simpliciter, but as objects of thought." Accordingly, he proposes that in formalizing Anselm's argument we "interpret our variables as ranging over objects of thought."[11]

I shall accept Klima's proposal, with one modification. In accord with assumption B above, I shall define the domain of discourse not as that of objects which are *conceived* (thought of, in someone's understanding), but as that of objects which are *conceivable* (can be thought of, are in "the" understanding). With this definition of the domain, a proposition of the form '$(\exists x)Fx$' will mean 'there is a conceivable object which has the property F'. Contrary to Adams' proposal, the domain does not contain really existent objects considered as such. Assertions of real existence must be made by first picking out the object in question as a conceivable object, and then asserting existence of it by using the existential predicate. This is consistent with the usual procedure of free logics.

---

the Ontological Argument, by Jerome Schaffer, "Existence, Predication and the Ontological Argument," *Mind* 71 N.S. No. 283, reprinted in John Hick and Arthur C. McGill, eds., *The Many-Faced Argument: Recent Studies on the Ontological Argument for the Existence of God* (New York: Macmillan, 1967), pp. 226-245, and at greater length by Jonathan Barnes, who devotes his entire third chapter to it. More general defenses of this strategy as a way of dealing with all sorts of non-existent (or possibly non-existent) objects, can be found in Richard Routley, *Meinong's Jungle and Beyond* (Canberra, Australia: Australian National University, 1979), esp. pp 180-186 and Terence Parsons, *Nonexistent Objects* (New Haven: Yale University Press, 1980), esp. pp. 1-13 (and, for the formalization of his theory, pp. 63-78). Dropping the existential import of the particular quantifier and symbolizing existence as a predicate instead are characteristic of free logics, which may be taken to have shown that this approach need not be logically disastrous. In addition to the works by Routley and Parsons, see Karel Lambert, "Free Logics" in *The Balckwell Guide to Philosophical Logic* (Malden, Mass.: Blackwell, 2001), pp. 258-279. However, such logics are typically constructed so as to prevent the introduction of an existentially quantified proposition until after the existence of members of its subject class has been proven. This is not a stipulation we want to impose on Anselm, for reasons that should be obvious.

[8] P. 166

[9] P. 10.

[10] P. 33.

[11] P. 2.

Allowing assertions about a domain of conceivable objects raises a host of questions. How are conceivable objects individuated? Is there a unique conceivable object corresponding to each real individual, or are conceivable objects necessarily universal in character? Can we give logically proper names to conceivable objects? Could it be legitimate to use a definite description in referring to one?

Issues analogous to these are familiar from the field of possible-world semantics; they are often discussed under the heading of "the problem of trans-world identity."[12] Without belittling these problems, I submit that we do not need to solve them to arrive at a satisfactory formalization of the ontological proof. The key to avoiding these difficulties is to recognize a point I have found explicitly stated only by G.E.M. Anscombe: Anselm's famous characterization of God is *not* a definite description.[13] In its first occurrence ('something than which none greater can be conceived') it doesn't even look like a definite description. It is true that later in the argument Anselm uses the expression 'that than which none greater can be conceived', which does sound like a definite description. But it need not be taken that way. It is very common to introduce a hypothetical entity with an indefinite description and then switch to apparently uniqueness-indicating terms when discussing it. "Suppose there were a unicorn in your back yard. Anyone with normal vision would be able to see the unicorn, wouldn't they?" The use of 'the unicorn' in this context does not ordinarily prompt questions about how one imaginary unicorn is to be distinguished from another, or how we can fix the reference of our term uniquely to one particular unicorn. Anselm's language is exactly parallel. He does not use a definite description, and thus he does not, simply by the form of his description, imply that it applies uniquely to a single individual.

That Anselm meant his description to be taken in this way is corroborated, I think, by the fact that in chapter XXII of the *Proslogion* he does offer an argument for God's uniqueness. That would hardly be appropriate if he had already presupposed God's uniqueness in chapter II. This is not conclusive, of course. Anselm may not have been aware of what his argument presupposed. If it should turn out that the argument can only be rendered valid by adding such a presupposition, then perhaps we should return to the common interpretation.[14] But I hope to show that this will not happen.

A further, and perhaps even stronger, point in favor of construing the description of God as indefinite is that it greatly facilitates the analysis of premises 4 and 5. Anselm puts them in a single sentence: "If S exists in the understanding alone, then it can be conceived to exist in reality as well, which is greater." How shall we expand the last clause so that it can stand alone? What is it saying is greater than what? The gist of it

---

[12] For two extensive and well-known treatments, see Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon Press, 1974), chapter VI, and Saul Kripke, *Naming and Necessity,* 2d ed., (Cambridge, Mass.: Harvard Univ. Press, 1980 [1st ed: 1972]), Lecture II.

[13] "Russelm or Anselm," *Philosophical Quarterly* 43:501.

[14] Barnes considers and rejects the possibility of using an indefinite description, on the ground that the sub-argument from step 1 to step 3 (which he formulates differently than I have) requires the presupposition of uniqueness. He seems to imply that the argument from 3 on does not require this presupposition, but given his view of the subargument, he has no cause to explore this possibility. He finds the whole argument valid but faulty, inasmuch as there is no good reason to accept this presupposition. See his pp. 12-13 and 80. I don't think the presupposition is required even for the subargument, but to show that I would have to wrestle with the difficulties of putting the Fool back into the argument, a task I propose to save for another time.

seems to be, "If S exists in the understanding alone and it is conceived to exist in reality as well, then the latter is greater than the former." The problem is to get rid of the ambiguities in 'latter' and 'former' here. This premise asks us to compare S-in-the-understanding-alone with S-in-reality-as-well, and pronounce one of them greater than the other. Are these two things, or just one? We need them to be the same insofar as both are S, but if one is greater than the other, they can't be the same individual. But if we take 'S' as a definite description, we're faced with the difficulty of referring to two individuals both of which satisfy the same definite description. That cannot be.

Consider how this issue crops up in Barnes's treatment. He distinguishes two ways of expanding premise 5 (the simplified translations in brackets are mine):

> (a) If X is in someone's understanding and does not exist in reality, and Y exists in reality, then Y is greater than X [in looser language, this would be, Anything real is greater than anything merely understood].
>
> (b) If X and Y are exactly alike except that X is in someone's understanding and does not exist in reality, and Y exists in reality, then Y is greater than X. [This, stated more loosely, is, A thing which is real is greater than the same thing would be if it were merely understood.]

Barnes observes that **b** is the traditional reading, and, he says, it is "doubtless preferable." In spite of this, he goes on to use **a** in his analysis, because it is simpler, and he thinks it doesn't make any difference. I think it does make a difference, because **b** is not nearly as sweeping a claim as **a**. But here I just want to note that some such locution as "X and Y are exactly alike except that . . ." is necessary to capture in a non-paradoxical way the notion that the two things we are comparing are the same and not the same.

All of this becomes much simpler if we interpret 'S' as an *in*definite description. This is especially obvious if we use the description itself rather than its abbreviation. Premise 5 could then be expanded:

> If something than which none greater can be conceived exists in the understanding alone, and something than which none greater can be conceived exists in reality as well, then the second something is greater than the first.

This way of putting it does not require us to compare the same individual in two different situations (understood and real), nor even two individuals alike in all other respects except for being in these two different situations. It leaves open the possibility that they may be altogether distinct individuals, requiring only that both of them satisfy the same indefinite description—and since the description is now indefinite, there's no absurdity in the requirement. This way of reading the description yields a straightforward and relatively simple interpretation of 5, and one which is easily extended to premise 4 as well. In addition, it absolves us at least of the immediate necessity of determining how we shall identify and differentiate conceivable objects. Of course, if we wanted to elaborate a complete semantics for our logic as applied to this domain, we should have to wrestle with such theoretical issues. But that is much more than is required to make sense of Anselm's argument.

Though I will not confront the issue head-on, I will point out that there is reason to suppose that the larger issue is not insuperable. In ordinary conversation, we do have a way of identifying and distinguishing conceivable objects. Suppose I begin a story, "Once upon a time there were two unicorns . . ." and you nervously interrupt: "Oh my goodness, how shall I tell them apart?" "Look," I say, "imagine two unicorns, okay?" "Okay." "Now let's just call one of them 'Fred' (or I could have said, 'the first unicorn') and the other one 'Alice' ('the second unicorn')." But you reply anxiously, "How do I know which one is Fred and which one is Alice?" How can I explain to you that this question is meaningless? I am stipulating that there are two unicorns, and I am stipulating that one is named 'Fred' and the other 'Alice'. So far that's all we know about them. So the only way we have of keeping track of the difference between them is by their names. By the end of the story we will know some more things about them. We may or may not know something that is true of one of them and not of the other. Perhaps Fred will be the one who was captured and Alice will be the one who got away. But unless there is some incoherence in my story, it will not make sense afterwards to ask, "Are you sure the one who got away was Alice?" When it comes to imaginary objects, the whole business of reference is achieved by stipulation.[15]

An exactly similar notion seems to lie behind the rule of Existential Instantiation. We instantiate an existential proposition by replacing one of its bound variables with a free "individual variable." This is a strange animal which is not exactly an individual and not exactly a variable. Thousands of logic teachers have doubtless offered explanations along these lines: "The existential statement says there are some things with such and such predicates. When you instantiate, you're picking out one of those, but it can be any one of them, and you aren't saying which one it is. And since you aren't picking out a particular one by using its proper name, you might get 'em confused with each other. So to avoid that, we'll treat these individual variables as if they were temporary proper names. And we'll put some restrictions on their use to keep us from inadvertently using the same temporary name for two different individuals."

This is precisely the kind of stratagem we should use for dealing with the consequent of premise 5 as formulated above. Rather than speaking of 'the first something' and 'the second something', we can now say:

> If some x than which none greater can be conceived exists in the understanding alone, and some y than which none greater can be conceived exists in reality, then y is greater than x.

But a significant inaccuracy remains. Anselm does not say, though he presumably believes, that a real S is greater than one which is merely conceived. What he actually says is that an S *conceived of as* real is greater than one which is merely conceived. In other words, he introduces a third category. Besides a conceivable object simpliciter and a conceivable object which is also real, he introduces the notion of a conceivable object

---

[15] Compare Klima's note 22: "Mere objects of thought are not individualized by their ('nuclear') properties, but simply by the intention of the people who think of them." This approach is analogous to Kripke's treatment of Nixon in other possible worlds; see his pp. 42-47.

which is conceived to be real.[16] Contra Hume, Anselm does not believe that to conceive of an object at all is *ipso facto* to conceive of it as real.

Since my aim here is to identify the logic of Anselm's argument, not to defend his metaphysics or epistemology, I shall not try to convince the reader that Anselm is right and Hume is wrong on this point. But it may aid understanding if I can at least suggest how Anselm's view might be construed as plausible.

Part of what is commonly meant by asserting that a thing is real is to say that it stands in certain relations, particularly causal relations, with admittedly actual objects. Now it seems to me that there is a difference between simply imagining a unicorn and imagining a unicorn in my back yard. The latter is not the same as imagining a unicorn in an imaginary back yard. Because my back yard is real, imagining a unicorn in my back yard is imagining it in interaction with actual objects. It seems to me that might fairly be described as imagining the unicorn as real. That is not to go so far as to believe or assert that the unicorn is real. But it seems something more than just envisioning a unicorn. Now as far as ontological status goes, a unicorn imagined-as-real is no more real—is just as much a "merely" conceivable object—as an imaginary unicorn simpliciter. How can we mark the difference here without plunging into paradox? We might think of it thus: To conceive of an object simpliciter is to conceive of an object with some set of descriptive or determining predicates. To conceive of an object as real is to construct another conceivable object by adding to the object simpliciter the non-determining predicate "real." But this predicate is added still in the mode of imagination or conjecture or hypothesis, so to speak, rather than in the mode of belief or assertion. To signify that an object is being conceived of as real, we can take an object described simpliciter and assert of it this special predicate. We'd better name this predicate "conceived-of-as-real," to avoid confusing it with our genuine existential predicate. If, following tradition, we use 'E!' for the latter, we might adopt 'C!' for the former.[17] (In both cases, we could drop the exclamation point, but perhaps we should use it to remind us that these are non-determining predicates.)

Since we are using indefinite descriptions to identify conceivable objects, the way we will assert either of these special predicates of a conceivable object is to assert that "there is" (without existential import) an object having such and such properties, and moreover, this object has the special predicate as well. In other words, we will guarantee the sameness of the object by the law-abiding use of bound and free variables.

Now it might appear that I have oversimplified premise 4 (and therefore also premise 5). Premise 4 does not say in its consequent that there *is* a conceivable object satisfying the description 'S' and that this object *is* also conceived-to-be-real. It says that there is a conceivable object satisfying 'S' and that this object *can be* conceived-to-be-real. But the difference is only apparent. The only sense I can make of the notion of conceiving something as real is, as I have said, that one conceives of an object under some description and then conceives of a second object which differs from the first only by the addition of the attribute of real existence. To say that this second kind of conception is possible (that S *can be* conceived-as-real) is precisely the same as to say

---

[16] The point is emphasized by Anscombe, "Why Anselm's Proof in the *Proslogion* is Not an Ontological Argument," *The Thoreau Quarterly* 17:32-40, esp. 36-37, and "Russelm or Anselm," p. 502.

[17] The 'E!' derives from *Principia Mathematica*. It is referred to as "E-shriek".

that its content represents a conceivable object (i.e., that S-conceived-of-as-real is a conceivable object). The modality 'conceivability' is built into the specification of our domain of discourse and need not be captured independently here.

What does a formalized version of Anselm's argument look like, if we take all the foregoing considerations into account? Let's consider one step at a time. To avoid confusion, I shall retain the numbering from my first summary, even though I have now decided to begin the argument at statement 3. Statement 4, however, must be elaborated into two separate steps.

3. S is in the understanding.

This is now fairly straightforward. First, we translate the description 'S'. To say that nothing greater than x can be conceived becomes, in logicese, 'there is no conceivable object y such that y is greater than x': $\sim(\exists y)(y > x)$. This propositional function is our indefinite description of God. Interpreters who regard Anselm's description as a *definite* description naturally make use of the standard inverted-iota operator, so that the description is formalized:

$$(\iota x)\sim(\exists y)(y > x)$$

They typically go on to make this description a definition for some symbol (usually 'g') representing a name (but not a logically proper name) of God. Should we follow this pattern, substituting some *indefinite* description operator for the iota? Priest and Jacquette attempt to remain neutral on the interpretation of the description by introducing a description operator (symbolized 'δ') which is "indifferently definite or indefinite." Whatever the propriety of an ambivalent operator, an indefinite description operator seems innocuous. But it is also unneccessary. There would be some justification for using one if we wanted to follow the friends of the definite-description interpretation in using it to define a name and then using the name in place of the description in our formalization of the proof. '$g = \sim(\exists y)(y > x)$' is an odd sounding definition. What it's supposed to mean is that g is defined as 'an x such that no y is greater'. We need to get that *an x* in there somehow. So why not something like '$g = (\delta x)\sim(\exists y)(y > x)$'? Perhaps this is in principle unobjectionable. But for reasons I shall make clear below, I do not want to replace the description with a definitionally equivalent name. So I have no need of such an operator.[18] Accordingly, we can now explicate our first

[18] The use of such an operator, whether definite, indefinite, or "indifferent," is not without its hazards. It tempts the eye to suppose that the variable representing the object described ('x') is bound in the description. But the description operator does not truly bind its variable. It only becomes bound when the description is used in a proposition which quantifies over it. I don't know if this is the source of the confusion, but Jacquette's use of the description operator strikes me as confused. It enables him to infer from the definition of 'g' in combination with something he and Priest call the "Characterization Principle" (which Priest got from Routley) the conclusion '$\sim(\exists y)(y > g)$'. This looks innocent because 'g' looks like a proper name, but it's really an abbreviation for a description containing a free variable, and it escapes me how the variable becomes bound in this process. The Characterization Principle thus appears to license the assertion of propositional functions. Quantification rules do that, too, but I can't see why this privilege

premise as: There is a conceivable object x such that there is no conceivable object y such that y is greater than x[19]:

$$3.\ (\exists x){\sim}(\exists y)(y > x)$$

4. If S exists in the understanding alone, then S can be conceived to exist in reality as well.

This hypothetical serves as a premise in the argument as it stands, but Anselm gets extra mileage out of it. For the antecedent also serves to express the assumption of his reductio proof. I will separate these two functions. We've already symbolized 'S exists in the understanding'. 'S exists in the understanding alone' can be read as 'S exists in the understanding but it is not real'. This becomes: There is a conceivable object x such that there is no conceivable object y such that y is greater than x, and x is not real.

$$4a.\ (\exists x)[{\sim}(\exists y)(y > x)\ \&\ {\sim}E!x]$$

The Conditional premise says that if S is in the understanding and not real, then there is an object satisfying the description 'S' which is conceived to be real: **If** there is a conceivable object x such that there is no conceivable object y such that y is greater than x, and x is not real, **then** there is a conceivable object z such that there is no conceivable object y such that y is greater than z, and z is conceived-to-be-real. I use 'z' in the consequent as a reminder that, given the scopes of the quantifiers, x and z can be, but need not be, identical. This is not strictly necessary at this point, but it becomes so in formulating premise 5.

$$4b.\ (\exists x)[{\sim}(\exists y)(y > x)\ \&\ {\sim}E!x] \rightarrow (\exists z)[{\sim}(\exists y)(y > z)\ \&\ C!z]$$

---

should be extended to the Characterization Principle. I do not attribute this confusion to Priest because he doesn't actually accept the Principle (see his p. 59).

19 Klima proposes that the description of God (which he construes as definite) be rendered as 'the thought object than which no thought object *can be thought to be* greater', and accordingly uses the same predicate in premise 5 (which is premise 3 in his version), reading 'x can be thought to be greater than y' rather than 'x is greater than y'. Tony Roark, "Conceptual Closure in Anselm's Proof," *History and Philosophy of Logic* 24:1-14 (2003), available on Klima's website at http://www.fordham.edu/gsas/phil/klima/FILES/Tony-Roark.pdf, has argued (pp. 5-8) that Klima's interpretation will require that "the proper concusion of the argument is not that God exists, but rather that God cannot be thought to exist only in the intellect." Klima's reply, *History and Philosophy of Logic* 24:131-134 (2003), http://www.fordham.edu/gsas/phil/klima/FILES/ReplytoTonyRoark.pdf, does not strike me as adequate, for it fails to address the criticism that Klima requires that 'greater than' not be an irreflexive relation, and it fails to respond to Roark's counterexample to his premise 3. In any event, I think Klima's reading undesirable. It conflicts with the way most interpreters take premise 5, and I think the latter is correct because, as I read Anselm, relative degrees of greatness are objective facts about things, even merely conceivable things, and there is no more reason to place such assertions in an intensional context than there is for assertions generally.

5. Which is greater.

We've already got this as: If some x than which none greater can be conceived exists in the understanding alone, and some y than which none greater can be conceived exists in reality, then y is greater than x. I will now state it more precisely. To fix the reference of the variables in the consequent, I must enlarge their scope and make them universal rather than particular. Moreover, it is crucial that the consequent contain two different variables; we don't want to license a conclusion of the form 'x > x'. Since the indefinite description itself contains a variable, we will need three variables altogether. To make this premise fit more easily with 4b, I will use 'x' and 'z' for the two items being compared, and use 'y' for the variable in the indefinite description. Putting all this together, we get: Given any two conceivable objects x and z, **if** x is such that there is no conceivable object y such that y is greater than x, and x is not real, **and** z is such that there is no conceivable object y such that y is greater than z, and z is conceived-to-be-real, **then** z is greater than x.

5. $(x)(z)\{\{ [\sim(\exists y)(y > x) \ \& \ \sim E!x] \ \& \ [\sim(\exists y)(y > z) \ \& \ C!z] \} \rightarrow (z > x)\}$

Note how this formalization captures what I earlier described as the idea that the two items being compared here are in a way the same and in a way not the same. Both x and z satisfy the same indefinite description, but we are protected from identifying them simply by naming them 'x' and 'z'; or more precisely, simply by using two quantifiers and hence two variables. We could of course instantiate this premise by replacing both variables with 'x'. But since we have also used two variables in premise 4b, and we cannot instantiate both of its component propositions to the same individual variable, we will not be able to infer 'x > x' from these two premises.

This also should make it plain why I do not want to replace the indefinite description with an abbreviation. We need to be able to instantiate propositions containing the description with different variables (x and z), and these variables occur within the scope of a quantifier containing a third variable (y). But, as the full derivation shows (in step 11), in order to perspicuously represent the contradiction to which the argument leads, we will also have to replace one of these (z) with y via existential generalization. This requires us to keep the unabbreviated description in play.

6. Therefore, if S exists only in the understanding, then S is not S.

The antecedent just repeats the assumption of the reductio, so we can drop it here. That leaves 'S is not S'. Given the way I have formulated the premises, this contradictory conclusion could best be stated: There is some conceivable object y which is greater than x and it is not the case that there is some conceivable object y which is greater than x.

6. $(\exists y)(y > x)$ & $\sim(\exists y)(y > x)$

This entitles us to deny the assumption. The denial transforms by easy steps into the conclusion.

7. Therefore S exists both in the understanding and in reality.

There is a conceivable object x such that there is no conceivable object y such that y is greater than x, and x is real.

7. $(\exists x)[\sim(\exists y)(y > x) \;\&\; E!x]$

Here is a full derivation, using standard rules of predicate logic. (For this I thought it clearer to renumber the steps.)

1. $(\exists x)\sim(\exists y)(y > x)$ — Premise (3 above)

2. $(\exists x)[\sim(\exists y)(y > x) \;\&\; \sim E!x]$ — Assumption for RAA (4a above)

3. $(\exists x)[\sim(\exists y)(y > x) \;\&\; \sim E!x] \rightarrow (\exists z)[\sim(\exists y)(y > z) \;\&\; C!z]$
   Premise (4b above)

4. $(x)(z)\{\{ [\sim(\exists y)(y > x) \;\&\; \sim E!x] \;\&\; [\sim(\exists y)(y > z) \;\&\; C!z] \} \rightarrow (z > x)\}$
   Premise (5 above)

5. $(\exists z)[\sim(\exists y)(y > z) \;\&\; C!z]$ — from 3, 2, Modus Ponens

6. $\sim(\exists y)(y > z) \;\&\; C!z$ — Existential Instantiation of 5

7. $\sim(\exists y)(y > x) \;\&\; \sim E!x$ — Existential Instantiation of 2

8. $[\sim(\exists y)(y > x) \;\&\; \sim E!x] \;\&\; [\sim(\exists y)(y > z) \;\&\; C!z]$ — Conjunction of 6 and 7

9. $\{ [\sim(\exists y)(y > x) \;\&\; \sim E!x] \;\&\; [\sim(\exists y)(y > z) \;\&\; C!z] \} \rightarrow (z > x)$
   Universal Instantiation of 4

10. $z > x$ — from 8, 9, Modus Ponens

11. $(\exists y)(y > x)$ — Existential Generalization of 10, y/z

12. $\sim(\exists y)(y > x)$ — from 7, Simplification

13. $(\exists y)(y > x) \;\&\; \sim(\exists y)(y > x)$ — Conjunction of 11 and 12 = Contradiction (6 above)

14.	$\sim(\exists x)[\sim(\exists y)(y > x) \;\&\; \sim E!x]$	2-13, Reductio ad Absurdum (assumption discharged)
15.	$(x)\sim[\sim(\exists y)(y > x) \;\&\; \sim E!x]$	from 14, Quantifier Negation
16.	$\sim(\exists y)(y > w)$	Existential Instantiation of 1
17.	$(x)[(\exists y)(y > x) \vee E!x]$	from 15, De Morgan's and Double Negation
18.	$(\exists y)(y > w) \vee E!w$	Universal Instantiation of 17
19.	$E!w$	from 18, 16, Disjunctive Syllogism
20.	$\sim(\exists y)(y > w) \;\&\; E!w$	Conjunction of 18 and 19
21.	$(\exists x)[\sim(\exists y)(y > x) \;\&\; E!x]$	Existential Generalization of 20 (7 above)

Let me summarize what I see as the advantages of this formalization over its rivals. By not using modal operators (whether alethic or epistemic) or definite descriptions, it steers clear of controversies about such items. We need not enter into disputes about the propriety of different modal systems (or of modal logic at all), or respond to Quinean objections about combining modal operators with quantifiers. Because epistemic operators are avoided, it raises no difficulties about substitutability *salva veritate* in intensional contexts. It does not require us to decide whose analysis of definite descriptions is correct. Of course, these are all issues worth pursuing, but there seems to be some merit in an analysis of Anselm which can set them aside.

This would be a temporary achievement, however, if subsequent arguments in the *Proslogion* required us to reintroduce such devices. I do not propose to tackle that question here. But there are other advantages to my formalization which, I would argue, should be preserved even if something more complicated needs to be developed. These have been pointed out in developing the formalization, so I shall only rehearse them here.

The crucial elements of this formalization are (a) the recognition that the description of God is an indefinite description, and (b) the stipulation of the realm of conceivable objects as the universe of discourse. These elements enable us to avoid presupposing or implying that the description is uniquely satisfied, thus escaping Barnes's criticism that such an unwarranted assumption (unwarranted at this point, anyway) underlies the argument. They also enable us to capture in a precise way the sense in which 'S-as-merely-conceived' and 'S-conceived-of-as-real' are and are not the same. This in turn obviates Roark's (otherwise justified) concerns about the step in Klima's version which translates as "God can be thought to be greater than God."[20]

My interpretation assumes that the relative greatness of two things can be assessed purely in terms of the other properties they have. The real greatness of real

[20] See particularly his pp. 5-6.

objects depends on the properties they really have, and the "real" properties of conceivable objects, for purposes of argument, are the properties we attribute to them, the predicates by which we characterize them. Surely Anselm would agree with this assumption. This enables us to say that one conceivable object *is* greater than another, rather than simply that one is *conceived to be* greater than another. The simplest way I can think of to convey the force of this difference is this: if you tell me the description under which you are conceiving of two objects, I can tell you which of those objects (if either) is greater than the other, whether you conceived of it as greater (i.e., consciously recognized that it was greater) or not. This assertion of relative greatness does not, however, *in general* entail the existence of either object. Only in the case of God, as described by 'S', does Anselm claim we can infer real existence from a judgment of greatness. The "objective" character of greatness enables us to interpret premise 5 in such a way as to avoid the unwanted conclusion (in this argument), which Roark thinks we are limited to if the argument is valid, that God cannot be thought to exist only in the intellect rather than that God exists.

Finally, most formalizations of the argument replace the description of God in most premises with an abbreviation which is allowed to serve as a quasi-name or individual variable. The result is that the description itself ceases to play an essential role in the logic of the argument. In my version, we are required to keep the description intact in order to reach the conclusion. Now Anselm seems to have been quite adamant that his argument did not just resist generalization to things other than God (such as Gaunilo's most excellent island); it resisted generalization to things other than *God as identified by the description 'S'*. If Anselm regarded his description of God as the key to the ontological argument, then we must suppose that an analysis of that argument which remains true to Anselm's intentions must exhibit that description as essential to it.

I will conclude with three criticisms of the argument which have previously been offered and which my formalization does not defeat.

First, many philosophers would reject the whole idea of quantifying over conceivable objects. I have adopted this stratagem on the authority of other philosophers who have, to my satisfaction, shown that this is feasible. But I have not attempted to demonstrate it myself. (Incidentally, even if this stratagem is disastrous, I would still argue that it captures the sense of Anselm's argument better than the alternatives. In other words, I would try to transfer the responsibility for using it from me to him.)

Second, while I have been willing to use 'exists' and other non-determining terms as predicates, I am not confident that the available defenses of this usage adequately answer all the objections to it. Specifically, there is the claim that to use 'exists' as this argument does is to commit a category mistake, to cross the boundaries of logical types in an unacceptable way. Perhaps this is the idea underlying most of the "existence is not a predicate" criticisms, but it comes out with varying degrees of clarity. It is quite explicit in Allen[21], and it is carefully spelled out by Roark, who relates it to Russell's theory of types and Tarski's conception of semantic closure.[22] His claim is that to allow the sorts of non-determining predicates Anselm uses is to commit oneself to a language vulnerable to the same sorts of inconsistencies that Russell and Tarski sought to avoid. Klima

[21] Pp. 59-60.
[22] Pp. 10-13.

proposes a counter-strategy, but does not work it out in detail.[23] The defenders of free logics argue that they are immune to such implications, but I do not pretend to be able to adjudicate that issue.

Finally, there is the criticism (or perhaps, family of criticisms) I would put under the heading of Leibniz's question: Does 'S' describe a really possible object? The issue could be expressed in more contemporary terms by saying that it is not enough that the description not be self-contradictory, that *in that sense* it represents a logical possibility. We must also be persuaded that it does not conflict with other principles required in the domain to which we would apply it. For example, the proposition 'Some triangles have interior angles equal to three right angles' is not, strictly speaking, *self*-contradictory. It is only when conjoined with the axioms of Euclidean geometry that it generates a contradiction. 'S' raises a similar issue. Is it consistent with our use of 'greater than' that there could be something than which none greater can be conceived? Could the series of objects ordered by this relation have a last member? Obviously the question cannot be answered until we know more about the relation; that is, until we know what the model is to which our system is being applied and how this relation fits into it. If 'greater than' is applied to the relationship between integers, then the supposition that 'S' is satisfied will generate a contradiction with the axioms of arithmetic. (In saying this, I ignore any differences there may be between conceivability and possibility, just for the sake of convenience.) This common counter-example demonstrates that we cannot assume that 'S' describes a possible object across-the-board, just because it is not evidently contradictory. On the other hand, there are series which by their very nature have a last conceivable member. If I order objects that are more or less circular, then the most circular object conceivable would be one that is perfectly circular. Our ability to accept Anselm's argument depends on whether we can interpret 'greater than' in such a way that (a) positing a limit to the series does not entail a contradiction, (b) the relation preserves a sense which can plausibly be attributed to the relationships between S-as-conceived and S-conceived-as-real, and (c) the relation preserves a sense in which 'S' can plausibly be construed as a description of God.

Now Anselm is a Platonist. Platonists typically believe that any quality that exhibits differences of degree (which for most Platonists means "all qualities") can only exist by virtue of participation in a form which possesses the maximum degree of that quality. Hence instances of these qualities form a series with a last member. Anselm certainly accepts this assumption, if not for all qualities, at least for "great-making qualities" like goodness. This is the basis of his proof in *Monologion* I, and in *Monologion* II, he explicitly restricts the meaning of 'greatness' in that argument to these sorts of qualities. So if his usage in the *Proslogion* is consistent with that, then his Platonist metaphysical assumptions render 'S' a legitimate description, describing a genuinely possible object.

This is not to say that the *Proslogion* proof presupposes the existence of God or that it presupposes the proof in the *Monologion*. The point is rather that it presupposes a fundamentally Platonic metaphysics. Does this mean that in order to judge his proof to be sound we must be Platonists? Certainly not thoroughgoing Platonists. But it seems to me we would have to accept a metaphysics which shares at least the Platonic doctrine that objects which possess lesser degrees of a"great-making" quality are causally

[23] Pp. 133-134.

dependent on a maximum or perfect embodiment of it. I doubt that many contemporary philosophers would find such a metaphysics acceptable. In any event, I have no intention of defending such a metaphysics here.