CARTESIAN ANALYTICITY

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The analytic-synthetic distinction plays a crucial role in philosophy generally, and particularly in analytic philosophy. Leibniz is credited for introducing this distinction to philosophic parlance,[1] and Kant for putting it to full use;[2] there is evidence to suggest both beliefs are mistaken. The analytic-synthetic distinction was first identified by Descartes; moreover, the distinction might be a key point of what is regarded as the "ontological argument." My purpose in this essay is to hint at the correction of those mistaken beliefs.

One word of caution before proceeding. Discussions of analyticity in contemporary philosophy, as in Carnap and Quine's writings, are primarily linguistic; they are mostly concerned with word synonymity, definitions of linguistic terms and questions of meaning and what is meant. Descartes, Leibniz and Kant, on the contrary, apparently worried about a nonlinguistic kind of analyticity that deals with predicate containment, concepts, judgments and things.[3] But Descartes did not consistently state the analytic-synthetic distinction by exclusive reference to nonlinguistic entities. In making the distinction, the text of Rule XIV uses words that refer to bodies and extension as well as sentences that refer to linguistic expressions denoting bodies and extension. My writing below is afflicted by this vagueness, to the extent it explicates texts which are themselves vague.[4]

Descartes recognized the analytic-synthetic distinction in an epistemic context. This should not be surprising, since foundationalist epistemologies require this distinction in order to avoid that interpretation and other factors, by mediating between the knower and what is known, could obstruct the person knowing the truth of incorrigible basic beliefs. The Cartesian explanation is rudimentary (like Leibniz and Kant's) by today's standards of rigor, but it is pretty clear. As a preliminary requirement, we must survey Descartes' thoughts on extension and space.

Extension is "whatever has length, breadth, and depth, not inquiring whether it be a real body or merely space."[5] Descartes averted the need to differentiate body from space due to his adoption of Aristotelian

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spatial theory. For Aristotle, space and place are synonymous. Space is an immovable limit taken up by a certain body.[6] Descartes accepted this view (the prevailing one in the Middle Ages), noting that there can only be a nominal difference between place and space;[7] thus, "by extension we do not here mean anything distinct and separate from the extended object itself."[8]

Discussing the fourteenth rule, Descartes considered three statements:

(i) Extension occupies place.

(ii) Extension is not a body.

(iii) Body possesses extension.

Of (i), he said that its subject may be substituted for "that which is extended," to yield a synonymous statement; of course, the synonymity of "extension" and "that which is extended" is a consequence of Descartes' identification of extension and space.[9] (i) and its equivalent statements resulting from deleting (i)'s subject and replacing it by "that which is extended" can be turned into logical truths by synonym substitution, where such truths contain logical particles as "not," "non" and "no." Logically true statements obtained by synonym substitution[10] are just those whose (cognitive) meaning depends only upon the semantic interpretation of the terms involved and not on any extralinguistic fact(s) referred to by the relevant sentence. The contradictories of such statements cannot be true, given the semantic interpretation employed; thus, their truth requires no empirical verification, the sole criterion for truth-value determination being not violating the law of contradiction. Thus, logical truths are *a priori* truths.[11] Consequently, we prove (i) analytic, for the set of logical truths obtained by synonym substitution is a proper subset of the set of analytic statements. (ii) is a self-contradiction, or so said Descartes, because the idea of extension necessarily involves the concept of body; thus, (ii) actually says "the same thing is at the same time body and not body," which he compared with "number is not the same thing that is counted."[12] This is a violation of the Law of Contradiction, since the grammatical predicate ("is not a body") contradicts the concept denoted by the subject; again, this denotation is a consequence of Descartes' identification of extension and body. We have a logical falsehood, the negation of "extension is body," the corresponding analytically true proposition.[13]

(iii) is of the utmost importance for our purposes, since it is in reference to it that Descartes distinguished analytic from synthetic statements:

Let us now take up these words: *body possesses extension.* Here the meaning of *extension* is not identical with that of body, yet we do not construct two distinct ideas in our imagination, one of body, the other of extension, but merely a single image of extended

body; and from the point of view of the thing it is exactly as if I had said: *body is extended*, or better, *the extended is extended*. This is a peculiarity of those entities which have their being merely in something else, and can never be conceived without the subject in which they exist. How different is it with those matters which are really distinct from the subjects of which they are predicated. If, for example, I say *Peter has wealth*, my idea of Peter is quite different from that of wealth. So if I say *Paul is wealthy*, my image is quite different from that which I should have if I said *the wealthy man is wealthy*. Failure to distinguish between these two cases is the cause of the error of those numerous people who believe that extension contains something distinct from that which is extended, in the same way as Paul's wealth is something different from Paul himself.[14]

This quote provides a rudimentary criterion to differentiate analytic from synthetic statements.

Giving Descartes due credit for pioneering the analytic-synthetic distinction is historically valuable but philosophically uninteresting, unless we show how Cartesian analyticity might contribute to some exegetical issue. In the next paragraphs, I shall argue that what is regarded as the "ontological argument" may not be an argument at all, but merely a use of analyticity. In fact, my thesis that Descartes regarded "god exists" analytic was suggested by reading Meditation V in conjunction with the passage (from AT X, 444) quoted just above and K.d.r.V., A:4-10; B: 8-14. For my purpose in this paper, let us restrict the discussion to two formal systems: Aristotelian logic and *Principia Mathematica's* functional calculi. I intend to show that none of these two systems is suitable for the development of an inferential interpretation of the Cartesian concept of god. Whether other logics are promising candidates for the job is a topic I do not address here.

Difficulties arise if we try to interpret the "ontological argument" using those two logics. To see this, let us write the alleged argument in logical form and find the inferential rules allowing the purported passage from premises to conclusions. If the presently accepted inferential interpretations are tenable, we should be able to translate each proposition in the argument from natural language to the predicate calculus and find the appropriate inferential rules among the finite stack of such rules each of those systems possesses; but we can neither translate those propositions nor find such rules.

To make the point clear, let us see how the "ontological argument" runs in ordinary language. The footnotes after each proposition in the "argument" indicate the approximate place in the Cartesian corpus from which each proposition was extracted ("[" is a conclusion indicator). For brevity, call my rendering OA:

(1) The concept "god" has all positive properties.[15]

(2) Existence is a (positive) property.[16]

[(3) The concept god has existence.[17]

[(4) God exists.[18]

One objection must be dealt with before proceeding. There are natural-language renderings of the "ontological argument" different from OA; hence, I must be certain that the theses to be developed in the sequel are neither excessively nor exclusively dependent on OA. If they are so dependent on OA, those theses would have little (if any) value for the wider context of Cartesian scholarship.
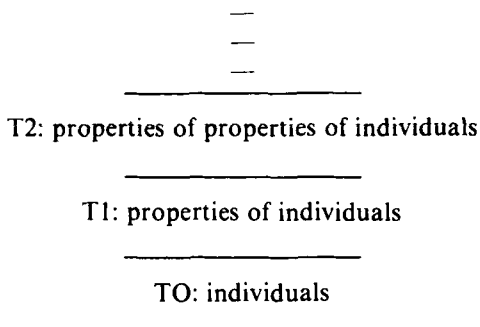
Certainly, OA is merely one of several renderings of the argument;[19] however, it is not easy to see how renderings claiming fidelity to the Cartesian corpus can fail to have components C1 and C2. These two components are: (C1) A statement or combination of statements declaring that existence is a property (or perfection) of god or of our concept of god, and (C2) Another statement or combination of statements asserting that god exists. How these statements are worded and where they or their combinations appear may vary from one rendering to another.

To see this, let us examine Curley and Sievert's versions just alluded to (footnote 19). The fourth statement in Curley's rendering ("I perceive clearly and distinctly that existence belongs to the true and immutable nature of a supremely perfect being") qualifies as C1. In fact, Curley states (page 142) that fourth statement is justified by a subargument one of whose premises is "Existence is a perfection," a statement that satisfies C1. The conclusion of Curley's version is identical to OA's. Sievert's first premise satisfies C1: " . . . the idea of existence is necessarily connected with other ideas which, jointly, constitute the idea of God." (page 203). Sievert worded the conclusion "Thus God necessarily exists." To be sure, one cannot conclude from a brief comparison of three versions of the "ontological argument" that C1 and C2 must be present in all other versions of that "argument"; instead, my point is that the difficulties arising in the effort to interpret the "ontological argument" using Aristotelian logic or *Principia's* language are due to C1 and C2 and not to the peculiarities of any version of the argument. In other words, not only can C1 and C2 be stated as conditions to be fulfilled by all natural-language renderings of the "ontological argument" true to Descartes' text, but those conditions can also be stated independently of any natural-language version one might use to illustrate (not to prove) those two conditions. The challenge I present my objector is to propose a natural-language rendering of the "ontological argument" which can claim fidelity to Descartes' text, though C1 and C2 are missing from his or her proposed rendering. If my reasoning is correct, the theses defended below do not depend on OA, which is merely used as an illustrative example. Let us proceed.

(2) is a problematic premise in attempting to translate the "argument" to functional-calculus notation. It is the type of statement that attributes the property of being a property to the referent designated by its (presumably existent) grammatical subject; the statement says that the property of being a property can be attributed to existence. We say

this with confidence, for "is" in (2) does not serve any other linguistic function (such as identity) commonly ascribed to the verb *to be*. Consider statements of the form "Existence is G," where "G" can be substituted by any property-denoting phrase or word. The property of being a property is attributed to existence only when "G" is replaced by the phrase "a property."[20]

In the functional calculi, properties attributed to things (objects, properties, pairs, . . .) are symbolized by predicate letters (technically called "functions") written to the left of the symbol (the argument of the propositional function) designating those things of which one or more properties are being predicated. For example, in the first order calculus, we use the wff "Fa" to say that "an object 'a' has property F"; so, letting 'b' be the name "Pegasus" and H the property of having wings, we write "Hb". Recall the theory of types regulates the conditions of property attribution in order to avoid paradoxes. This regulation is effected by a stratification, assumed by the hierachy of calculi, that can be readily understood with a diagram of the following sort ("T" denotes type, the number following which one; thus, "T1" means "type 1". The three dashes on the top of the diagram indicate that the stratification of types goes on to infinity. Bear in mind that the diagram and the accompanying explanations are deliberately oversimplified accounts of the theory of types. These accounts are not intended to explain the details of the theory; rather, their sole goal is to illustrate the difficulties type theory poses when a translation of (2) is attempted.)[21]

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T2: properties of properties of individuals

T1: properties of individuals

T0: individuals

The following rule governs the construction of wffs in the first-order calculus:

"Fa" is a wff iff the following is true: Let "m" and "n" be the types of "F" and "a": respectively; "Fa" is a wff iff $m = n + 1$.

Avoiding reference to any specific calculus, we can state the rule with full generality:

FX is a wff iff X's type is one below F's.

In other words, the predicate letter must be one type higher than the thing of which that letter predicates a property.[22] Technically, no predicate can occupy the position of an argument and no predicate can be its own argument.[23] The paradox of impredicability is derived from a question: Is the property of being impredicable impredicable? If it is, then it is not; if it is not, then it is. But the hierarchy of types rules impredicability out, for no property can be predicated of itself. Now, to say that a property is a property ("is" of predication) we would need formulae of the form F(F), the same form required to say that an impredicable property is impredicable; but type theory prevents this by regarding such formulae ill-formed. Consequently, (2) cannot be translated to a wff of *Principia's* functional calculus.

Another argument leads to the same conclusion. Wffs such as "Hb" do not necessarily have existential import. Existential Quantifier Introduction must be used if we wish to assert that the object to which property "H" is being attributed exists. We replace the noun "b" with a variable (Hx) and bind the variable with the (variously called "existential" or "particular") quantifier to get the wff "(Ex)(Hx)"; existence is expressed by (Ex), not by "H". Quantifiers or "E!", not predicate letters, represent existence in the Frege-Russell-Whitehead functional calculus. Some may counter that formulae such as "(Ex)(Hx)" ought to be read substitutionally ("some substitution instance of 'F . . .' is true) rather than restrictedly ("there is a . . ."). But these alternative readings are not objections to my point, because both accept the semantic and syntactic fact that, in *Principia's* functional calculus, predicate letters stand only for properties and cannot stand for existence.[24]

(4) presents additional difficulties also related to the functional calculus. There is no rule of inference in the Frege-Russell-Whitehead (or set-theoretic) systems built on restricted quantification that allows one to conclude that an object exists because it has a property. Moreover, it seems doubtful that Aristotelian logic, the only known to Descartes (as far as we know), allows such an inference. It is not clear that (4) follows from (1) - (3) either by classic or modern logical rules; hence, we may doubt it as the conclusion of an argument in any of the systems just mentioned, where "argument" is defined in the sense of a train of deduction from premises to conclusion.

Thus, the problem is how to account for the epistemic justification and the existential import of Descartes' alleged knowledge of god's existence. More precisely, the task is to show that Descartes used the analytic-synthetic distinction for those purposes, without the modern jargon.

Descartes did not explicitly invoke the analytic-synthetic distinction in explaining his idea of god. This should come as no surprise, since these technical terms had not been coined when he wrote; but he did imply it. The subject of a proposition "N" is "god" and its predicate

"exists." The subject of "N" is defined as a supremely perfect being endowed with all perfections; by necessity, one cannot think of such a being as lacking any perfection. Existence is a perfection, said Descartes; hence, one cannot think of god without existence. In other words, existence is implicit in the concept god. For clarity's sake, let us make this point in a needless psychologistic way: think the concept "god" and you *ipso facto* think "existence." The situation is similar to that of "body" and "extension." Once the concept "god" is understood as a supremely perfect being (existence being regarded as perfection) and body as that which occupies space, it is as redundant to say "god exists" as it is to say "bodies are extended," since "existence" and "extension" were already known through the mere apprehension of the concepts "god" and "body," respectively.[25]

Consider the statement "A triangle has three angles". Contradiction results if the subject is affirmed and the predicate denied. In the case of "N" (as well as "Bodies are extended"), this type of contradiction occurs by positing the subject while denying a predicate that is already "contained in" the subject; in fact, we have a violation of the Law of Contradiction, a key criterion for verifying the truth of analytic statements.[26] Denying the predicates of statements prompts similar contradictions iff the statements are analytic; thus, "god exists" is analytic, *provided* existence is viewed as a perfection and god is defined as a supremely perfect being.[27]

Descartes repeatedly insisted that existence is not necessarily contained in concepts or in the objects of concepts; god's essence is the only exception—existence is necessarily contained in god's essense (see passages in footnote 27); but he did not clearly explain *how* this containment obtains, except by comparing the containment to the triangularity of triangles and the inseparability of mountains from valleys. The theses defended in this paper provide a plausible hypothesis to understand what Descartes could have meant by such insistence. They also provide a framework to understand why Kant rebuffed Descartes on the grounds that existential statements are not analytic.[28] Moreover, they afford a clue to interpreting Descartes' claim that god's existence can be known nonargumentatively:

Fifthly, I require my readers to dwell long and much in contemplation of the nature of the supremely perfect Being. Among other things they must reflect that while possible existence indeed attaches to the ideas of all other natures, in the case of the idea of God that existence is not only plausible but wholly necessary. For from this alone and *without any train of reasoning* they will learn that God exists, and it will be not less self-evident to them than the fact that number two is even and number three odd, and similar truths. For there are certain truths evident to some people, without proof, that can be made intelligible to others only by a train of reasoning.[29]

NOTES

[1] *Monadology*, 33. There are passages in Aquinas' writings one might interpret as making the distinction. *Summa Theologiae*, Pt. 1, Q. 94, Art. 2. Also see Pt. 1, Q. 2, Art. 1.

[2] K.d.r.V., A: 4-8; B: 8-11ff.

[3] See "Replies to the Second Set of Objections," HR II, 19 (AT VII, 115-6) for Descartes' explicit statement of the distinction between words and the things they refer to.

[4] Garver has argued that Kant explained the distinction in at least six prima facie different ways: "Analyticity and Grammar," *Kant Studies Today*, Ed. L. W. Beck. (La Salle: Open Court, 1969), 245-73. This article is also published in *The Monist* 51 (1967), 397-425. Leibniz's use of "term" to denote concepts and not names might exempt his statement of the distinction from similar criticisms. *Leibniz: Logical Papers*, G. H. R. Parkinson, Ed. and Tr. (Oxford: Clarendon Press, 1966), 18-24; 3. *Opuscules et Fragments inédits de Leibniz*, Ed. L. Couturat. (Paris: F. Alcan, 1903), 51-7; 243. H. Ishiguro, *Leibniz's Philosophy of Logic and Language* (Ithaca: Cornell University Press, 1972), 38-41; 120.

[5] Rule XIV, HR I, 57; AT X, 442.

[6] Aristotle, *Physics* IV, 4, 212a, 20.

[7] "Principles," Part II, HR I, 259-0 (Principles 11-16); AT VIII-1, 45-9.

[8] Rule XIV, HR I, 57 & 62; AT X, 442-3 & 448-9.

[9] Rule XIV HR I, 59; AT X, 444.

[10] Here, I explicitly exclude logical truths (tautologies) as P v -P, which are true in all interpretations due to truth-functional connectors, not linguistic definitions.

[11] See Chisholm, *Theory of Knowledge* (Englewood-Cliffs: Prentice-Hall, Inc., 1977), 40-1 and his references.

[12] Rule XIV, HR I, 59; AT X, 445.

[13] Cf. K.d.r.V., A: 8-10; B: 11-14.

[14] Rule XIV, HR I, 58-9; cf. 42-3. AT X, 444. Cf. K.d.r.V., A: 7, B: 11, where Kant states that "All bodies are extended" is an analytic judgment. A paper of related interest is A. Donagan's "Spinoza and Descartes on Extension," *Midwestern Studies in Philosophy* I (1976), 31-3 /.

[15] "Discourse on Method," HR I, 102-3; AT VI, 33-5.

[16] "Meditations," HR I, 181-2; AT VII, 67.

[17] "Meditations," HR I, 181; AT VII, 69. Some of my critics prefer to write "The content of our concept of god has existence." If this suggestion is accepted, a corresponding rewording of premise (1) would seem to be required.

[18] "Meditations," HR I, 181-2; AT VII, 66-7.

[19] For two other renderings see E. M. Curley, *Descartes Against the Skeptics.* (Cambridge: Harvard University Press, 1978), 141-2. D. Sievert, "Descartes on Theological Knowledge," *Philosophy and Phenomenological Research* 43 (1982), 201-19.

[20] Sommers and Lockwood have argued independently of each other that the distinction between the "is" of identity and the "is" of predication rests on dubious reasons; see Sommers, "Do We Need Identity," *Journal of Philosophy* 66 (1969), 499-504 and Lockwood, "On Predicating Proper Names," *The Philosophical Review* 84 (1975), 471-98. Sommers and Lockwood's points have been ignored in formulating the analysis of (2); there are two reasons for this. First, the rationale that led them to question the distinction between the two senses of "is" cannot be appropriately discussed in the context of a Cartesian exegesis without substantial diversions from our present purposes; second, their points are far from unobjectionable, though they have shown the distinction is not as clear as textbook parlance has it. For a critical appraisal of the Sommers-Lockwood hypothesis, see N. Griffin, "Do We Need Predication," *Dialogue* 16 (1977), 653-63.

[21] Those interested in a rigorous explanation aimed at nonspecialists (but with a technical bibliography) should consult I. M. Copi, *The Theory of Logical Types*. (London: Routledge & Kegan Paul, 1971). Two original classics to consult are A. N. Whitehead and B. Russell, *Principia Mathematica*. (Cambridge: Cambridge University Press, 1925), especially Chapter 2, and F. P. Ramsey, *The Foundations of Mathematics*, Ed. R. B. Braithwaite. (London: Kegan Paul, Trench, Trubner & Co., Ltd., 1931), 20-1, 24-5, 76-7. Ramsey's work is important because he was the first to note that Whitehead and Russell's version of the theory of types contains two distinct parts each dealing with different classes of paradoxes. One of the two classes of paradoxes is made up of logical or mathematical contradictions; the other class is composed of semantic contradictions.

[22] For a formal definition of "type," see Voss and Sayward's "The Structure of Type Theory," *The Journal of Philosophy* 77 (1980), 247.

[23] A. N. Whitehead and B. Russell, *Principia Mathematica*, 40-1; 47-8.

[24] The restricted interpretation is defended by Quine: "Existence and Quantification," *Ontological Relativity and Other Essays* (New York: Columbia University Press, 1969), 94-7; "On What There Is," *From a Logical Point of View*. (Cambridge: Harvard University Press, 1953), 38-9; 40-1. Marcus defends the substitutional: "Interpreting Quantification," *Inquiry* 5 (1962), 252-9; "Quantification and Ontology," *Nous* 6 (1972), 240-50. Marcus and Quine's works are singled out not as sources, but as vigorous defenses of these readings.

[25] To prevent ambiguity, "god exists," is to be interpreted as an "All S is P" sentence. Where "x" stands for the term "existence," we say that "x" applies to S and P neither by equality nor identity of S and P, but because S is a conjunction of logically independent terms (omniscient, all-powerful, existence, . . .) one of which is "x." See Chisholm's *Theory of Knowledge*, 56-7.

[26] Leibniz, *Monadology* 33; Kant, *Prolegomena to Any Future Metaphysics*, section 2.

[27] "Meditations," HR I, 181; AT VII, 66. "Principles of Philosophy," HR I, 224-5; AT VIII-1, 10. "Reply to Objections I," HR II, 20; AT VII, 116. "Reply to Objections V," HR II, 218-9 & 228-9; AT VII, 368-0. "Arguments Drawn up in Geometrical Fashion," HR II, 57; AT VII, 166-7.

[28] K.d.r.V., A: 595-99; B: 623-27; *Lectures on Philosophical Theology*, Tr. A. W. Wood, et. al. (Ithaca: Cornell University Press, 1978), 46-7.

[29] "Arguments Demonstrating the Existence of God and the Distinction Between Soul and Body, Drawn Up in Geometrical Fashion," HR II, 55; AT VII, 163. Italics my own. The Latin counterpart of the sentence, a portion of which I have italicized is: "Ex hoc enim solo, & absque ullo discursu, cognoscent Deum existere." But see "Replies to Objections II," HR II, 45-6; AT VII, 49-0. The criticism Descartes is replying to can be found in HR II, 28; AT VII, 127. Cf. "Notes," HR I, 445-6; AT VII, 361-2. A paper of related interest is W. Doney's "Geometrical Presentation of Descartes' A Priori Proof," *Descartes: Critical and Interpretive Essays*, Ed. M. Hooker. (Baltimore: The Johns Hopkins University Press, 1978), 1-25.