

Two Aristotelian Theories of Existential Import¹

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Abstract

As commonly presented, Aristotelian logic is charged today with having the flaw of making an existential import assumption for all of its terms without stating it. I argue that, although this version of Aristotelian logic, “the copulative theory”, prevails today, it is not Aristotle’s theory. Moreover, there is another Aristotelian tradition with a different theory, more logically respectable and closer to Aristotle: the aspect theory. I present the two theories, as formulated by Aquinas and Avicenna, and compare them with respect to the square of opposition and metathetic predication. I conclude that the aspect theory works better and has some similarity to free logic today.

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Key Words: Aristotle; Aquinas; Avicenna; predication; existential import.

‘Existential import’ has become a fashionable phrase. Often it is used when modern logicians compare current theories with the Aristotelian tradition. The latter is said to have the flaw that it assumes that all of its terms have existential import when making inferences without making that assumption explicit. In contrast, today it is assumed that only certain logical forms of

¹ A version of this paper was given at The First Rio Colloquium on Logic and Metaphysics in the Later Middle Ages, a meeting sponsored by CAPES.

propositions imply that one or more of the terms used must have instances in the domain. The proofs go through whether or not the predicate terms in the propositions have existential import.

The most commonly given example of the Aristotelian flaw is the inference from a universal affirmative proposition (A) to the particular affirmative (I), from ‘every S is P’ to ‘some S is P’. On the modern symbolization only the I proposition asserts existence. Hence it does not follow from ‘every goatstag is an animal’ that ‘some goatstag is an animal’; ‘every goatstag is an animal’ is true, even necessarily so, even when there are no goatstags, while ‘some goatstag is an animal’ is then false.

Various responses can be made. For one, perhaps the current symbolization of the A proposition, as ‘ $(x)(Sx \supset Px)$ ’, is incorrect. Frege, Russell *et al.* introduced it as merely “convenient”, as Russell puts it, in the context of an ideal language where each singular term has a unique referent and each predicate expression has a non-empty extension.²

But here I put aside such responses and work on the historical side, namely that the Aristotelian position need not be as silly as thought. Rather, it differs from what we suppose it to be. I claim that Aristotle himself and some others later on had a different view of predication according to which the existential import problem does not arise at all. To be sure, other Aristotelians did have a theory of predication with that problem. As the latter view, advocated by Thomists, has come to be the dominant representation of Aristotelian logic, it has made it look silly.

I. Aristotelian Predication Theories

² As Russell states at the end of “Mr. Strawson on Referring.”

The Aristotelian tradition has two main theories of predication, which I have called *the copulative theory* and *the aspect theory*.³ The latter has been largely ignored today. Let me sketch each theory.

Take a simple, declarative sentence, of form ‘S is P’. On the copulative theory, its copula ‘is’ changes its logical function depending on its sentential context. In a statement of *secundum adiacens*, it makes an existence claim: ‘S is’ means that S is existent. In a statement of *tertium adiacens*, it connects the predicate term to the subject: ‘S is P’ means only that ‘P’ belongs to ‘S’, and makes no existence claim.

The copulative theory has dominated large portions of the Aristotelian tradition. Among others, Aquinas held it, and Thomist interpretations of Aristotle have had and continue to have great influence. Dominant and plausible though the copulative interpretation may seem, I have argued that the copulative theory is not Aristotle’s. To hazard an historical guess, I think that the copulative theory may have come to dominate as a result of the neo-Platonizing interpretations of Aristotle’s works by such as Proclus, Ammonius, and Boethius.

The aspect theory of predication, which I have located most clearly in Islamic Aristotelian philosophy, runs as follows: a statement of *secundum adiacens*, ‘S is’, makes an existence claim. A statement of *tertium adiacens* does so too: ‘S is P’ is to be read as ‘S is existent as a P’. So, for example, ‘Socrates is (a) man’ is to be read as ‘Socrates is existent as a man’; ‘Socrates is just’ as ‘Socrates is existent as just’; ‘every man is an animal’ as ‘every man is existent as an animal’; ‘man is animal’, taken as a predication of genus of species, as ‘man is

³ Bäck (2000).

existent as animal'. On such a reading, even a seemingly simple predication will have compound truth conditions: e.g., the truth of 'Socrates is existent as a man' requires both that Socrates be existent and that Socrates be a man (i.e., that 'man' signifies one of the attributes of Socrates). The latter condition, that Socrates be a man, is not equivalent to the original predication to be analyzed; if it were, it would beg the question. Rather, in Aristotelian jargon, it could be expressed more strictly as 'man is predicated (or: 'belongs to' or 'is said' (in a general sense)) of Socrates'.⁴ So, on this theory of predication even a simple assertion, of form 'S is P', is a disguised conjunction: 'S exists and P is predicated of S'.

It was explicitly recognized already in Islamic treatments of the square of opposition that espoused this theory that the contradictories of simple predications, understood in this way, will be implicit disjunctions, and so have disjoint truth conditions, each of which suffices for the truth of the contradictory. So, 'Socrates is not a man', taken to be the contradictory of the simple affirmation, 'Socrates is a man', is equivalent to 'it is not the case that Socrates is existent as a man', and hence to 'it is not the case that Socrates is existent and Socrates is a man'. Thus it was stated that for the truth of 'Socrates is not a man' either 'Socrates does not exist' or 'man is not predicated of Socrates' suffices.

I call this theory of predication *the aspect theory of predication*, as the predicate is supposed to stipulate a certain aspect of existence of the subject.

Who held this aspect theory explicitly? In later Greek philosophy, the texts are not decisive, but, in decreasing order of probability, some Stoics, Philoponus, and Theophrastus

⁴ Aristotle uses 'said of' (*legetai kata*) thus of 'is' itself: *Metaphysics* 1003b1-5.

might have held it.⁵ This theory clearly had Islamic adherents. Among the philosophers of the Kalām, it was held that a statement of form ‘S is’ (*al-S kāna*) makes a claim of existence. Further, in a statement of form ‘S is P’ (in every case or with only some types of verbal complements), ‘P’ must be taken as an accusative specifying the state: ‘S is existent as a P’:

‘Zayd is knowing’ is to be read as “Zayd *is*...and that his *is*, insofar as it is stated in this proposition, is a being knowing. That he have an attribute is that he be qualified in his being by an attribute...i.e., that he be in some state.⁶

Avicenna (Ibn Sīnā), following some combination of the Kalām, Philoponus, and his own genius, likewise analyzes ‘S is P’ into ‘S is existent, and P is an attribute of S’.⁷ With the simple denial, ‘S is not P’, Avicenna says, consistently, that it is true either if S does not exist or if P is not an attribute of S. He further distinguishes and lists, in line with the Greek commentators, the various ways in which the second condition, ‘man does not belong to Socrates’, could be satisfied. The fate of the aspect theory of predication theory in Latin medieval philosophy is less clear than in Islamic philosophy, but Ockham, Buridan, and De Soto are probable advocates.

I now propose to compare the copulative and the aspect theory in more detail. Here I shall concentrate on two cases: 1) subalternation, where in the square of opposition the particular affirmative (I) proposition is said to follow from the universal affirmative (A) proposition, and the particular negative (O) from the universal negative (E). 2) metathetic affirmations of the form ‘S is not-P’. Each of these cases raises logical difficulties. To keep the discussion

⁵ See Bäck (2000)..

⁶ Frank (1978), p. 23; cf. p. 21.

⁷ *Al-‘Ibāra* 77,8ff.

manageable I shall use the particular theories of Aquinas and Avicenna, as versions of the copulative and the aspect theory respectively.

II. Subalternation

Consider subalternation. As noted, the A to I inference looks suspect today because the universal affirmative statement might be true without there existing any instances of it. Why cannot ‘all goatstags are animals’ be true even if there are not any goatstags? To take a more scientific example, discussed in the Aristotelian tradition, take: ‘all eclipses have occlusion of a light source’. This can be true even at a time when there are no eclipses, and, for us, even if the universe never came to have any stars or eclipses at all.

The E to O inference looks especially silly: ‘No goatstag is a rock’ looks true; taken as ‘if something is a goatstag, it is not a rock’, it is true on the modern analysis. Even in the Aristotelian tradition, the E statement is supposed to be the contradictory of the I statement. Then likewise it should be true, without existential import. For consider ‘it is not the case that some goatstag is a rock’. Why cannot that be true without there being any goatstags: there does not exist something that is a goatstag and a rock.⁸ Still ‘some goatstag is not a rock’ looks false, if taken to claim that there exists something that is a goatstag and not a rock.

There is no need to hold the E to O inference in order to defend Aristotle. He has the position that the A to I inference is valid. However, he neither sanctions the E to O inference

⁸ Thus Aristotle, *Categories* 13b14-9, says that ‘Socrates is healthy’ and ‘Socrates is ill’ are both false when Socrates does not exist.

explicitly nor uses it in his syllogistic. In On Interpretation he only takes the A and O, and the E and I, statements to be mutually contradictory. [18a4-6; 20a18-20]

Aquinas does not discuss subalternation explicitly. However he seems to take it for granted as he is following Boethius. Boethius, conforming to the canons of Proclus, has the standard, textbook square of opposition, where subalternation holds from A to I and from E to O and where A and O, and E and I, are contradictories.⁹

Like Aristotle, Aquinas takes a simple affirmation to affirm that what is *in re* is just as it is. So ‘Socrates runs’ states that Socrates is in fact running. The problem is that his analysis of the predication does not give this result.¹⁰

Aquinas takes statements of *secundum adiacens* to make assertions of real existence. But with those of *tertium adiacens*, where ‘is’ is additionally predicated in addition as a third thing, Aquinas takes ‘additionally predicated’ to mean not that ‘is’ is also predicated of the subject, but that ‘is’ is attached to the predicate complement, which is predicated of the subject:

⁹ In Librum Aristotelis De Interpretatione, Editio Prima, 321B.

¹⁰ [80379] Expositio Peryermeneias, lib. 1 l. 9 n. 3 Sic igitur quatuor modis potest variari enunciatio, secundum permixtionem harum duarum divisionum. Uno modo, quia id quod est in re enunciatum ita esse sicut in re est: quod pertinet ad affirmationem veram; puta cum Socrates currit, dicimus Socratem currere. Alio modo, cum enunciatum aliquid non esse quod in re non est: quod pertinet ad negationem veram; ut cum dicitur, Aethiops albus non est. Tertio modo, cum enunciatum aliquid esse quod in re non est: quod pertinet ad affirmationem falsam; ut cum dicitur, corvus est albus. Quarto modo, cum enunciatum aliquid non esse quod in re est: quod pertinet ad negationem falsam; ut cum dicitur, nix non est alba. Philosophus autem, ut a minoribus ad potiora procedat, falsas veris praeponit: inter quas negativam praemittit affirmativae, cum dicit quod contingit *enunciare quod est*, scilicet in rerum natura, *non esse*. Secundo autem, ponit affirmativam falsam cum dicit: *et quod non est*, scilicet in rerum natura, *esse*. Tertio autem, ponit affirmativam veram, quae opponitur negativae falsae, quam primo posuit, cum dicit: *et quod est*, scilicet in rerum natura, *esse*. Quarto autem, ponit negativam veram, quae opponitur affirmationi falsae, cum dicit: *et quod non est*, scilicet in rerum natura, *non esse*.

...it must be considered that, whenever ‘is’ is predicated in the assertion as something second, as when it is said, ‘Socrates is’: by this we intend to signify nothing other than that Socrates is in the nature of things. But, whenever it is not predicated *per se*, as if it were a principal predicate, but, as if conjoined to the principal predicate for connecting it to the subject, as when it is said, Socrates is white, the intention of the speaker is not to assert that Socrates in the nature of things, but to attribute whiteness to it by means of the verb ‘is’, and so in such ‘is’ is predicated as adjacent to the principal predicate. And it is not said to be third since it is a third predicate, but since it is a third expression put in the assertion, which, together with the predicated name, makes one predicate.¹¹

Here Aquinas makes ‘is’ have only the copulative function in a statement of *tertium adiacens*, whereas ‘is’ has only the existential function in a statement of *secundum adiacens*. So Aquinas has a copulative theory of predication. In presenting it, he distinguishes sharply the ‘is’ of existence and the ‘is’ of predication: ‘is’ is ambiguous, as it has these two uses.¹²

¹¹ Aquinas, [80480] *Expositio Peryermeneias*, lib. 2 l. 2 n. 2 II.2.2. “Circa primum duo oportet intelligere: primo quidem, quid est hoc quod dicit, *est tertium adiacens praedicatur*. Ad cuius evidentiam considerandum est quod hoc verbum est quandoque in enunciatione praedicatur secundum se; ut cum dicitur, Socrates est: per quod nihil aliud intendimus significare, quam quod Socrates sit in rerum natura. Quandoque vero non praedicatur per se, quasi principale praedicatum, sed quasi coniunctum principali praedicato ad connectendum ipsum subiecto; sicut cum dicitur, Socrates est albus, non est intentio loquentis ut asserat Socratem esse in rerum natura, sed ut attribuat ei albedinem mediante hoc verbo, est; et ideo in talibus, est, praedicatur ut adiacens principali praedicato. Et dicitur esse *tertium*, non quia sit tertium praedicatum, sed quia est tertia dictio posita in enunciatione, quae simul cum nomine praedicato facit unum praedicatum, ut sic enuntiatio dividatur in duas partes et non in tres.” [Aquinas, *in de Int.*] Cf. *S. T.* I.3.4.ad 2; *De Ente et Essentia* 29,13-6.

¹² *Quodl.* XII, 1 ad 1: “*Esse dupliciter dicitur: quandoque enim esse idem est quod actus entis; quandoque autem significat compositionem enuntiationis; et sic significat actum intellectus...*” Cf. *In I Sent.* 19.5.1 ad 1; *In III Sent.* 5; 7.1.1; *S. T.* I.39. 6 ad 2; I.39.5 ad 4; *De pot.* q7.a2.ad 2.

Pannier and Sullivan (1993), pp. 159-60, understand Aquinas to say at *Metaphysicorum Aristotelis Expositio* V.1.ix n. 895, that something has being as truth “only if it can be made the intended subject of at least one statement, whether it be affirmative or negative.” But, judging by the examples of *Metaphysics* V.7, the “statement” needs only

To be sure, this move may be an advance in logical theory.¹³ But it has its problems as an interpretation of Aristotle's texts or as a doctrine to be embraced along with other of Aristotle's doctrines. It is hard to see how this theory of predication will give existential import even to the affirmative propositions of *tertium adiacens*. Why, on this theory, must 'all goatstags are animals' imply that goatstags exist and that some goatstag is an animal?

Perhaps then Aquinas requires all terms used to have existential import. Propositions containing non-referring terms are false. Similarly, Aristotle had said that 'Socrates is healthy' and 'Socrates is sick' are both false when Socrates does not exist. [Cat. 13b14-8]

Aquinas takes 'every S is P' (*omnis homo est albus*) to have 'not every S is P' (*non omnis homo est albus*) as its contradictory. Likewise 'no S is P' (*nullus homo est albus*) and 'some S is P' (*quidam homo est albus*) are contradictories.¹⁴ He takes 'some S is not P' to be equivalent to

being *per accidens*. Even they hedge on their example, 'the pink rabbit on the corner does not exist', and claim that the pink rabbit is not the logical subject.

Weidemann (1981), pp. 753-6, takes the two senses as being in act and being the value of an existential quantifier respectively. The latter amounts to being *per accidens*: e.g., to say that blindness is *per accidens* amounts to asserting that there exists someone who is blind. Cf. Kenny (1969), p. 82; also Anscombe and Geach (1973), pp. 90-1. Pannier and Sullivan (1993), pp. 157; 163, attack Weidemann and Geach on the grounds that their Frege-style exemplification cannot handle singular statements with say 'Socrates' as subject—but clearly it can (by defining 'E!a' as '($\exists x$) (x = a)').

¹³ Angelelli (1967), pp. 52-3.

¹⁴ [80413] *Expositio Peryermeneias*, lib. 1 l. 11 n. 3 Dicit ergo primo quod enunciatio, quae universale significat, scilicet universaliter, opponitur contradictorie ei, quae non significat universaliter sed particulariter, si una earum sit affirmativa, altera vero sit negativa (sive universalis sit affirmativa et particularis negativa, sive e converso); ut cum dicitur, omnis homo est albus, non omnis homo est albus: hoc enim quod dico, non omnis, ponitur loco signi particularis negativi; unde aequipollet ei quae est, quidam homo non est albus; sicut et nullus, quod idem significat ac si diceretur, non ullus vel non quidam, est signum universale negativum. Unde hae duae, quidam homo est albus (quae est particularis affirmativa), nullus homo est albus (quae est universalis negativa), sunt contradictoriae.

‘not every S is P’. Presumably then likewise the contradictory of ‘some S is P’ will be ‘not (some S is P)’, as equivalent to ‘no S is P’.¹⁵

But then it would seem that ‘some goatstag is an animal’ is false. Then its contradictory should be true: for Aquinas this is: ‘no goatstag is an animal’. But E implies O, and hence ‘some goatstag is not an animal’ should be true. But there are not any goatstags. Or, even worse: assume that O proposition to be false. Then its contradictory, ‘every goatstag is an animal’ should be true. But then its subaltern, ‘some goatstag is an animal’ should be true.

Should then existential import be a background condition, as in the theory of Strawson, so that we limit formal logic only to referring terms? A proposition containing a non-referring term would then be meaningless or ill-formed. Yet ‘some goatstag is an animal’ does not seem meaningless; we even know what would make it true. Sometimes we do not know whether a term refers or not; maybe there are goatstags. (After all, these days there are geeps: sheep-goat chimeras.) Anyway, Aquinas needs to have logic to apply to non-referring terms, if he wants to allow for God to think about whether or not to create goatstags. Aristotle himself has discussions where he uses his logical apparatus on non-referring terms: On Interpretation 11 discusses inferences involving ‘Homer is a poet’ and ‘not-being is’—the latter being an instance of an indefinite name, which Aristotle discusses extensively in Chapter 10. Moreover he wants to apply his logic to analyze the arguments of sophists.

¹⁵[80423] Expositio Peryermeneias, lib. 1 l. 12 n. 2: “Sed si quis recte consideret huius affirmativae, omnis homo est albus, negativa est sola ista, quidam homo non est albus, quae solummodo removet ipsam, ut patet ex sua aequipollenti, quae est, non omnis homo est albus. Universalis vero negativa includit quidem in suo intellectu negationem universalis affirmativae, in quantum includit particularem negativam, sed supra hoc aliquid addit, in quantum scilicet importat non solum remotionem universalitatis, sed removet quamlibet partem eius. Et sic patet quod sola una est negatio universalis affirmationis: et idem apparet in aliis.”

This seems a mess.

Avicenna On Avicenna's version of the aspect theory, likewise the E and O propositions should be taken as the contradictories of the I and A propositions, as Aristotle himself had stated. The A proposition has the truth conditions: 'there exists an S and P is predicated of every S'. Hence its denial, the O proposition, should be understood as:

'not (every S is P)', which has the truth conditions:

Either there does not exist an S or it is not the case that P is predicated of every S.

(The second disjunct can be taken to have existential import. Then it becomes: 'some S is not P'.) The I proposition has the truth conditions: 'there exists an S and P is predicated of some S'.

Hence its denial, the E proposition, should be understood as:

'not (some S is P)', which has the truth conditions:

Either there does not exist an S or it is not the case that P is predicated of some S.

(The second disjunct can be taken to have existential import. Then it becomes: 'no S are P').

The A to I and the E to O inferences follow, semantically, on these truth conditions. The inferences are obvious and have no hidden assumptions.

Neither E nor O propositions have existential import—unless that be stipulated as an additional assumption. Avicenna, like Aristotle, may make this special assumption in scientific contexts: of demonstrations and of a syllogistic whose intended application is to demonstration. For in Aristotelian demonstration, the terms must refer to real things. Hence Aristotle says that

the first thing to ask in a scientific investigation of S is whether or not S exists. [An. Po. I.1; II.1]

Yet, even so, Aristotle never uses the E to O inference in proving his syllogisms.

If we symbolize this analysis in modern terms, subalternation becomes valid. Symbolize ‘P is predicated of S’ as: $(x) (Sx \supset Px)$. The E proposition becomes: $\supset (_x)Sx \vee [(_x)Sx \ \& \ (x) (Sx \supset \supset Px)]$. (Some current systems of free logic come close to this.)

This account of subalternation does not seem a mess.

II. Metathetic Predication

Consider now metathetic predication, where the negation taken with a predicate ‘P’ forms a complex predicate, of the form ‘not-P’. Aristotle says that such an indefinite or metathetic name, ‘not-P’, holds of the existent and the non-existent. [Int. 16a29-31; 16b11-5] A simple statement, of form ‘S is not-P’, is then an affirmation, with ‘not-P’ being predicated of ‘S’.

Hence ‘a goatstag is a not-man’ should be true, even though no goatstags exist. Aristotle says that such a statement is an affirmation. The problem is that, since this is affirmative, its subject seems to exist. [Int. 19b22-6] Moreover consider ‘every goatstag is a not-man’. This seems true. Yet it implies ‘some goatstag is a not-man’. Hence metathetic affirmations seem to have existential import.

Here, taken as an interpretation of Aristotle, a copulative theory of predication might seem to have the advantage—if, according to it, the ‘is’ merely connects up the subject and predicate. Then ‘every goatstag is a not-man’ can be true without any goatstags existing. It

likewise might be nice to hold that ‘every goatstag is a goatstag’ is true.¹⁶ But then the A to I subalternation becomes invalid.¹⁷ Moreover such an account seems inconsistent with holding that the subject of a (true) affirmation must have existential import.

Aquinas has the usual account of indefinite names and verbs:

For it is imposed from the negation of man which is said equally of being and not-being. Whence too not-man can be said indifferently both of what is not in the nature of things, as if we said, ‘a chimera is not-man’, and of that which is in the nature of things, as if it is said, ‘a horse is not-man’. Moreover, if it be imposed from a privation, the subject would at least be required to exist; but since it is imposed from the negation, it can be said both of being and not-being, as Boethius and Ammonius say.¹⁸

So Aquinas takes an indefinite name, ‘not-P’, to describe whatever is not P, i.e., to describe the complement of P. He holds that ‘not-man’ is said of things that do not exist, like chimeras, as well as of some things, like horses, that do exist. Aquinas says that ‘a chimera is not-man’ is true. So here he seems to say that the truth of the metathetic affirmation does not require its subject to exist.

¹⁶ With Abelard, the chimera is a chimera’ became a standard sophism. Cf. *Dialectica* 139, 26-142,14; 123,15-25; 130-131. Cf. *Glossae super Peri Hermeneias* 348,37-351,23. Tweedale (1976), pp. 291; 227; Ebbesen (1986), pp. 122-31.

¹⁷ Aristotle takes an indefinite proposition, like ‘a goatstag is a not-man’ as equivalent either to a universal or to a particular proposition.

¹⁸ [80316] *Expositio Peryermeneias*, lib. 1 l. 4 n. 13: “Imponitur enim a negatione hominis, quae aequaliter dicitur de ente, et non ente. Unde non homo potest dici indifferenter, et de eo quod non est in rerum natura; ut si dicamus, Chimaera est non homo, et de eo quod est in rerum natura; sicut cum dicitur, equus est non homo. Si autem imponeretur a privatione, requireret subiectum ad minus existens: sed quia imponitur a negatione, potest dici de ente et de non ente, ut Boethius et Ammonius dicunt.” [trans. Oesterle (1962), p. 41]; cf. *S. T. I.17.4*. See Bäck (2003).

Aquinas' claim that in a statement of *tertium adiacens* the copula 'is' serves only to connect subject and predicate and makes no existence claim should entail for him that a metathetic affirmation by itself has no condition of existential import. For a metathetic affirmation is a statement of *tertium adiacens*. Moreover, what is being predicated is an indefinite name. However he has said otherwise about the square of opposition.

Aquinas clearly is aware of the difficulties of *On Interpretation* 10, as he cites the differing interpretations raised by Boethius. Giving his own view, he says:

...the statement, 'man is just', for example, is related to all those of which in any way 'is a just man' can be truly said. And similarly, the statement, 'man is not just', is related to all those, any of which it can be truly said that it is not a just man. According to this mode of speaking it is therefore evident that the simple negative holds in more cases than the indefinite affirmative that corresponds to it. Thus that he be a not-just man can truly be said only of any man who does not have the habit of justice, but that he not be a just man can be said not only of a man not having the habit of justice, but also of what is not a man at all. For example, this is true: 'the log is not a just man', but still this is false: 'the log is a not-just man'. And so the simple negative holds in more cases than the indefinite affirmative, just as animal holds in more cases than man, since it is verified of more.¹⁹

¹⁹ Aquinas, [80487] *Expositio Peryermeneias*, lib. 2 l. 2 n. 9: "Ad cuius evidentiam considerandum est quod, sicut ipse dicit, enunciatio aliqua virtute se habet ad illud, de quo totum id quod in enunciatione significatur vere praedicari potest: sicut haec enunciatio, homo est iustus, se habet ad omnia illa, de quorum quolibet vere potest dici quod est homo iustus; et similiter haec enunciatio, homo non est iustus, se habet ad omnia illa, de quorum quolibet vere dici potest quod non est homo iustus. Secundum ergo hunc modum loquendi, manifestum est quod simplex negativa in plus est quam affirmativa infinita, quae ei correspondet. Nam, quod sit homo non iustus, vere potest dici de quolibet homine, qui non habet habitum iustitiae; sed quod non sit homo iustus, potest dici non solum de homine

Like Ammonius and Boethius, Aquinas turns the examples given as statements by Aristotle into predicates; e.g., ‘man is just’ becomes the predicate ‘is a just man’; the metathetic ‘man is not-just’ becomes ‘is a not-just man’. (Aristotle uses an unusual word order suggesting this.) Aquinas then considers of what things such predicates are true. He says that the simple denial, ‘is not a just man’ is true of anything that is not a man and of any man that is not just, like a log. In contrast, the metathetic affirmation, ‘is a not-just man’ is true only of those men who are not just.

Aquinas is reading the categorical statement as having the form ‘___ is S-P’, and then considers what subjects this predication holds true.²⁰ So ‘he is taking ‘S is P’ to make a complex predication of an unnamed subject. E.g., ‘[X] is a just man’ asserts both that X is just and that X is a man. Thus, the metathetic affirmation, ‘X is a not-just man’, asserts that X is not-just and that X is a man. So it will hold only of those existent humans that are not-just, i.e., that are not just for whatever reason. For civilized, normal human beings, being not-just amounts to the privative ‘unjust’, but not so for boys or barbarians, who are not in the moral sphere in

non habente habitum iustitiae, sed etiam de eo qui penitus non est homo: haec enim est vera, lignum non est homo iustus; tamen haec est falsa, lignum est homo non iustus. Et ita negativa simplex est in plus quam affirmativa infinita; sicut etiam animal est in plus quam homo, quia de pluribus verificatur. Simili etiam ratione, negativa simplex est in plus quam affirmativa privativa: quia de eo quod non est homo non potest dici quod sit homo iniustus. Sed affirmativa infinita est in plus quam affirmativa privativa: potest enim dici de puero et de quocumque homine nondum habente habitum virtutis aut vitii quod sit homo non iustus, non tamen de aliquo eorum vere dici potest quod sit homo iniustus. Affirmativa vero simplex in minus est quam negativa infinita: quia quod non sit homo non iustus potest dici non solum de homine iusto, sed etiam de eo quod penitus non est homo. Similiter etiam negativa privativa in plus est quam negativa infinita. Nam, quod non sit homo iniustus, potest dici non solum de homine habente habitum iustitiae, sed de eo quod penitus non est homo, de quorum quolibet potest dici quod non sit homo non iustus: sed ulterius potest dici de omnibus hominibus, qui nec habent habitum iustitiae neque habent habitum iniustitiae.”

Cf. Boethius, *Editio Secunda* 424D; *Editio Prima* 303C-D; *Editio Prima* 308C-D; cf. *Editio Secunda*, 429B

²⁰ Boethius, *Editio Secunda* 531C-540A.

actuality.²¹ However, the simple denial, ‘X is not a just man’ asserts that S is not both just and a man; i.e., that either X is not just or X is not a man.

So the simple denial will hold of what exists but is not a man, like logs, and of what exists as a man but is not just. It *would* hold also of what does not exist at all, like goatstags, *if* there were no existential import condition. Aquinas says only that the simple denial holds of “what is not a man at all”. So perhaps Aquinas does not want an existential import condition here. However he seems to, as seen in his account of subalternation and as attested by the later Thomist tradition.²²

But this position looks inconsistent with holding that an indefinite name holds of the existent and of the non-existent. Why is not ‘a goatstag is not-just’ true?

Aquinas might reply that ‘not-man’ by itself holds of what does not exist. ‘A goatstag is not-just’ though is not a real, *per se* statement, but only one *per accidens*, like ‘Homer is a poet’.²³ Taken as a complex predicate, it becomes: ‘—is a non-just goatstag’ and is not true of anything—of anything existing *in re*, that is.

If Aquinas dropped the existential import assumption for denials, he might have a better explanation why the metathetic affirmation has existential import for its subject, whereas the

²¹ Klima (1996), p. 124, takes this account to give Aquinas an aspect theory of predication: “Just as in “ordinary predications” we can attach various qualifications to the predicate, so these “ordinary predications” themselves may be regarded as various qualifications of the predications of being. According to this analysis, therefore, when we say, “man is blind”, this is equivalent to saying, ‘A man’s blindness is’ which in turn, is equivalent to saying, ‘A man is with respect to his blindness’.” Cf. *Sentences* II.34.1.1.

²² Aquinas never makes it too clear whether he thinks that the simple denial has existential import; after all his commentary breaks off in the middle of Chapter 10, and Cajetan continues. Yet above I have noted that Boethius requires existential import for denials as well. This is the usual view taken by the Thomist tradition. Cf. McCabe (1960), “Categories,” pp. 80-3.

²³ I say that he “might” say this, as he never does comment on *On Interpretation* 11.

simple denial does not. The simple denial would be true if either the subject does not exist or if the predication does not hold. The metathetic affirmation would make an existence claim, implicitly. (If it made it explicitly, this would be an aspect theory.). But note that, apart from just stipulating existential import, the reason for this lies in there being a complex predicate: it is because 'man' is predicated of the subject, not because 'not-just' is predicated of the subject, that the subject must exist for this metathetic affirmation to be true.

In this way then Aquinas is able to maintain both that indefinite names and verbs may be said of the existent as well as of the non-existent while holding that the metathetic affirmation holds only for existent subjects. But he accomplishes this at the cost of limiting what Aristotle says about statements to existent subjects. For it is the subject term in the original statement that gives the existential import. To see this, let us convert Aquinas' metathetic predicate, 'is a not-just man', back into the original statement, 'man is not-just'. Here the predication of 'not-just' does not make any existence claim by itself. At best, the presence of 'man' grounds the requirement of existence. Again consider 'a goat-stag is not-just'. It is true, given that 'is' has merely a copulative function, but makes no existence claim. Likewise, the complex predicate, 'is a not-just goat-stag', should not belong only to existent subjects.

The only way I can see for Aquinas to dredge an assertion of existence out of 'man is not-just', while not requiring it for all metathetic affirmations, is to appeal to the content of the subject term, e.g., 'man'. For the predicate is an indefinite name, and Aquinas holds that an indefinite name like 'not-just' may be said indifferently of what does and of what does not exist.

He has said that ‘a chimera is non-existent’ is true, and also linked indefinite verbs with simple negations and not with privative predicates.

Further, as Aquinas holds that the copula ‘is’ in a statement of *tertium adiacens* serves only to link subject and predicate, he has eliminated the option of its making the existence claim. Nor does Aquinas give any indication how the copula, as the “verb” in a statement of *tertium adiacens*, will additionally signify time, and so perhaps provide a sentential context that might produce an existence claim. In short, Aquinas’ theory does not support Aristotle’s text nor his own claim that a metathetic affirmation applies only to what exists, and is not equivalent to a simple denial. So Aquinas has not managed to show that a metathetic affirmation requires that its subject exist. At best he can appeal only to the material content of the subject term (‘man’), and not on the formal structure of a metathetic affirmation.²⁴ But this will hardly do in formal logic.²⁵ Having a subject in a category of being *per se* might be required to make an existence claim true, but it is not required for making an existence claim.

Another mess?

²⁴ Weidemann (1986), pp. 189-91.

²⁵ Perhaps Aquinas means his interpretation as a type of exposition (*ekthesis*), as used in the syllogistic. We are to take the indefinite proposition, ‘man is not-just’, and then consider what objects could make it true or false. As neither a horse (Boethius’ example) nor something non-existent is a not-just man, the metathetic affirmation cannot be true of the non-existent. But, again, the trouble is that the subject term is ‘man’, and the restriction to the existent follows only from the content of the subject term.

Zimmermann (1967) presents a later view following Aquinas: a term like ‘man’ must refer to a universal abstracted from individuals *in re*, and hence the statement is not true, p. 186,55-8. So the existence of the subject is presupposed, p. 197. If no man exists, ‘man is animal’ is true means only that the concept man is the concept animal, p. 190.

Klima (1996), pp. 127-36, has an extended discussion of Aquinas’ (or a Thomistic) analysis of the inference from *tertium adiacens* to *secundum adiacens*. In any case, his discussion goes far beyond Aquinas and has some peculiar conceptions, e.g., of “a formal rule of inference”, p. 129: “Even if an inference is not valid in its form, nothing prevents it from being valid on the basis of the actual meanings of its terms.”

It is well known that Aquinas stopped writing this commentary in the midst of chapter 10 of *On Interpretation*. The usual reason given is that he was busy and that the student, for whom he was writing the commentary, wished to digest what he had been given before presuming to ask for more. Perhaps, on the other hand, Aquinas realized the mess that he had inherited and was trying to support. So perhaps not only St. Thomas's approaching beatitude but also his philosophical rectitude prevented him from continuing...²⁶

The probable source for these views of Aquinas is Boethius' commentary on *On Interpretation*, or some commentary upon it, and secondarily the commentary of Ammonius.²⁷ I find it odd that Aquinas did not use the more modern sources available to him: Albert or Averroes. Perhaps he forsook his more usual modern sources because, after all, he was writing merely a commentary for a beginning student. But then we should not take this commentary too seriously in logical theory.²⁸

Perhaps Aquinas, although citing Aristotle's views, is moving away from them. For, in his commentary on *Metaphysics* V.7, he seems to offer a different version. He sees the main point of the chapter to offer a distinction between two modes of being, the actual being (*actus essendi*) of real existence, and the alethic being of what *is* asserted, which he characterizes as

²⁶ More seriously, Aquinas may have had other non-logical motives to take the position he does: Robert Kilwardby in 1277 condemned at Oxford the claim that the simple denial entails the metathetic affirmation even when the subject does not exist ('S is not P (and there does not exist an S); therefore S is not-P'). To be sure, Aquinas had died by then, but still, given bureaucratic delays, it is likely that those who did not give existential import to the metathetic affirmation would have been held suspect earlier. See Lewry (1981).

²⁷ Boethius, *In Librum De Interpretatione Editio Secunda* 532C; cf. 535A. Boethius seems to be following Ammonius, in *De Int.* 161,35-162,5. Soreth (1972), p. 394, n. 20, agrees that Aquinas is unusual in following Boethius and Porphyry, whom most Stoics followed too here.

²⁸ Unlike McNerny (1986) and Gilson (1952).

what has the potential to exist and so being conceivable, exists *in intellectu*. He seems to equate the former with being *per se* and the latter with being *per accidens*.²⁹ So when ‘is’ is used to connect predicate to subject, it need have existence only *in intellectu*. So statements of *tertium adiacens* have no existential import. Now Aquinas generally takes the metathetic predicate, ‘not-P’, as equivalent to the privative.³⁰ As only actual subjects that can have the positive attribute (sight) can have the privation (blindness), accordingly privative, and hence metathetic, predications can apply only to what exists.³¹ In this way Aquinas gets existential import for affirmations of *tertium adiacens*.

But all this does not help much for interpreting Aristotle. Not only can Aquinas now not explain texts of Aristotle concerning the indefinite name and verb, but also now he cannot explain how it is possible to speak of what cannot exist at all, as the doctrine being *per accidens* was supposed to do.³² In particular he would be limiting the syllogistic to terms designating only things that actually exist. Logical inference would hold only for referring expressions.

However, on account of the dominance of Thomism among modern scholastics and medievalists, Aquinas’ logical views have come to have considerable importance today in Aristotelian logical theory, so much so that ridiculing Aquinas’ logical views for many today amounts to rejecting Aristotle’s too. E.g., Peter Geach has accused Aquinas of being an ancestor of the hated “two-names” theory of predication, whereby the copula asserts an identity between

²⁹ *In Metaphysica* V.9 [896]. Weidemann (1981), pp. 755-6.

³⁰ *S.T.* I.5.2 ad 2.

³¹ *De. pot.* 7.2 ad 1.

³² We might save Aquinas’ position by way of an extended sense of modality, so that a goat-stag *can* exist, and so have being *in intellectu*. But this again moves us further away from Aristotle.

subject and predicate: ‘S’ and ‘P’ name the same object.³³ Geach has ridiculed this “two-name” theory of predication.³⁴ He does this mostly because he holds Frege’s view that predicates and subjects have radically different logical structures. To be sure, Aquinas does make some remarks like this.³⁵ Still, this theory looks later and more nominalist, as with Ockham and Buridan. For Aquinas’s theory has the predicate being not ‘P’ but ‘is P’, which signifies the essence of P. Scotus will make this clear.³⁶ But Aquinas does suggest at times that the copula does signify the existence, but perhaps only *in intellectu*.³⁷ So, like Frege somewhat, Aquinas does give subject and predicate a different logical structure. But, even if we ought to reject Aquinas’ views, the rejection of Aristotle’s theory does not follow.

The aspect theory of **Avicenna** seems to have the same problem: how to assert that ‘a goatstag is a not-man’ is true, while ‘a goatstag exists’ is false? For the former statement is an affirmation and so has the truth conditions: ‘there exists a goatstag, and ‘not-man’ is predicated of (**that**) goatstag’.

³³ Geach (1974), p. 30, complains that “the theory that a true predication is effectively joining two names of the same thing or object, the copula being a sign of this real identity” is logically worthless, for try ‘David is the father of Solomon’. He accuses, p. 47, the theory of confusing a name with the bearer of the name. However, he too, p. 42, likes Aquinas’ theory to the extent that it distinguishes different logical structures represented by ‘is’.

Veatch (1960), p. 419, likes Aquinas’ theory and defends it against Geach. He rightly complains, p. 406, n. 16, that Geach attacks Aquinas’ “two name” theory too rhetorically. Veatch might be right, n. 17, that the difference lies in Geach’s not allowing the predicate to refer to objects.

³⁴ Geach (1962), pp. 34-6; Weidemann (1986), pp. 182; 188.

³⁵ *S.T.* I.13.12. Cf. I.85.5 ad 3; *In V Met.* 11, n. 908. Aquinas offers this generally as the structure of *per se* predication. See Aertsen (1988), pp. 54-8, who summarizes Aquinas on *Metaphysics* V.7: a predicate *per se* indicates a causal relation [*In V Met.* Lect. 9, 885ff.]; i.e. a formal necessary identity between subject and predicate [*De Pot.* 8,2, ad 6; *In III Sent.* 12,1,1 ad 6]. Also Schmidt (1966), pp. 230-1.

³⁶ *In Primum Librum Perihermenias Quaestiones* 193b; Bos (1987), p. 126.

³⁷ *In I Sent.* 19.5. Perhaps, because of the present existence of the mind, the copula can come to consignify time.

Avicenna has two main responses. First he sometimes avails himself of the standard doctrine that there are two types of existence: existence *in re* and existence *in intellectu*—or being *per se* and being *per accidens*. Already Plato had Socrates invoking an ancestor of the latter, when he explains how we can think of what is not and assert such false statements as ‘Theaetetus flies’. Likewise for Aristotle ‘goatstag’ and ‘chimera’ are names signifying something existing in the soul, a thought in the mental language. Thus Avicenna too says that ‘a goatstag is a not-man’ is true, if the existence is taken to be only *in intellectu* and not *in re*.

Avicenna however does not mind saying that Aristotle is just wrong—or at any rate that his text make false claims, as Aristotle might be hiding his real views. So then just take ‘a goatstag is a not-man’ to be false, in the usual sort of existence, *in re*, as there aren’t any goatstags. Likewise ‘Homer is a poet’ is false today, even if Homer did exist once. After all we would reject and dismiss such claims in science.

If you want to make such statements true, strictly and scientifically, Avicenna says, you can use the Aristotelian doctrine of phantasms, actual items in existing minds. People today have thoughts of Homer and his poetry; hence these thoughts actually exist. ‘Homer is a poet’ is true if taken to mean: there are some present thoughts of Homer today. Likewise ‘a goatstag is a not-man’ is true if taken to describe actual thought of goatstags. Ockham has a similar doctrine. So does Russell in his account of knowledge by description.

Avicenna’s theory has another complication, that scientific statements may make statements in a timeless way, independently of the existence of any instances. In this way statements like ‘all eclipses have occlusion of a light source’ can be true even when there are no

eclipses. For him their truth value is grounded on relations between quiddities in themselves. Here though it would seem that the A to I inference does not hold—unless there is a scientific, demonstrative context granting the presence of instances.

For instance, he says that ‘a phoenix is a phoenix’ or ‘a heptagonal house is heptagonal’ is true even when none exist. For certainly, like goatstags, phoenixes and heptagonal houses are possible even if none exist ever. Such statements can be taken to be about the relation of essences of such possible beings. Just as ‘human being’ has the definition of ‘rational animal’, on account of the relationship between the quiddities humanity, rationality, and animality in themselves, so too for these statements about the goatstag, phoenix, and heptagonal house.

In more modern terms, this amounts to ampliating the domain to a domain of all possible beings and moving from a categorial to a modal logic. Then there will be true statements about goatstags *et al.*, whether the universal predicates have instances, in some possible world, albeit not in this world. Avicenna’s metaphysics of necessary and contingent being supports such an amplified domain.

Still for such statements to be admitted into scientific, demonstrative discourse, the terms must have instances existing *in re*, in this world, and not in some possible world. Or does Avicenna allow that necessarily true statements can be admitted into scientific discourse without such existence *in re*? He doesn’t say too much.³⁸ I surmise: perhaps so. This would explain, for

³⁸ However cf. Avicenna, Al-Jadal 235,2-5.

instance, how in mathematics we can have a geometry of chiliagons, without any every really existing.

III. Conclusions

...there are existential presuppositions embodied in the usual system of quantification theory. These presuppositions go far towards explaining the uneasiness of the logicians about empty terms. They have to be explained away before the logicians are able to apply their formal constructs to oral discourse.³⁹

What may we conclude? The charge of having an implicit yet unrecognized assumption of existential import applies to the copulative theory of predication, but not to the aspect theory. The aspect theory fares better with subalternation and, perhaps, with metathetic affirmation. Still it has the drawback that syllogistic proof becomes much more complex: no longer do the antepredicamental rule and the *dicta de omni et de nullo* hold solely in virtue of the predication relation of belonging. This does not become a big problem for the intended interpretation of Aristotle's syllogistic: its application to demonstrative science, where existence *in re* is stipulated to hold for all terms. Then the existence claim drops out or, indeed, becomes a background, implicit assumption. Once this happens, the copulative and the aspect theory look quite similar, perhaps disagreeing on the E to O inference. Yet they still differ in the formal logic proper. There, the aspect reading yields explicit albeit unwieldy propositions. That may seem quaint. But, it turns out, even today we have come to a similar theory with free logics.

³⁹ Hintikka (1959), p. 130.

An aspect theory has reappeared in some versions of free logic, a logic “free of existence assumptions with respect to its general *and* its singular terms.”⁴⁰ Free logic developed as a correction or emendation of classical Frege-Russell logic. The latter has problems handling existence claims about singulars: any existence claim about a singular thing is not well formed. E.g., it rejects ‘Pegasus does not exist’ and ‘Homer exists’ as nonsense ($*\sim(\exists x)p$; $*(\exists x)h$).⁴¹ To admit them at all, classical logic had to use roundabout methods, like taking some terms, especially the non-referring terms, as disguised definite descriptions (‘the winged horse’) or sets (‘the set of space-time points comprising Homer’) or predicate functions (‘Pegasizes’). Classical logic has further problems when mixing existential quantification with identity. E.g., ‘ $a = a$ ’ (like ‘Pegasus is Pegasus’) looks true even if ‘ a ’ does not refer, but then, via the Existential Generalization [EG] rule, ‘ $(\exists x)(x = x)$ ’ makes an existence claim for a singular that need not be in the domain.⁴² Likewise, what to do with predicate functions like ‘ x is the same as t ’, when ‘ t ’ does not refer?

As mentioned, there are various ways to handle denials of the existence of individuals, like ‘Socrates does not exist’, in classical logic. We might have a domain of unreal objects, like existence *in intellectu* in addition to the normal domain of real objects. We might say that, while

⁴⁰ Lambert (1991), p. 6.

⁴¹ Frege (1952), p. 50: “The sentence ‘There is Julius Caesar’ is neither true nor false but senseless.” Classical logic has some other versions that may make it less problematic, in particular, those that treat the existential quantifier not as asserting existence but as asserting that the propositional function is sometimes true. Cf. Ludwig Wittgenstein, *Notebooks, 1914-1916*, 9.7.16: “Do not forget that $(\exists x)Fx$ does not mean: there is an x such that Fx , but that there is a true proposition ‘ Fx ’.”

⁴² Leblanc and Hailperin (1982), p. 17. Russell (1919), pp. 203-4, recognize this flaw. Note, as discussed above, that the same problem arises routinely in Aristotelian logic: ‘the chimera is a chimera’.

the “meaning” of a singular proposition (in the formal model) does not require existence, its use presupposes it. Or, we might follow Russell and Quine and replace all singular terms with descriptions or predicate functions, and thereby eliminate a subject-predicate ontology and embrace a “Platonism”. We might add on an existence predicate, and then wonder what the existential quantifier is doing. Or, we might amplify the domain to include all possible objects. Yet all this comes at the cost of weakening the robust sense of reality where individual substances have attributes.

Classical logic is supposed to be an advance from Aristotelian logic (i.e., in its modern copulative form, as given in the *Port-Royal Logic*⁴³) because it allows predicate functions to have no instances. Hence it disallows the A to I and E to O inferences, while Aristotelian logic admits them. Yet we can easily accuse classical logic of having an implicit existential import assumption too. Existential import sneaks in either in demanding that all atomic constants occur as (non-empty) items in the domain, or in having an unrestricted Existential Generalization rule.

Another problem comes from with predicate functions having an empty extension. For instance, take: $(x)(Ux \supset Mx)$ and suppose that it is false and that ‘Ux’ and ‘Mx’ both have null extensions in the domain. (For an interpretation, let ‘Ux’ be ‘x is a unicorn’ and ‘Gx’ ‘x is magical’: ‘no unicorn is magical’ looks false to most people.). But then: $\neg(x)(Ux \supset Mx)$. Hence: $(\exists x)(Ux \ \& \ Mx)$ —the contradictory of the E proposition is the I proposition. This objection can be handled by denying it to be possible that ‘ $(x)(Ux \supset Mx)$ ’ can ever be false, as ‘Ux’ will be false for every instantiation. But it does seem strange to hold that every negative

⁴³ Lambert (1991), p. 3.

universal proposition with a predicate having no instances must be true. As with Parmenides it becomes impossible to speak of a thing that “is not”.

Again, if a predicate function ‘ ϕx ’, has a null extension, then for any ψ , ‘ $(x)(\phi x \wedge \psi x)$ ’ will be true. For each constant in the domain is not ϕ . But then it would follow that every goatstag is a lollipop etc. Even scientists want to talk meaningfully about things that they take not to exist: phlogiston; N-rays, the axolotl species. Such a logic will not apply well to human discourse.

Perhaps a free logic, which emends classical logic to address such problems, fares better. Unlike classical logic, a free logic allows atomic constants without their referring to objects in the domain, either by adding a second domain of non-existent objects⁴⁴ or by using a notion of the satisfiability of a sequence or set.⁴⁵ Free logics generally admit, in addition to the existential quantifier, a second existence operator, ‘E!’, which applies directly to individuals. In this way, ‘Homer exists’ becomes well formed, ‘E!h’, where ‘h’ is an individual constant. Some versions define ‘E!’ as ‘ $(\exists x)(x = a)$ ’.⁴⁶ Others take ‘E!’ as a primitive one-place predicate function.⁴⁷

Despite allowing for terms having no existential import, in general free logic seems to contain an aspect theory of predication. For, with a theory taking ‘E!’ as primitive, ‘Homer exists’ makes a simple assertion of existence, of Homer’s real presence. A statement of tertium adiacens, like ‘Homer is a poet’, taken realistically, does that as well as predicating ‘poet’ of

⁴⁴ Cocchiarella (1991), pp. 242-3.

⁴⁵ Van Frassen (1991), p. 83. So too Benson Mates and Alfred Tarski.

⁴⁶ Whitehead and Russell (1910), p. 29, define ‘E!a’ as ‘ $(\exists x) x \in a$ ’.

⁴⁷ Burge (1974), pp. 318-20, summarizes some problems with most versions of free logic.

Homer. If we take the additional, nominalist step of eschewing Platonism by reducing predicate functions and sets to abstractions and/or sets of individuals (taken as mental acts and not as real entities), we begin to get, once again, an aspect theory like the one that I have attributed to Aristotle. Indeed, Karel Lambert goes so far as to analyze the singular predication, ‘s is P’ as ‘s exists and s is P’.⁴⁸

⁴⁸ Lambert (1998), p. 158.

Appendix

Selections from Avicenna, *Al-'Ibāra*

On the Square of Opposition:

[88,5] Let us now likewise determine a table for [mutual] contradictories:

Every man exists (as) just	Every man does not exist (as) just ⁴⁹
Every man does not exist (as) tyrannical	Every man exists (as) tyrannical
Every man does not exist (as) not just	Every man exists (as) not just

[88,10] Our saying (that) every man does not exist (as) not just is true when all of them are just only, and false about what lacks that. Our saying (that) every man does not exist (as) just is false when all of them are just, and true about what lacks that. Furthermore, our saying (that) every man exists (as) tyrannical is true when all of them are tyrannical, and false about what lacks that. Our saying (that) every man does not exist (as) tyrannical is false when all of them are tyrannical and true about what lacks that. So the privative affirmative is more particular than the simple negative. Still, the privative negative is more general than the simple affirmative.

[89,1] Furthermore, our saying (that) every man exists (as) not just is false when they are non-existent or (when) some of them are just or (when) all of them are just, and is true about what lacks that. So it is more generally true than the privative affirmative. Our saying (that) every man does not exist (as) not just is true when they are non-existent or (when) some of them are just or (when) all of them are just, and false about what is over and above that. So it is more particular than the privative negative. Matters take a similar course for the singular ones.

[89,6] As for the quadrants of affirmatives, they certainly do not concur in truth but do concur in falsity when the whole [subject?] is non-existent and when some are just and some are non-just, whatever they may be. So our saying (that) every man exists (as) just is false when only some of them are just, and here 'every man is tyrannical' is false and likewise 'every man exists (as) not just'. As for the negatives, they may concur in truth when the affirmatives are false together, while not concurring in falsity, unless their contradictories do not concur in truth.

[89,12] So these are the forms of the state when we make the universal ones affirmative. If we make the universal ones negative, we set down a table as follows:

Some man exists (as) just	No man is just
No man is tyrannical	Some man exists (as) tyrannical
No man is not just	Some man exists (as) not just

⁴⁹ In the Arabic, the negation *laisa* appears in front of the entire proposition. So the Arabic sentence has less ambiguity in the scope of the negation than the English. Perhaps read it is: it is not [the case that] every man exists (as) just'.

[90.1] The universal negative is true when all of them are tyrannical or (when) all of them are intermediate, or (when) they are in potency, or (when) they are non-receptive, or (when) they are non-existent, or (when there is) a mixed case among them that is not just. It is false when some of them are just, and the rest are, however they are. Our saying (that) some man exists (as) just is true when some are just and the others are however they are, and is false when among them there is no one, however they are.

[90,5] As for our saying (that) no man exists (as) tyrannical, it is true when all of them are just or intermediate or in potency or not receptive or non-existent or (when) there is not at all among them a mixed case that is tyrannical and not just. It is false when some of them are tyrannical, and its opposite is true when some of them are just [and] existent (*kā'in*), whatever the others are. Here the affirmative privative is not inseparable from the simple negative, and the simple negative is not inseparable from it. So, when some men are tyrannical or some are just, and the rest are however they are, without their being just, the privative affirmative is true, and the simple negative likewise. When all men are non-existent or intermediate or in potency or non-receptive, or (when) there is among them a mixed case that is neither tyrannical nor just, the negative is true, while the privative particular affirmative is not true. When some men are tyrannical and others just, the particular affirmative is true, and the simple negative is false. So when there is no inseparability between these (two), there is no inseparability between their contradictories, unless there is between them the conversion of that inseparability

[91,1] As for our saying (that) no man exists (as) not just, it is true when all of them are non-existent or (when) all of them are just, and false in what lacks that.

[91,3] As for the privative negative, it is true about what it is true about, as it is true when they are non-receptive or intermediate or (when) there is a mixed case among them that is not tyrannical. So it is more general than it, i.e., than the metathetic negative. And why not, as you know that the privative affirmative is more particular than the metathetic affirmative. So it is necessary that the metathetic negative be more particular than the privative negative

[91,7] The case here has differed from what holds for the singulars. The quadrants may be true together when some are just and others tyrannical. The denials (may) be false together in that, and the affirmatives may be false together when they are all is non-existent and the denials are true about them. Still the privatives and the simples are false together when they are all intermediate in potency or non-receptive. So their opposites would then be true. Let us consider the state of the table determining contraries for this form:

On Metathetic Predicates

[79,11] Now we need to advance an assertion (*taḥqīq*) that will give a first principle for this chapter. So we say (that) the true meaning (*ḥaqīqa*) of the affirmation is to judge the presence⁵⁰ of the predicate to the subject. It is absurd to judge of the non-existent that it is something existent. So every subject of an affirmation is existent either in individuals or in the intellect. When someone says: 'every one of those having twenty of the base is such', by that he means that every one of those having twenty

⁵⁰ Or: existence.

of the base exists however (that) might be, and is such. The sense of that is not that everyone having [80,1] twenty of the base that are non-existent has present to it in the state of its non-existence that it is such. When it is non-existent, its attributes are non-existent, since it is not possible for it to be non-existent and its properties to be existent. When it is non-existent, how is it judged that it exists, except in view of people who get themselves all worked up [?] So they make it possible for non-existent (things) to have attributes coming to pass, while they are not existent, and while (what) comes to pass, in their view, is non-existent. Our discourse is about the conception of (what) comes to pass, where we do not intend by the conception of the existent something else. It is up to them to intend whatever they want by the existent. Rather, the intellect judges things affirmatively according to their being in themselves and having the predicate present to them [along with] their existence, or having the predicate being thought in the intellect (as) present to them—not insofar as they are in the intellect alone, but rather according to (the fact) that, when they exist, this predicate is present to them. So, if there is no existence of the thing at the time of the judgment except in the intellect, then it is absurd for us to say that B, for instance, has present to it that it is A, not in the intellect, but rather in the state of affairs itself, while it is not existent in the state of affairs itself [—] then how is anything present to it [?] So the conception of the affirmation and (its) assertion is the certainty [*tubūt*] of a judgment about something, whose existence is about it, just as the conception of the denial is the non-assertion of a judgment about something, where this is no doubt its non-existence. From this it is clear that it is not an affirmation at all, except of a subject whose state is as we have mentioned. As for the things whose existence does not exist, the assertion that might be used of them when it is thought that the intellect judges about them that they are such—its sense is that, if they were existent, their existence [81,1] in the intellect would be such. This is as when it is said that the void [has] dimensions. As for the denial, it may be true of the existent and (of) the non-existent.⁵¹ So the previous distinction between the simple negative and the metathetic affirmative is that the subject of the simple negative may be existent and may be non-existent, where the denial of it holds insofar as it is non-existent. As for the subject of the metathetic affirmative, it does not hold that it is affirmed when it is non-existent. Then (there are) people who try after this to distinguish between the metathetic affirmative and the simple negative by making the metathetic signify the non-existence of the object with regard to being such as to be existent in the proximate or remote genus or in the species, so that they say: our saying ‘not just’ holds of the non-existence of justice and in its nature as being just, or in the nature of the genus, as when they say: ‘a beast is non-rational’ or ‘the rational soul is a non-body’, where the two senses are existent in their genus. Also people say: ‘the non-just is opposite the tyrannical and the intermediate, while the non-seeing is opposite the blind, regardless of whether you say ‘non-seeing’ or ‘blind,’ so that it does not hold in their opinion to say that the mind is not seeing. This is what they say.

[81,12] The true statement is explained by the example that we have given. When we say: ‘every body is non-existent in a subject, and everything that is non-existent in a subject is a substance; so every body is a substance’, we make an inseparable conclusion. It is known that the two propositions are affirmative and (that) the expression is not being taken (as) part of the predicate. On account of that it [‘non-existent’] is repeated as part of the subject, and the conclusion is made. Nevertheless [82,1] ‘non-existent’ in the subject does not indicate the non-existence of something existent in the

⁵¹ Or: privative.

genus of substance in some mode, since it certainly is not the genus of the substance, unless the existent exists as a genus. So, if this is one, and there is made a signification of the metathetic according to some (sort of) non-existence having the character that it exists in the totality of existence, this is closer to the truth. Rather, the metathetic is what is a particle of negation that is part of its predicate, however (that) may be. So, when we take the particle of negation with what, if it were separated, would be predicated by itself, taken as a single thing, and then assert it of the subject through the copulation of the assertion, the proposition would be affirmative in view of its composition. As for its matter and quality, (that) is another matter.

[82,8] They have heard in the teaching of the *Categories*⁵² and thereafter that the expression ‘not-man’ does not distinguish one thing apart from another, and does not distinguish what exists apart from what does not exist, or that it is correct for it to be made a predicate. So, when it is, it is necessary that in it this object be equivocal. Indeed we require that the subject in an affirmative metathetic proposition be existent, not because the nature of our saying ‘non-just’ demands this, but because the affirmation demands this in that it is true regardless of whether ‘non-just’ occurs to the existent and the non-existent, or occurs only to the existent. It is necessary to know that the difference between our saying ‘such exists as non-such’ and ‘such does not exist as such’ is that the simple negative (proposition) is more common than the metathetic affirmative, in that it is true of the non-existent insofar as it is non-existent, while the metathetic negative is not true of that. So it is true to say: ‘the griffin is not seeing’ but it is not true to say: ‘the griffin exists (as) non-seeing’. This is in virtue of ‘griffin’ being a name signifying a sense in the imagination, while not having existence in individuals.

[83,1] After this we say (that) every simple predicate is positive.⁵³ Either it has a contrary or it does not. If it has a contrary, either there is an intermediate between the two of them or there is not. And either the subject does not fail to be existent, or it is a non-existent taken insofar as it is non-existent. If it is existent and there is determined vis à vis it something, like the predicate, then either that or its contrary is existent in it, or an intermediate is, if it or both of them are [present] together in potency, like, for instance, the puppy that has not opened its eyes: both blindness and sight are in it in potency—or it is not receptive of either of them, like the soul with respect to whiteness and blackness and (their) intermediates. So, when we say ‘Zayd does not exist (as) just’, it is false only when he is just and it is true in the remaining (cases). Moreover, when we say ‘Zayd exists (as) not just’, it is true when he is tyrannical, or an intermediate, or is both of them in potency, or is not receptive of either in virtue of a difference of opinions about him, and it is false when he is just or non-existent. Their custom has it that they call the weaker of the two [mutual] opposites in view of the people and in the appearance of what is widely accepted [endoxic] in the example of this passage “non-existence” (*adam*⁵⁴), regardless of whether it is non-existence in reality, like blindness or evil, or a contrary like tyranny. So the “non-existent” affirmative (proposition) occurs in the scope of the metathetic affirmative and (in that of) the simple negative. The state of the two “non-existents” with regard to the two metathetic (ones) is that

⁵² Presumably *Categories* 10.

⁵³ Or: extant. Goichon, s. v. *muḥaṣṣal* notes that *muḥaṣṣal* is a technical term applying to nouns or to propositions in contrast to the metathetic names or propositions

⁵⁴ This can mean either ‘non-existence’ in the sense of not existing at all or the sense of existing without an attribute that it tends to have naturally. See n. **Error! Bookmark not defined.**

the affirmative (one) shares in the metathetic affirmative, while the negative one shares in the metathetic negative. So the metathetic affirmative is true of the “non-existent” [*‘adamiy*: privative] negative, but not conversely, because the metathetic affirmative is more common than the privative affirmative. However, the privative negative is true of the metathetic negative, but not conversely. So when our statement that Zayd does not exist (as) not-just is true, our statement that Zayd does not exist (as) tyrannical is true, but not conversely. [84,1] So, when our statement that Zayd does not exist (as) tyrannical is true, it is not true that he does not exist (as) not just. So this (the latter) is true about the mixed [case] and what is in potency and what is non-receptive, while the first [case] is not true of it. So the state of the two [types of] “non-existents” in view of the two [types of] metathetics is that the affirmation corresponds with the affirmation, and the denial with the denial, even if there is a difference in generality and particularity. The state of the two [types of] “non-existents” in view of the two [types of] simple [propositions] is that the denial corresponds with the affirmation, and the affirmation with the denial. The following is a chart of these specific judgements:

[84,6]

- (a) ‘Zayd exists (as) just’ —is true only when Zayd is just and is false about what is other than that.
- (b) ‘Zayd does not exist (as) just’ —is true in all cases but one. So it is true when he is non-existent, and tyrannical, and mixed, both in potency, and not in potency, and it is false when he is just.
- (c) ‘Zayd does not exist (as) not just’ —is true when he is just or non-existent and is false in the remaining [cases].
- (d) ‘Zayd exists (as) not just’ —is false when he is just or non-existent, and true in the remaining [cases].
- (e) ‘Zayd does not exist (as) tyrannical’ —is false when he is tyrannical, and is true when he is non-existent or just or mixed or in potency or not in potency.
- (f) ‘Zayd exists (as) tyrannical’ —is true only when he is tyrannical, and is false in the remaining [cases].

[85,1] So it has been explained to you that two of their states in regard to the two [types] of non-existence is like the state of the affirmation and denial in regard to them, and that the (other) two are not like that. Moreover, the truth of the affirmative (proposition) in each of them is about one (thing), while the falsity of the negative is about another. So this is (a case where) the two [types of] non-existent [propositions] and the two [types of] simple [propositions] are alike, and (where) the two [types of] non-existent [propositions] and the two [types of] metathetic ones differ.

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