

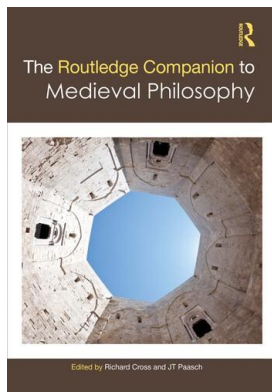
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### Qualification

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## 2

# QUALIFICATION

*Allan Bäck*

In ordinary discourse, people often qualify what they say by appealing to one respect or another of what is being said in order to avoid contradiction. A person may be excellent at basketball but not excellent at ballet; an animal may be a big mouse but not a big mammal. Philosophers too seek to qualify their statements, for the sake of greater precision of theory, or for the sake of avoiding the ignominious *elenchus* of Socrates, or for the sake of pretentiousness, or what have you. For instance, in *Republic* I, Socrates gets Thrasymachus to admit that, although rulers do make mistakes, still the ruler *qua* ruler does not err. But does this qualification, “*qua* ruler,” avoid the contradiction?

Indeed some whole metaphysical systems seem to have been built upon such qualifications, more or less explicitly: Father Parmenides, one hopes; certainly the Cārvāka and the Nyāya and certain Buddhists; perhaps Spinoza with his modes and Hegel with his moments. All of these hold that there is no plurality. Still, they admit that the world of our experience has different, mutually opposed aspects: some people are enlightened; others are not; thoughts about goats differ from thoughts about planets. To explain the diversity it is natural to talk about different *respects* about the world or about our experience.

So it is not surprising that philosophers have given logical analyses of the structure of statements containing qualifications, so as to determine which qualifications are legitimate and which are not, which ones avoid the contradictions of the unqualified statements and which do not. Medieval philosophers are no exceptions. To use a standard example from Christian theology: on the orthodox view of the Incarnation, Jesus is both the Creator God and a human creature. So He is both Creator and creature; hence He is created and not created. Such cases motivated many medieval philosophers, like Aquinas and Scotus, to develop an elaborate logical theory of qualification in order to show doctrines like the Incarnation to be consistent.

A simple declarative statement may be qualified in many ways: by adjectives, by subordinate clauses, by the context of the speech act, by being put into indirect discourse, by a propositional attitude like “it is unlikely that . . .,” and so on. More directly, terms or clauses may be attached adverbially, directly to the statement, like “quickly,” “necessarily,” and “deceitfully.” Following Aristotle, the medievals separated out a particular type of such qualifications that specify the respect in which the predication is asserted to hold, having the general form, “S is P in respect of being M”—often put in terms of “*qua*.” This connective is represented by many expressions in ordinary language, such as “insofar as,” “in virtue of,” and “in the sense that.” Traditionally, a use of this connective was called a reduplication.

## Greek Sources

Aristotle himself has a philosophy teeming with such qualifications, often expressed via the “*qua*” locution. He says things like “A doctor builds a house, not *qua* doctor, but *qua* housebuilder, and turns gray, not *qua* doctor but *qua* gray-haired. On the other hand, he doctors or fails to doctor, *qua* doctor” (*Phys.* 191b4–6). Aristotle calls his science of first principles the study of “being *qua* being.” He uses this talk of “*qua*” to signify abstractions that are the subjects of the sciences. More generally, Aristotle takes universals to be abstracted from individuals and not to exist like Plato’s Forms in their own right (*APo.* 81a38–b9; *Phys.* 193b31–5). He describes mathematical objects, “the ultimate abstractions,” by speaking of substances “*qua* planes” or “*qua* indivisibles” (*Met.* XIII.3). Thus, understanding the status of these qualifications has great importance for understanding the philosophy of Aristotle.

Being reflective like other philosophers, Aristotle himself analyzes the logical structure of propositions with such qualifications. Indeed, he began developing what turned into a canonical account of abstraction (Weinberg 1965: 5). He discusses formal properties of such propositions with qualifying phrases not systematically but topically, as the need arose (Bäck 1996: chs. 1–3). Aristotle never clearly gave a general overview of his views on *qua* propositions. However, he did hint that there are two logical types, which came to be called the *reduplicative* and the *specificative* in medieval times. Their difference becomes clear in considering the *secundum quid ad simpliciter* inference:

- (1) S *qua* M is P; therefore S is P.

This inference holds for the *reduplicative* but not for the *specificative* type. In the (strictly) *reduplicative* type, the respect introduced by the M term has a predicative relation to the original subject and predicate and sets restrictions on that predication. The original subject S is preserved along with P continuing to be asserted of it. In the *specificative* type, the respect introduced by the M term has another, “mereological” relation to the original subject and predicate, and changes the original predication, so as not to be true of the original subject but of its “part” in varied senses. Aristotle discusses formal features of the *reduplicative* type in his works on syllogistic, demonstration, and science, while discussing those of the *specificative* type when dealing with fallacies.

Late Greek philosophy had extensive commentaries on Aristotle where his doctrines were elaborated. Various passages where Aristotle discusses the logical structure of qualification were collated and their doctrine systematized. The medievals, both Islamic and Latin, came to have translations of these commentaries as well as of Aristotle’s works.

## Medieval Developments

Although current research is scanty, the Islamic philosophers seemed to focus on qualification as the need arose when dealing with specific issues—in the way that Aquinas or Scotus would develop logical doctrines in their theological or metaphysical discussions. Apart from some commentaries on the syllogistic, there were few separate logical treatises.

Once the Latin medievals had access to Aristotle’s full corpus (the *logica nova*), with the Greek and also with some Arabic commentaries, they too appropriated and elaborated upon Aristotle’s analyses of *qua* propositions. On account of Aristotle’s calling some *qua* phrases “reduplications” in *Prior Analytics* I.38, they called all such propositions containing them “*reduplicative*”—but then distinguished the strictly *reduplicative* logical type from other types.

*Reduplicative* propositions appeared along with *exceptives*, *exclusives*, *inceptives* in that part of logic called “the *exponibilia*,” namely, propositions able to be resolved into simpler and clearer

ones (Ammonius 1897: 217.5–12; Peter of Spain 1964: 1–16, 104). It is plausible that the original motivation for the treatment of the exponible was theological: to get clear on Christian doctrines as in: “all men sin except Jesus”; “God had only one Son”; “the Host began to be the body of Christ”; Christ *qua* God is not a creature, while Christ *qua* man is a creature. (There were antecedents: the Stoics had an elaborate theory of conditionals: hypothetical, disjunctive, and conjunctive.) This work continued in Islamic philosophy (Avicenna 1964). What do such claims mean? What are their truth conditions?

In sum, from Aristotle’s scattered remarks there arose a theory of qua propositions, or a theory of reduplication, fully developed by the high Latin medieval period (1250–1350). Although there are of course different philosophers with different views on reduplication in that period, their views overlap a lot, and it makes sense to talk of the rise of a single logical theory of reduplication. For instance, William of Ockham, the nominalist, and Walter Burleigh, the realist, have similar logical doctrines here despite their great metaphysical differences. The similarity of their views is partly due to their using Aristotle’s works as a common reference point: they all heed what Aristotle says about qua propositions, and attempt to offer analyses that demonstrate the truth of those qua propositions that Aristotle (as well as others in the Aristotelian tradition) asserts and the validity of inferences involving qua propositions that he maintains. Rather, they differ mostly on the applications of that logical theory—what we today would call “interpretations of the formal model.”

### The Aristotelian Theory of Reduplication: The Old Logic

Islamic and Byzantine philosophers had the full Aristotelian corpus about from the start. The Latin medievals did not (the “old logic”) but came to have it (the “new logic”) in the thirteenth century. That corpus included the Greek commentaries and some Arabic materials. Among the latter were all the literal commentaries of Averroes and many of the more original discourses of Avicenna. However, with the exception of his work on Porphyry’s *Eisagoge* in *Al-Madkhal* (called the *Logica* in the *Avicenna Latinus*), Avicenna’s logical treatises were not translated, so far as we know.

I now present some examples of the logical theory of qualification and its application in Latin medieval philosophy (for the Islamic materials, see Bäck 1996: ch. 4). I shall focus on Peter of Spain (thirteenth century), whose books were used as texts for centuries, and on William of Ockham (fourteenth century).

Even before the Latin medieval philosophers had the full corpus, they had Aristotle’s doctrine of logical fallacies in the *Sophistical Refutations*, including one involving an inference dropping a qualification: the fallacy of *secundum quid ad simpliciter*. The canonical example from Aristotle is:

(2) An Ethiopian is white with respect to his teeth (i.e., has white teeth);  
therefore he is white.

(SE 167a7–9)

Commenting upon the doctrines of complex predication, they also considered the reverse inference, of *simpliciter ad secundum quid*.

(3) S is P; therefore S is P qua M.

To take an instance from Aristotle’s *On Interpretation* 11:

(4) Socrates is good; therefore Socrates is a good cobbler.

(20b35–7)

Both inferences, of types (1) and (3), were grouped together, under the fallacy of *secundum quid et simpliciter*. In later centuries, the fallacy of accident was considered to be the converse of the fallacy of *secundum quid ad simpliciter*; still later, the names reversed, so as to get the fallacy of accident and the fallacy of converse accident, as seen in many logic textbooks (Versor 1473: 465, col 1; Reisch 1496: II.VII.10–11; Whately 1855: III.12; Copi 1994: 125).

Because the old logic contained most of the texts where Aristotle discusses the fallacy of *secundum quid et simpliciter* but few texts on essential qua propositions, logical theories of specificative qualification arose first already by the twelfth century (De Rijk 1962–1967, vol. I). The qualifications were not yet called “specificative.” Rather they were called *determinations* (William of Sherwood 1995: 96.32–97.2; translation in Kretzmann 1966: 153–154). Following Aristotle, medieval logicians formulated general rules detailing when the determinations could be validly dropped. As the rules depended greatly on the subject matter of the determinations, they were not rules of *formal logic* but of *material logic*.

Peter of Spain mostly codified what Aristotle says in various texts. For instance, he says:

Therefore first note that “in virtue of something” (*secundum quid*) is said in two ways. That in one way “in virtue of something” diminishes its whole, e.g., as “white of foot” diminishes “white” without qualification, and “dead man” “man”. And through such “in virtue of something” [qualifications] the fallacy of *secundum quid ad simpliciter* occurs.

But in another way “in virtue of something” does not diminish its whole, but puts it, and implies it without qualification. E.g., “he is curly in the head; therefore he is curly,” whatever accident that denominates the whole through the part, as curliness which denominates man through the head. And snubness and aquilinity are in the nose alone, and through this it is said that a man is snub or aquiline. And blindness is in the eyes, and through this it is said that a man is blind. And science and virtue are in the soul, as in the subject, and through this a man is said to be wise or to possess virtue, and likewise for any other cases denominating the whole through the part.

But those forms and accidents that are forms and accidents of that whole in such a way that they do not belong to the part only, I say, cannot denominate the whole, unless they are in the whole without qualification. And in such cases the fallacy of *secundum quid ad simpliciter* occurs, since the determination which is made in such in virtue of a part or in some respect diminishes it without qualification.

(Peter of Spain 1972: 157.14–34)

Peter claims that inferences like

(5) Socrates is a dead man; therefore Socrates is a man

are invalid, whereas those like

(6) Socrates is curly-haired; therefore Socrates is curly

are valid.

The source and authority for these inferences lie in Aristotle (*De Interp.* 11; *Phys.* V.1 and IV.3). He himself remarks that the inference depends upon the relation of part to whole, of which he recognizes different types. The medievals then developed and applied this doctrine of parts and wholes, already elaborated upon by Boethius, to the fallacy (1891: 461A–C, 877C, 1188B; cf. De Rijk 1962–1967, vol. I: 278). Peter of Spain does so in discussing the fallacy of *secundum quid ad simpliciter*:

Moreover this fallacy occurs in as many modes as it happens that a determination diminishing it is added to something.

First, in virtue of a diminishing qualified part. E.g., “he is a dead man; therefore he is a man” does not follow since “dead” diminishes the concept of “man.” And “a chimera is conceivable; therefore a chimera exists” (does not follow) for “conceivable” diminishes “is” (*esse*). And “it is a painted animal or painted eye; therefore it is an animal or eye” (does not follow), for “painted” diminishes the concept of these. Moreover Aristotle made those paralogisms in this way: “what is not is conceivable—such as a chimera—therefore what is not is.” And you can similarly construct all the others, such as “what is not a man is a dead man; therefore what is not a man is a man” and “what is not an animal is a painted animal; therefore what is not an animal is an animal.”

Second, in virtue of an integral part. E.g., “an Ethiopian is white with respect to his teeth; therefore the Ethiopian is white.”

Third, in those which are for something (*ad aliquid*). E.g., “riches are not good for the fool or for him who does not correctly use them; therefore riches are not good.” For riches may not be good when considered for something, but still they are good in themselves. And: “an egg is potentially an animal; therefore an egg is an animal.” For every potency is for something, since it is for the act which realizes it.

Fourth, in virtue of place. E.g., “it is good to sacrifice one’s father among the Triballi; therefore it is good to sacrifice one’s father” and “it is good to use a diet in places of sickness; therefore it is good to use a diet.” For it may be expedient there, but still it is not expedient without qualification.

Fifth, moreover, in virtue of time. E.g., “that man fasts at the Fortieth; therefore that man fasts” and “it is expedient for someone to be doctored when he is sick; therefore it is expedient to be doctored”.

(Peter of Spain 1972: 158.11–160.5)

These modes have their antecedents too: Aristotle (*De Interp.* 11; *Met.* 1049a1–2) and medieval ones like the *Dialectica Monacensis* (De Rijk 1962–1967, vol II: 533.13–541.5). Peter also gives examples of the fallacy of *simpliciter ad secundum quid* (see (3) above), but he does not classify those examples into modes (Peter of Spain 1972: 160.21–161.2).

Others like Albert the Great had much more complex theories (1632: 867, col. 2ff; 718, col. 1ff). By the fourteenth century the rules tended to become based on a quasi-formal semantics (Ockham 1974: 831.10–14; 1979: 53–56, 260–275). By then the analysis of scientifically respectable qualifications had arrived too. The task seems to have turned into giving a model semantics of the world where things had their aspects, accidental and essential and then formulating syntactic rules about the inference patterns of the propositions about them. The fallacies continued to be discussed extensively. Yet the general logical theories of qualification focused instead on how the accidental aspects could be handled respectably and soundly.

### The Aristotelian Theory of Reduplication: The New Logic

With the advent of the new logic, the Latin medievals also dealt with Aristotle’s treatment of qua propositions in his syllogistic. The qua propositions were not the sophistical specificative ones but the scientifically respectable reduplicative ones. Avicenna, Albert the Great, and Richard Kilwardby among others wrote long commentaries on *Prior Analytics* I.38. They also commented on passages where Aristotle uses these qua propositions to explain the structure of scientific demonstrations. For instance, he claims that “an arbitrary isosceles has its angles equal to two right angles, yet isosceles is not primary, but triangle is prior” (*APo.* 73b38–9). Thus, Aristotle says that triangle is the primary subject for this attribute. Therefore, he feels justified in claiming that

triangle *qua* triangle, or *per se*, has this attribute (*APo.* 73b31). Aristotle says that, since the term, “triangle,” “is not homonymous, and being equal to two right angles belongs to every triangle, it is not triangle *qua* isosceles, but isosceles *qua* triangle, that has such angle” (*APo.* 85b10–13). Thus, “a triangle *qua* isosceles has its angles equal to two right angles” is false, and “an isosceles *qua* triangle has its angles equal to two right angles” is true. Aristotle also says that, when isosceles triangles are shown to have angles equal to two right angles, “the demonstration is not *qua* figure or *qua* primary element, but *qua* triangle” (*SE* 168b2–4). Thus, “a triangle *qua* figure has its angles equal to two right angles” is false, and “a triangle *qua* triangle has its angles equal to two right angles” is true. Here the task for medieval logicians was to give an exposition of such *qua* propositions as these: above all, to give truth conditions for them so as to determine their inference patterns and thus to analyze the soundness of demonstrations.

By the thirteenth century expositions of types of strictly reduplicative propositions had a standard treatment. The *Tractatus De Exponibilibus*, traditionally attributed to Peter of Spain, gives the general approach:

[A] reduplicative expression presupposes that some predicate is in some subject, and denotes that that above which it immediately falls is the cause of that inherence.

(*Peter of Spain* 1972: 112.105–107)

This rule states that in a reduplicative “S is P *qua* M” proposition, the M term gives the cause of the predication relation holding between the S and P terms.

Peter is taking “cause” here in a strong, Aristotelian sense: the M term must name one of the four Aristotelian causes for that predication (Peter of Spain 1964: 370). This follows the earlier medieval practice of taking reduplicative propositions as causal hypothetical propositions (Boethius 1891: 835B–D; Abelard 1974: 401.34–402.7).

For instance, in his treatise on syncategorematic terms, Peter of Spain offers a partial analysis of the logical structure of these essential *qua* propositions. He says:

The mode of reduplication is diversified in virtue of the diversity of the causes. And therefore it is said commonly that the reduplication “due to the fact that” has different intensions in virtue of the diversity of causes.

(*Peter of Spain* 1992: 370)

From this Peter gives truth conditions

The third rule is that a reduplicative proposition in which no negation is put is expounded through four affirmative exponents, of which the first affirms the principal predicate of the subject, and the second affirms the *reduplicatum* of the subject, and the third affirms the principal predicate of the *reduplicatum*, and the fourth is a causal proposition, in whose antecedent the expression above which the reduplication falls is predicated, and in whose consequent the principal predicate is predicated. For example, “a man insofar as he is rational is able to weep” is expounded as: “a man is able to weep, and a man is rational, and every rational thing is able to weep, and since [*quia*] something is rational, that thing is able to weep”.

(*Peter of Spain* 1972: 112.110–120)

So this rule explicates reduplicative propositions. Is the whole meaning of such a proposition claimed to be captured in the explication? The explication given suggests so. The rule would then give an equivalence in meaning:

(7) S is P qua M (reduplicative) is synonymous with: S is P, and S is M, and M is P, and since something is M, it is P.

He takes the last condition, “since something is M, it is P” to mean that M is the (formal, final, material, or efficient) cause why S is P.

To handle the qua propositions in ideal Aristotelian demonstration, “cause” must be taken even more strongly, so as to be immediate. That is, the M and P terms need to be commensurately universal, or coextensive, along the lines of Aristotle’s *Posterior Analytics* I.4. Burleigh sees this, which he calls the “negative reduplicative” (Burleigh 1955: 175.30–176.10).

Aristotle allows also for not-so-ideal demonstrations (and syllogisms) where the middle term is not commensurately universal. He allows also for ones that give the cause for the predication in the conclusions and others where it does not (*APo.* I.13). “Cause” might also be taken in a weaker sense, of just giving a reason for the predication. Accordingly, the medievals allowed for both causal and non-causal reduplicative propositions, with various subtypes. The two main sorts can be seen in Ockham:

[I]t must be known that such a proposition can be distinguished by the fact that there can be concomitant or causal reduplication. If the reduplication is concomitant, then four propositions, as if explicating it, are required for its truth: one in which the principal predicate is truly predicated of the principal subject; another in which that above which the reduplication falls is predicated of the principal subject; a third in which the principal predicate is predicated universally of that above which the reduplication falls; the fourth will be a true conditional, from that above which the reduplication falls to the principal predicate, in that way in which a consequence from inferior to superior is said to be good, and in the way in which it is said that from one convertible the other follows. For example, for the truth of “Socrates insofar as he is a man is colored” is required the truth of “Socrates is colored,” and “Socrates is a man,” and “every man is colored,” and “if (he is a) man, (he is) colored,” or “if *a* is a man, *a* is colored.” And since such a conditional is false, therefore the corresponding reduplicative proposition, “Socrates insofar as he is a man is colored” is false likewise, since it indeed has a false exponent.

But, if the reduplication is causal, then, besides the four exponents given above, it is required for the truth of such a reduplicative proposition that that above which the reduplication falls express the cause of what is brought in through the predicate, or that it be that in which the principal predicate is in primarily, or that the principal predicate be in that prior to being in the pronoun demonstrating that for which the principal subject supposes. E.g., by “an isosceles insofar as (it is) a triangle has three etc. [i.e., three angles equal to two right angles]” is denoted that an isosceles has three etc., and that an isosceles is a triangle, and that every triangle has three etc., and that, if something is a triangle, it has three etc., and along with this that the predicate “has three” is verified of triangle prior to being verified of isosceles, in the way that a logician uses “prior” and “posterior,” which are conditions of propositions. Similarly, through “fire, insofar as it is hot, gives off heat” are denoted (the exponents) given above, and therefore it is true. Similarly, “a man, insofar as he has an intellective soul, is capable of knowledge” is true, since, in addition to the four exponents, the intellective soul is the cause of knowledge, and as this extends the name of the cause to some subject, it suffices for the truth of such a reduplicative proposition. But, “a man insofar as he is risible is capable of knowledge” is false, although it is true if the reduplication is concomitant, as the four exponents given above are true.

(Ockham 1974: 290.21–291.57)



In addition to the reduplicative sort of qua propositions, Ockham discusses another sort, the “specificative”:

But if the expression is not held reduplicatively but specifically, then it is not required that that to which such an expression is added be the subject for the principal predicate universally, but it is required that that above which the reduplication falls indicate that by reason of which the principal predicate is compatible with [*competit*] the primary subject. For example, if in “fire insofar as it is hot causes heat” the “insofar as” is not held reduplicatively but specifically, it is not necessary that “every hot thing causes heat” be true, but it is required that “hot” indicate the heat through which fire causes heat. Further, causing heat must be compatible with “hot” as more prior and more *per se* than with “fire,” or at least what is the principle of causing (must be compatible in this way). And so for the truth of such a proposition it is required that the principal predicate be predicated of the principal subject and of that to which such a (reduplicative) expression is added, and that that added term be predicated of the principal subject. But it is not required that the principal predicate be predicated universally of that to which such an expression is added, but it is necessary that it indicate that by reason of which the principal predicate truly agrees through predication with the principal subject. And so the following propositions are made true: “Socrates, insofar as he is white, stands out [*disgregat*]”; “Socrates insofar as he has free will sins”; “being insofar as being is the subject of metaphysics”; and so forth. But of the examples there must be no concern.

(Ockham 1974: 295.160–179)

Here, Ockham is separating off a scientifically respectable type of specificative proposition, which I have called the *abstractive* (Bäck 1996). Others, like Scotus and Burleigh, had this type too (Burleigh 1955: 176.19–32). The motivation again came from Aristotelian philosophy. For instance, Aristotle has a science of “being *qua* being.” This science makes statements that hold of beings, real things, “*qua* being” (*Met.* IV.1; XI.3–4). This sort of specificative proposition is not the standard fallacious sort: the *secundum quid ad simpliciter* inference holds. On account of this, I suggest that it be considered “reduplicative” and called *abstractive*.

Moreover, Ockham recognizes what we may call an adverbial temporal logical type of qua proposition:

It is necessary also to know that this word, “insofar as” and similarly “in virtue of the fact that,” “under the concept of,” and so forth, are sometimes equivalent in propositions to some adverb of time. Just as one sense of the proposition “dog, insofar as it signifies ‘animal capable of barking’, makes the proposition ‘every dog is an animal’ true,” so “the proposition ‘every dog is an animal’, is not true except when dog stands for ‘animal capable of barking’.” And similarly we say “that image is a man, in virtue of the fact that ‘man’ is taken improperly” is true when “man” is taken improperly.

(Ockham 1974: 295.180–296.188)

Here the “qua” expression means just “when” or “so long as,” and it is being reduced as a mere linguistic variant.

So the Aristotelian tradition has marked off two main logical types of qua propositions, of the form “S is P qua M.” In the (strictly) *reduplicative* type, the respect introduced by the M term has a predicative relation to the original subject and predicate and sets restrictions on that predication. The original subject S is preserved along with “P” continuing to be asserted of it. In the *specificative* type, the respect introduced by the M term has another, “mereological” relation to the original

subject and predicate, and changes the original predication, so as not necessarily to be true of the original subject, at least for many types of parts, but rather of its “part.”

The reduplicative type has the following basic structure:

(8) [Reduplicative] S qua M is P iff S is M, and M is P, and S is P.

This captures what Ockham says about the (scientific) “specificative” or abstractive, except that it leaves out the condition that the M term be “more prior and more *per se*.” To get that, I suggest the condition that P be an M-type predicate. In this way Socrates qua animal is human, and Socrates qua being is a substance.

The subtypes that have been distinguished for the reduplicative add further conditions on (5): that being M entails being P (“it is necessary that every M is P”), which can be construed causally; that the M and P terms be commensurately universal: M if and only if P (the restrictive); that P be an M-type predicate—that is, “P” falls under (in Frege’s sense) “M.” In short, the qua phrase then explains why S is P, where this explanation can be given a weaker or a stronger causal sense.

Medieval logicians gave more or less explicit truth conditions for all these sorts of reduplicative propositions. I list for them truth conditions that I have given elsewhere (Bäck 1996: 507–522), along with relevant passages in Aristotle, and append some examples that would be accepted in the Aristotelian tradition:

(9) Every S is P qua M (reduplicative) if and only if:  
 $(\forall x)((Sx \rightarrow Mx) \ \& \ (Mx \rightarrow Px))$ . (*APr.* I.38)

The Aristotelian tradition had two main subtypes: one, which I call the restrictive, used in scientific demonstration, where the reason or cause for the predication, given by the M term, should be commensurately universal with the predicate:

(10) Every S is P qua M (restrictive reduplicative) if and only if:  
 $(\forall x)((Sx \rightarrow Mx) \ \& \ (Mx \leftrightarrow Px))$ . (*APo.* I.4–5)

(11) Every S is P qua M (abstractive reduplicative) if and only if:  
 $(\forall x)(Sx \rightarrow (Mx \ \& \ Px))$  and “P” is an M-type predicate.

(*Met.* IV.1)

Some more examples:

(12) Every isosceles triangle qua isosceles triangle has its interior angles equal to 180°. (True reduplicatively and abstractively; false restrictively.)

(13) Every isosceles triangle qua triangle has its interior angles equal to 180°. (True restrictively; reduplicatively and abstractively.)

(14) The Great Pyramid qua geometrical is a triangular pyramid. (True abstractively; false reduplicatively and restrictively.)

(15) Being qua mathematical is quantitative.

(*Ibid.*)

With (fallacious) specificative propositions, the *secundum quid ad simpliciter* inference, “if S qua M is P, S is P;” does not follow (*SE* 5–6). To use Aristotle’s example (2), if the Ethiopian (say, Haile) with respect to his teeth is white (the Ethiopian’s teeth are white), it does not follow that the Ethiopian is white. Here “P;” what is predicated of the original subject S, need not be predicated of S

in the respect specified (M). That is, the predicates of that respect of S need not be predicates of S. If we take the notion of part broadly, as is traditional though not too contemporary (Rickey 1984; Simons 1987), we can think of the respect M as being a part of S. Then the fallacy of composition and division can apply here: what is true of the part need not be true of the whole, and vice versa. So we can give the following analysis of an accidental qua proposition:

- (16) [Specificative] Every S qua M is P if and only if S qua M is a part of S, and everything that is S qua M is P (not that every M is P, but every M of S is P, in a mereological sense of “of”).

This can be formalized, not too informatively as:

- (17) Every S is P qua M (specificative) if and only if:  
 $(\forall x)((Mx \ \& \ x \ \varepsilon_i \ S) \rightarrow Px)$ , where “ $x \ \varepsilon_i \ M$ ” indicates a part-whole relation between x and M.

The semantics for reduplicative qua phrases, “S qua M,” presents no more difficulty than what is needed for analyzing usual predicative sentences, as the analyses given above suggest. The terms there keep their usual reference. Specificative qua phrases however immediately, by themselves, change the reference of the original subject S to some aspect of it, signified by the complex, “S qua M”: “Haile” refers to an individual human being; “Haile in respect to his teeth” refers to Haile’s teeth.

The Aristotelian tradition claims that all qua propositions that are true reduplicatively are true specifically. Strictly, this works only for the more respectable sort, which I have called the abstractive. It does not work for the fallacious specificative type, as it has a change of reference so as to have a different subject. It might be thought to work even there on some part-whole relation. That relation is not properly specificative, though, and does not make a *de re* determination, changing the reference of the whole subject to its part. Still such a relation of part and whole, or belonging-to, was recognized in the traditional doctrine of subjective wholes and parts.

### Some Applications

Abstractions with their concomitant talk of “qua” played a large part in medieval philosophy, for better or for worse. For Berkeley it was for worse: “those great masters of abstraction [with all their] manifold inextricable labyrinths of error and dispute” (1710: §17). Indeed, there was a famous *Magister Abstractionum*, whose logical and philosophical writings were read widely during the thirteenth and fourteenth centuries by such as Ockham (Ebbesen 2009: 33).

Despite the protests of Berkeley, who also disliked Newton’s theories on similar grounds, abstraction plays a large role in mathematics and science today—and perhaps an inevitable one in philosophy. The logical theory of qualification makes the abstraction talk more understandable—so the medievals thought.

Thus in metaphysics, Avicenna’s doctrine of the threefold distinction of quiddity (*triplex status naturae*) had a central place in both Islamic and Latin solutions of the problem of universals. He says that a quiddity has three respects: in itself, in *re*, and in the mind (1952: 15.1–16). How to analyze propositions about these respects assumed great importance. Does a quiddity in itself, like Avicenna’s example of “horse *qua* horse” or “horseness,” exist independently of its individual instances, like horses (1960: V.1)? Is horseness individual or universal? Once again, people like Ockham appeal to the logical analysis of the qua phrases.

Again, to resolve contradictions in the doctrine of the Incarnation, Aquinas, Scotus, and others appealed to qua talk. The orthodox position of the Athanasian Creed is that “Christ is perfectly God and perfectly man . . . [and] is equal to the Father with respect to his divinity, but less than

the Father with respect to his humanity” (Denzinger 1967: 18). It was a major task of Christian theology to show how such claims are consistent. To do that well, without begging the question, requires a general theory of the logic of qualification.

Beyond this, logical textbooks and treatises on such topics as insolubles and consequences and obligations dealt with reduplicative sophisms. A standard one, perhaps already to be found in Plato’s *Parmenides*, is: “things insofar as they agree differ” (Peter of Spain 1992: 372–374). Others became more elaborate: “Equivocals, due to the fact that they are equivocal, are univocal” (Peter of Spain 1992: 374); “man *qua* man is the worthiest of creatures” (William of Sherwood 1966: 111–112); “every man insofar as he is dead [*homo mortuum*] is an animal” (Lax 1512: 95 col II). Reduplicative propositions continued to be used in later centuries: by Leibniz to restrict his identity principles and to eliminate relations, by Protestants to refute “Popish” theology, and by Bolzano to explain why Titus as a judge ought not to accept gifts.

## Conclusions

Latin medieval logicians distinguished two main logical types of qua propositions: the reduplicative and the specificative. These have two main differences: one syntactic, in terms of whether or not the *secundum quid ad simpliciter* inference holds, and, one semantic, according to whether or not the qua phrase changes the reference of the unqualified subject term.

To be sure, there are many other types of qualifications. But qua phrases have the logical merit of having formal properties. So too there are many types of modalities (what used to be called “tropes”) of a proposition. But modal logic focuses on the few that have formal properties, like “necessary.”

Still, why are there so many logical types of qua propositions given? Are the medievals splitting hairs and multiplying entities here? Rather, consider what a logical theory is supposed to do. Descriptively, it seeks to provide analyses of current uses of the sentences under consideration—and there are many uses. Prescriptively, it might claim that certain modes are useful in science, while other modes are not. This is what the medievals were doing—and what goes on today.

Today philosophers, linguists, and others still discuss the structure of qualification. Some people, like Kit Fine and Gerhard Heyer, start from the Aristotelian tradition while developing their theory (Fine 1982; Heyer 1987). Others seem to begin all by themselves—often I think to their peril. For instance, Asher and Landman endorse the inference: “If John as a judge is John, John is a judge” (Landman 1989; Asher 2006). Yet the inference follows only reduplicatively, but then the antecedent is false.

The main medieval points seem still to hold. In particular there are (at least) two logical types of such qualifications, having different syntactic and semantic features. Moreover the truth conditions offered for qua propositions of various types, although perhaps needing to be supplemented and modified by linguistic fieldwork, seem better than relying on armchair intuition. Oftentimes, the level of sophistication looks higher in the medieval discussions.

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