Problems of Ockham’s Semantics

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The debate concerning the extensional or intensional use of the terms in a proposition caused a great doctrinarian clamour the echo of which gives life to important philosophical questions still nowadays. In the course of the exposition, concerning over all the use of quantifiers, have apparead some analogies with important principles of the contemporary logic that in my opinion are not yet quite cleared in the studies consulted on the same subject.

Ockham, like every mediaeval philosopher, founds the correctness of the linguistic analysis on the exibition of metalinguistic rules in order to construct and verify syntactically well-formed sentences in Latin language. As a lot of his contemporaries and predecessors the Venerabilis Inceptor conceived the figure of the personal supposition in connection with the use of terms denoting objects (De re) and states of the world, but since each term, if it is included in a proposition, interlaces complex semantical relations with all the other terms and parts of the speech that form the proposition, the figure of the personal supposition over all concerned these complex relations studied in order to define the extension of the subject, of the predicate and their reciprocal distribution. Since the other figures of the Ockhamian supposition concern the metalinguistic use of the terms they will not be treated in this study.

As it is known the metalogical use of denotative terms comes to Ockham from an ancient tradition that analyzed the meaning and use of the appellativa but the Venerabilis Inceptor

1 BOCHENSKI (1972) 1204
with great precision explains the different property of the appellation as regards to the form and use of the terms in a proposition. Ockham seems to be very near to the concept of denotation formulated by Frege. In fact the Venerabilis Inceptor asserts that only the meaningful terms of second intention both put in relation in the same proposition form sentences in personal supposition that stand for states of the world or truth conditions, but always and only in virtue of the proper meaning.

Ockham, as all his contemporaries, provides some important rules judged necessary and sufficient to obtain correct constructions of propositions in personal supposition.

1. Rules for the right construction of propositions in personal supposition.

1.a) The first rule concerns the places of topic of the proposition, that is both extremes. Ockham considers extremes of the proposition only categorematic terms taken significatively. As syncategorematic terms (prepositions, adverbs, conjunctions etc.) have no proper meaning, they don't find place in the predication and then can't be correctly inserted in a proposition.

1.b) The second rule asserts that each extreme of the proposition has to act like logical subject or predicate. If in a proposition the logical subject or predicate are formed of two or more terms, then the predication doesn't regard the meaning of each term but concerns the meaning of both the extremes considered as a single meaningful unity.

1.c) The Venerabilis Inceptor, differently from his contemporary Walter Burleigh, holds a not-referential theory of the personal supposition. In fact Burleigh, admits the existence of second substances but since according to Aristotle all the universals are substances only for analogy

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3 FREGE (1973) 9-32.
4 BOEHNER (1956) 247.
Burleigh doesn't admit that the intensional predicates are in personal supposition too. Burleigh admits the personal supposition if, and only if, the subject is in relation to a predicate that defines the simple and singular "form" of the subject rigidly linked to each denotate:

"Sed quando terminus singularis compositus seu aggregatus significans res diversorum generum supponit pro eo quod significat, tunc talis terminus habet suppositionem simplicem,..."\(^8\)

Burleigh, like Shyreswood, conceives the subject always in the quality of inferius of the predicate. Vice versa Ockham, on the semantic plane, levels superius and inferius. Propositions that show either extreme, or both, composed by two or more terms connoting a concept and all its own individual values (secundum superius et inferius) aren't well-formed propositions because the existential statements and universal terms must produce semantical relations of distribution by means of predications. Vice versa a superius term, in regard to each inferius (a concept and its parts) gives rise to a well-formed proposition if, and only if, it is extreme and the supposition-relation is connected with its inferius (for the inverse):

"Et ideo quantumcumque aliquando partes extremorum se habeant secundum superius et inferius, non oportet consequentiam esse bonam inter illas propositiones, quia illa regula debet intelligi quando ipsa extrema quae supponunt in propositionibus ordinatur secundum superius et inferius. Unde non sequitur 'tu es vadens ad forum'; et tamen 'vadens' et 'existens' ordinatur secundum superius et inferius".\(^9\)

Ockham rejected the existential commitment rising in the definition of terms belonging to a well-defined semantical category; when quantifiers are absent in the proposition, the

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7 *Categoriae*, 2b 8
predicative constants don't find a correspondence with any truth value.\(^{10}\)

1.d) The fourth rule asserts that quantifiers always assign truth values of each term in regard to the other terms in a proposition:

"Et primo sciendum quod nullum signum per se significat aliquid nec imponitur ad significandum aliquid determinate, sed sic instititur ut faciat illud cui additur stare pro omnibus suis significatis et non pro aliquibus tantum, et ideo dicitur 'syncategorema'"\(^{11}\)

In fact Venerabilis Inceptor, discussing the extension of quantifiers, holds that they apply to the meaning of intentional terms and therefore to the extension of the various meanings. It is impossible to discuss in these pages the theme of the intentio (\textit{oratio mentalis}) in relation to the doctrine of the impositio (\textit{oratio verbalis}) that flows into the Ockhamian theory of the significance on the ground of which is conceived the use of the quantification that is the chief argument of this work. Therefore we shall adopt the exegetical conclusion of De Andrés who interprets the Ockhamian semantic like a kind of 'realistic propositionalism'.\(^{12}\) To conclude, quantifiers hold a definite semantical role only if they are linked to categorematical terms in one or both extremes of the proposition.\(^{13}\)

2. Use of quantifiers

\(^{10}\) On the modernity of the Ockhamian thought cfr. SIMONS (1988) p.20.
\(^{13}\) When Ockham wrote his \textit{Summa Logicae}, these theories, with different shades, where a common patrimony of the late scholastic logic. (Cfr.BURLEIGH (1988) II 5:“..., quia 'omnis' syncategorematicce acceptum non potest supponere nec aliquid de se significat", About the elements of concordance between Burleigh and Ockham, cfr. BROWN (1972) 15-30.
Ockham supplies some formal rules to define the correct use of the quantifiers in a proposition.

2.a) The first rule concerns the use and extension of the particular quantifiers. According to the philosopher all the indefinite terms (in Latin language) always presuppose the existence of a particular indefinite quantifier (aliquis):

"Est ergo primo sciendum quod quando in categorica nullum signum universale distribuens totum extremum propositionis additur termini, nec mediae nec immediate, hoc est nec a parte eiusdem extremi nec a parte extremini praecedentis nec negatio praecedit nec aliqua dictio includens aequivalenter negationem vel signum universale, semper talis terminus communis supponit determinate"\(^\text{14}\)

The first corollary to the rule is the following:

"Et est primo sciendum quod si non vocetur proppositio indefinita nec particularis nisi quando terminus subiectus supponit personaliter, tunc semper indefinita et particularis convertuntur...\(^\text{15}\)

Ockham restricts the validity limits of the above-mentioned rules to the correctness of the speech \((de\ virtute\ sermonis)\)\(^\text{16}\) because sometimes the intensional meaning of connotative terms gives place to ambiguous propositions. Therefore Venerabilis Inceptor retains that all the terms correctly placed in personal supposition always must have an extensional reference:

\(^{15}\) OCKHAM (1974) II 3.
\(^{16}\) ib. II 3 (19-27) p. 225
Metalogicon (1991) IV,

“Sicut si nullus homo sit albus, haec est vera ‘homo albus non est homo’, et tamen subiectum pro nullo supponit, quia nec pro substantia nec pro accidente”.17

The second corollary entails the indefinite interpretation of the particular term only on condition that both the extremes are in personal supposition; this prevents from creating confusion between metalinguistic expressions and denotative terms.18

2.b) Ockham admits the existence of numerous syncategorematic universal terms each having a well-defined extensional role, but this plurality is a grammatical change not a logical element of the speech. The Venerabilis Inceptor maintains the distinction among the universal syncategorematic terms that distribute themselves on substances and accidents (quilibet, nullus etc.) but then he reaffirms the extensional role of the universal quantifiers

“Si autem intelligatur quod sit aliquo modo distributivum, scilicet sub disiunctione inter species vel copulative, vel aliquo tali modo, concedi potest”.19

If from a grammatical point of view some syncategorematic terms (see omnis) must concord with the case of the categorematic term bound to them (whereas someone else - quilibet, uniusquisque etc. - doesn't follow so strict rules for the agreement) from a logical point of view all these distinctions don't are valid to alter the scope of the universal quantifier.20

This one, in all its forms, must be put in relation with individuals taken conjointly but never for the species neither for the genera nor for any partition of substances or accidents if not per accidens:

18 Ib. p. 257.
20 Ib. II 4.
“Nunc autem dictum est quod terminus talis non supponit nisi pro individuis et non pro speciebus.”

This is opposite to Burleigh's position according whom connotative terms can be put in personal supposition too:

“Non enim, oportet, quod terminus supponens personaliter supponat pro rebus singularibus vel pro re singulari, quia sic dicendo: 'omnis species est sub genere', subiectum supponit personaliter, et tamen non supponit pro suis inferioribus.”

2.c) In the rigorous and modern analysis of the seeming quantifiers _uterque_ and _neuter_ it is possible to show an intuition very near to the concept of ‘logical order’, although inserted in the not very favourable context of the terministic logic. The proposition corresponds in extension to the logical sum ‘$Apq$’ whereas "neuter istorum currit" is equivalent to the not-sum ‘$Xpq$’ because this last one corresponds to “nec iste currit nec ille currit”. With adamantine lucidity Venerabilis Inceptor asserts that whilst the universal quantifier ‘omnis’ binds at least one or more occurrences to the domain of objects (for which we have “$(\exists x) (Fx \rightarrow Fa)$” vice versa ‘uterque' always implies the occurrence of two united sentences:

“Et causa istius diversitatis est qua hoc signum ‘omnis’ potest convenienter ‘addi’ termino habenti unum suppositum, sed ‘uterque’ semper requirit duo supposita, scilicet duo demonstrata”.

2.d) At last, Venerabilis Inceptor explains the connexion of the term ‘totus’, with the meanings that it can assume in a proposition. If ‘totus’ is employed to indicate the totality, then,

taken like meaningful term, it blends to meaning of the terms to which it is bound. “Sortes runs” is exactly alike to the whole of “Sortes runs” (the totality of the parts of Sortes conceived like a whole:

“Si sumatur categorematice, tunc significat idem quod ‘perfectum’ vel ‘compositum ex omnibus suis partibus’; et sic quantum ad veritatem sermonis tantum valeret non addere quantum addere”.\textsuperscript{24}

If, in the contrary, ‘totus’ is explained like a syncategorematic term, it is a sign that denotes the distribution of the proper parts in regard to the totality of the bound term:

“Si autem ‘totus’ teneatur syncategorematice, sic est unum signum distributivum pro partibus integralibus, immo pro partibus proprie dictis ipsius importati per terminum cui additur”.\textsuperscript{25}

It seems then that Ockham has guessed the principle of the proper parts formulated in the modern extensional mereology.\textsuperscript{26} In fact according to Venerabilis Inceptor the proposition ‘totus Sortes est minor Sorte’ is equivalent to the proposition “quaelibet pars Sortis est minor Sorte” ; this last proposition, formally equivalent to the first, introduces the extension of the quantifier that is valid if, and only if, each occurrence of the logical product of the proper parts extracted by the totality is valid:

“Et tunc quaelibet talis propositio non posset esse vera nisi praedicatum conveniret cuilibet parti illius totius importati per terminum cui additur, et tunc

\textsuperscript{24}\textsuperscript{} OCKHAM (1974) II 6.
\textsuperscript{25}\textsuperscript{} Ib. II 6.
\textsuperscript{26}\textsuperscript{} SIMONS(1988), p.20. The principle of proper parts is summed by Simmons as follows: \[ \exists z (z \subseteq x) \land \forall z (z \subseteq x \supseteq z \subseteq y \supseteq x \subseteq z) \] where the symbol “\( \subseteq \)” expresses the relation of proper parts.
Metalogicon (1991) IV,

proprie est signum et dicitur distribuere pro partibus integralibus, et alia signa pro partibus subiectivis.²⁷

The strong extensionalist trend that marks Ockham's logical work is corroborated by the analysis of the various figures of the personal supposition in which appear the precognition of the hierarchy of levels, the use of the negation like modern logical connective and at last, relating some aspects of the *suppositio confusa immoblis* to the ‘determinate supposition’, the intuition of the movement of the quantifiers emerges.²⁸

3. DIVISION OF THE PERSONAL SUPPOSITION.

3.1 Discrete supposition.

The discrete or singular personal supposition concerns the relation between a proper name (or the pronoun that replaces it) and the term in the sense of a class-concept (*Sortes est homo*).²⁹

This figure requests the copula employed in tertio adiacens. Following Moody, we shall interpret the copula in in secundo adiacens by means of the modern existential quantifier ‘Ex’ that, united to the predicate ‘Fx’, defines it as ‘standing for something’. Moody, to express the role of the supposition of the terms, associates an index to the predicate in the following way: " 'Fₘₓ'x ".³⁰ Vice versa the copula in tertio adiacens (*Sortes est homo*) links two terms and implies the theory of the identity between the values of the terms conceived in extension. Therefore the proposition ‘*Sortes est homo*’ is so

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²⁷ Ib. II 6. In Ockham’s intention the subject matter is equivalent to the formula of the product: " \( \exists y \; x = y \; \exists x = \forall z \; x = z \) "

²⁸ The extensional interpretation that looks the Ockhamian personal supposition like a partial and incomplete theoria of the modern quantification has been holden with by numerous scholars as Bochen’ski, Boehner, Geach, Henry, Moody etc.


³⁰ MOODY (1953), 35.
rewritten (Ex) ’\(F_x \cdot G_x\) \(x\) where each index of relation of supposition sends again to the extension of the terms. Therefore if the first extreme is a proper name denoting one and only one individual then the copula is equivalent to an existential quantifier that binds the content (the individual) to the extension of the predicate (class-concept). The proposition ‘Sortes est homo’ can therefore be rewritten as follows: “\(\text{Est: homo (Sortes)}\)”. As in Ockham we don’t find the concept of propositional variable, this interpretation goes only in part over the modern notation of the *Principia Mathematica*: “\(\text{E! } x \ (\gamma x) \ (\varphi x)\)”.

In the opinion of Trentman only in the work of S. Vincent Ferrer, we find for the first time a weak intuition of the concept of propositional variable.\(^{31}\)

### 3.2 Determinate supposition

Determinate supposition in a proposition whose extremes are bound in extension by a particular quantifier ‘\(\text{aliquis}\)’ so that the distribution among the truth values implies almost one of the predicates may be true:

> “Suppositio determinata est quando contingit descendere per aliquam disiunctivam ad singularia; sicut bene sequitur ‘homo currit igitur iste homo currit, vel ille’, et sic de singulis”\(^{32}\)

For the rule, propositions with the form “(\(\text{aliquis}\)) homo est (\(\text{aliquis}\)) animal” are correctly constructed in determinate supposition:

> “Sicut ad veritatem istius:’homo currit’ requiritur quod aliqua certa singularis sit vera”.\(^{33}\)

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\(^{31}\) FERRER (1977), 69-70.


In the Ockhamian use of the personal supposition, categorematic terms always correspond to the proper meaning, that is to the single denotates (cfr.1.a), each conceived on the same semantic level of the other extreme. It seems that the Venerabilis Inceptor means to go round the problem of the semantic indicators contained in the connotative terms; in fact the constant and reiterated criticism to the inherence aims at rejecting the ontological properties of the intentional terms.\footnote{In spite of the deep evolution of the logical formalism, our time is witness of an analogous debate. A strong formulation of a criterion of identity of intentional predicates has been suggested by Rescher (RESCHER (1959) p. 623-636). In fact Rescher appeals to the mediaeval tradition for the use of the 'suppositio formalis' (p. 628). A different and weaker formulation of the criterion has been purposed by Turner (TURNER (1989) p. 63-84)\label{fn:rescher}}

The quantification, so conceived, simultaneously places itself on the terms and the domain of the individuals included in the meaning of the terms. The quantification on the terms and on the proper individuals that stand under the domain of each term has been studied by Matthews. He symbolizes predicative quantifications in the following way: \footnote{MATTHEWS (1964),92.}\footnote{Cfr. also BOEHNER (1959), 36.}\footnote{MOODY(1953), 48.}\begin{equation}
(\forall x)(Fx \cdot Gx).
\end{equation}

According to Matthews the copula in \textit{tertio adiacens} justifies the use of the logical product between predicates and then the ‘reduction to singulers’ is equivalent to a disjunction of conjoined predicates: \footnote{MATTHEWS (1964),92.}\footnote{Cfr. also BOEHNER (1959), 36.}\footnote{MOODY(1953), 48.}\begin{equation}
F_{x_1} \cdot G_{x_1} \lor F_{x_2} \cdot G_{x_2} \lor \ldots \lor F_{x_n} \cdot G_{x_n}.
\end{equation}

But the two expressions quantify only the subject and therefore we prefer to adopt Moody's notation that quantifies only on predicative variables.\footnote{Cfr. also BOEHNER (1959), 36.}\footnote{MOODY(1953), 48.}

So in the formalization of the examples where metalinguistic rules for the reduction to singulers, analogous to the ‘truth tables’, will be adopted;\footnote{MOODY(1953), 48.} they determine the extension of the proposition defined by the particular or universal quantifiers linked to categorematic terms. Considering the inexistence of the concept of propositional variable in the terministic logic, Moody makes use of predicate variables ‘$F$’ and ‘$G$’ with numerical subscripts to point at the
individuals for which the terms stand. A proposition like ‘*homo est animal* ’ is therefore translated with sentential operators, quantifiers and predicate variables in the following incomplete notation:

i) “(∃F) (∃G) · F = G”.

That is equivalent to:

ii) “(F₁ v F₂ v ... v Fₙ) = (G₁ v G₂ v ... v Gₙ)”

In i) each member of ‘F ’ is equivalent to a member of ‘G ’ but Moody observes that since determinate supposition is an indefinite or particular affirmative, the ii) can be rewritten in the following way

iii) “[(F₁ = G₁) v (F₁ = G₂) v ... v (F₁ = Gₙ)] v

v [(F₂ = G₁) v (F₂ = G₂) v ... v (F₂ = Gₙ)] v

v [(Fₙ = G₁) v (Fₙ = G₂) v ... v (Fₙ = Gₙ)]”

Consequently i) shows that the ‘reduction to singulars’ is almost held by a couple of elements ‘x ’ and ‘y ’ arbitrarily taken like individual variables (‘that man’ vel ‘that other man’ vel the n

th man’) through the ostensive use of the general terms ‘F ’ and ‘G ’ so that the equivalence ‘x = y’ is satisfied. The notation can be rewritten asserting the existence of almost an individual variable

“(∃x) · x = x”. With the predicates we will have “(∃x) · Fx ≡ Gx ”; so that at least an individual is predicated of ‘F ’ or ‘G ’.

From this moment to make easier the comparison between determinate supposition and common *tantum* supposition and to
clarify the metalinguistic method that get near to the rules which regulate the movement of quantifiers besides Moody's notation the standard symbolism of the P.M. will be adopted.\textsuperscript{38}

3.3) Common ‘tantum’ suppositio

The suppositio personalis confusa tantum implies that the proposition is equivalent to a conjunction of disjoined predicates:

“suppositio personalis confusa tantum est quando terminus communis supponit personaliter et non contingit descendere ad singularia per disiunctiva, nulla variatione facta a parte alterius extremini, sed per propositionem de disiuncto predicato, et contingit eam inferri ex quocumque singulari”.\textsuperscript{39}

If the proposition has the subject preceded by the syncategorematic term omnis whereas the predicate is disjunctively taken without altering the extension of the subject, then from the proposition ‘omnis homo est animal ’(ib. I 70) it isn't possible to infer upon the term ‘animal ’ a disjunction of joined predicates like “ ‘omnis homo est hoc animal ’ vel ‘ omnis homo est illud animal ’ ” but it is possible to perform the distribution to the single individuals disjoining the subject from the intensional predicate (class-concept) (cfr.3.1).

Then the foregoing exemple will be valid if we apply the conjunction of disjoined predicates to the subject and the result is that the determinate supposition corresponds to the conjunction of disjunctions whereas common supposition is a disjunction of disjoined predicates. Obviously suppositio confusa tantum and the common and distributive supposition only differ in the deliberate choise of the extreme of the proposition that must be distributed. Both the figures are represented by the same example which in the modern symbolic notation gives rise to the following writing:

\textsuperscript{38} WHITEHEAD & RUSSELL (1913) ,45.
\textsuperscript{39} OCKHAM (1574) I 70.
iv) “(x) (∃y) · φxy”

This one is obviously equivalent to the following description:

v) “(φa₁a₁ ∨ φa₁a₂ ∨ ... ∨ φa₁an) ·
   “(φa₂a₁ ∨ φa₂a₂ ∨ ... ∨ φa₂an) ·
   ........................................
   “(φan a₁ ∨ φan a₂ ∨ ... ∨ φanan) ”

Translating the same figure in Moody's notation, where the ostensive uses are only represented by numerical indices, and conceiving the sign of equality as equivalent to the copula in tertio adiacens but with the value of a biargomental operator, we obtain the following writing

vi) “(F) (∃G) · F = G ”.

In this writing aren't quantified the bound variables but only the terms. From this expression we obtain a conjunction of disjoined predicates:

vii) “(F₁ =: G₁ ∨ G₂ ∨ ... ∨ Gn) ·
     “(F₂ =: G₁ ∨ G₂ ∨ ... ∨ Gn) ·
     “(Fₙ =: G₁ ∨ G₂ ∨ ... ∨ Gn)”.

Since “p ≡ q ∨ r . ⊃. p ≡ q ∨ p ≡ r ” by means of the rule of the detaching it is possible to transform the foregoing expression in a conjunction of predicative functions equivalent but disjoined being the predicate in common supposition:
viii) \[((F_1 = G_1) \lor (F_1 = G_2) \lor \ldots \lor (F_1 = G_n)) \lor \ldots \lor \ldots \lor (F_n = G_1) \lor (F_n = G_2) \lor \ldots \lor (F_n = G_n)\]

\[\ldots\]

\[\ldots\]

\[\ldots\]

\[\ldots\]

3.4 Common and distributive supposition.

In the common and distributive supposition, differently from the common ‘tantum’ supposition, the predicate, intentionally taken, conjointly distributes itself on each denotate of the subject.

As this choice is intentional the two above-mentioned figures are superimposed:

“Suppositio confusa et distributiva est quando contingit aliquo modo descendere copulative, si habeat multa contenta et ex nullo uno formaliter infertur. Sicut est in ista ‘omnis homo est animal’ cuius subiectum supponit confuse et distributiva: sequitur enim ‘omnis homo est animal, igitur iste homo est animal et ille homo est animal’, et sic de singulis”\(^{40}\)

The common and distributive supposition, still divides itself into the common and distributive \textit{mobilis} supposition (the distribution takes place without meeting the impediment of an exceptive sentence or of other disturbing parts of the speech\(^{41}\) and in the common and distributive \textit{immobilis} supposition but these figures, at the present time will be omitted. On the contrary, very important are the rules for the formation of universal propositions. The first rule asserts that the negation of an universal proposition doesn't imply the negation of the predicate quantification:

\(^{40}\) OCKHAM (1974) I 70.

\(^{41}\) ib. I 74.
Metalogicon (1991) IV,

“Secunda regula: quod in omni tali universali negativa praedicatum stat confuse et distributivae” 42

Ockham intended to clarify the use of monadic logical operator “not”. In the modern logic an universal affirmative proposition is written by making use of a conditional operator that links two predicative functions having the variable bound by the quantifier $(x) \ (\phi \ x \supset \psi x)$. As we know, according to De Morgan's rules, denying the whole expression, the affirmative universal ‘A’ transforms itself in a negative particular ‘O’. In fact we have:

“$\neg[(x) \ (\phi x \supset \psi x)] : = : (\exists x) \ (\phi x \cdot \neg \psi x)$. 

Furthermore Venerabilis Inceptor knew the third and fourth De Morgan's law and then he didn't confound the scope linked to the use of the various logical operators in presence of the quantifiers.43 If the predicate is preceded by the universal quantification, it changes into a particular proposition in determinate supposition:

"Veruntamen sciendum est quod praedictae regulae vere sunt quando sine negatione, vel tali verbo vel nomine dempto, praedictus terminus non staret confuse et distributivae, tunc per advertum talis dictionis idem terminus staret determinate" 44

If the negation falls on the predicate linked to a particular quantifier we have the inverse. Ockham extends the power of the monadic operator ‘not’ to all the predicates apparently without quantifiers and then to indefinite or particular predicates (cfr.2.a):

42 ib. I 74.
“Tertia regula est quod quando negatio determinans compositionem principalem praeceedit, praedicatum stat confuse et distributive, sicut in ista ‘homo non est animal’ ly ‘animal’ stat confuse sed ‘homo’ stat determinate” 45

Therefore if in the proposition ‘homo est animal’ the logical operator ‘not’ is put before the predicate ‘animal’, this one changes the extension of the quantification of the predicate in ‘omnis animal’.

The Venerabilis Inceptor, in spite of the intrinsic limits of the terministic logic, realized the possibility to define laws to regulote the movement of the quantifiers syntactically connecting the use of the logical operators in the natural Latin language.

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