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UNDERSTANDING THE SEMANTICS OF “RELATIVA GRAMMATICALIA”
SOME MEDIEVAL LOGICIANS ON ANAPHORIC PRONOUNS

1 INTRODUCTION

When in the early nineteen-sixties Geach presented his by now well known theory of the semantic roles of anaphoric pronouns, he did something quite unusual in those days: time and again he critically referred to certain medieval approaches to the same subject. He thought, apparently, that these sophisticated approaches showed the enormous difficulties a coreferential approach was bound to lead into. Geach (1960) even went so far as to claim sweepingly that “the medievals who discussed *relativa* – pronouns with antecedents – were groping in the dark despite all their ingenuity.” It is one of the ironies of the history of philosophy that one such medieval theory – to be found in the fourteenth-century philosopher Buridan and his pupils (though foreshadowed a century earlier) – has now raised his head again in the work of Gareth Evans – this time against Geach.

Geach was mainly thinking of logicians and philosophers working in the thirteenth and fourteenth centuries (virtually all the names he drops are from this period). However, interest in *relativa grammaticalia* – this is the complete title for expressions called “anaphoric” nowadays to separate them from “logical” relatives, expressions such as ‘father’ and ‘master’ – can be found already in twelfth-century writers such as Peter Abelard, William of Conches or their pupil John of Salisbury. Having Priscian’s explanation of *pronomen* as well as epistemological and ontological considerations in the back of his mind,¹ John, for instance, finds it difficult to account for the grammaticality and the truth of a sentence such as (1):

(1) Every man loves himself (*omnis homo diligit se*)

if one analyzes this (...) according to the strict and proper meaning of a relative expression, one will perhaps charge that it is improperly stated and false. For it is evident that all men do not love all men. Neither is there someone who is loved by all men. So whether the expression: “all men,” be understood collectively or distributively, the relative pronoun “himself,” which follows, cannot correctly be understood as referring either to every man or to any one man. The relation [here] is accordingly not a strict one.²

John is concerned that the pronoun should signify something *definite*, in accordance with Priscian’s definition of pronoun as he understands it. The two alternatives for a definite *significatum*: the class (or group?) of all men, or one particular man, are, he thinks, both at odds with the ordinary interpretation of (1) according to which it

is necessary and sufficient that everyone loves one particular person, namely oneself. Now, one might think that this is pretty definite enough. What more could we possibly ask for? Could it be that John is looking for an interpretation of (1) that might explain away the reflective pronoun (the *relativum reciprocum*) altogether?

The problems of definiteness is, of course, not confined to reflexive pronouns with general antecedents. It is, apparently, John's main worry when discussing the topic of *relativa*. This can also be seen from the passage where he introduces them:

A relative expression is (...) one which designates something as the subject of foregoing speech or thought. (...) when there is nothing sure and definite to which the relation refers there is a mistake or a figure of speech. Whence if a horse in general is promised, and the one to whom the promise was made says: "The horse which is promised to me is either healthy or sickly, since every horse is either healthy or sickly," he is clearly quibbling. For there is no horse that was promised to him. I do not say "There is no horse" because the horse does not exist. Even that which does not exist, such as Arethusa's giving birth to a child, may be the subject of a very definite promissory obligation. Rather, <I say "There is no horse"> because the promise of a general kind of thing does not involve the promise of the specific, that is a distinct thing.³

With this position John might find it difficult to explain how a generic promise might ever be fulfilled by giving a definite thing. But the point is clear enough: since the antecedent 'horse' is entirely general, a relative expression referring to it could not "relate" to a definite significatum – or so it seems, at least.

The truth-conditions of promissory sentences became a recurrent topic in the next two centuries. Logicians started to distinguish between John's example in the form (2) and the semantically more tricky version (3), arguing to the effect that in the former example 'horse' just behaves like 'man' in 'a man was killed on the road' with no special problem, reserving John's insight – or problem – to the latter version.

- (2) A horse is [such that it is] promised [to you] (*equus promittitur*)
- (3) I promise you a horse (*promitto tibi equum*)

Even here they managed to get much farther than John had probably dreamed of. The semantic theory of grammatical relatives was also developed with quite some "ingenuity". Both problems were treated within the framework of the theory of properties of expressions, *proprietas terminorum*.

2 THE FRAMEWORK OF PROPERTIES OF TERMS

What is that theory about? As the name reveals, it is about properties of expressions, but not all sorts of properties of expressions, rather, it is about properties that, as we would say, are *semantically* relevant in one way or another. Of these there are more than modern semanticists would dream of. Thus we find *significatio*, *suppositio*, *appellatio*, *ampliatio*, *restrictio* and *copulatio*. A closer look at this bewildering variety reveals – in many authors – that with the exception of *significatio* (and, sometimes, *copulatio*) the properties are more or less some sort of variant of *suppositio* or can

be defined in terms of the corresponding *supposita* – either as a sort of extension or restriction (*ampliatio* and *restrictio*) of the ordinary scope of *suppositio* that an expression has within a certain context, or as a sort of extension of the *concept* of supposition. *Suppositio*, on the other hand, is often defined in terms of *significatio*, or rather, the *significata* of an expression. (Ockham is a sort of exception here, basing signification the supposition.) Thus, if *suppositio* is defined as the property of the subject term in a sentence to stand for all *presently existing things signified by that term* (its *supposita*) as it often was in the beginning, *appellatio* might be found to be defined as the corresponding role of the predicate term, viz. as standing for *appellata*. The *appellata* sometimes turn out to be just the things signified by the expression in question,⁴ sometimes the corresponding ‘forma’, that is the intensional significata of a general expression.⁵ *Ampliatio* is defined as a sort of extended supposition of the subject term, namely in a sentence containing a special predicate or just a verb in past or future tense. If I say, for instance, (4), the subject expression will supposit not just for presently existing horses but also for all future horses.

(4) A black horse will win the race.

According to some medieval logicians, verbs such as ‘promise’ have an even greater power to amplifyate – viz. to extend the supposition of the noun even to merely possible horses. Though this is a way to explain how a sentence can be true in terms of extensions, one might well wonder how it is to be understood: does it amount to saying that possible horses exist, and if so, in which way do they exist? Do they exist in a manner analogical to the existence of future or past horses? Or is it rather that they do not exist, but *could* exist?

Restrictio was less uniformly treated. Some medievals would regard ‘horse’ as restricted by the adjective ‘black’ in (4). Another possible source of *restrictio* was context-dependence. If I say, “The president has no idea what is going on”, the subject term ‘the president’ would be interpreted as suppositing for precisely the president of the country (or company) I am uttering this sentence in (cf. Ebbesen 1981).

3 SUPPOSITIO

The foregoing description suggests that *suppositio* is just reference (of a complete noun phrase functioning as subject in the context of a sentence) and that the *supposita* are simply the referents of that expression. The basic concept is indeed sometimes defined in such a way. Thus, in Ockham (1974, 193; engl. tr. Loux 1974, 188ff) we read:

Supposition is said to be a sort of taking the place of another. Thus, when a term stands for something in a sentence in such a way that we use the term for the thing and the term or its nominative case (if it is in an oblique case) is truly predicated – verified – of the thing (or the pronoun referring to which) the term supposits for that thing; or this, at least, is true when the term is taken significatively.

What Ockham says here is that a term supposits for those things of which one could truly predicate it when building a demonstrative sentence with that term as a predicate. What does ‘donkey’ in a sentence such as ‘Peter is no donkey’ supposit for? Well, if

we accept that a predicate supposit, it supposits for those things one could point to and truly say: ‘this is a donkey’ – that is, for donkeys. (So far, no context-dependence is recognizable.) This makes it clear that so-called “syncategorematic” expressions such as ‘and’ or ‘some’ will not have supposition; for we cannot sensibly point to something and say “This is and” or “This is some”. More difficult is the question how to deal with empty expressions such as the notorious Meinongian ‘round square’, the ‘golden mountain’ or the ancient ‘chimera’. This is what Ockham’s younger Parisian colleague Buridan has to say on this subject when introducing supposition:

(...) it must also be added that we do not deal with supposition as ‘supposition’ is understood by the grammarians, for the term ‘chimera’ could supposit just as well as the ‘man’ and ‘horse’, since the expression [that] ‘A chimera is running’ is as grammatical as ‘A man is reading’, and so is not supposition as the logicians takes it. Again, if I say ‘A man is an animal’, ‘animal’ supposits equally well as ‘man’, which is not the case according to the grammarians. Therefore, taking signification and supposition as spelled out, signification and supposition differ because any given word which not taken materially is a part of a sentences has the job of signifying and giving rise to a concept in the one hearing it according to the deliberate introduction of that word. But not every such word has the task of suppositing, for only such an expression is able to supposit which, when something or some things is or are pointed out by the pronoun ‘this’ or ‘these’ can be truly affirmed of that pronoun. Thus the term ‘chimera’ cannot supposit since, no matter what is pointed out, it is false to say “This is a chimera” (...).⁶

But the theory of *suppositio* is more interesting than this. Already in its earlier stages it contained subdivisions of what sometimes was called *species*, kinds and *modi*, modes of *suppositio* preparing the ground for rules governing the logical relationship of sentences containing the terms having the different modes. Ockham and others distinguished three different kinds, viz. *suppositio personalis*, *suppositio simplex* and *suppositio materialis*. Others, for instance, Ockham’s older contemporary Walter Burleigh, accepted a kind of supposition called *suppositio formalis*, while Buridan tried to get along with just *suppositio personalis* and *suppositio materialis*.

Material supposition, alluded to already by Buridan in his introduction above, appears both from numerous examples, like (5), as from the discussions to amount to the property an expression has when it is quoted (more or less).⁷

(5) homo has two syllables (*homo est dysallabum*)

Despite recent arguments emphasizing certain differences, this view seems essentially correct. Simple supposition was generally assigned to suitable expressions within the scope of a predicate applicable only to names of species or genera:

(6) *Man* is a species, *animal* is a genus.

Ockham and Buridan apparently did not like the ontological commitment to universals. Ockham, accepting only universals in the mind, reinterpreted *suppositio simplex* as being supposition for a *concept*, while Buridan went even further and abolished *suppositio simplex* as a kind in its own right.

Interestingly, simple supposition was also diagnosed in some cases where the verb (predicate) appears perfectly applicable to individuals: Brother William exclaims in Peter’s garden, ‘Look, this herb grows in my garden too!’ or, rather, in Latin: ‘*Haec herba crescit in horto meo*’. Peter dryly replies: ‘Well, I suspected it was large, but I did not think it reached that far!’ All that William meant is, of course, that the herb here is *of the same species* as another herb growing in his garden miles away. Again, someone muttering

(7) The/a woman who has damned us, has also saved us.

would be surprised when receiving the question in turn: “Did she change her mind then?” For he is thinking about numerically distinct women, Eva and Maria – under the concept of their sex, as Abelard remarks some time before supposition theory was developed:⁸

But when we say this: “the/a woman who has damned us has saved us”, we do not speak about the same person but about the nature of the sex of women – we say: “Eva of course has damned (us), Maria has saved us.”

It is worth noting that in this medieval stock-example a *relativum* turns up, giving ample ground for discussing its role (called suitably *relatio simplex*), in particular for those with a strict understanding of Priscian. Thus, John of Salisbury had to recognize here some exception to the rule of definiteness:

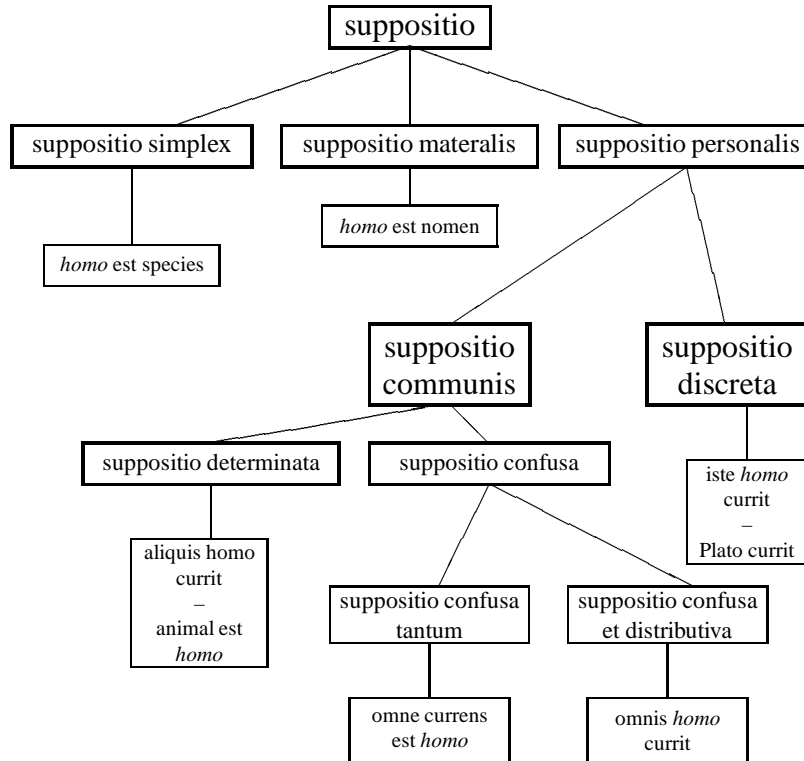
(...) some relations remain general, which, if they are to remain true and are to be properly understood, cannot be tied down to something specific. Examples are (...): “A woman, both saved [us], and damned [us]”; “A tree both bore the cause of our death, and that of our life”; “The green leaves, which the freezing north wind bears off, the mild west wind restores.” Here, I believe the relative expressions should not be conceived as descending to the specific, that is pointing out something definite, but rather should be understood as remaining general.⁹

One should be careful not to think that this way of talking is just old-fashioned medieval style. We still use *suppositio simplex* and *relatio simplex* in our daily talk. Oliver is telling the story of his life: ‘My car used to be a Mercedes, now it is just a Fiat 500’. Roger replies: ‘Amazing that cars can undergo such drastic changes nowadays.’ But of course the Mercedes has not turned into a Fiat the way a caterpillar turns into a butterfly. Roger misunderstood by taking the pronoun ‘it’ as suppositing for *numerically* the same car while Oliver intended to talk about cars under the general description of being (the car) owned by him.

4 PERSONAL SUPPOSITION AND ITS MODES

When Ockham and Buridan introduced *suppositio*, they made it clear that it is a property not to be found in every expression whatsoever but rather restricted to expressions signifying something (and only in the context of sentences etc.), something one could point to, at least in principle. This condition might remind us of the semantic enterprise of neopositivism in our century. Quite apart from the fact that it seems to make semantics more empiricist than a promising theologian believing in an invisible God and immaterial angels might want to subscribe to, the delineation is not quite correct

anyway. As Ockham and others make it perfectly clear, *suppositio materialis* can be had even in meaningless sequences of letters such ‘bubu’ or the ancient ‘blitiri’, in syncategoremata (‘and’ is a conjunction) or empty nouns. What Ockham and Buridan were thinking about was the third and most important kind of supposition, *suppositio personalis*. The name is odd, since this sort of supposition is by no means confined to expressions suppositing for persons (as *suppositio materialis* is in a way confined to supposition for the material of the expression, i.e. for its letters). Perhaps the title had to do originally with speculations about the Trinity and the corresponding distinction between a simple divine essence and the three divine persons, as William Kneale already suspected more than thirty years ago.



Whatever its history, from a modern point of view (and already from the point of view of Ockham and Buridan) personal supposition appears very much to be *proper* supposition: it is the kind of supposition that is tied to meaning, its *supposita* are the things signified by the expression, or, so at least Ockham thinks. Walter Burleigh argues to the contrary that in identifying the *supposita* with the *significata* of an expression one would be forced to admit that the word ‘quiet’ would change its meaning with any finger starting to move and the word ‘man’ would change its meaning with anybody dying.¹⁰

Personal supposition was divided into several modes. There is virtually always discrete (*discreta*) and common supposition, the first applying to proper names and some sort of definite descriptions built from a general expression and demonstrative, amounting to singular reference. Common supposition, *suppositio communis*, on the other hand applies to general terms in various significative occurrences (except when governed by a demonstrative pronoun). It was further divided.

A fairly early division of common supposition is in determinate and confused supposition. Determinate supposition was assigned to a general term (used significatively) when governed by an existential quantifier or not preceded by any sign. Thus, if I say,

(8) Some/a man is running.

the term ‘man’ has determinate supposition. Already in the thirteenth century this label was difficult to understand. William of Sherwood, one of the first philosophers we happen to know by name to write a logical treatise covering supposition explained that ‘determinate’ simply signals that one determinate *suppositum* would be sufficient to verify the sentence. But it is important to keep in mind that (a) the sentence would still be true if thousands of men would engage in a monstrous marathon, and (b) that the expression is not confined to supposit for one element of its extension only. Indeed, in the later development it is sometimes pointed out that a term in determinate supposition supposits for precisely as many *supposita* as in confused supposition – or for all!

Even more trouble gives the notion of ‘confused’ supposition. It was applied to most other significative occurrences of a general expression. Thus, according to most fourteenth-century logicians ‘animal’ has confused supposition in both the following sentences:

(9) Every man is an animal.

(10) Every animal is running.

The occurrence of ‘animal’ in (9) – i.e. as a predicate of a universally affirmative sentence – gave rise to what was called merely confused (*suppositio confusa tantum*) and the mode of common personal supposition of ‘animal’ in (10) was called confused and distributive (*suppositio confusa et distributiva*).

Three questions arise naturally: first (a), why that name – what does all that have to do with confusion? (b), what do the two occurrences of ‘animal’ in (9) and (10) have in common? and (c), would it not be much more natural to say that ‘animal’ in (9) has that same oddly-called determinate supposition as ‘man’ has in (8)?

The answers to these three questions might appear somewhat disappointing. As to the first question: usually it is said that a mode of supposition is called “confused” because it requires a multitude of *supposita*. As mentioned before, an expression suppositing determinately might just as well supposit for many, indeed for all its *significata*. The difference is: it does not *require* more than one *suppositum*.

The second and the third questions belong together. A typical fourteenth-century reasoning why ‘animal’ does not have determinate supposition in (9) relies on the

truth-conditions of the sentence: A sentence such as (8) is true, if at least one man is running, respectively, if at least one sentence of the form ‘NN is running’ is true (I will call this a “corresponding singular [sentence]”). If we know that Cicero is running, we can safely infer: Some man is running. But we can do more. We can also argue the other way round: if it is true that some man is running, and provided (we know that) Cicero, Socrates and Plato are the only men that there are, it is safe to say that Cicero is running or Socrates is running or Plato is running. Thus, we have two criteria for determinate supposition: from the original we should be able to infer (to *descend* to) the (complete) disjunction of corresponding singular sentences, and the original must follow from any of the corresponding singulars (that is, *ascend* from the singular must be possible).

One can apply this analysis also to the suitably changed *predicate* of that sentence:

(8') Some man is a runner.

and will see that it works. The predicate of an indefinite (or existential) sentence has determinate supposition too. The analysis will not work, however, with the predicate of a universally quantified sentence. Ascend from any singular would work only in the special case of every man being the same animal (i.e. of there being exactly one man):

Every man is this animal, therefore every man is an animal.

Many medieval logicians would already protest that in such a case (9) would be ill-formed, lacking the three *supposita* deemed requisite for employing the quantifier ‘omnis’. And how about descent? Let us assume there are just two animals, both may even happen to be men: Peter and William. Even in these circumstances it would not be correct to argue:

Every man is an animal, therefore every man is this animal (Peter) or every man is that animal (William).

It is simply not true that both William and Peter are Peter, nor is it true that both William and Peter are William. Thus the predicate of an (affirmative) universally quantified sentence does not have determinate supposition. Hence the need for another mode. Ockham managed to devise a somewhat unusual sort of descent: to a disjunction not of *sentences* but of singular terms:

Every man is an animal, therefore every man is either William or Peter or (...)

The subject of the universally quantified sentence such as (9) was said to have *suppositio confusa et distributiva* – or, for short: distributive supposition. The criterion for this mode is easily stated: you cannot ascend from any singular (though you might from the complete conjunction of them) to (9), but you can descend to any singular (respectively to the conjunction of singulars):

Peter is an animal \nRightarrow every man is an animal

Every man is an animal, therefore Peter is an animal

5 RELATIVA GRAMMATICALIA IN SUPPOSITION THEORY

If one starts discussing *relativa grammaticalia* within the framework of the properties of terms the first question to discuss might seem: what does the *relativum* supposit for? The answer will be: that depends on the antecedent expression and the *relativum*! It is natural to say that the relative supposits precisely for the same entity or entities that its antecedent supposits for. Indeed this was given as a rule:

Rule I

a relative expression of identity supposits (stands) for the same as its (grammatical) antecedent (*relativum identitatis supponit pro eodem pro quo suum antecedens*)

(*Relativa identitatis* – relatives of identity are expressions such as ‘which’ and ‘that’ and are distinguished from relatives of diversity, *relativa diversitatis*, such as ‘the other one’ to which this rule would not apply, of course. I will say nothing about relatives of diversity here, so I will usually skip the “of identity” clause where possible.) It is tempting to regard this as a clear expression of co-reference, but we shall see that this is not always the case. Having seen also that supposition comes in a wide variety of sorts and modes, another question arises: in which modes or species does the *relativum* supposit? Again, it tempting to say that the *relativum* supposits in the same way or mode as its antecedent. This answer was often presented as a rule:

a relative expression has the same mode of supposition as its antecedent (*relativum supponit eodem modo cum suo antecedente*)

It became apparent that these two rules face serious difficulties. Indeed, it sometimes looks as if just their combination is wrong. With proper names the rules look plausible indeed. If we replace the *relativum* by its antecedent in:

(11) Socrates is debating, and he is running.

the sentence is still true.¹¹ Also, it seems clear that the *relativum* supposits in the very same mode as its antecedent: *personaliter discrete*.

Things are less simple if we turn to general/indefinite antecedents. If I replace the proper name ‘Socrates’ by ‘a man’, I get:

(12) A man is debating, and he is running.

which follows from (11). But while in (11) I could replace the relative by the antecedent the result of doing this here would be rather different:

(13) A man is debating, and a man is running.

Medieval logicians did recognize this and they warned that an antecedent with determinate supposition is not generally allowed to replace its *relativum*. This did not always move them to renounce rule I – and rightly so. The different truth-conditions of (8) and (9) are not sufficient in themselves to show that the two noun phrases supposit

for different things. For if the antecedent expression supposits for all men (disjunctively), so would the relative. But if this is so, why can we not replace the *relativum* by its antecedent?

Somewhat surprisingly, most logicians even of the fourteenth century did not try to answer this question. Ockham, for instance, does not seem to recognize that this is a fact of precisely the kind to be *explained* with the help of supposition. A glance at a rather special phenomenon should have helped to see the problem – the so-called reciprocal relatives discussed by John of Salisbury already:

- (1) Every man loves himself.

The antecedent of the *relativum* is ‘man’ and it is distributed by the quantifier. Indeed, we can “descend conjunctively under it”:

Socrates loves himself and Plato loves himself and Cicero loves himself
(...)

If the *relativum* inherited the mode of supposition from its antecedent, it should be equally distributed; thus we should be allowed to descend under the relative too, thus:

Every man loves Socrates and every man loves Plato (...)

But we are not! So what’s wrong? According to most fourteenth-century logicians nothing is wrong. It is only that we have to impose a further distinction: the reciprocal relative allows only for a special sort descent – namely synchronously with that of the antecedent and to the same *suppositum*, thus:

Every man loves himself; therefore Socrates loves Socrates and Plato
loves Plato and so on (...)

This special kind or mode of distributive supposition was called *suppositio singillatim*.

We can see from this that the medieval rule that antecedent and relative “supposit for the same” does not necessarily amount to a crude co-referential theory, but we can also see that the second rule that both “supposit in the same mode” was saved sometimes in a somewhat ad hoc manner.

Surprisingly, the concept of *suppositio singillatim* was diagnosed only in the case of reciprocal relatives. It should have appeared natural to analyse sentences such as (12) with its help. For let us assume that Peter is debating and Paul is running. Then it is true that

- (14) Some man is debating (viz. Peter), and Paul is running.

It is obvious that we can *not* infer (12) from (14)! That is, we cannot *ascend* from any corresponding singular whatsoever to (the sentence containing) the *relativum* without taking care of the antecedent somehow. Again, from (12) we cannot infer:

Some man is debating, and Paul is running *or* some man is debating, and
Peter is running and so on (...)

In other words, there is neither ascent to nor descent from the (the sentence of the)¹² *relativum* possible independently of its antecedent. Apparently, this simple fact escaped many medieval logicians. A few logicians, however, did recognize the trap and evaded it. For instance, Walter Burleigh writes in his early *Tractatus de suppositionibus*:

For those categorical sentences to be true, in which a relative and the antecedent of the relative are posited, it is necessary that they be verified for the same *suppositum*. For these namely to be true: ‘A man is running and he is debating’, it is necessary that ‘A man is running’ be verified for some *suppositum* of ‘man’, and that the second part be verified for the *same suppositum*. From this it follows that a relative (...) can only be inferred from its *suppositum* if at the same time its antecedent is inferred from the *same suppositum*.¹³

What Burleigh stresses here, is simply that ascent should be made simultaneously from antecedent and relative to the same *suppositum*. We have to look at his later work, *De puritate artis logicae*, however, for a suitable example. There Burleigh (1955, 29) says, after repeating the text of his older work virtually word for word:

Hence it does not follow: ‘A man is running and Socrates is debating, therefore a man is running and he is debating’.

The insight might appear a minor one. In a way it is trivial. But one should not forget that supposition theory was conceived to apply to expressions within the context of a sentence. And this was thought to be done without analyzing the rest of the sentence before (that is, descending from or ascending to an expression). This would have changed the original context. For instance, if the subject expression of a universal affirmative sentence is analyzed first, there is no need to recognize *merely confused supposition* in the predicate. For if we descend from (9) “Every man is an animal” to “Socrates is an animal”, a quick check will show that the predicate has now a different mode of supposition from before, viz. determinate supposition; we can descend in terms of a disjunction to singulars: “Socrates is either this animal *or* Socrates is that animal (...)”¹⁴ So, the question: which mode of supposition does an expression in that particular context have, had to be answered usually without changing that sentence beforehand. And though the observation of Burleigh is not quite the same as recognizing a sort of priority-rule, it might explain why medievals often overlooked the problem or, rather, recognized it only in the case of *relativa reciproca*.

There remains great difficulty in the supposition of relative expressions. Therefore they will be treated especially now. *Jean Buridan*

6 OCKHAM AND BURIDAN ON RELATIVA GRAMMATICALIA

The most famous logician of the fourteenth century, William Ockham did not bother much about *suppositio relativorum*. Like his slightly older contemporary, Burleigh, he starts from the notion of verification, coming up with the following:

<relative terms> always supposit for that for which their antecedent term supposits, in such a way that they are verified for the same, if they are verified. As is clear here: ‘Socrates is running and he is debating’. For this conjunction to be true it is required that the second part will be verified for the same for which the first part is verified.¹⁵

Ockham begins with what looks like an entirely unrestricted rule of co-supposition. Then he explicates co-supposition in terms of co-*verification* – apparently of expressions. This in turn he illustrates by way of an example suggesting co-verification of the would-be sentences “Socrates is running” and “he is debating”. Did Ockham believe that supposition of a term and verification of a sentence (containing that term) amount to the same? In a way, yes. The (range of) *supposita* of an expression ‘F’ is given by the set of entities that *verify* the sentence ‘This is an F’. But, of course, this role of verification of demonstrative sentences is something very different from what we are concerned with here.

Perhaps the great Oxonian was just being a little careless and a little confused here. The Parisian master, Buridan, on the other hand, recognized that it could make all the difference in the world whether we say that the *relativum* supposits for all *supposita* of its antecedent or that it supposits just for those *supposita* that verify the sentence *containing* the antecedent. Take

(12) A man is debating, and he is running.

The antecedent of the relative supposits for every man, thus you can pick out any man you like.¹⁶ The second half of the sentence, on the other hand, is meant to say that one of the debating men is running. It is entirely silent about non-debaters. Buridan concluded from this that the *relativum* supposits only for the *verifiers* of the first half, i.e. for the verifier of the sentence containing the antecedent, i.e. for those men who make “a man is debating” true. He goes so far as to state this as generally valid (though his examples are indefinite sentences such as (12)):

It is a universal rule that it is not necessary that a relative of identity supposits or stands in a sentence for each of the things for which its antecedent stands or supposits; rather the relative expression refers to its antecedent only for those of its *supposita*, for which the sentence was verified that contains the antecedent.¹⁷

Buridan is able to present examples that show the “disastrous” consequences of a theory – such as Ockham’s – that does not take care of this problem, but he too appears a little careless. Let’s take the different sorts of sentences. If the antecedent of the *relativum* is universally quantified, Buridan’s rule amounts to a sort of co-supposition

rule – and without any provisos about simultaneous descent. If the antecedent is a singular term, on the other hand, as in Ockham’s example, Buridan’s rule is likewise not needed. Worse still, even if the antecedent is a particular expression, Buridan’s theory will not always give the desired results. For that depends on the conjunction linking the two would-be sentences too. If the conjunction were not an ‘and’ (*et*), but rather a disjunction or a conditional expression, it is not clear that his rule would hold good. Take

(15) A man is either debating, or he is running.

This sentence would *not* be true, if the debating man were running. Such cases were extensively discussed in later generations of logicians, pupils often of Buridan’s own pupils working sometimes far from the Athens of the North, in Vienna, Prague or Krakow.

In an earlier work of mine (Hülsemann 1994) I have tried to show in much more detail that Buridan’s theory might be regarded as a precursor to Gareth Evans’ conception of E-type pronouns. I still think there are some striking parallels. Both talk about relative expressions referring to, respectively suppositing for, *verifiers* of the sentence containing the antecedent. Of course, their targets were different. While Evans argues against Geach’s bound-variable theory of pronouns, Buridan argues against a crude co-suppositional theory. Buridan wants to improve on a theory he basically accepts, Evans wants to rehabilitate a general view on pronouns.

But there is yet another difference. Buridan does not explicitly state any uniqueness-condition. Indeed, in one place he explicitly claims that a relative supposit *determinate* if its antecedent does, because it *could* supposit for many.¹⁸

Let’s assume that only Socrates were running and that he is white, if we (then) say: ‘A man is running and he is white’, it may be doubtful whether the relative ‘he’ supposits *determinate* and generally, or *discrete* and singularly. (...) I claim that it supposits *determinate* and *not discrete*, for it is not taken in the sentence mentioned as a discrete expression but as a general expression, suitable to supposit for many, for it would supposit for many if many men would run.

Generally, however, he seems to assume that a sentence such as (12) would be uttered only if the sentence containing the antecedent were true of precisely *one suppositum* of the subject. This seems to be the presupposition of his pupils too who managed to show the limits of his theory in other respects, namely with regard to sentences joined by connectors other than “et”.

7 CONCLUSION

Medieval logic was an exciting battleground for young minds to exhibit their genius. The field was wideranging and covered much more than logic proper. One topic where you could show your skill was the semantics of *relativa grammaticalia*. Medieval logicians might not have reached a consistent and comprehensive theory of such expressions but they came a long way towards it. They were attentive to the phenomena of language and inventive.

NOTES

¹ *Institutiones grammaticae*, XII; 3 (Keil 1855, 577): “Pronomen est pars orationis, quae pronomine proprio uniuscuiusque accipitur personasque finitas recipit.”

² “Quod si ex relativae dictionis proprietate discutias, incongrue dictum forte causabaris et falsum; siquidem nec omnis omnem diligit, nec aliquis est qui diligatur ab omni, ut, sive collective sive distributive accipiatur quod dictum est ‘*omnis*’, pronomen relativum ‘*se*’, quod subiungitur, nec universitati singulorum nec alicui omnium veraciter aptetur. Est itaque licentiosa relatio (...)” (Salesbury 1929, transl.: McGarry (1971, 127)). I have changed the Latin orthography and the English translation.

³ “(...) relativa dictio est quae significat rem, ut de qua praecessit sermo vel cogitatio. (...) Nam ut nihil certum et finitum sit, in quod cadat relatio, non contingit sine vitio aut figura. Unde si equus promittatur in genere, et dicat stipulator: *Equus qui mihi promissus est, sanus aut aeger est; cum omnis equus sit aut sanus aut aeger*, arguitur nugari eo quod non est equus qui sit ei promissus. Non dico: ‘*Non est*’, eo quod non existat, nam et illud quod non existit, ut partus Arethuse, in certissimam deducitur obligationem, sed quia species, id est res discreta, obligationem generis non attingit.” (Salesbury 1929, 103; transl.: McGarry 1971, 124, slightly modified.)

⁴ Thus Ockham writes: “First it should be noted that ‘supposition’ has two senses, a broad sense and a narrow sense. In the broad sense the term does not stand opposed to appellation, on the contrary appellation is a term under ‘supposition’. In the strict sense the two terms stand opposed. But I do not intend to speak of supposition in this sense, only in the first. Thus, as I use the term both subject and predicate supposit; and, generally, whatever can be a subject or a predicate of a proposition supposits.” (Ockham 1974, 193; transl.: Loux 1974, 188f)

⁵ This theory is mentioned by Burleigh (1955, 46) in his *De Puritate Artis Logicae*.

⁶ “Sed etiam addendum est quod hic non intendimus de supponere prout est reddere suppositum verbo apud grammaticum. Quia sic potest ita bene supponere iste terminus ‘chimaera’ sicut iste terminus ‘homo’; aequae enim est congrua haec oratio ‘chimaera currit’ sicut haec ‘homo legit’, et non est ita prout apud logicum de suppositione intendimus. Etiam si dico ‘homo est animal’, ita bene ‘animal’ supponit sicut ‘homo’, quod non est sic de suppositione apud grammaticum. Dicto ergo modo capiendo ‘significationem’ et ‘suppositionem’, differunt significatio et suppositio quia cujuslibet dictionis quae non materialiter sumpta est pars propositionis interest significare et audienti eam conceptum aliquem constituere secundum institutionem sibi ad placitum datam. Sed non omnis talis dictionis est supponere, quia solus talis terminus est innatus supponere qui aliquo demonstrato per istud pronomen ‘hoc’ aut aliquibus demonstratis per istud pronomen ‘haec’ potest vere affirmari de illo pronomine. Ideo iste terminus ‘chimaera’ non potest supponere, quia quocumque demonstrato falsum est dicere ‘hoc est chimaera’ (...)” (Reina 1957, 181)

⁷ Some medievals indicated *suppositio materialis* by the insertion of ‘ly’ or ‘li’ (or even ‘le’) in front of the expression (*ly homo est dyssallabum*). Boehner has suggested that ‘ly’ etc. is the old French article. Of course, ‘ly’ is not quite the same as our quotation marks or even the artificial corner quotes etc. of modern logicians. It does not give the scope, it is not re-iterable and so on. And it was not used consistently and regularly.

⁸ “Cum vero dicimus hoc ‘mulier quae damnavit salvavit’, non circa eandem personam sed circa naturam sexus mulieris (...) dicimus: Eva quippe damnavit, Maria salvavit.” (“Sententiae secundum Petrum”, Abaelardus 1958, 118)

⁹ Salisbury (1929, 102f; transl.: McGarry 1971, 124f): “fiunt tamen relationes in genere, quae salvo intellectu veri nequeunt revocari ad speciem; ut cum dicitur: *Mulier quae salvavit damnavit; Lignum quod mortis et vitae causam dedit; et: Quas Boreas aufert, revehit mitis Zephrus frondes*. Sic (...) relativae dictiones accipiendas arbitror, ut non decurrant ad speciem, id est ad diffinitum aliquod quod discernant, sed subsistant in genere.” For an extensive discussion of such examples of so-called *relatio simplex* see Kneepkens (1976, 1977).

¹⁰ “(...) nec posset aliquis movere digitum, nisi vox per hoc caderet a suo significato, quia quiescente digito haec vox ‘quiescens’ significat digitum et digito moto haec vox non significaret digitum, quod videtur absurdum. Item, hoc nomen ‘homo’ secundum istum modum dicendi significat Sortem Sorte existente et Sorte corrupto non significat Sortem, quia tunc Sortes non est homo; ergo quandocumque aliquis homo moritur, hoc nomen ‘homo’ caderet a suo significato, et ita sequitur, quod quilibet corrumpens aliquam rem faceret vocem cadere a suo significato, quod est absurdum.” (Burleigh 1955, 9).

¹¹ Medievals, following Priscian, sometimes pointed to the fact that the second occurrence of the proper name might suggest that the sentence is actually about two persons (or things) having the same name.

¹² It was common to talk of decent or ascent to a term instead of a sentence, but the examples make it quite clear that this was not meant as an inference to an isolated expression, but a simplified mode of speaking.

¹³ “Ad hoc quod illae categoriae sint verae in quibus ponuntur relativum et antecedens relativi oportet quod istae propositiones verificentur pro eodem supposito. Ad hoc enim quod istae sint verae ‘Homo currit et iste disputat’ oportet quod ista ‘Homo currit’ verificetur pro aliquo supposito hominis et quod secunda pars verificetur pro eodem supposito. Ex isto sequitur quod relativum identitatis non inferatur ex supposito nisi simul cum hoc suum antecedens inferatur ex supposito.” (Brown 1972, 46)

¹⁴ I am not claiming that a prior analysis of the subject would have allowed medievals to get rid of merely confused supposition altogether. For a debate on this subject see e.g. Ashworth (1973); Spade (1976); Fitzgerald (1978); Priest & Read (1980).

¹⁵ Ockham (1974, 233): “<Relativa> semper supponunt pro illo pro quo supponunt sua antecedentia, ita quod pro eodem verificantur, si verificentur. Sicut patet hic ‘Sortes currit et ille disputat’; ad hoc quod ista copulativa sit vera requiritur quod secunda pars verificetur pro illo eodem pro quo prima pars verificatur.”

¹⁶ Cf. Buridan’s definition of *suppositio determinata*: “Vocatur autem suppositio ‘determinata’ alicujus termini si necesse sit ad veritatem propositionis in qua ponitur vel talis propositionis in forma quod ipsa sit vera pro aliquo determinato supposito, ut si ista sit vera ‘homo est albus’, oportet quod sit vera pro isto homine et isto albo vel pro illo alio homine et illo alio albo, et sic de singulis.” (Reina 1957, 323)

¹⁷ “Est autem universalis regula quod non oportet relativum identitatis supponere vel stare in propositione pro omni eo pro quo supponit vel stat suum antecedens, immo terminus relativus solum refert suum antecedens pro illis eius suppositis pro quibus erat verificatio categoricae in qua ponebatur antecedens (...)” (Reina 1957, 337)

¹⁸ “Dubitatur etiam si ponamus quod tantum Socrates currit et quod ipse est albus et dicamus ‘homo currit et ille est albus’, utrum hoc relativum ‘ille’ supponit determinate et communiter, vel discrete et singulariter. (...) Dico quod supponit determinate, et non discrete; quia non

ponitur in dicta propositione tamquam terminus discretus, sed tamquam terminus communis, innatus supponere pro pluribus, quia supponeret pro pluribus si plures homines current.”

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