

ON THE CONTRAST BETWEEN GERMANIC AND ROMANCE NEGATED QUANTIFIERS

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Abstract: Universal quantifiers can be stranded in the manner described by Sportiche (1988), Giusti (1990) and Shlonsky (1991) in both the Romance and Germanic languages, but a negated universal quantifier can only be stranded in the Germanic languages. The goal of this paper is to show that this contrast between the Romance and the Germanic languages can be explained if one adapts the theory of sentential negation in Zeijlstra (2004) to constituent (quantifier) negation. According to Zeijlstra's theory, a negation marker in the Romance languages is the head of a NegP that dominates vP, whereas in the Germanic languages a negation marker is a maximal projection that occupies the specifier position of a verbal phrase. I will show that the non-occurrence of stranded negated quantifiers in the Romance languages follows from the fact that negation markers in the Romance languages are highly positioned syntactic heads.

Keywords: negation, negated, quantifier, stranding

1. Introduction

Both the Germanic and the Romance languages have floating quantifiers:

- (1) a. *Alle* die Studenten haben das Buch gelesen. (German)
all the students have the book read
b. Die Studenten haben *alle* das Buch gelesen.
the students have all the book read
- (2) a. *Toți* studenții au citit cartea. (Romanian)
all students the have read book the
b. Studenții au citit *toți* cartea.
students the have read all book the

However, only the Germanic languages allow the floating of negated quantifiers:

- (3) a. *Nicht alle* die Studenten haben das Buch gelesen. (German)
not all the students have the book read
b. Die Studenten haben *nicht alle* das Buch gelesen.
the students have not all the book read
- (4) a. *Nu toți* studenții au citit cartea. (Romanian)
not all students the have read book the
b. *Studenții au citit *nu toți* cartea.
students the have read not all book the

The purpose of this article is to attempt to explain this contrast. My theoretical foundations are as follows:

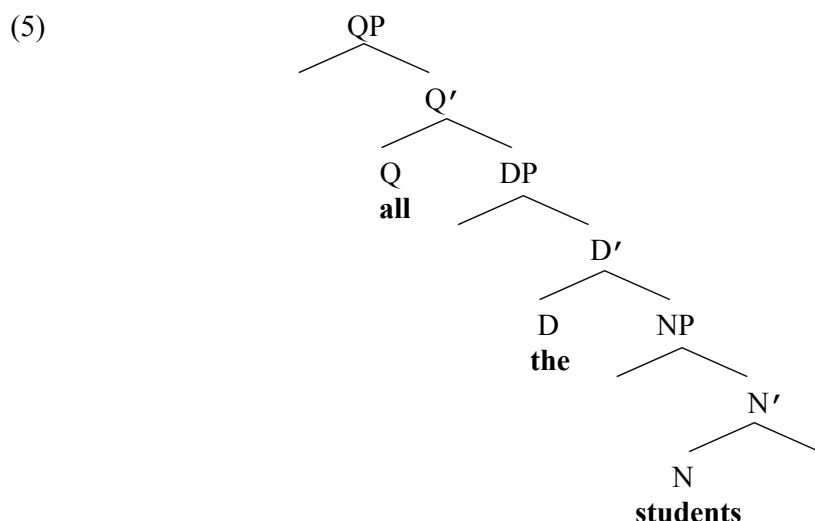
Floating quantifiers can best be explained under the Stranding Analysis as put forth in Sportiche (1988), Giusti (1990), Shlonsky (1991) and Cirillo (doctoral dissertation, forthcoming).

The theory of sentential negation in Zeijlstra (2004) can be adapted to constituent negation.

This article is organized as follows: Section 2 is a quick review of the Stranding Analysis of floating quantifiers. Section 3 is an overview of the theory of sentential negation in Zeijlstra (2004). Section 4 presents my adaptation of Zeijlstra (2004) to the constituent level. Section 5 describes an unresolved issue in the VO Germanic languages. Section 6 is a brief summary.

2. The Stranding Analysis

Under the Stranding Analysis there is a nominal phrase higher than DP called Quantifier Phrase or QP. This phrase is headed by a universal quantifier such as the English word *all*, which selects a DP as its complement:



Under this approach, the entire QP can move to subject position, producing (6a). Alternatively, the DP can move to subject position by itself and strand the quantifier, producing (6b):

- (6) a. All the students have read the book.
 b. The students have all read the book.

3. Sentential negation in Zeijlstra (2004)

The foundation of Zeijlstra's theory is that negation is not a functional category in all languages, which means that not all languages have a NegP. This distinction between languages with and without NegP enables Zeijlstra to predict with high accuracy whether a language will have preverbal or post-verbal negation markers and whether it will have negative concord and true negative imperatives.

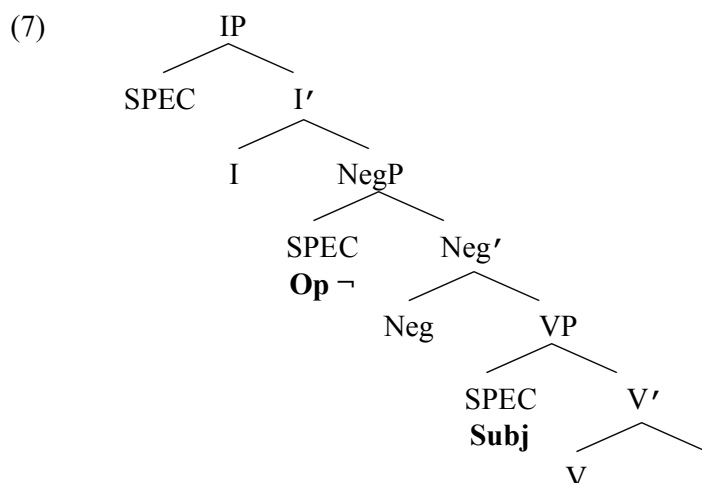
The Romance languages belong to the category of NegP languages, in which negation is a functional category. NegP in these languages is located above TP and is headed by the

negation marker. In [SPEC, NegP] there is a phonologically empty negation operator referred to as $Op \neg$ that bears the feature [iNeg] and provides a sentence with its negative semantics.

The Romance languages show negative concord, which is typical of NegP languages. Negative concord can be strict or non-strict. In a strict negative concord language like Romanian, the negation marker is “weak” and bears the uninterpretable negation feature [uNeg]. This feature is eliminated against the [iNeg] feature on $Op \neg$ in [SPEC, NegP]. In a non-strict negative concord language like Italian, the negation marker is “strong” and bears the feature [iNeg]. Because of the [iNeg] feature the negation marker in a non-strict negative concord language can function as $Op \neg$.

The so-called “n-words” in the Romance languages like the words meaning “nothing” and “nobody” bear the feature [uNeg], which must be eliminated against the [iNeg] feature of the negation marker or $Op \neg$.

I will briefly demonstrate how Zeijlstra’s model works with some simple sentences from Italian. The model itself is illustrated in (7). Whereas Zeijlstra claims that NegP is above TP, here I am using a model in which TP (IP) dominates NegP.



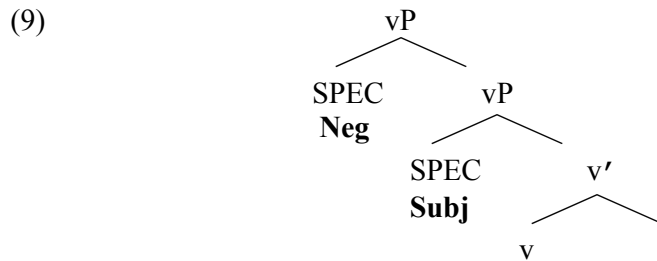
Consider the following sentences:

- (8)
- | | | |
|---|---|--|
| a. <i>Lo studente non viene.</i>
the student not comes | b. <i>Nessuno viene.</i>
no one comes | c. <i>Non viene nessuno.</i>
not comes no one |
| d. <i>*Nessuno non viene.</i>
no one not comes | e. <i>*Viene nessuno.</i>
comes no one | |

In (8a) the subject *lo studente* (*the student*) starts out in [SPEC, VP] and moves to [SPEC, IP]. The verb *viene* (*comes*) moves from its head position in V to Neg, where is right-adjoined to the negation marker, and the combined verb and negation marker move to I. In (8b) there is no negation marker. The subject *nessuno* (*no one*) moves from [SPEC, VP] to [SPEC, NegP], where it combines with the operator and eliminates its [uNeg] feature. It then moves with the operator to [SPEC, IP]. The verb moves from V to I. In (8c) a negation marker is present and eliminates the [uNeg] feature on *nessuno* (*no one*) under Agree. In (8d) the n-word *nessuno* (*no one*) has moved outside of the c-command range of the negation marker that had eliminated its [uNeg] feature. This produces ungrammaticality. In (8e) there

is no negation marker to check the [uNeg] feature on the n-word. The way to correct (8e) would be to have the subject n-word move to [SPEC, NegP] and combine with $\text{Op } \neg$, thereby eliminating its [uNeg] feature. This is precisely what happened in (8b).

According to Zeijlstra (2004), unlike the Romance languages, the Germanic languages have no NegP. In these languages, the negation marker is therefore not a head but a maximal projection located in the specifier position of a verbal phrase. For example, negation markers like *not* (English), *nicht* (German) and *niet* (Dutch) are base-generated as adjuncts to vP and carry the feature [iNeg]. It is for this reason that they do not move. Sentential negation therefore looks as follows in the Germanic languages:

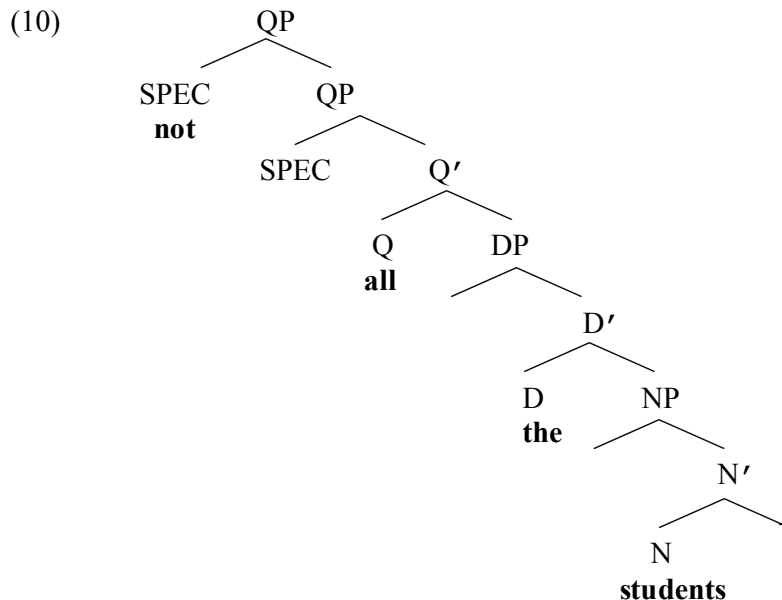


Having presented the Zeijlstra's theory of sentential negation I will now show how one can extend it to constituent negation.

4. My proposal for constituent negation

4.1 Constituent negation in the Germanic languages

Following Zeijlstra's treatment of negation markers in the Germanic languages as maximal projections, I propose that a negated constituent in the Germanic languages has the following structure:



If one assumes this structure one can easily explain the following two sentences:

- (11) a. Not all the students have read the book.
b. The students have not all read the book.

In (11a) the entire subject QP shown in (10) moves to subject position. In (11b) the DP *the students* moves out of QP and strands not only the quantifier *all* but the negation marker as well.

Some readers may want to suggest that the negation marker in (11b) is not a constituent negation marker at all but a sentential negation marker. It is easy to demonstrate that this is not the case, because in the Germanic languages a sentential negation marker can co-occur with a stranded negated quantifier, and the negated quantifier must appear above sentential negation. The following sentences from English, Dutch and German demonstrate this:

- (12) a. The students have not all not read the book.
b. De studenten hebben het boek niet allemaal niet gelezen. (Dutch)
the students have the book not all not read
c. Die Studenten haben das Buch nicht alle nicht gelesen. (German)
the students have the book not all not read

4.2 Constituent negation in the Romance languages

The question that we are trying to answer is why negated quantifiers cannot be stranded in the Romance languages the way they can in the Germanic languages. Could it be that the Romance languages simply do not have the kind of negated quantifiers that one finds in Germanic? I offer the following examples from Italian that indicate that this may be the case:

- (13) a. Sono arrivati tutti gli studenti.
are arrived all the students
b. *Sono arrivati non tutti gli studenti
are arrived not all the students

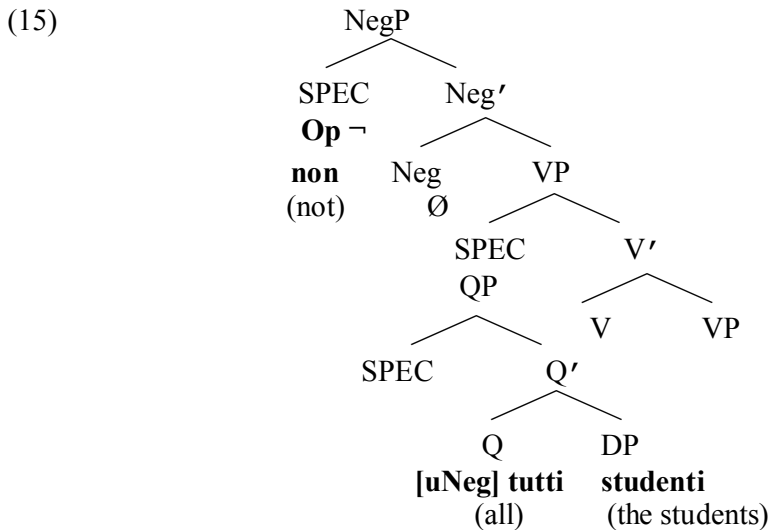
Example (13a) is a sentence in which the subject QP *tutti gli studenti* (*all the students*) has remained in its base-position in VP and has not moved up to normal pre-verbal subject position. The crucial sentence is (13b). If the negated quantifier *non tutti* (*not all*) really existed, (13b) should be just as acceptable as (13a). That is, the negated quantifier and its complement DP in (13b) should have been able to remain in VP just as the subject QP remained in VP in (13a). Note that in (13b) it is not the stranding of a negated quantifier that is the problem, since no stranding has occurred in this sentence. As I will explain shortly, the problem with (13b) is that a negated constituent is located below NegP.

If one follows Zeijlstra (2004) and treats negation markers in the Romance languages not as maximal projections in specifier positions but as highly positioned syntactic heads, one does not expect to find the type of negated constituent illustrated in (10) in the Romance languages. One expects to find negation markers only in the head position of a highly situated NegP, as shown in (7). This explains not only why one does not find stranded negated quantifiers in the Romance languages, it also explains why one does not even find non-stranded negated quantifiers below NegP, as shown in (13b). There is still an open question, however: If negated quantifiers as illustrated in (10) do not exist in the Romance languages, how does one generate a sentence like (14)?

- (14) Non tutti gli studenti sono arrivati.
not all the students are arrived

If negated constituents do not occur below the position of NegP, the implication is that negated constituents are actually formed by combining with the negation marker when they pass through NegP on their way to subject position. This would explain (14). It would also explain why (4b) and (13b) are ungrammatical. What I will do now is suggest how one might derive (14).

I propose that in order to derive (14) we adapt Zeijlstra's model for sentential negation, shown in (7), to constituent negation. The following structure, based on the structure in (7), would then be the base-structure for (14):



To derive (14) from (15), the subject QP *tutti gli studenti* (*all the students*) is base-generated with an uninterpretable negative feature on it. This feature simply means that the speaker intends to negate the QP. In order to eliminate the [uNeg] feature, the QP moves to [SPEC, NegP] and combines with Op \neg . The operator is phonetically realised as the negation marker *non* and the newly formed negated QP moves up to subject position in [SPEC, IP], resulting in (14). This model allows constituent negation in the nominal domain to run parallel to sentential negation in the verbal domain. In the verbal domain there is a series of head movements. The verb moves from V to Neg, where it combines with the negation marker, and then moves on to I. In the nominal domain there is a series of movements from one specifier position to another. The subject moves from [SPEC, VP] to [SPEC, NegP], where it combines with the negation operator, and then to [SPEC, IP].

It will no doubt have occurred to some readers that a negated quantifier and a sentential negation marker can co-occur in the Romance languages, as the following Italian sentence demonstrates:

- (16) Non tutti gli studenti non hanno letto il libro.
not all the students not have read the book

This kind of sentence is no problem for the model in (15) if one simply assumes that there can be a negation operator in [SPEC, NegP] and a negation marker in the head position of NegP at the same time.

The model that I am suggesting follows Zeijlstra (2004) in two important ways. First of all, it makes use of the distinction between languages that have NegP and those that do not. Secondly, it applies to the nominal (constituent) domain the same derivational methodology that Zeijlstra applies to the verbal (sentential) domain. (Note that Zeijlstra's model and mine both involve right-adjunction to the negation marker or operator, not necessarily what one would expect in head-first languages like the Romance languages.)

While my model shows important similarities to Zeijlstra (2004), it also shows two significant departures from it. The optional [uNeg] feature on the QP is one such departure. One would normally expect such a feature to be inherent or lexical in nature and to be borne by negative words such as the Italian *nessuno* (*nobody*) and *niente* (*nothing*). I am proposing that such a feature can be optional, depending on whether a speaker intends to negate the QP or not.

Another significant departure of the model in (15) from Zeijlstra (2004) is the way in which the negation operator $\text{Op } \neg$ is phonetically realised as the negation marker. Zeijlstra does say (Zeijlstra 2004: 258) that the negation marker in a non-strict negative concord language like Italian can be the "realisation" of the operator and accomplish what the operator accomplishes, but in saying this he is not claiming that a negation marker, a syntactic head, is jumping from Neg into [SPEC, NegP]. He is simply saying that because the negation marker in a non-strict negative concord language bears an [iNeg] feature and can provide the negative semantics to a phrase and "check" the [uNeg] features of other negative elements, it is the realisation of the negation operator. Therefore, there is a difference between my model and Zeijlstra's. I should point out that Zeijlstra does claim (Zeijlstra 2004: 246-247) that there are instances in which a negation operator is phonologically realised in its SPEC position. The problem is that in Zeijlstra's examples it is not the normal sentential negation marker that serves as the phonological realisation of the operator, but another negative word such as *pas* (*not*) in French and (*mai*) (*ever/never*) in Italian. This does not, in my opinion, rule out that the normal sentential negation marker might under some circumstances be the phonological realisation of the negation operator.

There are two other major issues with the model in (15). The first issue is that it does not explain why the negation operator is not *always* phonologically realised when it combines with another element. For example, in the following Italian sentence the negative word *nessuno* (*nobody*) has passed through [SPEC, NegP] on its way to subject position and checked its [uNeg] feature by forming a sort of compound with the operator, but there is no phonological realisation of the operator:

- (17) a. Nessuno ha fatto niente.
 no one has done nothing
 (No one has done anything.)
 b. *Non nessuno ha chiamato.
 not no one has called

To get around this inconsistency, I would have to say that a QP bearing [uNeg] is somehow different from an n-word like *nessuno*. It does not seem unreasonable to say that there is a difference between an indefinite n-word such as *nessuno*, which always bears the feature [uNeg], and a definite QP, which does not inherently bear [uNeg]. Nonetheless, this is difficult to capture formally in a model. The position that I will take on the phonological realisation of the negation operator in the model in (15) is that it is an issue but not a convincing reason to abandon the model.

Another issue with the model in (15) is that it makes a false prediction. Consider the following sentence from Italian:

- (18) Non tuttti i ragazzi hanno una bicicletta.
not all the children have a bicycle

According to the model in (15), the negation marker in (18) originated as the operator $\text{Op } \neg$ in [SPEC, NegP] and is the phonological representation of the operator. A similar thing occurs in (17a), in which the n-word *nessuno* (*nobody*) combines with $\text{Op } \neg$ before moving to subject position. The difference between (18) and (17a) is that $\text{Op } \neg$ is phonologically realised in (18) but not in (17a). Here is the problem: Following Zeijlstra (2004), in (17a) the operator has combined with an n-word and this combination licenses a second n-word in the sentence, namely, *niente* (*nothing*). One would therefore expect the negation marker in (18) to also license another n-word, but it does not:

- (19) *Non tuttti i ragazzi hanno fatto niente.
not all the children have done nothing

In order to make this sentence grammatical, a second negation marker is needed:

- (20) Non tuttti i ragazzi non hanno fatto niente.
not all the children not have done nothing
'Not all the children haven't done anything.'

What is apparently happening is that in (19) the negation marker, which is the phonological realisation of $\text{Op } \neg$, because it is embedded in a QP can no longer bind event variables lower in the sentence. In (17a), a phonetic realisation of $\text{Op } \neg$ is not necessary because the n-word *nessuno* (*nobody*), which is inherently negative, takes over the function of $\text{Op } \neg$. It is not embedded in another phrase and can therefore bind an event variable (and license another n-word) lower in the sentence. The ungrammaticality of (19) is surely an issue with the model proposed in (15) but it would also be an issue for Zeijlstra (2004) and probably for any theory of negation.

I now need to return to the issue of the optionality of the [uNeg] feature that I posit on the quantifier in (15). Normally, such a feature is considered to be lexical, borne by n-words, and not optional. Nonetheless, if the feature cannot be optionally borne by a QP that is not inherently negative, there is no way to force that QP to move through NegP and up to subject position. Remember that in languages like Italian, Portuguese, Romanian and Spanish a subject may remain in vP, but not if it is negated.

There are various tricks that one might try in order to avoid positing an optional [uNeg] feature in order to get a negated QP into sentence-initial position, but it seems that they all lead us right back to the need for an optional [uNeg] feature after all. One might, for example, claim that there is a second NegP located above IP and that subjects move into the SPEC position of this higher NegP and this produces sentence-initial negated subjects such as those in (14) and (18). The problem with this approach is that in most Romance languages the subject is not forced to move to canonical subject position. Therefore, placing a NegP above IP only solves half the problem. It gives us the potential for a sentence-initial negation marker, but it does not provide a motive for a subject to move up to it. The feature [uNeg] remains necessary under this approach

Another trick that one might try would be to say that instead of a [uNeg] feature on the subject QP there is a NegP embedded in the SPEC position of that QP and that it is this NegP that makes it obligatory for a negated subject QP to move through the NegP that dominates vP. Under this approach, however, in order to motivate the upward movement of the subject QP, one would have to say that there is an [uNeg] feature somewhere in the NegP that is in [SPEC, QP]. This is an implausible solution, because in languages like Italian and Spanish neither the specifier nor the head of a NegP bears the feature [uNeg]. Thus, the [uNeg] feature on the subject QP seems to be the only solution.

We have looked at some serious issues with the model in (15). Those issues notwithstanding, the model has a lot of advantages, which I will now summarise. Because it is based on Zeijlstra (2004) it allows a unified approach to sentential and constituent negation. Also, by claiming that in the Romance languages the negation marker is a head, not a specifier, and that this head is located in a NegP dominating vP, the model in (15) explains why there can be no stranded negated quantifiers in the Romance languages. It actually goes further than that. It correctly predicts that no negated quantifiers, stranded or otherwise, will be found below NegP in the Romance languages. Subjects with the feature [uNeg] will move up to SPEC of IP and on the way they can pass through NegP, check their uninterpretable feature and combine with Op \neg . If they do not do this, the derivation will crash, as the following Italian sentence illustrates:

- (21) a. Sono venuti tutti i ragazzi.
 are come all the children
 b. *Sono venuti non tutti i ragazzi.
 are come not all the children

Object quantifiers bearing the feature [uNeg] would normally not have the occasion to move high enough to check their uninterpretable feature. This is why one does not find negated object quantifiers, stranded or otherwise, in the Romance languages, as shown in the following sentence from Italian:

- (22) *Ho visto non tutte le ragazze.
 (I) have seen not all the girls

What is interesting here is that a negated object *is* possible in the Romance languages if it is topicalised, in other words, if it has passed through NegP on its way to the topicalisation position. The following Romanian sentence clearly demonstrates this:

- (23) Nu pe toate fetele le-am văzut.
 not PE all girls the them (I) have seen

This sentence provides even more evidence that a negated constituent in the Romance languages must pass through NegP.

The model in (15) also makes the correct predictions on small clauses in the Romance languages. As the reader undoubtedly knows, the subject of a small clause appears to be the object of the verb in the matrix clause. What looks like a direct object is actually a small clause subject that has been raised out of the small clause and into [SPEC, AgrOP] of the main clause. Consider the following Italian sentence:

- (24) Considero non tutti gli studenti intelligenti.
 (I) consider not all the students intelligent

As already shown in (22), negated direct objects do not appear in post-verbal position in the Romance languages. The grammaticality of (24) can only be explained if one assumes that the direct object of the matrix verb is actually the subject of a small clause and that a small clause, like a full sentence, can contain a NegP. Just like a main clause subject, the subject of a small clause can move through NegP on its way to subject position and combine with Op \neg to form a negated quantifier, as in (24). Furthermore, if we assume that the small clause subject moves to [SPEC, AgrOP] of the main clause, the model in (15), in combination with the Stranding Analysis, predicts that the negated quantifier in a sentence like (24) can be stranded in the small clause. This prediction is borne out:

- (25) Considero gli studenti non tutti intelligenti.
 (I) consider the students not all intelligent

5. An unresolved issue in English

The model that I have proposed makes a lot of correct predictions for the Romance languages, but there is a problem in the VO Germanic languages. Note that since in the Germanic languages negation can be in a specifier position in the nominal domain, one would expect to see negated object quantifiers and even stranded negated object quantifiers in the Germanic languages. German, an OV language, meets this expectation. In (26a) there is a negated object quantifier and in (26b) the same negated object quantifier has been stranded:

- (26) a. Er hat nicht alle die Bücher gelesen.
 he has not all the books read
 b. Er hat die Bücher nicht alle gelesen.
 he has the books not all read

I remind the reader that these are not instances of sentential negation, and that the proof of this is that the sentences in (26) can occur with sentential negation in addition to the constituent negation that they already contain:

- (27) a. Er hat nicht alle die Bücher nicht gelesen.
 he has not all the books not read
 b. Er hat die Bücher nicht alle nicht gelesen.
 he has the books not all not read

Whereas German fulfils the prediction made by my model, English (along with other VO Germanic languages like Swedish) does not:

- (28) a. *He has read not all the books.
 b. *He has read the books not all.

I must leave this matter for future research, but I will offer an observation that might lead us in the right direction:

(29) Constituent negation must appear above the position of sentential negation.

This generalisation certainly holds for the Romance languages, as we have seen. It also holds for German, for two reasons. First of all, German is verb-final and sentential negation is in the SPEC position of the verbal phrase. Secondly, it is well known that direct objects in German are scrambled to the left of sentential negation. This can be verified by observing the sentences in (27). Reversing the order of sentential and constituent negation in (27) would produce ungrammaticality:

- (30) a. *Er hat nicht nicht alle die Bücher gelesen.
 he has not not all the books read
 b. *Er hat die Bücher nicht nicht alle gelesen.
 he has the books not not all read

The generalization in (29) also holds for English. In English, since it is VO, a negated object quantifier, stranded or otherwise, will never occur above sentential negation, so any sentence with a negated object will crash. Stranded subject quantifiers, however, will always occur above the position of sentential negation:

- (31) a. The students have not all not read the book
 b. *The students have not not all read the book.

The generalisation in (29) is admittedly purely descriptive and explains nothing, but it does seem to be valid.

One might say that with the generalization in (29) the models that I have proposed in (10) for the Germanic languages and in (15) for the Romance languages are superfluous, since (29) explains the position of sentential and constituent negation. I would simply point out that even if (29) turns out to be correct it does not tell us everything we need to know. We still need to know whether negation markers are heads or maximal projections and how the merge process works, so (10) and (15) are necessary.

6. Summary

We started this paper with the interesting observation that negated quantifiers can be stranded in the Germanic languages but not in the Romance languages. I have hypothesised that this can be explained if one applies the theory of sentential negation in Zeijlstra (2004) to the constituent level. That is, if one assumes, as diagrammed in (15), that in the Romance languages negation is a highly positioned syntactic head, it follows that a QP can only appear in negated form if it passes through NegP and combines with the negation operator. This means that negated quantifiers will be found only if they appear above NegP, for example in canonical subject position or in a topic position. This prediction seems to be borne out, as the following Romanian sentences indicate:

- (32) a. Nu toți studenții au citit cartea.
 not all students the have read book the
 b. *Studenții au citit nu toți cartea.
 students the have read not all book the

- c. *Au citit nu toți studenții cartea.
have read not all students the book the
- d. *Studentul a citit nu toate cartele.
student the has read not all books the
- e. Nu pe toate fetele le-am văzut.
not PE all girls the them (I) have seen

If one applies Zeijlstra (2004) to constituent negation in the Germanic languages and assumes that negation markers are maximal projections in SPEC positions, there is nothing preventing one from positing a negation marker in the specifier position of a nominal phrase such as a QP, as illustrated in (10). The prediction here is that in the Germanic languages both subject and object negated quantifiers should be found in both stranded and non-stranded positions and that they should be able to co-occur with a sentential negation marker located in the specifier position of a verbal phrase. The following German sentences provide evidence in support of this prediction:

- (33)
- a. *Nicht alle* die Studenten haben das Buch nicht gelesen. (German)
not all the students have the book not read
 - b. Die Studenten haben *nicht alle* das Buch nicht gelesen.
the students have not all the book not read
 - c. Er hat nicht alle die Bücher nicht gelesen.
he has not all the books not read
 - d. Er hat die Bücher nicht alle nicht gelesen.
he has the books not all not read

The problem is that in VO Germanic languages like English, negated object quantifiers are not found, stranded or otherwise. Consequently, examples (33a) and (33b) are possible in English but (33c) and (33d) are not. I have been told that the same holds for other VO Germanic languages such as Swedish.

This issue with VO Germanic languages is one that I have to leave for future research, but there is an observation that might help put us on the right track, namely, that constituent negation must be above sentential negation. This generalisation seems to be at least indirectly supported by information that we have on the phenomenon of scrambling. English and the Romance languages do not allow scrambling, so one will not see objects above sentential negation. A sentence with a negated object is doomed to ungrammaticality. Since German does allow scrambling, negated objects can be moved above sentential negation and this is perhaps why one sees negated objects (and stranded negated object quantifiers) in German. This generalisation is first of all purely descriptive and secondly cross-linguistically untested.

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