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The asymmetric behavior of English negative quantifiers in negative sentences¹

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In this paper, the unexpected behavior of object negative quantifiers in some diagnostic

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tests of sentential negation is accounted for within a Minimalist framework assuming that: (i) negative quantifiers decompose into negation and an existential quantifier; (ii) negative quantifiers are multidominant phrase markers, as Parallel Merge allows the verb to c-select their existential part but not their negative part, thus giving negation remerge flexibility; (iii) tag question involves or-coordination of TPs, and neither/so clauses involve and-coordination of TPs; (iv) two positions for sentential negation are available in English, one below TP (PolP₂), and one above TP (PolP₁). Activation of either PolP₁ or PolP₂ in the absence of other scope-taking operators corresponds to two distinct grammars. If PolP₁ is active, the negative part of an object negative quantifier remerges in its Specifier valuing the [upol:] feature of Pol_1 as negative while skipping the TP-domain. As no negative formal feature is present in the TP, a negative question tag is required, as well as so-coordination, too-licensing and Yes, I guess so 'expression of agreement'. Conversely, if PolP₂ is active, the negative part of the object negative

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quantifier remerges in the TP-domain (in Spec, PolP₂), thus requiring a positive

question tag, neither-coordination, either-licensing, and No, I guess not.

1. Introduction

As observed by a number of scholars, object negative quantifiers seem to misbehave when submitted to some of Klima's (1964) diagnostic tests for sentential negation, while this is not the case for subject and adjunct negative quantifiers. Ross (1973), McCawley (1998), Horn (1989), Moscati (2006) and, more recently, De Clercq (2010a, b) and De Clercq, Haegeman & Lohndal (2012), for instance, point out that postverbal negative quantifier objects such as *nobody* in (1) can take a negative tag question.

(1) John read nothing, didn't he?

This is unexpected, as negative quantifiers introduce an instance of logical negation that makes the proposition negative (Quirk, Greenbaum, Leech & Svartvik 1973).

Therefore, a sentence such as (1) should take a positive tag question.

Before proceeding further, let us clarify that English tag questions can be of two kinds depending on whether the polarity of the antecedent clause is reversed in the question tag or not (Klima 1964, Quirk, Greenbaum, Leech & Svartvik 1985, McCawley 1998, among others). While in reverse polarity question tags the antecedent clause and the tag have different polarity, thus resulting in the two combinations in (2), in reduplicative question tags (Brasoveanu, De Clercq, Farkas & Roelofsen 2014) – also known as constant question tags in Tottie & Hoffmann (2006) – the polarity of the antecedent clause and that of the tag is the same. This should give rise to two possible combinations too, namely the ones in (3). However, only the combination in (3a) is regularly attested in English.

(2) Reverse polarity question tags:

- (a) positive antecedent clause negative tag
- (b) negative antecedent clause positive tag

- (3) Reduplicative or constant question tags:
 - (a) positive antecedent clause positive tag
 - (b) negative antecedent clause negative tag

Question tags of the kind in (3b), by contrast, are considered to be rare or occasional by Tottie & Hoffmann (2006), who report having found just two genuine examples of this kind of tag question in a corpus study that included the spoken component of the British National Corpus (10.36 million words) and the Longman Spoken American Corpus (5 million words).² Quirk et al. (1985) and McCawley (1998) also mention that negativenegative question tags are not attested in actual use. Swan (2005: 481), for whom question tags of the kind in (3b) are also rare, claims them to sound aggressive.

In this paper, I argue that (1) must be distinguished from a genuine reduplicative question tag of the negative-negative kind in (3b). In other words, example (1) is unexpected under the assumption that the question tag is of the reverse polarity kind, (2), and has the function of seeking confirmation of the statement expressed in the antecedent main clause, which is a discourse function of reverse tag questions (Cattell 1973, McCawley 1998, among others).

Returning to the example in (1), in an experimental study carried out by

Brasoveanu et al. (2014) it was found not only that antecedent clauses with object

negative quantifiers could take negative tag questions of the reverse polarity kind, but

also that antecedent clauses with subject and adverb negative quantifiers did not, as they

consistently triggered the use of positive polarity reverse tag questions in the same way

negative control sentences did. This is shown in (4) and (5).³

- (4) (a) She never lied to you, did she?
 - (b) *She never lied to you, didn't she?

- (5) (a) Nobody read the book, did they?
 - (b) *Nobody read the book, didn't they?

McCawley (1998: 607) discusses a second test where object negative quantifiers do not behave as expected from a linguistic expression that contributes sentential negation to the clause. He reports both *either* and *too* to be possible with object negative quantifiers, (6a, a'), while only *either* is grammatical with subject and adjunct negative quantifiers, (6b, b') and (6c, c').

- (6) (a) John read nothing and Peter read nothing either.
 - (a') John read nothing and Peter read nothing too.
 - (b) She never lied to you and she didn't betray you either.
 - (b') *She never lied to you and she didn't betray you too.
 - (c) Nobody read the book and they didn't come to class either.
 - (c') *Nobody read the book and they didn't come to class too.

In a similar vein, Jackendoff (1972: 364) observes that both *so* and *neither* are possible with object negative quantifiers, (7a, a'), while this is not the case with subject and adjunct negative quantifiers, (7b, b') and (7c, c').

- (7) (a) John read nothing and neither did Peter.
 - (a') John read nothing and so did Peter.
 - (b) She never lied to you and neither did Peter.
 - (b') *She never lied to you and so did Peter.
 - (c) Nobody read the book and neither did they come to class.
 - (c') *Nobody read the book and so did they come to class.

Finally, when submitted to Klima's (1964) *not even* + X test, which is a possible continuation only for negative sentences, (8), negative quantifier objects, negative

quantifier adjuncts and negative quantifier subjects behave alike, (9). However, as pointed out by an anonymous reviewer, this test does not have a non-negative counterpart that parallels the negative question tag, *too*-licensing, and *so*-coordination in the other three tests, so such a test is not very informative as to what the difference might be in the syntax of object negative quantifiers on the one hand, and subject and adjunct negative quantifiers on the other.

- (8) (a) John read something, *not even the shortest book.
 - (b) John didn't read anything, not even the shortest book.
- (9) (a) John read nothing, not even the shortest book.
 - (b) She never lied to you, not even as a child.
 - (c) Nobody read the book, not even the best students.

It is the case, though, that, as shown in (10), when negation is of the kind that has traditionally been described as constituent negation (Klima 1964) (i.e. as non-sentential negation) the *not even* + X test fails, and the question tag is negative, *too* is licensed and coordination is with *so*.

- (10) (a) She saw her not long ago {, didn't she? / and he did too. / and so did he. /
 *not even by chance.}
 - (b) She is unhappy {, isn't she? / and he is too. / and so is he. / *not even after graduating.}

Therefore, in this paper I take non-sentential negation to be the one that fails to reverse the truth-conditions of the proposition expressed by the clause. Given that English speakers consider (1) truth-conditionally equivalent to the main clause in (8b), I conclude that negative quantifiers introduce an instance of sentential negation regardless of the position they occupy. It is thus an aim of this paper to explain why

sentential negation is not diagnosed as such by certain tests when encoded in object negative quantifiers.

Four potential explanations come to mind to account for the facts presented above: if a negative sentence such as (1) can take a negative reverse polarity tag question, license *too* and allow *so*-coordination, then (i) the sentence is not negative; (ii) the aforementioned Klima's (1964) tests may not be a good diagnostic for sentential negation; (iii) the sentence has not been typed as negative by the time the tests apply; and (iv) the syntactic structure that is relevant to the tests does not contain any negation.

The first of the above potential explanations is ruled out by the results of Klima's tests when applied to negative quantifiers in syntactic positions other than that of object in (4)–(7), and by the judgments in (9). The second of the possible explanations, namely that Klima's (1964) tests may not be good diagnostics for sentential negation, overgeneralizes. Leaving the *not even* + X test aside, the other three tests presented above are only problematic for object negative quantifiers, but provide a clear-cut result for adjunct and subject negative quantifiers. Thus, Klima's tests cannot be rejected as diagnostics for sentential negation across the board.

The third potential explanation, namely that the sentence has not been typed as negative by the time the tests apply is not new. In the particular case of the tag question test, Moscati (2006) and De Clercq (2010a, b) explain the occurrence of negative tag questions with clauses containing object negative quantifiers as a consequence of the antecedent clause being typed as affirmative by default. In other words, when the tag question is merged to the antecedent clause, this has not been typed as negative yet. As will be seen, these two analyses face the same crucial problem: if the clause is typed as affirmative by default, it amounts to saying that the proposition is not negative at all.

However, this goes against the speakers' interpretation of a sentence such as (1) as $\neg p$ (and thus as truth-conditionally equivalent to the main clause in (8b)).

Moscati (2006) argues that negative tag questions co-occur with sentences with object negative quantifiers when Force, a left-peripheral functional projection above TP (and hence also above ν P) dedicated to illocutionary force, has been valued as positive by default due to the restrictions imposed by the Phase Impenetrability Condition, formalized in (11).⁵

(11) Phase Impenetrability Condition

In a phase α with a head H, the domain of H is not accessible to operations outside α , only H and its edge are accessible to such operations.

(Chomsky 2000: 108)

Moscati assumes that Force bears an uninterpretable and unvalued negative feature that probes for a matching interpretable feature. Negative quantifiers bear an interpretable and valued negative feature and, hence, can potentially serve as Goals for the Probe in Force. In Moscati's account, however, the Phrase Impenetrability Condition prevents postverbal negative quantifiers (i.e. negative quantifiers inside VP) from valuing the uninterpretable negative feature in Force, as only the edge of ν P is accessible to Force. Hence, the feature in Force is valued as positive by default and the negation is narrow in scope (i.e. it is constituent or non-sentential negation).

For the negative quantifier to convey sentential negation, an unvalued interpretable feature at the edge of vP should agree with the interpretable and valued negative feature of the postverbal negative quantifier. When this is the case, the Probe in Force can access it for valuation of its uninterpretable and unvalued feature as negative. This accounts for the diagnosis of the sentence as negative in (6a), (7a) and

(9a), but predicts that the question tag with object negative quantifiers will always be positive, contrary to what has been seen in (1), and that clauses with object negative quantifiers will always have to license *either* and be continued with *neither*, contrary to what has been shown to be the case in (6a, a') and (7a, a'). In short, Moscati's (2006) analysis only works for examples such as (1), (6a') and (7a') insofar these are considered to be cases of constituent negation, but if they are, their meaning equivalence with a sentence such as *John didn't read anything* (i.e. $\neg p$) cannot be accounted for.

In a similar vein, De Clercq (2010a, b) assumes that clauses contain a Polarity head in the CP field that needs to be valued for polarity in the course of the derivation. For De Clercq, postverbal negative quantifier objects, which are inside vP, cannot value the polarity feature of the Polarity head in the CP, because they do not participate in the CP phase. Hence, the unvalued feature of the Polarity head is valued as affirmative by default. As discussed earlier for Moscati's (2006) account, De Clercq's explanation cannot handle the fact that speakers interpret (1) as equivalent in meaning to *John didn't read anything* (i.e. as $\neg p$). In addition, recall that a negative tag question can be appended to (1) by some speakers but not by all. Hence, it is clear that object negative quantifiers would not be generally unable to type the clause as negative.

Finally, the fourth possible explanation outlined above – namely that the syntactic structure that is relevant to the tests does not contain any negation – is the one I explore in this paper. In particular, I claim that the grammaticality that some speakers attribute to (1), (6a') and (7a') follows from two facts: (i) that the syntactic structure that is relevant for the various operations (i.e. polarity reversal in tag questions, polarity licensing of *either/too*, and *neither-/so-*coordination) contains no negative feature in

the grammar of speakers who accept (1), (6a') and (7a'), and (ii) that the syntactic material that is relevant for polarity reversal, licensing of *either/too*, and *neither-/so-*coordination is TP.

In this paper, I also try to extend the analysis of the facts in (1), (6) and (7) to accommodate Postal's (2004: 164) observation that both the 'expression of agreement' clauses *Yes, I guess so* and *No, I guess not* are fine with object negative quantifiers, while – as has already been shown to be the case in the question tag test, the *either/so* test, and the *neither/so* test – only an 'expression of agreement' clause with *not* is possible with subject and adjunct negative quantifiers, (12)–(14).

- (12) Speaker A: John read nothing.
 - (a) Speaker B: No, I guess not.
 - (b) Speaker B': Yes, I guess so.
- (13) Speaker A: She never lied to you.
 - (a) Speaker B: No, I guess not.
 - (b) Speaker B': *Yes, I guess so.
- (14) Speaker A: Nobody read the book.
 - (a) Speaker B: No, I guess not.
 - (b) Speaker B': *Yes, I guess so.

To articulate my proposal I make a number of theoretical assumptions, which are outlined in Section 2. First, I assume that English negative quantifiers are non-atomic complex syntactic objects that contain a negative component and an existential quantifier that only become a single lexical unit at the PF interface (Klima 1964, Jacobs 1980, Ladusaw 1992, Rullmann 1995, Larson, den Dikken & Ludlow 1997, Sauerland 2000, Penka & Zeijlstra 2010, Penka 2011, Iatridou & Sichel 2011, Temmerman 2012,

among others). Second, I follow Temmerman (2012) in analysing English negative quantifiers as multidominant phrase markers. Third, in line with Lasnik (1972), van Craenenbroeck (2010) and Temmerman (2012), among others, I assume that two positions are available for negation in English: $PolP_2$ is above vP (i.e. in the TP-domain), and $PolP_1$ is above TP (i.e. outside the TP-domain), (15).

(15)
$$\left[\operatorname{CP} C \left[\operatorname{PolP1} \operatorname{Pol}_{1} \left[\operatorname{TP} T \left[\operatorname{PolP2} \operatorname{Pol}_{2} \left[\operatorname{vP} v \left[\operatorname{VP} V \dots \right] \right] \right] \right] \right] \right]$$

(adapted from Temmerman 2012: 78)

Given that negation is considered sentential if it takes scope above the main predicate of the clause (cf. Acquaviva 1997 and Penka 2007), both positions for negation in (15) are taken to be suitable for the expression of sentential negation. In this paper, nonetheless, I show that encoding negation in one position or another has relevant consequences for the syntax of tag questions, *neither-/so-*coordination, *either/too* licensing, and expression of agreement clauses.

The rest of the paper is organized as follows. In Section 2 I outline the assumptions made on (i) the internal structure of negative quantifiers in English, (ii) their multidominant nature as a result of Parallel Merge (Citko 2005, 2011), and (iii) the structure of tag questions, and of coordinated clauses. In Section 3, an analysis is put forward for the unexpected behavior of tag questions with sentences containing an object negative quantifier, as well as for the behavior of clauses with object negative quantifiers with respect to *neither-/so-*coordination and *either/too* licensing that relies on the theoretical assumptions presented in Section 2. The case of 'expression of agreement' clauses is also briefly discussed. Finally, Section 4 concludes.

2. Theoretical considerations

In this section, I address four issues that are central to the account that is put forward in Section 3. In Section 2.1 negative quantifiers are shown to be decomposable into a negative component and an existential quantifier. In Section 2.2 a third type of Merge (i.e. Parallel Merge) is presented. Parallel Merge combines properties of the other two types, namely Internal and External Merge, and results in multidominance (i.e. a daughter node having two mother nodes), which has been claimed to be a property of English negative quantifiers (Temmerman 2012). In Section 2.3 Sailor's (2009, 2012) analysis of tag questions as full CPs with VP-ellipsis is outlined, and in Section 2.4 I show that only material inside TP is relevant for the syntax of question tags. Finally, in Section 2.5 I build on Krifka's (2016) claim that reverse polarity question tags are related to their antecedent clause by means of disjunction. Finally, in Section 2.6 I present some assumptions on the nature of coordination based on Munn (1993) and Progovac (1998a, b), which are relevant to the licensing of *too* and *either*, and to *so*- and *neither*-coordination.

2.1 *On the internal structure of negative quantifiers*

Negative quantifiers (e.g. English *no*, *nobody* or *nothing*, or German *kein* 'no') have been analyzed in the literature as decomposable into a negative part and an existential part (Klima 1964, Jacobs 1980, Ladusaw 1992, Rullmann 1995, Larson et al. 1997, Sauerland 2000, Penka & Zeijlstra 2010, Penka 2011, Iatridou & Sichel 2011, Temmerman 2012, Tubau 2016, among others). These two parts enter the derivation separately and may become a complex object in the syntax, and a single lexical item at PF (Klima 1964, Jacobs 1980, Rullmann 1995, Iatridou & Sichel 2011, Zeijlstra 2011, Temmerman 2012).

In support of a decompositional view of negative quantifiers, Jacobs (1980, 1982, 1991) discusses the existence of Split Scope readings (already observed by Bech 1955/57), which may emerge for the negative quantifier *kein* when it interacts with other scope-taking operators. Split Scope readings, which have also been reported to be available in Dutch (Rullmann 1995), and English (Potts 2000), are illustrated in (16). As can be seen, the negative quantifier can take wide scope with respect to *need*, (16b), but not narrow scope, (16c). Split Scope, with negation scoping over *need* and the existential part under it, (16a), is also an available reading.⁹

- (16) The company need fire no employees.
 - (a) 'It is not the case that the company is obligated to fire employees'

 $\neg > \text{need} > \exists$

- (b) 'There are no employees x such that the company is obliged to fire x' $\neg \exists > \text{need}$
- (c) *'The company is obligated to fire no employees'

 $need > \neg \exists$

(example from Potts 2000, quoted in Penka 2007: 172)

Split Scope readings of negative quantifiers, however, have also been accommodated in semantic accounts of quantification that did not assume negative quantifiers to be decomposable. Geurts (1996), for example, assumes negative quantifiers to form a semantic unit, and Split Scope readings to be the result of quantification over kinds à la Carlson (1977), while De Swart (2000) argues Split Scope readings to follow from quantification over properties. More recently, Abels and Martí (2010) put forward a unified account of Scope Splitting for negative quantifiers in intensional contexts, comparative quantifiers, and numerals, where Split Scope readings

follow from quantification over choice functions. For reasons of space, I cannot discuss each of these accounts in detail here and thus direct the reader to the original sources for further reading, as well as to Penka (2007, 2011) for some criticism of the first two.

Given that the existence of Split Scope readings with negative quantifiers cannot be seen as a conclusive argument for a decompositional approach to negative quantifiers, let us discuss some further evidence coming from the behavior of negative indefinites under ellipsis. As shown in Temmerman (2012: 50), *not...any* can antecede the ellipsis of *no* in clausal ellipsis, but not in verbal ellipsis.

For the elliptical answer in (17), four different underlying structures are possible depending on a number of different assumptions made on the ellipsis literature. Notice that the structure in (18a) is ungrammatical due to lack of NPI-licensing; in (18b) a universal quantifier intervenes between negation and the NPI, with the structure thus violating the Immediate Scope Constraint; but (18c, d) are convergent and, crucially, confirm that *not...any* can be an antecedent of *no* in elliptical clauses.

(17) Q: Which song didn't any judge always vote for?¹¹ A: Katie's song.

(adapted from Temmerman 2012: 60)

- (18) (a) $[CP \text{ Katie's song}_i] [CP \text{ C} < [TP \text{ any judge}_k] [TP \text{ didn't } [TP \text{ always } [TP \text{ didn't } [TP \text{ did$
 - (b) $[CP \text{ Katie's song}_i]_{C'} C < [TP]_{T'} \text{ didn't } [PP \text{ always } [PP \text{ any judge vote for } f_i]]]] >]]$
 - (c) $[CP \text{ Katie's song}_i]_{C^*} C < [TP \text{ no judge}_k]_{T^*} T [PP \text{ always } PP \text{ t}_k \text{ voted for } f_i]]] >]]$
 - (d) $[CP \text{ Katie's song}_i [C] \subset \{TP : T]_{PP} \text{ always} [PP \text{ no judge vote for } t_i]]] >]]$

Concerning verbal ellipsis, as shown in (19) and (20), *not...any* cannot antecede the ellipsis of *no*, (19d) and (20d).

(19) [Context: the Cannes Film Festival]

Q: Who didn't like any movie?

- A: (a) Quentin Tarantino didn't like any movie.
 - (b) Quentin Tarantino liked no movie.
 - (c) Quentin Tarantino didn't < like any movie>.
 - (d) *Quentin Tarantino did < like no movie >.
- (20) I know PETER didn't offer any help...
 - (a) ...and I also don't expect JOHN to offer any help.
 - (b) ...and I also expect JOHN to offer no help.
 - (c) ...and I also don't expect JOHN to offer any help>.
 - (d) *...and I also expect JOHN to <offer no help>.

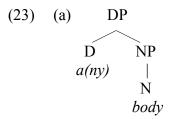
(Temmerman 2012: 62)

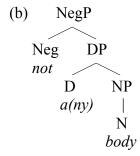
Furthermore, an object negative indefinite cannot scope out of a VP-ellipsis site, (21) and (22). In (21), a reading where negation scopes higher than the modal is not attested. In (22a), negation can have high scope ('Mary doesn't look good with any clothes'), or not ('Mary looks good without any clothes'), but in (22b), only a reading where negation is non-sentential is available.

- (21) Q: Who can offer no help?
 - A: %Quentin Tarantino can <offer no help>. (* \neg > can, % can > \neg)
- (22) (a) Mary looks good with no clothes.
 - (b) You say Mary looks good with no clothes, but I say Julie does < look good with no clothes>.

Temmerman (2012: 91) accounts for the ellipsis facts presented above as indicating that negative quantifiers result from an operation that allows the two components of a negative quantifier to become a single lexical unit. Such an operation is known as Fusion Under Adjacency (FUA), and was originally put forward by Johnson (2010, 2012). FUA applies when two terminals are adjacent at Spell-Out (i.e. linearized next to each other, with no other terminal intervening between the two). Being a PF-phenomenon, ellipsis prevents negative quantifiers from being formed at PF.

According to Temmerman (2012: 85–86), a negative quantifier such as *nobody*, for example, would be built in two steps. First, a D a(ny) would merge with the N body, as in (23a), and then Neg *not* would merge with the resulting DP, as in (23b).



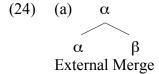


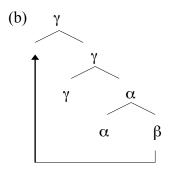
How the structure in (23b) merges with the verb, and how negation and the existential DP end up being linearized as adjacent so they can undergo FUA at PF is explained in Section 2.2 after the concepts of Parallel Merge and multidominance have been presented.

2.2 Parallel Merge and multidominance

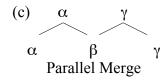
According to Chomsky (2001, 2005), Merge can be of two types, External and Internal. While the former allows two independent lexical items (α and β) to be joined into one syntactic object, as in (24a), the latter allows a copy of α or β to be remerged with the syntactic object resulting of External Merge of α and β , as in (24b).

Parallel Merge (Citko 2005), in (24c), is a combination of the other two types, as it allows β , which is part of the complex syntactic object α (as in Internal Merge) to merge with an independent syntactic object γ (as in External Merge). The result of Parallel Merge is a multidominant structure, (24c), where β has two mothers, α and γ .



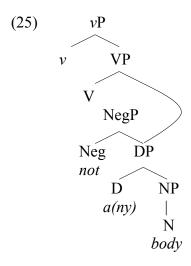


Internal Merge



In line with Johnson (2010), Temmerman (2012: 87) assumes that English object negative quantifiers undergo Parallel Merge with V. That is, given a structure such as (23b) above, V would not select NegP, the complex negative object. Rather, the verb

would select an object DP, which corresponds just to the existential part of the negative quantifier. This is illustrated in (25).



The main implication of such an analysis is that Neg, the negative component of the negative quantifier, is not part of the VP, the complement of the phase head v, which is Transferred upon completion of the vP phase. ¹² If NegP is not Transferred when the vP phase is completed, it will then be able to participate in a higher phase and have scope over v, with negation taking sentential scope. Recall that according to Penka (2007: 11), who in turn follows Acquaviva (1997), negation is assumed to be sentential if it scopes over the event expressed by the verb.

According to Temmerman (2012: 90), once the VP has been Transferred, a Polarity head merges with vP, and NegP can merge in its Specifier. However, as it is a complex Specifier, it is assumed, following Uriagereka (1999), that it is sent to the interfaces before merging with Polarity Phrase (PolP). ¹³

In short, the DP in (25) is linearized after the VP is Transferred, whereas NegP is linearized before it merges in the Specifier of PolP. Temmerman (2012: 90) gives the linearizations in (26) for VP and NegP, and the definition of the Adjacency condition on Fusion in (27). As can be seen in (26), nothing intervenes between D and Neg, which

allows these two terminals to undergo FUA (Temmerman 2012: 91) and become a negative quantifier that contributes sentential negation to the clause in English.

- (26) (a) $d(A)_{NegP} = \{ Neg < D, Neg < N, D < N \}$
 - (b) $d(A)_{VP} = \{ V < D, V < N, D < N \}$
- (27) The Adjacency condition on Fusion

X and Y can fuse only if the linearization algorithm assigns them adjacent position

(Temmerman 2012: 91)

Like Temmerman (2012), who aligns with a number of other scholars (Cormack & Smith 2002, Butler 2003, Holmberg 2003, among others) in assuming that two positions dedicated to polarity exist in English – one above *ν*P and one above TP – I also take sentential negation in English to be ultimately related to a TP-internal and to a TP-external position (see (15) above). That is, the uninterpretable polarity feature (i.e. [*u*pol:]) that needs to be valued for clause-typing (cf. Tubau 2008, De Clercq 2010a, b. See also Haegeman 1995, Kato 2000, Biberauer & Roberts 2011, and De Clercq, Haegeman & Lohndal 2017) can either be in the TP-domain (if encoded in PolP₂, above *ν*P), or outside the TP-domain (if encoded in PolP₁, above TP). Assuming the feature [*u*pol:] in Pol₁ and Pol₂ to be a Probe, and the negative feature of Neg (i.e. [pol:neg]) to be a Goal, clause-typing of a sentence as negative is the result of an Agree relation between Pol₁/Pol₂ and Neg. ¹⁴

In Section 3 I return to this issue, showing that two possible derivations for a clause with an object negative quantifier exist, which follow from whether $PolP_1$ and $PolP_2$ are the relevant positions for negation. According to Temmerman (2012) – who in turn follows Iatridou & Sichel (2010) – the scopal relation of negation with other scope-

taking operators determines the choice of which of the two PolPs is active. Crucially, though, in the absence of other scope-taking operators, the choice of PolP₁ and PolP₂ is free (Temmerman 2012: 80). What I show in this paper is that when negation is expressed by means of an object negative quantifier, the activation of PolP₁ or PolP₂ has visible consequences for (i) the choice of a positive or a negative reverse polarity tag question; (ii) the choice of *neither*- or *so*-coordination; (iii) the licensing of *either* and *too*; and (iv) the choice of 'agreement of expression' clauses.

2.3 Tag questions and VP-ellipsis

In this section I review the work by Sailor (2009, 2012), who gives evidence in favor of analyzing English tag questions as yes/no-questions (i.e. full CPs) that have undergone VP-ellipsis (VPE, henceforth). The first part of this assumption is in line with much older work by Huddleston (1970), Bublitz (1979), McCawley (1988) and Culicover (1992), among others, whereas the second part – namely that tag questions are instances of VPE (Merchant 2001) – is based on the observation that they behave like other clauses with VPE with respect to the distribution of auxiliaries and their stranding possibilities.

As shown in (28a, b), Sailor (2009: 28) shows that the T head in the antecedent clause cannot be elided in the clause with VPE. The examples in (28c, d) show that the same is true for tag questions.

- (28) (a) Mister Ed couldn't read, but Arnold Ziffel sure could [read].
 - (b) *Mister Ed couldn't read, but Arnold Ziffel [could read].
 - (c) Mister Ed couldn't read, could_i he_i t_i [read]?
 - (d) *Mister Ed couldn't read, (did) he [could read]?

(Sailor 2009: 28)

In addition, if negation is present, as in (29), it has the same distribution in clauses with VPE, (29a), and in tag questions, (29b).

- (29) (a) Most dogs can smell fear, but Sparky could not [smell fear].
 - (b) Most dogs can smell fear, can_i they t_i not [smell fear]?

(Sailor 2009: 28)

With respect to perfective *have*, it is shown in (30) that, again, the conditions for stranding are the same in VPE and tag questions.¹⁵

- (30) (a) The pizza guy should have called, and the governor should have [ealled] too.
 - (b) #The pizza guy should have called, and the governor should [have called] too. 16
 - (c) The pizza guy should have called by now, shouldn't he have [called]?
 - (d) *The pizza guy should have called by now, shouldn't he [have called]?

 (Sailor 2009: 29)

Non-finite progressive *be*, which, according to Sailor (2009: 30), is known to optionally elide in VPE clauses, (31a), displays the same behavior in tag questions, (31b). This also extends to VPE clauses and tag questions with multiple stranded auxiliaries, as shown in (32).

- (31) (a) Dr. McCracken should be drinking, but I shouldn't (be) [drinking].
 - (b) Dr. McCracken should be drinking by now, shouldn't he (be) [drinking]?

 (Sailor 2009: 29)
- (32) (a) Phil should have been fired, but I shouldn't have (been) [fired].
 - (b) Phil should have been fired, shouldn't he have (been) [fired]?

Conversely, progressive *be* must be elided both in VPE clauses, (33a, b), and in tag questions, as illustrated in (33c, d).

- (33) (a) Our hot dog vendor is being arrested, but our gyro isn't [being arrested].
 - (b) *Our hot dog vendor is being arrested, but our gyro isn't being [arrested].
 - (c) Our hot dog vendor is being arrested, isn't he [being arrested]?
 - (d) *Our hot dog vendor is being arrested, isn't he being [arrested]?

 (Sailor 2009: 30)

In short, it can be concluded that there is evidence in support of the claim that tag questions are full CPs that are subject to VPE. In this paper, however, I depart from Sailor (2012), as well as from McCawley (1988), in that I do not assume tag questions to be adjoined to the antecedent clause (also a CP). Rather, inspired by Krifka (2016), I propose, that the TP of the question tag and the TP of the antecedent clause are coordinated by means of a (silent) disjunctive conjunction *or*. I expand on this issue and give the assumed clause structure in Section 2.4.

As discussed in Sailor (2009), it seems that the derivation of tag questions is not a process of literally copying material from the antecedent clause. As shown by the examples in (34), from McCawley (1988: 482, quoted in Sailor 2009: 18–22), tag questions might not be identical to their antecedent. In particular, (i) tag questions can take coordinated clauses as their antecedent, (34a); (ii) host clauses with modal verbs may occur with tag questions that do not contain the same modal as their antecedent, (34b); (iii) the subject in a tag question with a host clause containing a collective noun triggering singular verb agreement might be plural, (34c); (iv) *there* can be the subject

of a tag question, while it is not the subject of the host clause, (34d); (v) it can be the subject of a tag question, while it is not the (focused) subject of the host clause, (34e).

- (34) (a) John is drinking scotch and Mary is drinking vodka, aren't they?
 - (b) We may have to work late, {*mayn't / won't} we?
 - (c) IBM_i doesn't make that model anymore, {do / *does} they_i?
 - (d) Six books_i are on the shelf, aren't {%they_i / there}?
 - (e) NICK drove us home that night, wasn't it?

The data in (34) are taken to indicate that tag questions might be 'sensitive to other levels of representation beyond the surface antecedent they are construed with'. (Sailor 2009: 35). However, as far as polarity is concerned, I claim that reverse polarity tag questions (i.e. those that reverse the polarity of the antecedent clause) are positive if a negative feature is merged inside TP, and negative if it is not. In the next section, I provide some evidence to support the claim that only material in TP (and not outside it) is relevant for the derivation of tag questions.

2.4 *Tag questions and sentence adverbs*

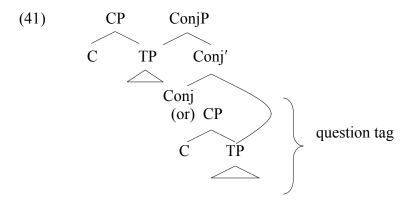
To support the (otherwise stipulated) claim that reverse polarity tag questions only take into account material that is inside TP, in this section I explore the compatibility of sentence adverbs such as *certainly* and *probably* with tag questions. Shu (2011) has recently analyzed sentence adverbs as C elements in spite of the fact that they can take several positions in the clause (Jackendoff 1972), hence giving the false impression that they are genuine TP-elements. Hence, if it is true that tag questions are blind to material outside TP, tag questions should be blind to sentence adverbs.

As shown in (35) and (36) (which are Sailor's (2009) examples in (29) and (33) above to which the sentential adverbs *certainly* and *probably* have been added, respectively) sentential adverbs are compatible with VPE clauses. However, as shown in (37)–(40), sentence adverbs are irrelevant for tag questions.

- (35) (a) Certainly most dogs can smell fear, but certainly Sparky could not.
 - (b) Most dogs certainly can smell fear, but Sparky certainly could not.
 - (c) Most dogs can certainly smell fear, but Sparky could certainly not.
- (36) (a) Probably our hot dog vendor is being arrested, but probably our gyro isn't.
 - (b) Our hot dog vendor probably is being arrested, but our gyro probably isn't.
 - (c) Our hot dog vendor is probably being arrested, but our gyro isn't probably.
- (37) (a) Certainly most dogs can smell fear, can't they?
 - (b) Most dogs certainly can smell fear, can't they?
 - (c) Most dogs can certainly smell fear, can't they?
- (38) (a) Certainly most dogs can smell fear, *certainly can't they?¹⁷
 - (b) Most dogs certainly can smell fear, *can't they certainly?
 - (c) Most dogs can certainly smell fear, *can't certainly they?
- (39) (a) Probably our hot dog vendor is being arrested, isn't he?
 - (b) Our hot dog vendor probably is being arrested, isn't he?
 - (c) Our hot dog vendor is probably being arrested, isn't he?
- (40) (a) Probably our hot dog vendor is being arrested, *probably isn't he?
 - (b) Our hot dog vendor probably is being arrested,*isn't he probably?
 - (c) Our hot dog vendor is probably being arrested,*isn't probably he?

2.5 Clauses with question tags as multidominant disjunction structures

In Krifka (2016), reverse polarity question tags are analyzed as the disjunction of two speech acts: an assertion expressed by the antecedent clause, and a yes/no-question. Building on this idea, I propose that the syntax of question tags is the one in (41).



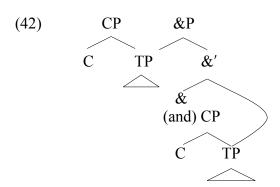
In (41), multidominance allows the TP in the antecedent clause and the TP in the tag question to be selected by C, as is expected if the antecedent clause and the tag question are two full CPs. Notice, as well, that multidominance explains why two phrase markers with different semantics (an assertion in the case of the antecedent clause, and a yes/no-question in the case of the tag question) can be coordinated: if the coordinates are the TPs of the antecedent clause and the tag question rather than full CPs, identity is maintained. In short, the structure in (41) is compatible with Sailor's (2009, 2011) claim that question tags are full CPs, and also with the observation made in Section 2.4 that only material in the TP of the antecedent clause is relevant for the tag question.

I attribute the mechanism of polarity reversal to the effect of the disjunctive conjunction or, which is not phonologically realized in question tags. While it was assumed in Section 2.2 that clause-typing obtains with the valuation of a polarity feature either in Pol₂ (above vP) or in Pol₁ (above TP), I further assume that valuation of the uniterpretable feature [upol:] takes place when the tag question has already been

coordinated with the TP of the antecedent clause. Hence, the disjunctive conjunction *or* causes the question tag to differ in polarity from the antecedent clause, but it does so by examining the features that are part of the TP of the antecedent clause. If a negative feature is part of the TP, then the tag question is positive. If a negative feature is not part of the TP, then the tag question is negative. In Section 3, I suggest that it is possible for object negative quantifiers to type the antecedent clause as negative but with a negative feature not being part of the antecedent clause TP. This results in a negative sentence being tagged with a negative tag question, i.e. the puzzling example in (1). Likewise, I also explain why this is not a possibility for subject and adjunct negative quantifiers, which always occur with positive tag questions.

2.6 On coordination

Following Munn (1993) and Progovac (1998a, b), the coordinator *and* is assumed to be a head (henceforth &) that takes the first conjunct as a Specifier and the second as its complement. Symmetric coordination with & involves conjunction of CPs according to Bjorkman (2010), but this claim is to accommodate the fact that the complementizer *that* can be overt before each of the conjuncts. However, notice that in a multidominant approach to coordination, this is possible even if the conjuncts are TPs rather than CPs. It is plausible, therefore, to assume the structure in (42) for coordinated clauses. The structure is consistent with what has been assumed for tag questions in (41).



- 3. MISBEHAVING OBJECT NEGATIVE QUANTIFIERS: TOWARDS SOLVING THE PUZZLE
- 3.1 *Object negative quantifiers and tag questions*

As discussed in Section 1, it has been reported in the literature that, at least for some speakers, a clause containing an object negative quantifier can take a negative reverse polarity tag question. This is unexpected, as reverse polarity tag questions precisely contrast in polarity with the antecedent clause. That is, if the clause is positive, the question tag is negative, whereas if the antecedent clause is negative, the question tag is positive.

In this section I try to provide an answer to the two main questions raised by the data in (1), (4), and (5): namely (i) how it is possible that a negative tag question can occur with an antecedent clause that is negative by virtue of containing an object negative quantifier; and (ii) why this is uniformly not possible with subject or adjunct negative quantifiers. In order to devise the present analysis, a number of assumptions have been made. First, negative quantifiers have been taken to be complex syntactic objects, where the negative part is independent from the existential part in spite of the fact that they can end up forming a single lexical unit (i.e. a negative quantifier of the *no*-series).

Second, object negative quantifiers are multidominant phrase markers where only the existential DP (but crucially not Neg) is c-selected by the verb. This results in VP only dominating the existential DP but not Neg. Thus, when VP, which is the complement of the phase head v, is sent to the interfaces once the vP phase is completed, only the existential DP, but not Neg, is Transferred. The Transfer domain is indicated in the trees in (43) and (44) below with a thick black line. Multidominance,

hence, grants Neg the possibility to participate in a higher phase after VP has been Transferred.

Third, I have identified two positions that are available to negation in English. PolP₂, which is above *v*P, is TP-internal, and PolP₁, which is above TP, is TP-external.

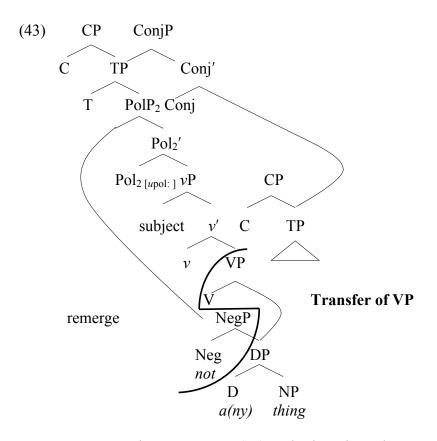
Finally, tag questions have been assumed to be full CPs with VPE, and I have claimed that only material inside TP is visible to tag questions. This observation is compatible with the proposal that antecedent clauses and tag questions are syntactically linked by means of a silent disjunctive conjunction that coordinates TPs.

Multidominance allows both the antecedent clause and the question tag to be full CPs whose TP complements are coordinated. With such a structural relation between the antecedent clause and the tag question, polarity reversal crucially depends on whether a negative feature is found inside the TP or not. With all this in mind, the derivation of sentences with negative quantifiers is discussed. Section 3.1.1 is devoted to object negative quantifiers, and Section 3.1.2 to subject and adjunct negative quantifiers.

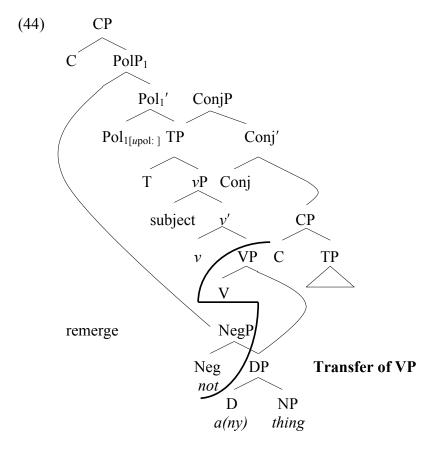
3.1.1 Tag questions with negative quantifiers in object position

In this section I attribute the fact that some speakers can use a negative reverse polarity tag question with a negative antecedent clause to the existence of two different grammars that can be used to derive negative sentences with an object negative quantifier. Both grammars share the clausal structure given in (41), and involve Parallel Merge and multidominance for the derivation of object negative quantifiers, along the lines of what was shown in (24). Conversely, the two grammars differ in which polarity head (Pol₁ or Pol₂) is used to reverse the truth-conditions of the proposition. In one of the grammars (let us call it Grammar A), it is the TP-internal PolP₂; in the other one

(Grammar B), it is the TP-external PolP₁. As shown in (43), negation remerges in Spec, PolP₂ in Grammar A (i.e. negation remerges in a TP-internal position) and values the [upol:] feature of Pol₂ as [upol:neg]. Notice that when PolP₂ is active, PolP₁ is not and viceversa.



By contrast, in Grammar B, (44), PolP₁ is active. Thus, negation remerges in Spec, PolP₁ and values the [*u*pol:] feature of Pol₁ as [*u*pol:neg]. The result is that the main clause is typed as negative but, crucially, there is no negative feature in any position inside the TP (as PolP₁ is in a TP-external domain), which results in the (silent) *or* conjunction reversing positive polarity rather than negative. The question tag is, hence, negative. In both grammars, the Goal, negation, remerges in a position that allows the Probe (either Pol₂ or Pol₁) to have its [*u*pol:] feature checked.¹⁸



Given that negative quantifiers are decompositional, there is also the possibility that the negative part and the existential part of a negative quantifier merge in the structure independently from one another and surface discontinuously. That is, the host clause of the example in (1), repeated here as (45a) for convenience, could have also been Spelled-Out as in (45b).

- (45) (a) John read nothing.
 - (b) John didn't read anything.

In (45b), negation would be first-merged in the ν P-edge (i.e. inside the TP), thus being in the c-command domain of either PolP₁ or PolP₂, and making it possible for negation to remerge in a higher position than the one it has been first-merged (either Spec, PolP₂ or Spec, PolP₁ whenever the choice is free). The consequence of having negation first-merged in the ν P-edge (i.e. TP-internally), however, is that a sentence such as (45b) can

only take a positive reverse polarity question tag, as shown in (46). This is indeed the case for all speakers of English independently of whether they use Grammar A or Grammar B for the syntax of object negative quantifiers.

(46) John didn't read anything, did he?

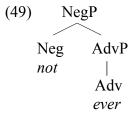
3.1.2 Tag questions with negative quantifiers in subject and adjunct position

In this section I address why, unlike object negative quantifiers, subject and adjunct negative quantifiers only take a positive tag question in English. I argue that this is due to the fact that a restriction applies to negative quantifiers in the two syntactic positions under consideration that makes them essentially different from object negative quantifiers.

Following Temmerman (2012), who in turn follows Uriagereka (1999), I assume that complex left-branching phrase markers have to be Transferred before merging into the derivation. ¹⁹ Therefore, if a structure such as (23b), repeated here as (47) for convenience, is to be merged in Spec, vP, or adjoined to vP, it first needs to be Transferred and an interpretable negative feature is necessarily part of the TP. ²⁰

Something similar happens with adjunct negative quantifiers.²¹ Let us assume that the adjunct negative quantifier in (2a), repeated here as (48), can be analyzed as in (49).

(48) She never lied to you, did she?



Given that (49) is, like (47), a complex syntactic object and, as such, it is Transferred before being merged as a vP-adjunct, an interpretable negative feature is found in the TP-domain, and so, the tag question has to be positive. Therefore, the two grammars postulated in Section 3.1.1, which may result in the opposite selection of reverse polarity tag questions for object negative quantifiers, converge into just one grammar in the case of subject and adjunct negative quantifiers. In both grammars, [upol:] in Pol₁ and Pol₂ is valued by Agree with Neg in the vP.

Notice that, as has been shown to be the case for object negative quantifiers, it is also possible for negation not to merge with an existential at all. Rather, negation can first-merge in the edge of the vP, while the existential first-merges as the complement of V, thus resulting in the two parts of a potential negative quantifier being Spelled-Out independently from one another. This is shown in (50) for adjuncts. As was also the case for (47), the tag question is necessarily positive, (51).

- (50) She didn't ever lie to you.
- (51) She didn't ever lie to you, did she?

In short, in this section I have assumed that the fact that negation and the existential quantifier are independent lexical items allows them to surface discontinuously, or as a single lexical item (i.e. as a negative quantifier). If negation is first-merged in the ν P-edge and not with the existential, the antecedent clause takes a positive reverse polarity tag question, as there is a negative feature inside the TP.

Conversely, if negation is first-merged with the existential quantifier, the resulting syntactic object will be Spelled-Out as a negative quantifier. Being complex syntactic objects, subject and adjunct negative quantifiers will have to be Transferred before they merge in the ν P. Hence, the presence of a negative feature inside the TP is guaranteed, imposing a positive question tag for all speakers.

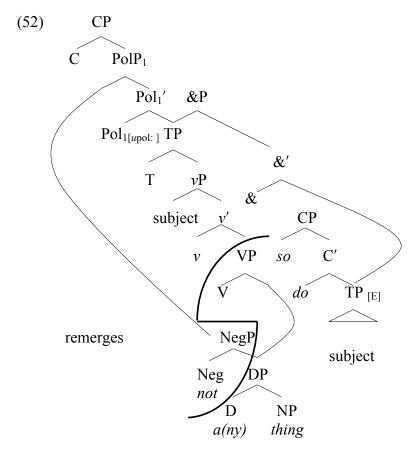
The multidominant nature of negative quantifiers, however, interacts with the properties of the relevant polarity head when the quantifiers occur in object position. I have assumed that two different grammars are possible for English speakers. In one of the grammars (Grammar A), polarity is encoded in Pol₂. This deactivates Pol₁ as a Probe and forces the negative component in the negative quantifier to remerge in Spec, PolP₂, in the TP-domain. As there is a negative feature inside the TP, the question tag has to be positive for speakers with this grammar. In the other grammar (Grammar B), by contrast, polarity is encoded in Pol₁, which forces negation to remerge in Spec, PolP₁, outside the TP-domain. The antecedent clause, then, is typed as negative, but the question tag is going to be negative, too, as there is no negative feature inside the TP, which is the part of structure that the question tag is sensitive to.

3.2 Neither-/so-coordination and either/too licensing

In this section, the analysis put forward in Section 3.1 is extended to account for the *neither-/so*-coordination facts described in (7), according to which an object negative quantifier can coordinate with a *neither-* or *so*-clause, whereas subject and adjunct negative quantifiers are only fine with a coordinated *neither-*clause. In a similar vein, I also try to account for the facts related to *either/too* licensing, (6), according to which a

clause with an object negative quantifier can license both *either* and *too*, but this is not the case with subject and adjunct negative quantifiers.

Let us address *neither-/so-*coordination first. Continuing to assume the existence of two different grammars, Grammar A and Grammar B, which diverge with respect to which Pol head is active (either Pol₂, in the TP-domain, or Pol₁, outside the TP-domain), *so-*coordination should be possible in Grammar B, as negation remerges in a position outside the TP. That is, if the negation in the object negative quantifier remerges in Spec, PolP₁, the TP that sits in the Specifier of &P contains no negation and, hence, coordination must be with *so.* The structure is given in (52), where all the TP – except for the subject – in the coordinated *so-*clause is elided.



If, by contrast, negation remerges in Spec, PolP₂ of the first conjunct (Grammar A), then there is a negative feature in the TP-domain and *neither* is required in the

second conjunct CP for coordination. This is also what happens with subject and adjunct negative quantifiers. As discussed in the previous sections, these involve complex Specifiers that are Transferred prior to Merge, thus imposing an interpretable negative feature inside the TP that then values the [upol:] feature of either Pol₂ or Pol₁ via Agree. Thus, *neither*-coordination is required in both grammars when the negative quantifier is in subject or in adjunct position.

With respect to *either/too* licensing, both polarity items are possible in clauses containing an object negative quantifier, (6a, a'). Again, this is predicted if negation can be inner (i.e. TP-internal, as in Grammar A), which licenses the negative polarity item *either*, or outer (TP-external, as in Grammar B), which makes it possible for the positive polarity item *too* to be licensed.

3.3 'Expression of agreement' clauses

In this section, I briefly discuss the data involving 'expression of agreement' clauses, (12)–(14). As was shown in (12a, b), clauses with object negative quantifiers agree both with *Yes, I guess so* and with *No, I guess not* 'expression of agreement' clauses.

Like for the other three sets of unexpected facts (namely (i) the occurrence of negative tag questions with object negative quantifiers, (ii) the possibility for a sentence containing an object negative quantifier to be coordinated with a *so*-clause, and (iii) the possibility for *too* to be licensed in a sentence containing an object negative quantifier), it is possible to accommodate the data in (12) within the two grammars account.

Assuming that 'expression of agreement' clauses constitute a CONFIRM speech act (cf. Krifka 2013), and that this involves expressing the same commitment expressed by the ASSERT speech act in the antecedent clause (cf. Farkas and Bruce 2010), CONFIRM

can apply to an ASSERT speech act that takes the TP as the propositional discourse referent (cf. González-Fuente et al. 2015). In our analysis, this means that the propositional discourse referent on which ASSERT applies can be either $\neg p$ (if negation is TP-internal) or p (if negation is TP-external).

In other words, given Speaker A's utterance in (12), which contains an object negative quantifier, if Speaker B interprets the utterance as having been generated with Grammar A, where Pol_2 is active and, hence, negation is TP-internal, the CONFIRM operator applies to ASSERT $\neg p$, thus requiring the 'expression of agreement' clause *No, I guess not*, (53) (the strikethrough indicating ellipsis).

- (53) No, I guess [ForceP CONFIRM [ForceP ASSERT [TP \neg John read- \exists -thing]]] By contrast, if Speaker B interprets the utterance as having been derived by means of Grammar B, where Pol₁ is active, CONFIRM applies on ASSERT p (since TP, the propositional discourse referent, contains no negation). This means that the 'expression of agreement' clause *Yes*, *I guess so* will be required, (54).
- (54) Yes, I guess [ForceP CONFIRM [ForceP ASSERT [TP John read 3 thing]]]

4. CONCLUSION

In this paper, I have provided an explanation as to why for some speakers of English negative sentences containing an object negative quantifier (but not a subject negative quantifier, or an adjunct negative quantifier) can (i) co-occur with a negative reverse polarity question tag, (ii) be coordinated with a *neither*-clause, (iii) license the polarity item *too*, and (iv) occur with a *Yes, I guess so* 'expression of agreement' clause. I have claimed that these facts can be accommodated within a decompositional and multidominant approach to negative quantifiers in English on the assumption that two

distinct positions for the expression of negation (one below TP and one above) exist, which results in two grammars available to English speakers.

The analysis of negative quantifiers as decomposable into a negative and an existential part allows negation to enjoy (re)merging flexibility, while the existence of two possible grammars explains that for some speakers an asymmetry exists between object negative quantifiers, on the one hand, and subject and adjunct negative quantifiers on the other. While sentences with subject and adjunct negative quantifiers uniformly (i) select a positive reverse polarity question tag, (ii) occur with a *neither*-coordinated clause, (iii) license *either*, and (iv) are followed by a *No, I guess not* 'expression of agreement' clause, sentences with object negative quantifiers may (i) occur with negative question tags, (ii) occur with a *so*-coordinated clause, (iii) license *too*, and (iv) be followed by a *Yes, I guess so* 'expression of agreement' clause for some speakers.

The existence of Grammar A and B has been claimed to follow from the availability of two different positions for negation in English (one below TP, and one above TP). As discussed in this paper, such difference has consequences not only for the choice of the polarity of question tags when associated to antecedent clauses that contain object negative quantifiers, but also for *neither-/so-coordination*, *either/too* licensing, and the choice of 'expression of agreement' clauses. If it is the case that Pol₁ is the active polarity head, a negation that is ultimately part of a negative quantifier values the feature [*u*pol:] in Pol₁ by remerging TP-externally (i.e. by remerging in Spec, PolP₁), which results in object negative quantifiers typing the clause as negative without their negative feature being part of the TP. Furthermore, in both grammars, subject and adjunct negative quantifiers have to be Transferred before merging in Spec,

vP (subjects) or at the edge of the vP (adjuncts) by virtue of being complex syntactic objects. This results in a negative feature always being part of the antecedent clause TP in both grammars and, hence, a completely uniform and expected behavior of subject and adjunct negative quantifiers with respect to polarity.

As it has been assumed that the antecedent clause and the question tag, on the one hand, and the two conjunct clauses in *neither-/so*-coordination, on the other, relate by means of coordination of their TPs, only material that sits inside the antecedent/first conjunct clause TP can be relevant for the second conjunct (i.e. the question tag, and the neither/so coordinated clause). In particular, I have assumed that question tags are full CPs with VPE, and that the TP of the antecedent clause and the TP of the question tag are coordinated by means of a silent disjunctive conjunction or that is responsible for the two coordinates having opposite polarities. For neither/so-clauses I have assumed and to be the head of the &P projection, thus resulting in a structure that is comparable to the one assumed for clauses with tag questions. This is the reason why only a grammar that allows the negative component of a (decompositional and multidominant) object negative quantifier to remerge directly outside the TP (i.e. in Spec, PolP₁) can derive a negative antecedent clause containing an object negative quantifier with a negative reverse polarity question tag, or with a so-coordinated clause. In a similar vein, I have also discussed the asymmetry of either/too licensing for object negative quantifiers on the one hand, and for subject and adjunct negative quantifiers on the other as resulting from the possibility of having inner vs. outer negation (understood as TPinternal vs. TP-external negation).

Finally, I have also briefly shown that it is possible to make this analysis compatible with the facts observed with 'expression of agreement' clauses, which

involve the CONFIRM and ASSERT speech acts. Given that TP is the propositional discourse referent onto which the ASSERT operator applies, whether negation is TP-internal or TP-external when object negative quantifiers are involved becomes relevant. Again, subject and adjunct negative quantifiers expectedly do not show the asymmetry that is observed with object negative quantifiers, as they always involve an interpretable negative feature inside the TP.

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FOOTNOTES

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The following abbreviations have been used throughout the paper: v and vP (little v and little v Phrase), V and VP (Verb and Verb Phrase), T and TP (Tense and Tense Phrase), C and CP (Complementizer and Complementizer Phrase), Pol and PolP (Polarity and Polarity Phrase), D and DP (Determiner and Determiner Phrase), N (Noun), Neg and NegP (Negation and Negation Phrase), PF (Phonetic Form), and Spec (Specifier of).

- ² The examples in Tottie & Hoffmann (2006: 290) are the following:
- (i) I bet you didn't buy a paper today either, did you not? (BNC-SDEM)
- (ii) Yes, they don't come cheap, don't they? (BNC-SCG)
- ³ Moscati (2006: 90) gives the examples in (i) (from Svenonius 2002: 135) to exemplify that negative tag questions are allowed when the negative quantifier occurs in postverbal position. In particular, in (ia, b) the negative quantifier is inside a PP-adjunct.
- (i) (a) Kim looks good in no clothes, doesn't he?
 - (b) Kim looks good in no clothes, does he?

However, (ia) is different from (1) above in one crucial respect. While (ia) is interpreted as expressing constituent negation (i.e. the sentence does not mean that Kim doesn't look good in any clothes, but rather that he looks good without clothes), negation is sentential in (iib). As shown in (ii) and (iii) (also from Svenonius 2002: 135–136), (ia)

and (ib) are consistently diagnosed as expressing constituent negation and sentential negation respectively with Klima's (1964) *so/neither* test, (ii), and the triggering of negative inversion, (iii). Hence, (ia) is not puzzling as (1) is.

- (ii) (a) Kim looks good in no clothes, and so does Robin.
 - (b) Kim looks good in no clothes, and neither does Robin.
- (iii) (a) In no clothes, Kim looks good.
 - (b) In no clothes does Kim look good.

(i)
$$\left[_{CP} C \right]_{TP} T \left[_{vP} v \left[_{VP} V \dots \right] \right] \right]$$

The CP-layer can, following Rizzi's (1997, 2001, 2004) and Cinque's (1999, 2002, 2006) cartographic approach, be split into a number of dedicated functional projections. Force is one of them.

⁶ Temmerman (2012: 79, fn. 59) takes PolP₁ to be inside the TP-domain, but admits that the choice of positioning PolP₁ in the TP- or the CP-domain is not crucial, as these two positions would play no different role in the formation of negative indefinites in the framework proposed here.

I align with Lasnik (1972), Rizzi (1997), and Haegeman (2000), among others, in taking PolP₁ to belong to the CP-domain.

⁷ As pointed out by an anonymous reviewer, multidominant phrase structures are incompatible with higher-order logic and Montagovian lambda-calculus. However, multidominance is compatible with other theories of the syntax-semantics interface such as Glue semantics (Dalrymple 1999 and ff., and especially Gotham 2015, who

⁴ See Penka (2007, 2011) for some criticism on Klima's (1964) tests as diagnostics for sentential negation.

⁵ Throughout Moscati (2006) the assumed basic clause-structure is the following:

provides an implementation of Glue for Minimalist Syntax with explicit reference to multidominant structures). Glue semantics, which involves linear logic deduction, is conceived as an alternative to lambda-calculus.

⁸ For a different view of the morphosyntactic complexity of negative quantifiers, see Watanabe (2004), who claims that negative quantifiers are inherently negative but lack an uninterpretable focus feature, which results in the impossibility of having the [neg] feature checked and, thus, in the emergence of double negation when two negative quantifiers co-occur.

⁹ As discussed in Penka (2007), Split Scope readings are also observed in *there*-sentences with postcopular subject negative quantifiers and an epistemic modal, as in (i). Given that postcopular subjects in *there*-sentences containing a modal usually take narrow scope with respect to the modal, the behaviour of negative quantifiers is, again, different from the behaviour of other kinds of quantifiers.

(i) (a) There can be no doubt.

'It is not possible that there is a doubt'

 $\neg > \operatorname{can} > \exists$

(b) Yet here it was, a letter, addressed so plainly there could be no mistake.

'It was not possible that there was a mistake'

 $\neg > can > \exists$

(From Rowling, J. K. 1997, Harry Potter and the Philosopher's Stone. Bloomsbury, London: 42)

(Penka 2007: 172)

¹⁰ De Swart (2000) has also criticised the decompositional approach to negative quantifiers by pointing out that Split Scope readings also emerge in intensional contexts

with other Downward Entailing (DE) operators such as *few*, *little*, *at most*, etc., which would call for a proliferation of decomposition rules. Penka (2007, 2011), however, claims that Split Scope readings with DE quantifiers do not follow from lexical decomposition, but rather from their own semantics. Hence, contra Klima (1964), Penka (2007, 2011) assumes lexical decomposition to apply to negative indefinites, but not to other DE operators.

¹¹ The context that Temmerman (2012: 60) provides for this example is the following:

There is a contest to choose which song will represent the UK in the Eurovision Song Contest. There are several qualifying rounds, a semi final, and a final, and several judges choose their favorite song. When there is a tie in the final, the consistency of the votes given to the songs is taken into account. In particular, if a judge has consistently voted for a certain song in every round, this is considered a bonus. Now, we are in the final and there is a tie. We first want to eliminate the weakest song, i.e. we want to know if there is a song that no one consistently voted for. So we ask...

¹² The PIC (see (11) in Section 1) constrains the accessibility of information that has been sent to the interfaces, imposing a strong cyclic character to syntactic derivation and Spell-Out. In Chomsky (2005: 9) only CP and *v*P are considered phases. TP is not, as its phi-features are inherited from C. In addition, CP and *v*P are claimed to be strong phases in Chomsky (2001: 12), as they have landing sites for moved elements. Spell-Out is assumed to occur at the strong phase level.

¹³ In Uriagereka's (1999) Multiple Spell-Out model, all complex Specifiers and adjuncts (i.e. Specifiers and adjuncts containing left-branching structure) are to be Transferred early for linearization purposes. In more recent proposals (e.g. Narita 2009; Boeckx

2008), it is assumed that only simplex objects can undergo Merge. Thus, for complex Specifiers and adjuncts to be merged, they first have to be reduced to simplex objects, which is achieved by building them in a separate workspace and Transferring them before merging them into the clause.

- ¹⁴ Agree is defined by Chomsky (2000, 2001) as in (i):
- (i) α can agree with β iff:
 - (a) α carries at least one unvalued and uninterpretable feature and β carries a matching interpretable and valued feature.
 - (b) α c-commands β .
 - (c) β is the closest goal to α .
 - (d) β bears an unvalued uninterpretable feature.
- (id), known as the Activation Condition, is dispensed with in valuation-driven approaches to Agree such as Pesetsky & Torrego (2007) and Bošković (2009), where it is argued that only the Probe has to be active by virtue of carrying an uninterpretable unvalued feature.
- ¹⁵ As acknowledged by Sailor (2009: 29), these judgments hold for American English speakers. It seems that (30d) might be accepted by speakers of other varieties, however.

 ¹⁶ The example in (30b) is only possible under a reading where the tense and aspect of the antecedent and the VPE do not match. That is, (30b) is only good if the tag question is actually a VPE elided version of *the governor should call*, not of *the governor should*
- ¹⁷ As observed by one of the reviewers, sentence adverbs are also restricted to just a certain position when occurring in yes/no-questions, as shown in (i) and (ii).
- (i) (a) *Certainly can most dogs smell fear?

have called.

- (b) Can most dogs certainly smell fear?
- (c) *Can certainly most dogs smell fear?
- (i) (a) *Probably is our hot dog vendor being arrested?
 - (b) Is our hot dog vendor probably being arrested?
 - (c) *Is probably our hot dog vendor being arrested?

Given that sentence adverbs are C-elements, they are predicted to be incompatible with an auxiliary in C (as is the result of T-to-C movement in yes/no-questions), (ia, c) and (iia, c), but they should be fine if they surface lower than C, (ib) and (iib). For tag questions, sentence adverbs are not possible at all, as the entire TP is elided, thus not allowing them to surface in any position.

¹⁸ Recall that Temmerman (2012: 79–80) follows Iatridou & Sichel (2010) in assuming that the scopal relations of negation and other scope-bearing elements involve (de)activation of one of the two relevant polarity heads. In the absence of scope-taking operators, the choice of PolP₁ or PolP₂ for the expression of negation is assumed to be essentially free (the ultimate choice defining the two different grammars in my proposal). Notice that, as pointed out by an anonymous reviewer, negation cannot outscope a universal quantifier in a sentence such as (i), and that a low-scope reading for negation is degraded.

(i) Everybody read no books. $(*\neg > \forall; ??\forall > \neg)$

If PolP₁ is always inactive when a universal quantifier is present (i.e. if PolP₂ is the only choice for every speaker), the ungrammaticality of the high-scope negation is accounted for. The existence of more optimal syntactic structures (i.e. either merging a subject negative quantifier, (ii), or merging negation with the universal quantifier, (iii)) marginalizes the low-scope reading of negation obtained with PolP₂ being the relevant

polarity head, very much in the same way it marginalizes (iv).

- (ii) Nobody read (any) books.
- (iii) Not everybody read (any) books.
- (iv) ??Everybody didn't read (any) books.
- ¹⁹ See footnote 13.
- Whether the structure in (47) is merged in Spec, vP by means of External Merge or by means of Parallel Merge (with only the existential DP being c-selected as the Specifier of vP) is an issue that I leave for further research.
- ²¹ Negative quantifiers can also occur as part of negated PP-adjuncts, as in (ia). As shown in (ib), these take a positive tag question.
- (i) (a) We were friends at no time.(De Clercq et al. 2012: 16, after an example from Pullum & Huddlestone
 - 2002: 814, [24i])
 - (b) We were friends at no time, were we?

As in this paper the focus is on the puzzling behavior of object negative quantifiers, I leave for further research a detailed analysis of negated PP-adjuncts within a decompositional and multidominant approach to negative quantifiers. I will advance, though, that if it is assumed that the P-head c-selects a quantifier DP rather than NegP (i.e. if Neg is merged with DP by means of Parallel Merge), the key issue is to explain what the remerge possibilities of NegP are. Bearing in mind that extraction from adjuncts is impossible (Ross 1967), negation is not predicted to be able to remerge outside the adjunct. Hence, the first-merge position of the negated adjunct should ensure sentential scope of negation and, at the same time result in the impossibility of the clause to co-occur with a negative tag question.