

Disjunction, Focus, and Scope

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This article presents the observation that disjunction cannot take wide scope in negative non-*wh*-questions and declaratives with a preposed negative element. This rules out the alternative question reading for non-*wh*-questions with preposed negation and the wide scope *or* reading for neg-inverted declaratives. We show that effects parallel to the ones associated with preposed negation can be reproduced in affirmative non-*wh*-questions and declaratives when focus is involved. We propose that preposed negation in non-*wh*-questions and preposed negative adverbials in declaratives necessarily contribute focus marking (in particular, *verum focus*) and argue that the lack of wide scope disjunction reading in both declaratives and non-*wh*-questions results as a by-product of the interaction between focus and the LF syntax of disjunctive structures, which we argue involves ellipsis.

Keywords: negation, focus, *verum*, alternative questions, yes-no questions, ellipsis, disjunction, neg(ative) preposing

1 Introduction

This article presents the observation that negative non-*wh*-questions and declaratives with preposed negation do not have a wide scope disjunction reading.

In English, a simple written question like (1) has two possible readings: a yes-no (yn-)question reading, paraphrased in (1a), and an alternative (alt-)question reading, paraphrased in (1b). Under the yn-question reading, the question can be answered as in (2); under the alt-question reading, it can be answered as in (3).

- (1) Did John drink coffee or tea?
a. 'Is it the case that John drank either of these two things, coffee or tea?'
b. 'Which of these two things did John drink: coffee or tea?'
- (2) a. Yes, John drank coffee or tea.
b. No, John didn't drink coffee or tea (i.e., he didn't drink either).

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- (3) a. John drank coffee.
b. John drank tea.

The two readings are disambiguated by focus intonation (Bartels 1997, Romero 1998): the yn-reading presents neutral intonation on the disjunctive phrase, as in (4a), whereas the alt-reading is in general achieved by placing focus stress on each disjunct, as in (4b).

- (4) a. Did John drink coffee or tea? (neutral intonation, yn-reading only)
b. Did John drink COFfee or TEA? (focus in capitals, alt-reading only)

When we turn to negative questions, both readings are available for (written) examples with nonpreposed negation, as in (5): the version with neutral intonation on the disjunct has the yn-reading, and the version with double focus on the disjunct has the alt-reading. But preposed negation examples like the one in (6) (Han 1999) are not ambiguous: (6) has a yn-question reading, but it lacks the alt-reading and the corresponding double focus intonation.

- (5) Did John not drink coffee or tea?
a. Did John not drink coffee or tea? (yn-reading)
Yes, John did not drink coffee or tea (i.e., he didn't drink either).
No, he did drink coffee or tea.
b. Did John not drink COFfee or TEA? (alt-reading)
John did not drink coffee.
John did not drink tea.
- (6) Didn't John drink coffee or tea?
a. Didn't John drink coffee or tea? (yn-reading)
No, John did not drink coffee or tea (i.e., he didn't drink either).
Right, he did drink coffee or tea.
b. *Didn't John drink COFfee or TEA? (alt-reading)
John did not drink coffee.
John did not drink tea.

It is important to note that what is responsible for this interpretive asymmetry is not the type of negation (constituent vs. sentential, or *n't* vs. *not*), but the preposing and nonpreposing of negation. It could be argued that negation can be divided into sentential negation over the entire IP and constituent negation over the VP, and that for some reason, only constituent negation allows disjunction to take scope over it. However, alt-readings are available even when negation attaches not to VP but to a higher IP node, as in (7), where *not* negates not the VP but an entire modal proposition. One could say that negation in (7) is still constituent negation—it just negates a constituent bigger than VP. But if we allow negation in (7) to qualify as constituent negation, it is not clear how to define—syntactically or semantically—the distinction between constituent and sentential negation.

- (7) Does John not have to eat CHICKen or BEEF? ($\neg > \square$)

Alternatively, one could adopt the position that there are two different hierarchical positions for negation in English, *n't* being the spell-out of high negation and *not* being the spell-out of low negation, as in Zanuttini 1991, Baltin 1993, and Han 2000. With this assumption, one could argue that, for some reason, disjunction cannot take scope over high negation *n't* and that sentences with high negation are thus incompatible with the alt-reading. However, disjunctive declaratives with *n't* indeed allow a wide scope disjunction reading, as shown in (8), where the continuation *But now I can't remember which* forces the wide scope reading of the disjunctive phrase.

- (8) Context: The speaker knows that Iqbal subscribes to one of two food taboos.
S: Iqbal doesn't eat BEEF or PORK. But now I can't remember which.

The interpretive asymmetry attested in questions is replicated in declaratives with negative adverbials in preposed position and in nonpreposed position; witness the pattern (9)–(10). The sentences in (10) are examples of what is known in the literature as “neg(ative) inversion,” which involves movement of a negative constituent to Spec,CP along with movement of an auxiliary verb to C⁰ (Klima 1964, Liberman 1974, Radford 1988, Vikner 1995, Haegeman 1995). In a (written) sentence like (9) where the adverb *never* is not preposed, the neutral intonation in (9a) produces the scope reading *never* > \vee , compatible with the continuation *He always drinks juice*. The pronunciation with double stress on the disjuncts in (9b) yields the opposite scope reading \vee > *never*, as the availability of the continuation *But now I can't remember which* shows. However, when the negative adverb is preposed, as in (10), the only available reading involves narrow scope disjunction, and the double focus pronunciation leading to wide scope disjunction is unacceptable.

- (9) John has never drunk coffee or tea.
a. John has never drunk coffee or tea. He always drinks juice. (*never* > \vee)
b. John has never drunk COFFee or TEA. But now I can't remember which. (\vee > *never*)
- (10) Never has John drunk coffee or tea.
a. Never has John drunk coffee or tea. He always drinks juice. (*never* > \vee)
b. *Never has John drunk COFFee or TEA. But now I can't remember which. (\vee > *never*)

The aim of this article is twofold. First, we establish that the lack of a wide scope disjunction reading in neg-preposing sentences—including non-*wh*-questions with preposed negation and declaratives with preposed negative adverbials—is part of a larger pattern having to do with an extra focus on polarity-related items such as auxiliary verbs or negation, namely, verum focus. We will show that effects parallel to the ones associated with neg preposing can be reproduced in sentences without neg preposing and with verum focus. Second, we propose a unified account of all the cases involving loss of wide scope disjunction, capitalizing on the interplay among the

effects of verum focus, the licensing conditions of the double focus on the disjuncts, and the LF syntax of disjunctive constructions.

The article is organized as follows. In section 2, we sketch two possible analyses for the interpretive asymmetry attested in negative non-*wh*-questions and declaratives with negative adverbials, and point out that neither accounts for the full array of data. We then show in section 3 that effects parallel to the ones associated with neg preposing can be reproduced in affirmative non-*wh*-questions and declaratives when verum focus is involved, establishing that the lack of the alt-reading and the lack of wide scope disjunction are related to verum focus. After a brief introduction to some background assumptions on focus in section 4, we present our focus-based analysis in section 5. We will show that the lack of the alt-reading results as a by-product of the interaction between focus and the LF syntax of disjunctive constructions, which involves ellipsis.

2 Two Potential Analyses and Their Problems

In this section, we will consider two possible analyses and point out their problems. These analyses consist of combining Larson's (1985) scopal theory of disjunction with overt extraposition, and assigning "frozen" scope to negation in $C^0/Spec,CP$.

2.1 Combining Larson's (1985) Scopal Theory of Disjunction with Overt Extraposition

Larson (1985) argues that disjunction cannot take scope over an overtly c-commanding negative element. Thus, in his proposal, examples like (11a) and (11b) cannot have the reading in which the disjunctive phrase takes scope over negation.

- (11) a. John did not [_{VP} drink coffee or tea].
 b. John never [_{VP} drank coffee or tea].

This is contrary to what we showed in section 1: sentences with nonpreposed negative elements can have the wide scope reading of disjunction. But a way to reconcile the data introduced in section 1 with Larson's (1985) idea that *or* cannot have inverse scope over negation is to attribute the interpretive contrast between neg preposing and lack of neg preposing to the (un)availability of overt extraposition of the disjunctive phrase. One could claim that (a) when there is no neg preposing, the wide scope disjunction reading is possible because the disjunctive NP is overtly extraposed higher than a nonpreposed negative element, as in (12) and (13); and (b) with neg preposing, the wide scope disjunction reading is impossible because XPs cannot extrapose to CP and hence the disjunctive NP cannot be overtly higher than the preposed negative element, as illustrated in (14) and (15).

- (12) a. Did John not drink coffee or tea?
 b. *Structure for the alt-question*
 [_{CP} did John [_{NegP} not drink t_j] [_i coffee or tea]_j]
- (13) a. John never drank coffee or tea.
 b. *Structure for wide scope or*
 [_{IP} John [_{VP} never drank t_j] [_i coffee or tea]_j]

- (14) a. Didn't John drink coffee or tea?
 b. *Structure for the alt-question*
 *_[CP] didn't John drink t_j] [coffee or tea]_j
- (15) a. Never has John drunk coffee or tea.
 b. *Structure for wide scope or*
 *_[CP] never has John drunk t_j] [coffee or tea]_j

This analysis, however, cannot be correct because we can easily construct examples that clearly do not involve extraposition of the disjunctive phrase, such as those with a verb disjunction, a negative polarity item, or a verb particle, but that nevertheless have a wide scope *or* reading. For example, assume that Bill had to take the car out of the tire shop before the mechanics were done with it. In this context, Bill can utter the sentence in (16), where the disjunction clearly takes scope over negation.

- (16) So, they didn't ROTate or BALance the tires. But I don't know which.
 (Muffy Siegel, personal communication)

For an example with a negative polarity item, assume that Tom knows that John used to talk to both Kim and Sue. But John had a fight with one of them, and so now he doesn't talk to her. In this context, Tom can say (17a) or (17b). The negative polarity item *any longer* has to be in the c-command domain of negation at Spell-Out to be licensed. This implies that the disjunctive phrase *Kim or Sue*, which precedes the negative polarity item, must also be overtly in the c-command domain of negation. Nevertheless, the wide scope reading of the disjunctive phrase is available.

- (17) a. John doesn't talk to KIM or SUE any longer. But I don't know which one.
 b. John never talks to KIM or SUE any longer. But I don't know which one.

Finally, for an example with a verb particle, assume that Tom knows that John telephoned either Kim or Sue, but not both, and he is wondering which one John didn't call. In this context, Tom can say (18). It is widely assumed that verb particles do not postpose (Den Besten 1983, Santorini 1992, 1993, Pintzuk 1996). This implies that the disjunctive phrase *Kim or Sue* that precedes the particle has not extraposed either.

- (18) John didn't call KIM or SUE up. But I don't know which one.

All these examples show that in the right context, disjunction can indeed take scope over a negative element even when it is overtly c-commanded by negation. But then it remains to be explained why questions and declaratives with neg preposing cannot have the wide scope disjunction reading. Thus, Larson's analysis plus extraposition cannot account for the contrast between sentences with preposed and nonpreposed negation.

2.2 Frozen Scope in the CP Domain

Another possible avenue of explanation for the contrast between neg preposing and lack of neg preposing would be to postulate that scope "freezes" in C⁰ and in Spec,CP. One could argue

that although *or* can in principle take scope over overtly c-commanding negation, as in the alt-reading of (19a), it cannot take scope over a negative element in $C^0/\text{Spec,CP}$ because $C^0/\text{Spec,CP}$ guarantees that its occupant will maintain its wide scope status throughout LF, hence allowing for the yn-reading but not for the alt-reading in (19b). One could further argue that the reason why nothing can take scope over negation in $C^0/\text{Spec,CP}$ is that (a) quantifier raising to CP is impossible,¹ and (b) items in C^0 or Spec,CP cannot reconstruct to a lower position within IP (where something could take scope over them).

- (19) a. $[_{CP} \text{ Did } [_{IP} \text{ John not drink coffee or tea}]]?$ (\surd yn-reading, \surd alt-reading)
 b. $[_{CP} \text{ Didn't } [_{IP} \text{ John drink coffee or tea}]]?$ (\surd yn-reading, $*$ alt-reading)

However, frozen scope is not generally found in C^0 or Spec,CP . For instance, in (20) *must* is in C^0 , but disjunction can still have scope over the modal, generating the alt-reading.²

- (20) Must I go to CHIna or to JaPAN this time? ($\surd > \square$)

Similarly, in neg-inversion declaratives, scope reconstruction under a quantificational expression (e.g., *expect*) is also available, as in (21), where the creation verb *write* requires scope reconstruction of its object.

- (21) Not even one book does Mary expect you to write.
 a. 'Mary does not expect that you cause there to exist even one book.'

¹ We will argue in section 5.2.1 that the disjunctive structures at issue involve ellipsis and that disjunction of two CP nodes is possible. Hence, it is not clear how one could enforce the restriction that disjunction does not take scope outside CP. Here we entertain this idea for the sake of the argument.

² One reviewer suggests that maybe negation in C^0 cannot reconstruct because it underwent across-the-board (ATB) movement (see section 5.2.1 on disjunction of IPs and ellipsis). In effect, Johnson (1996) proposes that the auxiliary cluster *can't* in (i) has ATB-moved out of the two conjuncts, and he further claims that ATB head movement cannot reconstruct (p. 34) in order to explain why *can't* necessarily takes scope over *and* in (i). However, as noted by Siegel (1987) and Johnson (1996), when the ATB-moved (or gapped) segment includes both the modal and the verb, reconstruction of the modal is possible, as shown in (ii). Given that there has to be a Spell-Out structure for the declarative (ii) that allows for the reconstructed $\wedge / \surd > \neg \diamond$ reading (Johnson suggests (iia)), we can in principle derive from it a structure for the question (iii) using non-ATB head movement, as in (iiaa). This means that contrary to fact, the reconstructed reading $\wedge / \surd > \neg \diamond$ should be possible for the question (iii) as well. That is, nonreconstructible ATB head movement cannot explain the loss of the alt-reading in (iii): its declarative source (ii) allows for wide scope disjunction, and the derivation from (iia) to (iiaa) involves no ATB movement.

- (i) Ward can't bathe and his guests watch.
 a. S-Structure: $[_{AgrP} \text{ Ward}_1 \text{ can't}_3 [_{VP} [_{VP} \text{ t}_1 \text{ t}_3 \text{ bathe}] \text{ and } [_{VP} \text{ his guests t}_3 \text{ watch}]]]$
 b. $\neg \diamond ((\text{Ward bathe}) \wedge (\text{his guests watch}))$
 c. $*(\neg \diamond (\text{Ward bathe})) \wedge (\neg \diamond (\text{his guests watch}))$
- (ii) Ward can't eat caviar and/or his guests beans.
 a. S-Structure: $[_{AgrP} \text{ Ward}_1 [_{NegP} \text{ can't}_1 \text{ eat t}_2]_3 [_{Agr_oP} [_{Agr_oP} \text{ caviar}_2 \text{ t}_3] \text{ and } [_{Agr_oP} \text{ his guests beans t}_3]]]$
 b. $\neg \diamond ((\text{Ward eat caviar}) \wedge (\text{his guests eat beans}))$
 c. $(\neg \diamond (\text{Ward eat caviar})) \wedge (\neg \diamond (\text{his guests eat beans}))$
- (iii) Can't Ward eat caviar or his guests beans?
 a. S-Structure: $[_{CP} \text{ can't}_4 \dots [_{AgrP} \text{ Ward}_1 [_{NegP} \text{ t}_4 \text{ t}_1 \text{ eat t}_2]_3 [_{Agr_oP} [_{Agr_oP} \text{ caviar}_2 \text{ t}_3] \text{ and } [_{Agr_oP} \text{ his guests beans t}_3]]]]]$
 b. Yn-reading: $\neg \diamond ((\text{Ward eat caviar}) \wedge (\text{his guests eat beans}))$
 c. *Alt-reading: $(\neg \diamond (\text{Ward eat caviar})) \wedge (\neg \diamond (\text{his guests eat beans}))$

All these examples show that material that is overtly placed in C^0 and Spec,CP can in principle be outscoped by other operators that appear lower in the Spell-Out structure. Hence, frozen scope in C^0 and Spec,CP cannot be maintained and we lose this potential explanation of the necessary wide scope of negative elements in C^0 /Spec,CP.

In sum, neither of the analyses considered so far can explain why the wide scope disjunction reading is possible with nonpreposed negative elements but impossible with neg preposing. The Larsonian proposal yields wrong predictions in examples with no extraposition; and frozen scope in the CP domain undergenerates when the operator in C^0 or Spec,CP is not negation.

3 Characterizing the Pattern: The Relevance of Focus

In this section, we will establish that effects parallel to the ones associated with neg preposing can be reproduced in affirmative non-*wh*-questions and disjunctive declaratives when focus on polarity-related material (*verum focus*) is involved. We also present phonetic data suggesting that, even in negative *yn*-questions, preposed negation involves focal intonation. Through all this, we motivate a unified focus-based account for the lack of wide scope disjunction in all the constructions examined in this section.

3.1 Focus on a Polarity Expression and the Loss of Wide Scope Disjunction

Effects parallel to the ones associated with preposed negation can be reproduced in affirmative questions with focus on the polarity-related items. There are at least two ways of focusing the polarity: (a) by putting focus pitch on the auxiliary verb, or (b) by introducing the epistemic adverb *really*, with primary focus pitch on *really* and secondary pitch on the auxiliary verb.³ For example, (22), with stressed auxiliary, has a *yn*-reading (with neutral intonation on the disjuncts) but not an *alt*-reading (with double stress on the disjuncts). Similarly, the *yn*-reading is possible in (23), but the *alt*-reading is not. Recall from (1) that the versions with nonstressed auxiliary are not biased in these ways.

³ Epistemic *really*, as in (ia), needs to be distinguished from the intensifier adverb *really* in (ib).

- (i) a. Sandra really is clever.
- b. Sandra is really clever.

There is also a nonintensifier, nonepistemic use of *really* that roughly means ‘in the actual world rather than in some other relevant world’. This use is illustrated in (ii). The difference between ‘in-actuality’ *really* and epistemic *really* is clearly illustrated by languages like Spanish that make a lexical distinction between the two usages, as shown in (iii).

- (ii) Gore really won the election though Bush is president.
- (iii) a. En realidad, ellos ganaron las elecciones.
 in reality they won the elections
 ‘In-actuality’ reading: ‘They (did) really win the elections.’
- b. De verdad que ellos ganaron las elecciones.
 of truth that they won the elections
 Epistemic reading: ‘They really (did) win the elections.’

- (22) a. DID John drink coffee or tea? (yn-reading)
 b. *DID John drink COFfee or TEA? (alt-reading)
- (23) a. DID John REALly drink coffee or tea? (yn-reading)
 b. *DID John REALly drink COFfee or TEA? (alt-reading)

Similar effects are attested in affirmative disjunctive declaratives as well. *Either ... or* constructions like (24a) containing a double-focused disjunctive phrase are perfectly well formed and have the wide scope *or*-reading paraphrased as ‘Either he is going out with Martina or he is going out with Sue.’ In contrast, (24b) with epistemic adverb *really* and stressed auxiliary is marginal, reproducing the same restriction on the availability of wide scope disjunction.

- (24) a. Either he is going out with MarTIna or with SUE.
 b. ???Either he REALly IS going out with MarTIna or with SUE.

Notably, given the syntactic position of *REALly* and *IS* in (24b), the effect at issue does not depend on the polarity element’s being in C^0 or Spec,CP, but on the presence of focus stress on the polarity-related elements.⁴

These new data raise the question whether the unavailability of the wide scope disjunction reading in neg-preposing questions and declaratives is related to focus as well. If so, we would also expect our original sentences with neg preposing to involve focus marking. With neg-preposing declaratives, the inverted negative element clearly *does* have special focal intonation, as in (25).

- (25) a. NEVer has John agreed with Sam.
 b. Under NO circumstance will John agree with Sam.

Moreover, preliminary evidence from phonetic data suggests that preposed negation in non-*wh*-questions involves some special focal intonation as well. In Romero and Han 2002, we looked at phonetic data on yn-questions with preposed negation in a small experiment, including pitch tracks of naturally occurring data and those of contextually controlled sentences. In both cases, we observed that preposed negation generally involves a special pitch curve different from that of unfocused nonnegative auxiliaries. Consider the naturally occurring sentences in (26)–(27) and compare the pitch track of the regular affirmative question in (26) (low pitch for *did*;

⁴ Neg-preposing effects arise to some extent in non-*wh*-questions and declaratives with a nonpreposed negative element if focus stress is placed on it. For instance, unfocused *never* in (ia) allows for wide scope disjunction, but focused *NEVer* in (ib) makes this reading marginal. The same contrast can be witnessed in (ii). However, as we will observe in footnote 8, wide scope disjunction is possible over nonpreposed focused *NOT* and *NEVer* if a context is provided where the polarities are contrastive.

- (i) a. Iqbal has never eaten BEEF or PORK.
 b. ??Iqbal has NEVer eaten BEEF or PORK.
- (ii) a. Did John not drink COFfee or TEA?
 b. ??Did John NOT drink COFfee or TEA?

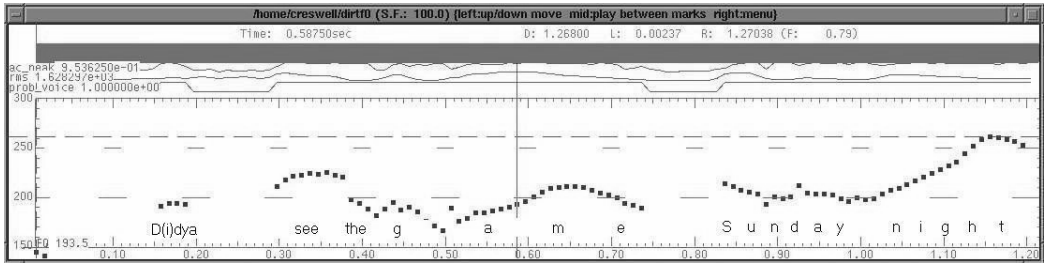


Figure 1

Pitch track of regular affirmative yes-no question

see figure 1) with that of the preposed-negation question in (27) (higher pitch for *didn't*; see figure 2).

(26) D(i)d-ya see the game Sunday night?

(27) (. . .) The Cowb . . . Didn't the Cowboys even finish . . . They finished pretty close to .500 last year, didn't 'ey?

The same pattern arises from a small experiment where we elicited (unfocused) affirmative yn-questions and negative yn-questions with preposed negation in appropriate contexts. The participants were first asked to understand the scenario and accept a number of assumptions. They were then asked to say out loud the given yn-question as naturally as possible as a response to an utterance produced by the experimenter. We used the scenario in (28) for eliciting a neutral affirmative yn-question, and the scenario in (29) for eliciting a biased question with preposed negation.

(28) Assumption: You (the subject) know that John is planning to go to Hawaii for a vacation.

Experimenter: John is on a vacation.

Subject: Is he in Hawaii?

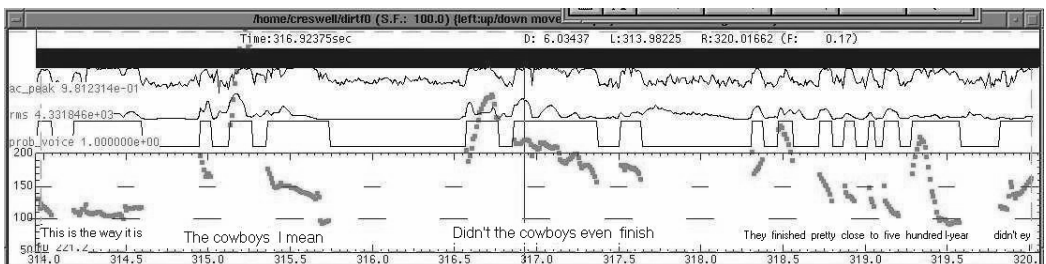


Figure 2

Pitch track of preposed negation yes-no question

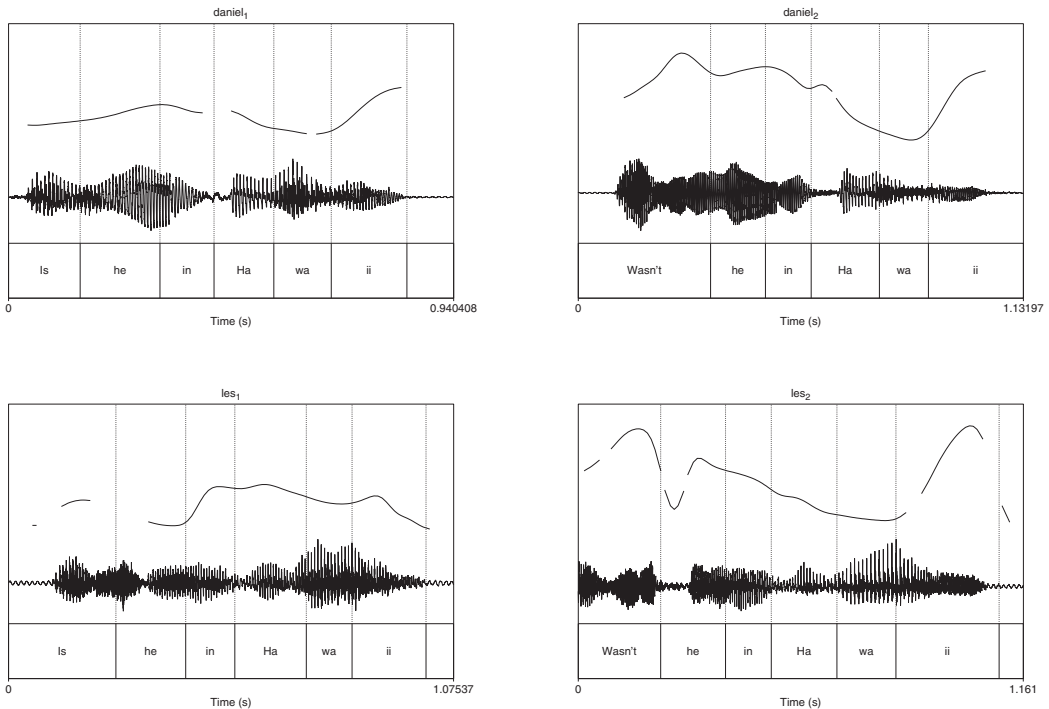


Figure 3

Pitch tracks of affirmative and preposed negation yes-no questions

(29) Assumption: You (the subject) believe that John was in Hawaii and returned to Vancouver this morning. You and I are talking on the SFU campus (in Greater Vancouver) now.

Experimenter: I saw John at the movies last night.

Subject: Wasn't he in Hawaii?

There were 8 participants in this experiment. The results consistently showed that the preposed negated auxiliary verb has relatively higher pitch than the auxiliary verb in affirmative questions. Pitch tracks of two subjects are shown in figure 3.

Hedberg and Sosa (2002) also independently found that preposed negation in yn-questions is characteristically pronounced with a higher pitch, parsed as a L+H* accent, that does not necessarily appear in the auxiliary of a regular affirmative yn-question. The authors suggest that the accented negative polarity item is part of the focus—not of the topic—of the sentence.⁵

⁵ A reviewer points out that having some special intonation contour is not enough to prove that there is focus. Admittedly, how the pitch tracks of these negative questions can be mapped into pitch accents (and concomitantly into semantic focus marking) is not at all obvious. See Romero and Han 2002, where we explore two possible mappings that

In view of these data and findings, we will hypothesize that preposed negation in non-*wh*-questions carries focus marking as well.

To sum up, we have shown that the following constructions pattern together, as they all lack the wide scope reading of disjunction. All of them, including by assumption our original examples with neg preposing (30)–(31), carry focus accent on a polarity element. This suggests that focus on a polarity element is related to the loss of the wide scope reading of disjunction.

- (30) *Didn't_F John drink COFFee or TEA?
 (31) *NEVer has Iqbal eaten BEEF or PORK.
 (32) *DID John REALly drink COFFee or TEA?
 (33) ???Either he REALly IS going out with MarTIna or with SUE.

3.2 *Verum Focus and the Loss of Wide Scope Disjunction*

The goal of this section is to characterize the function and semantic contribution of the focus related to the loss of wide scope disjunction that we just illustrated. To this end, we will leave disjunction aside for the moment and examine the four interrogative and declarative sentence types in examples *without* disjunction.

Let us start with declarative sentences. A very common use of focus on a polarity element is simply to bring out a contrast between two regular polarity-related denotations. For example, in (34) the positive polarity of the second clause (semantically, $\lambda p_{\langle s,t \rangle} \lambda w.p(w) = 1$) intuitively contrasts with the negative polarity of the first clause (semantically, $\lambda p_{\langle s,t \rangle} \lambda w.p(w) = 0$). Similarly, in (35) the negative adverb *NEVer* of the second clause (semantically, $\lambda Q_{\langle i,t \rangle} . \neg \exists t[Q(t)]$) contrasts with the adverb *SOMETimes* in the first clause ($\lambda Q_{\langle i,t \rangle} . \exists t[Q(t)]$).

- (34) Noa DOESn't play tennis when the ground is WET, but she PLAYS it when the ground is DRY.
 (35) Noa has SOMETimes played tennis when the ground was MOIST, but she has NEVer played tennis when it was WET.

But note that examples of polarity focus with *REALly AUX* and preposed *NEVer* do not have this flavor of contrast between two plain polarities. Compare the pair (34)–(35) with the pair (36)–(37). In (36), the focus on *REALly DOES* does not indicate bare contrast with the negative polarity of the previous clause; rather, it *insists on the truth* of its proposition, as if the addressee had questioned that Noa plays tennis when the ground is dry and now the speaker wants to settle that she does. In similar fashion, preposed *NEVer* in (37) does not contribute a bare contrast with

are compatible with focus marking on the preposed *aux + n't* cluster. A related question raised by the reviewer is whether the special focal intonation in neg-preposing declaratives (25) is the same as in neg-preposing questions (27) and (29). This boils down to the question of whether there is a one-to-one mapping between a focus marking and an intonation contour. In the case at hand, we suspect that the intonation contours of the two types of constructions may not be exactly the same, given that one type is a declarative and the other is a question.

SOMETimes, but it insists on the truth of the proposition ‘‘that she has never played tennis when the ground is wet.’’

- (36) Noa DOESn’t play tennis when the ground is WET. (But) She REALLy DOES play tennis when the ground is DRY.
- (37) Noa has SOMETimes played tennis when the ground was MOIST. (But) NEVer has she played tennis when it was WET.

Polarity focus that intuitively insists on the truth of a proposition has been studied under the rubric *verum focus* (e.g., Jacobs 1986, Höhle 1992). To see an example from Höhle 1992 (adapted from German to English), consider (38), with *verum focus* on (*REALLy*) *IS*. Höhle proposes that this type of focal stress signals the presence of a predicate or operator *VERUM* (Höhle 1992:114). This yields the LF representation in (38a). The insistence on the truth of the argument proposition is the semantic contribution of *VERUM*. As defined in Romero and Han, to appear, *VERUM* is a conversational epistemic operator that applies to a proposition *p* to yield a proposition that is true if the speaker (or the sum of the speaker and the addressee) is certain that *p* should be accepted as true and added to the common ground (CG).⁶ Applying this definition to the semantic computation of the LF representation (38a), we obtain the final proposition paraphrased in (38b). Similar LF representations and final denotations obtain for (36) with *REALLy DOES* and for (37) with preposed *NEVer*. This is illustrated in (39) and (40).

- (38) A: I asked Hanna what Karl was doing, and she made the silly claim that he is writing a script.
 S: (It’s true.) He (REALLy) IS writing a script.
 a. LF: [*VERUM* [he (REALLy) IS writing a script]]
 b. ‘It is certain that we should add to CG [that Karl is writing a script].’
- (39) She REALLy DOES play tennis when the ground is DRY.
 a. LF: [*VERUM* [she REALLy DOES play tennis when the ground is dry]]
 b. ‘It is certain that we should add to CG [that she plays tennis when the ground is dry].’
- (40) NEVer has she played tennis when it was WET.
 a. LF: [*VERUM* [NEVer has she played tennis when it was wet]]
 b. ‘It is certain that we should add to CG [that she has never played tennis when it was wet].’

Hence, declarative sentences with focused *REALLy AUX* and preposed focused *NEVer* involve *verum focus* and a *VERUM* operator.

⁶ This definition is spelled out formally in (i), where *x* is contextually identified with the speaker (or with the speaker and the addressee), $\text{Epi}_x(w)$ is the set of worlds compatible with *x*’s knowledge in *w*, $\text{Conv}_x(w')$ is the set of worlds where *x*’s conversational goals in *w'* are fulfilled, and where $\text{CG}_{w'}$ is the common ground or set of propositions that the speakers assume in *w''* to be true (Stalnaker 1978, Roberts 1996).

(i) $[[\text{VERUM}_i]]^{\text{g}^{\text{df}i}} = \lambda p_{\langle s,t \rangle} \lambda w. \forall w' \in \text{Epi}_x(w) [\forall w'' \in \text{Conv}_x(w') [p \in \text{CG}_{w''}]]$

Let us now turn to the interrogative constructions with preposed focused *didn't* and with focused *DID . . . REALly*. As in the case of declaratives, this focus on a polarity element does not bring out a contrast between two regular polarity denotations. Take, for instance, the examples in (41). Whereas focus on nonpreposed *NOT* in (41a) can simply be used to contrast with the previous positive polarity, the continuation (41b) with preposed *didn't* lacks this bare use. Similarly, focus on *DID . . . REALly* does not express simple contrast with the previous negative polarity in (42).

- (41) I know that Kim drank whiskey.
 a. . . . Did he NOT drink vodka?
 b. . . . Didn't he drink vodka?
- (42) I know that Kim didn't drink whiskey.
 a. # . . . DID he REALly drink vodka?

In fact, what focus on preposed *didn't* and on *DID . . . REALly* conveys is an epistemic bias of the speaker. The question *Didn't John drink (any) vodka?* in (43a) conveys that the speaker originally believed or at least expected that John drank vodka. The question *DID John REALly drink vodka?* in (43b) conveys the epistemic bias of the speaker toward the belief that John did not drink vodka.

- (43) a. Didn't John drink (any) vodka?
 Positive epistemic bias: The speaker believed or expected that John drank vodka.
 b. DID John (REALly) drink vodka?
 Negative epistemic bias: The speaker believed or expected that John did not drink vodka.

These epistemic biases render the questions infelicitous in contexts where the speaker is presumed to be unbiased, as shown in (44S') and (45S'). Note that such biases do not need to arise in examples without focus, as (44S) and (45S) show, or in examples where focus indicates bare contrast between two regular polarities, as in (41a).

- (44) Scenario: The speaker is a vodka marketer and wants to find out who did not drink vodka at the party last night (and why). He has no previous belief about who did and who didn't drink vodka. The speaker and the addressee are going through the list of people at yesterday's party.
 A: Kate didn't drink any vodka last night.
 S: What about John? Did he not drink vodka (either)?
 S': #What about John? Didn't he drink vodka (either)?
- (45) Scenario: The speaker does not know who drank vodka last night and simply wants to find out.
 A: Kate drank vodka last night.
 S: What about John? Did he drink vodka (too)?
 S': #What about John? DID he REALly drink vodka (too)?

In Romero and Han, to appear, we derived this epistemic bias from the presence of VERUM. We argued there that, in a way parallel to what happens in declaratives, preposed negation and DID . . . (REALLy) introduce VERUM in interrogatives as well. This VERUM operator is syntactically placed above C⁰, but below Q, in the left periphery of the CP domain (in the spirit of Rizzi 1997). The resulting LF structures are given in (46a) and (47a) and the semantic paraphrases are given in (46b) and (47b). Roughly, the semantics of these questions dictates that they are used by a speaker who did not accept the proposition under VERUM at first and who wants to make absolutely sure it is true before adding it to the common ground, hence conveying that he or she had previous reasons to doubt it.⁷

(46) Didn't John drink vodka?

a. LF: [_{CP} Q VERUM [didn't John drink vodka]]

b. 'Is it certain that we should add to CG that John didn't drink any vodka?'

(47) DID John REALLy drink vodka?

a. LF: [_{CP} Q VERUM [DID John REALLy drink vodka]]

b. 'Is it certain that we should add to CG that John drank vodka?'

In sum, we have examined the four constructions that preclude the wide scope reading of disjunction, and we have shown that all of them involve verum focus. Verum focus introduces a conversational epistemic operator VERUM—which insists on the truth of its argument proposition—missing from the sentence otherwise. VERUM is expressed through focal intonation and/or preposing of certain polarity elements.⁸

To sum up this section, we have shown that the lack of the wide scope disjunction reading with neg preposing in non-*wh*-questions and declaratives is part of a larger pattern having to do with polarity focus. Further, we have shown that the type of polarity focus that cooccurs with the loss of wide scope *or* is verum focus. Verum focus, unlike bare contrastive focus between two regular polarity elements, introduces a new operator into the sentence: the conversational epistemic operator VERUM. Hence, the conclusion so far is that disjunction cannot take scope over verum focus and its concomitant VERUM, as stated in (48).

⁷ In the case of preposed *didn't*, two possible LF representations exist: one corresponding to the reading where negation takes scope over VERUM and the other corresponding to the reading where VERUM takes scope over negation (Romero and Han, to appear). This ambiguity is not relevant for present purposes and will therefore be ignored.

⁸ We have shown that verum focus—and its corresponding VERUM—prevents wide scope disjunction. In fact, other kinds of polarity focus allow for wide scope *or*. Take, for example, (i). To the extent that focal stress on *NOT* can be understood as signaling bare contrast with the preceding regular positive polarity, the alternative reading is acceptable. The same holds for bare contrastive nonpreposed *NEVer* in (ii). This means that it is verum focus, and not contrastive focus between two simple polarity elements, that triggers the lack of wide scope disjunction.

(i) ?I know that John drank whiskey and not vodka. Now I want to know this: did John NOT drink COFFee or TEA?

(ii) ?Either John has often CLEANED or FILLED the tires (though I don't know which). But either he has NEVer BALanced or ROTated them (I don't know which).

(48) *Generalization* (to be revised)

Disjunction cannot take scope over verum focus and its corresponding VERUM.

In what follows, we will pursue the generalization in (48) and provide a unified account of the lack of wide scope disjunction in all the constructions examined in this section. The question to be addressed is this: what is ill formed in a configuration where disjunction takes scope over verum focus and VERUM? In addressing this question, we will sharpen the generalization in (48) and show that disjunction cannot take scope over verum focus/VERUM if the LF configuration involves ellipsis of the verum-focused material, while the configuration that does not involve any ellipsis allows disjunction to take scope over verum focus/VERUM. But before we tackle this issue, we introduce some background assumptions about the felicity conditions of focus that will be important for our proposal.

4 Background Assumptions about Focus

Focal stress at PF is encoded as focus marking at LF (written XP_F).⁹ Besides their ordinary semantic value ($\llbracket \cdot \rrbracket$), sentences with focus have a focus semantic value, also called focus set of alternatives ($\llbracket \cdot \rrbracket^f$). The focus semantic value of a sentence is the set of alternative propositions construed by replacing the denotation of the focus-marked expression(s) at LF—for example, $BEEF_F$ in (49)—with an object of the same semantic type (Rooth 1985, 1992). For example, the ordinary semantic value of (49) is the single proposition in (50), whereas its focus semantic value is a set of propositions, as in (51).¹⁰

(49) Iqbal ate BEEF_F for dinner.

(50) (*Ordinary*) semantic value

$\llbracket \text{Iqbal ate BEEF}_F \text{ for dinner} \rrbracket$
 $= \lambda w.\text{eat}(\text{iqbal}, \text{beef}, \text{dinner}, w)$
 $= \text{“that Iqbal ate beef for dinner.”}$

(51) *Focus semantic value*

$\llbracket \text{Iqbal ate BEEF}_F \text{ for dinner} \rrbracket^f$
 $= \{\lambda w.\text{ate}(\text{iqbal}, x, \text{dinner}, w) : x \in D_e\}$
 $= \{\text{“that Iqbal ate beef for dinner,” “that Iqbal ate pork for dinner,” “that Iqbal ate fish for dinner,”} \dots \}$

⁹ Phonological accent and LF focus marking do not always coincide, as a narrow accent on a constituent may signal focus marking on a wider supraconstituent (see, e.g., Selkirk 1995, Truckenbrodt 1995, Schwarzschild 1999). We will mostly limit ourselves to examples where no focus projection or “percolation” is at stake; focus projection will be relevant only in footnote 16.

¹⁰ The formal definition of focus semantic value is as follows:

- (i) a. If α is a nonfocused lexical item, then $\llbracket \alpha \rrbracket^f = \{\llbracket \alpha \rrbracket\}$.
- b. If α is a focused lexical item, then $\llbracket \alpha \rrbracket^f = D_\sigma$, where σ is the type of $\llbracket \alpha \rrbracket$.
- c. If the node α has the daughters β and γ (order irrelevant), and there are types σ and τ such that $\langle \sigma, \tau \rangle$ is the type of $\llbracket \beta \rrbracket$ and σ is the type of $\llbracket \gamma \rrbracket$, then $\llbracket \alpha \rrbracket^f = \{x \in D_\tau : \exists y, z [y \in \llbracket \beta \rrbracket^f \wedge z \in \llbracket \gamma \rrbracket^f \wedge x = y(z)]\}$.

A common use of focal stress is to signal that the sentence with the focus is semantically parallel to some other nearby sentence, contrasting only in the focused part. For example, in (52) the two disjunctive clauses are parallel to each other, differing only in the content of the NP objects. Similarly, in (53) the two adjacent clauses bear stress on the elements they do not have in common—namely, on the contrastive NP subjects and on the contrastive temporal adjuncts. Finally, the same holds for (54), where the (regular) polarities and the embedded predicates differ from each other and bear focal stress.

(52) Either $[_{IP}$ Iqbal ate BEEF for dinner] or $[_{IP}$ he ate PORK for dinner].

(53) $[_{IP}$ PAT visited Sue for CHRISTmas], and $[_{IP}$ JOHN visited Sue for NEW YEAR’S].

(54) $[_{IP}$ Noa DOESn’t play tennis when the ground is WET]. $[_{IP}$ She PLAYS it when the ground is DRY].

To formalize this parallelism/contrast relation, Rooth introduces the squiggle operator \sim followed by a contextual free variable C . The sequence $\sim C$ adjoins to the IP (or other relevant constituent) that includes the focus marking, as shown in (55) with $\sim C_1$ and $\sim C_2$. The variables C_1 and C_2 , or C simpliciter, stand for the ordinary semantic value of a nearby sentence. Then, for focus marking to be licensed as felicitous, the following condition has to be met: given a sequence $[_{IP}\sim C]$, the value of C must be or imply a member of the focus semantic value of the IP. This condition is formulated in (56) and applied to example (55) in (57)–(58).

(55) Either $[_{IP_3}$ Iqbal ate BEEF_F for dinner] $\sim C_1$ or $[_{IP_4}$ he ate PORK_F for dinner] $\sim C_2$.

(56) *Focus Condition*

$[_{\alpha}\sim C]$ is felicitous if $C \in \llbracket \alpha \rrbracket^f$ or C implies a member of $\llbracket \alpha \rrbracket^f$.

(57) Licensing: $[_{IP_3}$ Iqbal ate BEEF_F for dinner] $\sim C_1$.

a. $\llbracket C_1 \rrbracket = \llbracket IP_4 \rrbracket =$ “that Iqbal ate pork for dinner.”

b. $\llbracket C_1 \rrbracket \in \llbracket \text{Iqbal ate BEEF}_F \text{ for dinner} \rrbracket^f$,

which equals {“that Iqbal ate pork for dinner,” “that Iqbal ate beef for dinner,” “that Iqbal ate fish for dinner,” . . . }.

(58) Licensing: $[_{IP_4}$ he ate PORK_F for dinner] $\sim C_2$

a. $\llbracket C_2 \rrbracket = \llbracket IP_3 \rrbracket =$ “that Iqbal ate beef for dinner.”

b. $\llbracket C_2 \rrbracket \in \llbracket \text{Iqbal ate PORK}_F \text{ for dinner} \rrbracket^f$,

which equals {“that Iqbal ate pork for dinner,” “that Iqbal ate beef for dinner,” “that Iqbal ate fish for dinner,” . . . }.

The same mechanism applies to examples with verum focus, as in (59). As observed in the previous section, verum focus adds the operator VERUM to the clause. Besides this, verum focus behaves like NP focus or regular polarity focus: it signals contrast between two elements, namely, VERUM and another function of epistemic conversational content. Consider (59), for example. Here, A’s utterance implies a proposition of the shape ‘it is possible that we should add to CG p ,’ which is parallel to the denotation of $[_{CP}$ VERUM_F p] except for the meaning of the focus-marked VERUM, (λp .it is certain that we should add to CG p). Given that this implied proposition

belongs to $\llbracket \text{VERUM}_F \text{ they are tired} \rrbracket^f$, the Focus Condition is fulfilled, exactly as in the cases above. This is sketched in (60).

(59) A: According to Mary, they are tired.

S: They ARE tired.

LF: $[_{CP} \text{VERUM}_F [\text{they ARE tired}]] \sim C$

(60) a. $\llbracket C \rrbracket = \llbracket \text{According to Mary, they are tired} \rrbracket$,

which implies ‘‘it is possible that we should add to CG $\lambda w'.\text{tired}(\text{they}, w')$.’’

b. $\llbracket C \rrbracket$ implies a member of $\llbracket \text{VERUM}_F \text{ they ARE tired} \rrbracket^f$,

which equals $\{ \text{‘‘it is certain that we should add to CG } \lambda w'.\text{tired}(\text{they}, w')\text{,’’ ‘‘it is possible that we should add to CG } \lambda w'.\text{tired}(\text{they}, w')\text{,’’ ‘‘it is unlikely that we should add to CG } \lambda w'.\text{tired}(\text{they}, w')\text{,’’} \dots \}$.

In sum, focal stress gives rise to focus marking at LF, and our LF representations with focus marking must be licensed by the Focus Condition. This condition roughly dictates that a sentence including focus marking at LF has to be semantically parallel to a nearby sentence, differing only in the content of the focus-marked material. This condition applies equally to all types of constituents, including NPs and epistemic conversational operators like *VERUM*. Two aspects of this algorithm will be crucial for our proposal. First, the double focus on the disjuncts correlated with wide scope disjunction will have to obey the Focus Condition. Second, besides introducing the operator *VERUM*, *verum focus* behaves like regular focal stress and thus gives rise to focus marking on *VERUM* at LF.¹¹

5 Our Proposal

The key ingredients of our analysis are the following:

- *Verum focus* introduces and focus-marks the operator *VERUM* (sections 3.2 and 4). This means that the *VERUM* operator is present if and only if *verum focus* is present, and that *VERUM* is always focus-marked.¹²
- Focus-marked constituents at LF cannot be deleted at Spell-Out (Heim 1997, Merchant 2001, Romero 2000).

¹¹ The Focus Condition in (56) corresponds to Rooth’s (1992) membership condition. Rooth also uses the sequence $\sim C$ to define a subset condition that applies, for example, to *only* associated with focus, as in (i). Rooth’s subset condition is given in (ii).

(i) John only $[_{VP} \text{eats FRUIT}_F \text{ in the morning}] \sim C$.

(ii) *Subset Focus Condition*

$[\alpha \sim C]$ is felicitous if $C \subseteq \llbracket \alpha \rrbracket^f$.

¹² A reviewer raises the issue that lexical items and functors—for example, *VERUM*—are not usually assumed to select for focus marking inherently. That is, the lexicon determines that *really* or *VERUM* has the meaning in (i) in footnote 6, but it should in principle not specify that the lexical item must always appear focused. We very much agree with the reviewer on this point. Now, note that the semantic contribution of *VERUM* is to insist on the truth of some (explicit or implicit) background proposition whose degree of certainty has been called into question, as in (38) in the text. If no such background proposition under scrutiny exists, the use of *VERUM* is completely infelicitous, as in (i). This means that

- *Whether/Q . . . or* and (clausal) *either . . . or* constructions involve ellipsis (see Schwarz 1999 for declarative *either . . . or* constructions, which we extend here to interrogative *whether/Q . . . or*, on the basis of Han and Romero 2002, to appear).
- Remnants of ellipsis bear focus stress and thus focus marking. They must fulfill the Focus Condition (section 4).

We will first consider declarative disjunctive constructions and show that the combination of these four ingredients—*verum focus*, ellipsis, the prohibition against deleting focus-marked constituents, and the Focus Condition—accounts for the loss of the wide scope reading of disjunction. We will then turn to interrogative disjunctive constructions. We will argue for an extension of Schwarz’s (1999) ellipsis account of *either . . . or* to *whether/Q . . . or* and will propose that the same factors that conspire against wide scope disjunction in declaratives also rule out the alt-reading in interrogatives.

5.1 *Either . . . or* Constructions

We adopt the ellipsis analysis of *either . . . or* constructions like (61)–(62) convincingly argued for by Schwarz (1999). According to Schwarz, *either* marks the left periphery of the first disjunct, and some material in the second disjunct is deleted under identity with the first disjunct, as illustrated in (61b) and (62b).

- (61) a. Either he is going out with MarTIna or with SUE.
 b. either [_{IP} he is going out with MarTIna] or [_{IP} ~~he is going out~~ with SUE]
- (62) a. Either Iqbal has never eaten BEEF or PORK.
 b. either [_{IP} Iqbal has never eaten BEEF] or [_{IP} ~~Iqbal has never eaten~~ PORK]

Recall that *either . . . or* constructions have a double focus; that is, they have focal stress on each disjunct. Assuming Schwarz’s (1999) ellipsis analysis, stress falls on the remnant in the ellipsis clause (*SUE* in (61) and *PORK* in (62)) and on its correlate in the parallel clause (*MarTIna* in (61) and *BEEF* in (62)). Both foci are licensed because the denotation of the first IP belongs to the focus semantic value of the second IP, and vice versa. This is shown in (63)–(64).

- (63) Either [_{IP} he is going out with MarTIna_F]_~C₁ or [_{IP} ~~he is going out~~ with SUE_F]_~C₂.
 a. The proposition “that he is going out with Martina” (= $\llbracket C_2 \rrbracket$) belongs to \llbracket he is going out with SUE_{F}} \rrbracket^f ,
 which equals {“that he is going out with Sue,” “that he is going out with Martina,” “that he is going out with Pat,” . . . }.

interlocutors do not insist on the truth of a proposition unless needed; and, if insistence is needed, then they must use *VERUM* with focus because *VERUM* contrasts with different epistemic force in the background proposition (see Romero and Han, to appear, for an elaboration of this point for *yes-no* questions).

- (i) A: I was just introduced to Martin. He was very concentrated on his work and barely talked to me. What is he working on?
 S: #He REALly IS/really is writing a script.

- b. The proposition “that he is going out with Sue” (= $\llbracket C_1 \rrbracket$) belongs to \llbracket he is going out with MarTIna $_F$ \rrbracket^f ,
 which equals {“that he is going out with Sue,” “that he is going out with Martina,” “that he is going out with Pat,” . . . }.
- (64) Either $[_{IP}$ Iqbal has never eaten BEEF $_F$] $\sim C_1$ or $[_{IP}$ ~~Iqbal has never eaten~~ PORK $_F$] $\sim C_2$.
- a. The proposition “that Iqbal has never eaten beef” (= $\llbracket C_2 \rrbracket$) belongs to \llbracket Iqbal has never eaten PORK $_F$ \rrbracket^f ,
 which equals {“that Iqbal has never eaten pork,” “that Iqbal has never eaten beef,” “that Iqbal has never eaten fish,” . . . }.
- b. The proposition “that Iqbal has never eaten pork” (= $\llbracket C_1 \rrbracket$) belongs to \llbracket Iqbal has never eaten BEEF $_F$ \rrbracket^f ,
 which equals {“that Iqbal has never eaten pork,” “that Iqbal has never eaten beef,” “that Iqbal has never eaten fish,” . . . }.

But what happens if, besides the focus on the two disjuncts, there is verum focus elsewhere within the *either . . . or* construction, as in (65)? Can the double focus be licensed in coexistence with this extra verum focus? To obtain wide scope disjunction, there are two logically possible ways to locate verum focus and VERUM at LF: (a) within both disjuncts or (b) within the first disjunct only. We will consider these two possibilities in turn. We will conclude that, when *either . . . or* disjoins two full-fledged CPs and no ellipsis is involved, both potential LFs are legitimate with focus-marked VERUM. However, when the second CP disjunct involves ellipsis, both LF representations are ruled out by independently motivated constraints: focus-marked material cannot be deleted and must obey the Focus Condition. As a result, the sentences in (65) with verum focus will be ruled out.

- (65) a. ???Either he REALLy IS going out with MarTIna or with SUE.
 b. *Either NEVER has Iqbal eaten BEEF or PORK.

5.1.1 Verum Focus in Both Disjuncts In general, full *either . . . or* constructions without any ellipsis can have verum focus in both disjuncts, as illustrated in (66). Such constructions may be slightly awkward when uttered in isolation, since some pragmatic conflict arises between wide scope *or* and VERUM: on the one hand, using verum focus in a declarative indicates strong certainty on the speaker’s part, and, on the other, *or* in a declarative dictates that the speaker is not certain which disjunct is true. Nonetheless, this pragmatic conflict can be overcome if the right context is provided, as in (66). The LF syntax and the semantic reading of (66) are given in (67).¹³

- (66) Context: We heard many contradictory assertions about John. Now, we have narrowed it down to two of the asserted possibilities.

¹³ We will use the following LF indexation through the rest of the article: C_1 is used as the variable for the squiggle operator associated with the first focused disjunct, C_2 is the variable related to the second focused disjunct, and C and C' are the variables related to the focus marking on VERUM.

S: Either he REALly IS going out with MarTIna or he REALly IS going out with SUE.

- (67) a. either $[[_{CP_1} \text{VERUM}_F \text{ he REALly IS going out with MarTIna}_F] \sim C] \sim C_1$ or
 $[[_{CP_2} \text{VERUM}_F \text{ he REALly IS going out with SUE}_F] \sim C] \sim C_2$
 b. ‘[It is certain that we should add to CG that he is going out with Martina] or [it is certain that we should add to CG that he is going out with Sue].’

In contrast, as we showed in section 3.1, as soon as ellipsis is involved in the second disjunct, the sentence (68) becomes marginal, even if uttered in the same context as in (66). The LF representation in (69a) and its corresponding reading, paraphrased in (69b), are unavailable.

- (68) ???Either he REALly IS going out with MarTIna or with SUE.
 (69) a. *either $[[_{CP_1} \text{VERUM}_F \text{ he REALly IS going out with MarTIna}_F] \sim C] \sim C_1$ or
 $[[_{CP_2} \text{VERUM}_F \text{ he REALly IS going out with SUE}_F] \sim C] \sim C_2$
 b. *‘[It is certain that we should add to CG that he is going out with Martina] or [it is certain that we should add to CG that he is going out with Sue].’

What is the difference between (66) and (68) that makes the former grammatical and the latter ill formed? The two LF representations are exactly the same, the only difference being that all the LF material is pronounced at Spell-Out for the grammatical (66) but not for the deviant (68). Notably, if we look at (69a), we see that the ill-formed example involves deleting a focus-marked constituent and the phonological locus of a focus-marked constituent at Spell-Out—namely, the constituent *REALly IS* that gives rise to the focus-marked VERUM_F , and the VERUM_F itself. Given that VERUM_F is present if and only if verum focus is present, the deletion of *REALly IS* must occur in conjunction with the deletion of VERUM_F . The question then is this: can LF focus-marked constituents (or their phonological realization) be deleted at Spell-Out?

Focus-marked constituents cannot be deleted at Spell-Out.¹⁴ To show this, we construct an example unrelated to disjunction where an overt focus-sensitive particle—here, *only*—tries to associate with a focus-marked constituent. This is done in (70)–(71). This association is possible if, as in (70), there is no ellipsis and the focus-marked constituent FRUIT_F is pronounced. Clearly, though, this focus association and the corresponding reading are unavailable if the focus-marked FRUIT_F is part of the elided material, as in (71).

- (70) Mary only told John to eat FRUIT in the morning.
 Sue only $[_{VP} \text{ told him to } [_{VP} \text{ eat FRUIT}_F \text{ in the morning}]] \sim C$, as well.
 (71) *Mary only told John to eat FRUIT in the morning.
 Sue only $[_{VP} \text{ told him to } [_{\cancel{VP}} \text{ eat FRUIT}_F \text{ in the morning}]] \sim C$, as well.

¹⁴ See Heim 1997:210 for an application of this constraint to antecedent-contained ellipsis, Merchant 2001:178–179 for sluicing, and Romero 2000:162–164 for reduced conditionals.

That is, if a constituent is focus-marked at LF, it cannot be deleted at Spell-Out. This constraint is formulated in (72) under the rubric *Focus Deletion Constraint*.¹⁵

(72) *Focus Deletion Constraint* (FDC)

Focus-marked constituents at LF (or their phonological locus) cannot delete at Spell-Out.

Let us now return to our ungrammatical example (68), repeated as (73). We argue that its LF configuration (73a) is ill formed because it violates the FDC: VERUM_F and the phonological items that introduce it—namely, *REALly IS*—are deleted and the FDC is therefore violated.

(73) ???Either he *REALly IS* going out with MarTIna or with SUE.

- a. *either $[[\text{CP}_1 \text{VERUM}_F \text{he REALly IS going out with MarTIna}_{F_1}] \sim C] \sim C_1$ or
 $[[\text{CP}_2 \text{VERUM}_F \text{he REALly IS going out with SUE}_{F_2}] \sim C] \sim C_2$

The same explanation holds for declarative sentences with preposed focused *NEVer*. A full disjunctive declarative is acceptable in the context given in (74) (with some slight marginality due to the awkwardness of the construction). But, uttered in the same context, the ellipsis version (75) lacks the intended wide scope disjunction paraphrased in (76b). In fact, the double focus intonation on the disjuncts is very odd, since the corresponding LF representation violates the FDC: the verum-focused constituent *NEVer* in (76a) is deleted at Spell-Out.

(74) Context: Both the speaker and the addressee know that Iqbal is very religious. They don't know, though, whether he is a Hindu or a Muslim.

A: Although Iqbal is very religious, he does not subscribe to any food taboos. He can eat anything.

S: No. That's not true. Either *NEVer* would he eat BEEF or *NEVer* would he eat PORK. I just don't know which one.

¹⁵ More accurately, an ellipsis site cannot at the same time contain a focus-marked constituent and exclude its corresponding $\sim C$, as stated in (i).

(i) *Focus Deletion Constraint* (plus its exception)

Focus-marked constituents at LF cannot delete at Spell-Out, unless the ellipsis site contains both the focus-marked constituent and its associated squiggle operator.

As a result, the ungrammatical example (71) in the text—with ellipsis of FRUIT_F but not of $\sim C$ —contrasts with the grammatical example (ii)—where the ellipsis site contains both FRUIT_F and $\sim C$.

(ii) Mary told John to only eat *FRUIT* in the morning.

Sue told him to $[\text{VP only } [\text{VP eat FRUIT}_F \text{ in the morning}] \sim C]$, as well.

In the examples with disjunction, $\sim C$, adjoined to CP, is never within the ellipsis, which targets a subconstituent of CP (see (69a)). More specifically, the job of $\sim C$ is to signal matching of the constituent it adjoins to with some background proposition ‘‘It is probable/possible/improbable that he is going out with Sue.’’ If we moved the remnant *with SUE* in (69a) and tried to include both VERUM and its associated $\sim C$ within the ellipsis site, as in (iii), the clause $[\text{VERUM}_F \text{he REALly IS going out } t_i]$ would not match that proposition because accidental coindexing is not allowed (Heim 1997) and thus $[[t_i]]$ would not match the referent Sue.

(iii) $[[\text{With SUE}_{F_i}]_i [\text{CP}_2 \text{VERUM}_F \text{he REALly IS going out } t_i] \sim C]$.

Hence, in all our examples $\sim C$ is outside the ellipsis site while its associated VERUM_F is within it, as in (69a). Therefore, the amendment in (i) does not affect the logic of our argument and we will ignore it in the text for reasons of simplicity.

- (75) *Either NEVER would Iqbal eat BEEF or PORK.
- (76) a. *[[_{CP₁} VERUM_F NEVER would Iqbal eat BEEF_{F₁}]_{~C}]_{~C₁} or
 [[_{CP₂} VERUM_F NEVER would Iqbal eat PORK_{F₂}]_{~C'}]_{~C₂}
 b. *‘[It is certain that we should add to CG that Iqbal would never eat beef] or [it is certain that we should add to CG that Iqbal would never eat pork].’

In sum, in *either . . . or* constructions, verum focus—and its corresponding focus-marked VERUM operator—cannot be located in the second disjunctive clause if this clause has an ellipsis site that includes the verum focus. This is due to the FDC, which prohibits deletion of focus-marked constituents. If the second disjunctive clause is fully phonologically spelled out and there is no ellipsis, the FDC does not apply and the sentences are acceptable.

5.1.2 Verum Focus in One Disjunct We have shown that having verum focus and its corresponding focus-marked VERUM operator in the second disjunct is at odds with ellipsis. In this section, we will explore what happens if the elliptical disjunct does not include verum focus, that is, if verum focus and VERUM are present only in the first, full-fledged disjunct at LF.

Full *either . . . or* constructions without any ellipsis can have verum focus in the first disjunct without the corresponding verum focus in the second disjunct. This is illustrated in (77).

- (77) Context: Someone said he is going out with Martina, the person he has had a crush on for the last three years. We were not sure that was true. Now, seeing how busy he is, we arrive at the conclusion that either that was true and he is completely devoted to Martina, or he is going out with Sue, who we know to be an extremely socially busy person.
 S: Given how busy he is, either he REALLy IS going out with MarTIna or he’s going out with SUE.

But as soon as ellipsis is involved in the second disjunct, as in the disjunctive declarative in (78) uttered in the same context as in (77), the reading in which the verum focus is present only in the first disjunct (paraphrased as in (78a)) is unavailable.

- (78) ???Given how busy he is, either he REALLy IS going out with MarTIna or with SUE.
 a. *‘[It is certain that we should add to CG that he is going out with Martina] or [he is going out with Sue].’

This reading is impossible because its source LF representation violates the Focus Condition for *MarTIna_F* and *SUE_F*. Consider (79), with the usual double focus marking on *MarTIna_F* and *SUE_F* and with VERUM in the first disjunct only. The problem with this LF representation is that the two disjunctive CPs are semantically asymmetrical and consequently the Focus Condition is not met for the double focus on *MarTIna_F* and *SUE_F*. In particular, [[CP₁]] is not a member (nor does it imply a member) of [[CP₂]]^f, as sketched in (80).¹⁶

¹⁶ Note that although the ellipsis version (78a) with unbalanced disjuncts is ill formed, its full version (77) is acceptable. The pair in (i)–(ii) provided by a reviewer illustrates the same point.

- (79) * $[_{CP}[_{VERUM}_F \text{ he REALly IS going out with MarTIna}_{F_1}] \sim C] \sim C_1$ or $[_{CP_2} \text{ he is going out with SUE}_{F_2}] \sim C_2$
- (80) The proposition “that it is certain that we should add to CG that he is going out with Martina” does not belong to nor does it imply a member of $[[\text{he is going out with SUE}_F]]^f$, which equals {“that he is going out with Sue,” “that he is going out with Martina,” “that he is going out with Pat,” . . . }.

The cases with focus-marked *NEVer* are no different. Two full-fledged disjunctive clauses, the first one containing *VERUM*, are acceptable in the context (81). But, with the same context in mind, as soon as ellipsis targets the second disjunct, the wide scope reading of *or* is lost and the double focus pronunciation is very odd, as in (82).

- (81) Context: Iqbal is planning a trip to Fuerteventura, an island where the only meats used in cooking are beef and pork. The addressee has expressed his belief that Iqbal eats beef. The speaker who utters the following sentence is convinced that one of the two disjuncts is true, though he does not know which one.
S: Given how worried Iqbal is about his diet on this trip, either *NEVer* has he eaten BEEF or he has never eaten PORK.
- (82) *Given how worried Iqbal is about his diet on this trip, either *NEVer* has he eaten BEEF or PORK.
a. *[It is certain that we should add to CG that Iqbal never ate beef] or [he never ate pork].’

As before, (82) is ruled out because its LF representation, shown in (83), has nonmatching disjuncts and hence the Focus Condition is not met.

-
- (i) Either Bill’s mother thinks he’s dating MarTIna or he is dating SUE.
(ii) *Either Bill’s mother thinks he’s dating MarTIna or SUE.

A possible way to capture this contrast is to say that the Focus Condition requires that the two *entire* disjuncts be semantically symmetrical in ellipsis, whereas it allows for semantic matching of smaller constituents in the full version. We thank the reviewer for this suggestion.

Another line of explanation exploits the projection or “percolation” possibilities of focus in full and ellipsis sentences. Under this approach, the full version (77) is able to meet the Focus Condition because focal stress on *SUE* can be understood as narrow focus marking on *SUE_F* or, crucially, as wider focus marking on the entire second IP, as in (iii) (by focus projection in Selkirk 1995 or a similar effect in Schwarzschild 1999). If so, the phonological pattern and focus marking in (77) are comparable to those in (iv).

- (iii) $[_{CP}[_{VERUM}_F \text{ He REALly IS going out with MarTIna}_{F_1}] \sim C] \sim C_1$ or $[_{CP_2} \text{ he is going out with SUE}_{F_2}] \sim C_2$.
(iv) (His friends think he’s seeing Martina. Thus,) Either he REALly IS going out with MarTIna or $[_{IP_2} \text{ he’s managed to fool his FRIENDS}]_F$.

In contrast, focal stress on the remnant of ellipsis in (78) is not able to project to a wider focus marking. In fact, Merchant’s (2001:179) and Romero’s (2000:162–164) version of the FDC explicitly prohibits deletion of constituents focus-marked by focus projection (even if they would not be pronounced with focal stress) in order to account for some data on sluicing and on German reduced conditionals.

- (83) * $[_{CP_1}[_{VERUM_F} \text{NEVer has Iqbal eaten BEEF}_{F_1}] \sim C_1] \sim C_1$ or $[_{CP_2} \text{Iqbal has never eaten PORK}_{F_2}] \sim C_2$

To sum up, in this section we have argued for the following points. In declarative *either . . . or* constructions, *either* marks the left periphery of the first disjunct while some material is optionally deleted in the second disjunct (Schwarz 1999). Given the overt sequence (84) in our ellipsis examples, two potential LF representations generating the wide scope reading of *either . . . or* arise: (84a) and (84b). The representation (84a), which includes focus-marked $VERUM$ in both disjuncts, violates the FDC owing to the deletion of $VERUM_F$ and its phonological locus, and it is thus ruled out. The representation (84b) has $VERUM$ in the first disjunct only. This representation is also ill formed, since the two disjuncts are not semantically parallel and hence the Focus Condition for the focus-marked XP and YP is not met.

- (84) Either $X_{VERUM_F} \dots XP$ or YP .
 a. *Either $[_{VERUM_F} \dots XP_F]$ or $[_{\overline{VERUM_F}} \dots YP_F]$
 b. *Either $[_{VERUM_F} \dots XP_F]$ or $[_{\overline{\dots}} YP_F]$

In conclusion, since no LF representation is well formed when $VERUM_F$ is present and ellipsis targets the second disjunct, *either . . . or* constructions of the shape (84) with *REALLY IS* and preposed *NEVer* are ungrammatical.

5.2 Whether/Q . . . or Constructions

We will now turn to our analysis of *whether/Q . . . or* constructions. We will first argue that *whether/Q . . . or* constructions involve ellipsis as well, just like *either . . . or* constructions. But in addition to ellipsis, they involve *wh*-movement of *whether/Q*, and so they are subject to constraints on movement, showing island effects and intervention effects. We will then consider three possible ways of locating *verum* focus and $VERUM$ to try to obtain wide scope disjunction: (a) $VERUM$ is within both disjuncts, (b) $VERUM$ is within the first disjunct only, and (c) $VERUM$ is outside the disjuncts but *whether/Q wh*-moves above it. We will show that each case in turn fails and thus we will rule out the alt-reading altogether.

5.2.1 Ellipsis in whether/Q . . . or Constructions Schwarz (1999) did not extend the ellipsis account of *either . . . or* to *whether/Q . . . or* constructions, because the two constructions show asymmetries in the types of ellipsis allowed. First, ellipsis of verbal particles in the first disjunct is marginal in *either . . . or* but perfect in *whether/Q . . . or* constructions, as in (85).

- (85) *Ellipsis of verbal particles*
 a. ??Either this pissed BILL or SUE off.
 either $[_{IP} \text{this pissed BILL off}]$ or $[_{IP} \text{this pissed SUE off}]$
 b. Did this piss BILL or SUE off?
 $Q [_C \text{did this piss BILL off}]$ or $[_C \text{did this piss SUE off}]$

Second, eliding materials from a clause higher than the finite clause with which *or* is associated

results in marginality for *either . . . or*, but it yields grammaticality for *whether/Q . . . or*, as in (86).

(86) *Ellipsis across matrix and embedded finite clauses*

- a. ??Either Bill said that John was reTIRing or reSIGNing.
 either [_{IP} Bill said that John was reTIRing] or [_{IP} ~~Bill said that John was reSIGNing~~]
- b. Did Bill say that John was reTIRing or reSIGNing?
 Q [_{C'} did Bill say that John was reTIRing] or [_{C'} ~~did Bill say that John was reSIGNing~~]

Note, however, that the corresponding *either . . . or* constructions in which *either* is lower in the clause are well formed.

- (87) a. This either pissed BILL or SUE off.
 this either [_{VP} pissed BILL t_j] or [_{VP} ~~pissed~~ SUE t_j] off_j
- b. Bill said either that John was reTIRing or reSIGNing.
 Bill said either [_{CP} that John was reTIRing] or [_{CP} ~~that John was reSIGNing~~]

According to Schwarz, in (87a) *either* is adjoined to VP, marking the left periphery of the first disjunct, and the particle *off* has undergone right node raising. Given this analysis, the only elided material is the verb *pissed* in the second disjunct, and so the ellipsis does not target the particle *off*.¹⁷ In (87b), *either* is adjoined to CP, and so ellipsis is restricted to the embedded finite clause.

We point out that *whether/Q* is a *wh*-phrase, while *either* is not, and claim that *whether/Q* can undergo movement, as in Larson 1985. Thus, the trace of *whether/Q* corresponds to the surface position of *either*. This means that the left edge of ellipsis can be the originating position of *whether/Q*, and not its surface position, and that as long as there is a grammatical source sentence with *either*, the corresponding *whether/Q* sentence should be fine. This, then, is the reason why *whether/Q . . . or* constructions appear to allow ellipsis of verbal particles in the first disjunct and ellipsis across matrix and embedded finite clauses. The LF representations we propose for (85b) and (86b) are given in (88a) and (88b), respectively.

- (88) a. Did this piss BILL or SUE off?
 Q_i did this t_i [_{VP} piss BILL t_j] or [_{VP} ~~piss~~ SUE t_j] off_j
- b. Did Bill say that John was reTIRing or reSIGNing?
 Q_i did Bill say t_i [_{CP} that John was reTIRing] or [_{CP} ~~that John was reSIGNing~~]

The apparent ellipsis of a verbal particle in (85b) actually involves disjunction of VPs with a

¹⁷ Schwarz assumes that while right node raising above VP is possible, the option of right node raising above IP is difficult, if not impossible. This, then, is why (85a) (repeated here as (ia)) is degraded: the particle would have to right-node-raise above IP, as in (ib).

- (i) a. ??Either this pissed BILL or SUE off.
 b. ??either [_{IP} this pissed BILL t_j] or [_{IP} ~~this pissed~~ SUE t_j] off_j

right-node-raised particle *off*, and the apparent ellipsis across matrix and embedded finite clauses in (86b) actually involves disjunction of *that*-clauses.

If *whether/Q* undergoes movement, we would expect constraints on movement to apply, inducing, for example, island effects (Ross 1967) and intervention effects (Beck 1996, Beck and Kim 1997, Kim 2002). This prediction is borne out. As noted in Larson 1985, (90) cannot have an alt-reading because it would involve *whether/Q* movement out of a complex NP, which is an island for movement (cf. (89)).

(89) *What did John hear the news that Bill ate t?

(90) Did John hear the news that Bill was reTIRing or reSIGNing?

Q_i did John hear [the news t_i that Bill was reTIRing or reSIGNing] (*alt-reading)

Whether/Q movement also shows intervention effects. Beck (1996) and Beck and Kim (1997) observe that in (91a), the LF movement of the in-situ *wo* ‘where’ is blocked by the intervening focus phrase *nur Karl* ‘only Karl’ (but it is acceptable with the bare name *Karl*).¹⁸ As observed in Kim 2002, the same intervention effect obtains for alt-questions: the alt-reading and the double focus pronunciation of (91b) are not available when we add *nur* ‘only’ to *Hans*.¹⁹

(91) a. Wen hat (*nur) Karl wo getroffen?

whom has only Karl where met

‘Who did (*only) Karl meet where?’ (from Beck 1996)

b. Hat (*nur) Hans gesagt, dass ich SCHLAFe oder ESSE?

has only Hans said that I sleep or eat

‘Did (*only) Hans say that I’m sleeping or eating?’

Hence, we take *whether/Q* to be like *either* (its base position marks the left edge of the first disjunct) except that *whether/Q* then undergoes *wh*-movement. Now, the important question arises whether, for an example like (92), *whether/Q* is the *wh*-version of clausal *either* (adjoined to VP or higher, as in (88) and (92a)) or the *wh*-version of NP *either* (as in (92b)).²⁰

(92) Did John drink COFFee or TEA?

a. *Whether/Q as clausal either*

Q_i did [t_i [_{IP} John drink COFFee] or [_{IP} ~~John drink~~ TEA]]

b. *Whether/Q as NP either*

Q_i did John drink [t_i [_{NP} COFFee] or [_{NP} TEA]]

¹⁸ Operators inducing an intervention effect include quantified structures and negation in Beck 1996. Kim (2002) defines the class of interveners as focus-sensitive operators (see also footnote 21).

¹⁹ We will show in section 5.2.4 that this intervention effect rules out one of the potential derivations of the alt-reading in *whether/Q . . . or* constructions with *verum focus*.

²⁰ Given that disjunction is cross-categorial and that clause-bound ellipsis exists, the grammar can, in principle, generate both representations (92a–b). We need the ellipsis analysis developed in this article to account for the incompatibility of clausal *either . . . or* constructions with *VERUM*, as we showed in section 5.1. The question, then, is whether all we need is to apply the ellipsis analysis from that section to *whether/Q . . . or* constructions or whether, in addition to that, we need a second analysis for the NP-*wh + either* derivation.

Whether/Q acts as the *wh*-version of clausal *either* and not as the *wh*-version of NP *either* in view of three kinds of data. First, as we argued in Han and Romero 2002, alt-questions in several SOV languages have the surface structure [Q . . . SOV or O] rather than [Q . . . S O-or-O V], as illustrated in (93)–(94) for Hindi. This is so even when the SOV language at issue has a scoping mechanism (e.g., obligatory scope marking with *kyaa* in Hindi, comparable to *wh*-movement in English) that could in principle have generated the alt-reading from the [Q . . . S O-or-O V] order in the same way that it generates it for regular *wh*-phrases (Dayal 1996).

- (93) (Kyaa) Chandra-ne *coffee yaa chai pii*?
 what Chandra-ERG *coffee or tea* drink-PFV
 ‘Is it the case that Chandra drank coffee or tea?’ (yn-question only)
- (94) a. (Kyaa) Chandra-ne *coffee pii yaa chai*?
 what Chandra-ERG *coffee* drink-PFV or *tea*
 ‘Which of these two things did Chandra drink: coffee or tea?’ (alt-question)
- b. (Kyaa) Q [Chandra-ne *coffee pii*] yaa [Chandra-ne *chai pii*]?
 what Q Chandra-ERG *coffee* drink-PFV or Chandra-ERG *tea* drink-PFV

Second, we showed that the disjunct associated with *whether/Q* bears double focus stress (Bartels 1997, Romero 1998). That is, each disjunct must have a focus pitch in an alt-question, as in (92). If only movement is involved, it is not clear why the alt-structure in (92b) is pronounced with double focus stress but the yn-structure in (95) is not.²¹

- (95) Yes-no *question*
 Q_i (t_i or not) [did John drink [coffee or tea]]

If, however, the *wh*-version of clausal *either* is necessarily involved in the syntax of alt-questions, ellipsis is involved in these examples too and the function of this double focus can be explained as the usual contrastive focus falling on remnants and correlates.²²

Third and finally, quantified NPs like *every course* can take scope over the VERUM operator. In (96), for example, the embedded object *every course* can take scope over the matrix subject, crossing over VERUM. This possibility predicts that a disjunctive NP like *either John or Mary* can

²¹ Kim (2002) proposes that the above intervention effects are related to focus in the following way. The question morpheme Q is a focus-sensitive operator that must associate with the in-situ *wh*-phrase or the in-situ disjunctive phrase, and the focus-sensitive operator *nur* ‘only’ intervenes, blocking that link. But note that all that Kim’s proposal justifies is that the phrase *coffee or tea* be focus-marked and hence that it receive *some* focal stress—for example, focal stress for global focus marking as in (i). Kim’s approach does not predict the characteristic double focus intonation of alt-readings.

(i) Juice won’t help. If I want to wake up, what I need to drink is [coffee or TEA]_F.

²² Bartels (1997:197ff.) presents a detailed phonological analysis of the double focus in the disjuncts and the downstep sequence between them to support the same idea that alt-questions involve clausal disjunction.

take scope over VERUM as well. This prediction is borne out. Example (97) has a wide scope disjunction reading parallel to that of (66).²³

(96) At least one student claimed to REALly HAVE followed every course.

(97) Context: We heard many contradictory assertions about John. Now, we have narrowed them down to two possibilities.

S: He REALly IS/ISn't going out with either MARY or SUE. (But I don't know which one.)

This means that if *whether/Q . . . or* could be the *wh*-version of NP *either*, sentences like *Didn't John drink COFfee or TEA?* and *DID John REALly drink COFfee or TEA?* could have a derivation in which the NP disjunct takes scope over VERUM even before *wh*-movement of *whether/Q* occurs. But this would then derive the alt-reading for these two questions, which is missing.

The question remains why in alt-questions the derivation involving the *wh*-version of clausal *either* with ellipsis wins over the pure movement derivation with the *wh*-version of NP *either*. We do not have a full answer to this question. However, in Han and Romero, to appear, we note that, for an alt-question like *Did John drink COFfee or TEA?*, the overall movement in the clausal *either* derivation is shorter than the movement that the NP *either* derivation would yield. An economy principle preferring as little movement as possible or Shortest Move may point toward an answer: it may be that, for a given reading, shorter or less movement from disjunction of larger constituents (with consequent ellipsis) is preferred over longer or more movement from disjunction of smaller constituents.

5.2.2 *Verum Focus in Both Disjuncts* *Whether/Q . . . or* constructions without any ellipsis can in general have verum focus in both disjuncts. For instance, in (98S) both disjuncts contain verum-focused *IS . . . REALly* and the sentence is acceptable in the given context. Note that the two clausal disjuncts constitute one alt-question and not two separate yn-questions, since we can embed them as the (single) interrogative complement of a question-taking verb like *find out*, as in (98S').

(98) Context: We heard many contradictory assertions about John. Now, we have narrowed them down to two possibilities.

S: IS he REALly going out with MarTIna or IS he REALly going out with Sue?

S': I need to find out whether he REALly IS going out with MarTIna or he REALly IS going out with SUE.

It must be noted that, just as full disjunctive declaratives with VERUM in both disjuncts are awkward in isolation, so full *whether/Q . . . or* constructions with VERUM in both disjuncts sound degraded without an appropriate context. The pragmatic conflict between the alternative reading

²³ We thank a reviewer for pointing out the data with quantified NPs in (96) and for urging us to check how NP *either* behaves in this respect.

and VERUM is this: the VERUM operator in each disjunctive clause indicates that the speaker is biased against the truth of the clause (section 3.2), but at the same time the alt-question presupposes that exactly one of the disjuncts must be true. This having been said, it is still possible to come up with the right context that allows for the use of full *whether/Q . . . or* constructions with VERUM in both disjuncts, as in (98).

But, as with declaratives, the wide scope reading of disjunction disappears—and in fact the double focus on the disjuncts makes the sentence deviant—as soon as ellipsis is involved. This is shown in (99). This is because the representation of (99) in (100a) and the corresponding reading in (100b) involve deleting focus-marked material, in violation of the FDC.²⁴

(99) ???IS he REALly going out with MarTIna or with SUE?

- (100) a. * $Q_i t_i [C_1 [\text{VERUM}_F \text{ IS he REALly going out with MarTIna}_{F_1}] \sim C'] \sim C_1$
 or $[C_2 [\text{VERUM}_F \text{ IS he REALly going out with SUE}_{F_2}] \sim C'] \sim C_2$
 b. *‘Which is true: it is certain that we should add to CG that he is going out with
 Martina or it is certain that we should add to CG that he is going out with Sue?’

The same reasoning applies to *whether/Q . . . or* constructions with preposed negation. Again, we note that the full *whether/Q . . . or* construction (101) with VERUM in each disjunct is already awkward because of the pragmatic conflict between alt-questions and the epistemic bias contributed by VERUM in each disjunct.²⁵

- (101) Context: S planned for two nonalcoholic beverages: punch and cola.
 A: The teetotalers are complaining that there is only one nonalcoholic choice.
 S: What!?! Didn't PAUL bring PUNCH or didn't SUE bring COLA?

²⁴ Bartels (1997:200–201) suggests that the alt-reading in sentences like (99) is impossible because it would amount to a multiple question of the form ‘For which $R \in \{\text{yes, no}\}$ and $x \in \{\text{Martina, Sue}\}$: he R is going out with x ’ and *whether* cannot participate in multiple questions. We agree that the multiple alt-question reading can be ruled out for this reason. Still, we need to rule out the *simple* alt-reading where only the disjunctive PP *with MarTIna or with SUE* is associated with *whether/Q*. This reading—available for the full version in (98) but unavailable for the ellipsis version (99)—is ruled out by the FDC.

²⁵ The pragmatic conflict in the full version (101) is more severe than that in (98) and could not be overcome by some speakers. We do not presently know why that is the case. Note, though, that for some speakers, it is possible to have a full-fledged alt-question with VERUM arising from preposed negation in the first conjunct and with VERUM arising from *AUX . . . REALly* in the second conjunct, as shown in (ia) and (iia). For these speakers, (ia) and (iia) can be reported as the embedded alt-questions (ib) and (iib), showing that, in both examples, the two disjuncts form one alt-question. Hence, in some configurations, preposed negation VERUM does not conflict with the presupposition of the alt-question (see also the examples in footnote 26). We leave the variation in the pragmatic conflict among these examples for future research.

- (i) Context: I'm coughing and looking very sick while getting ready to leave the house to go to work.
 a. Shouldn't you stay home today or do you REALly have to go?
 b. I asked her whether she shouldn't stay home or she REALly had to go.
 (ii) a. Can't you call her at home or do you REALly have to call her at work?
 b. I asked him whether he couldn't call her at home or he REALly had to call her at work.

However, we were able to verify that those speakers who deemed the full version (101) appropriate in the given context found the elided version in (102) impossible in the same context, indicating a contrast between full and elided versions. This is because the derivation of the alt-reading incurs an FDC violation, as illustrated in (103).

(102) S: *What!? Didn't PAUL bring PUNCH or SUE COLA?

(103) a. *Q_i t_i [_{C₁}'[VERUM_F didn't PAUL_F bring PUNCH_{F₁}]'~C]~C₁
or [_{C₂}'[VERUM_F didn't SUE_F bring COLA_{F₂}]'~C]~C₂

b. *'Which is true: it is certain that we should add to CG that Paul didn't bring punch or it is certain that we should add to CG that Sue didn't bring cola?'

5.2.3 *Verum Focus in One Disjunct* In *whether/Q . . . or* constructions without ellipsis, *verum focus* can in principle be placed in the first disjunct without any corresponding *verum focus* in the second disjunct. In (104), for example, (104S) contains a *verum focus* on *IS . . . REALLY* in the first disjunct but not in the second disjunct. This question is fine in the context described and has an alt-reading. Note also that the question can be embedded as a single alt-question, as in (104S').

(104) Context: Someone said he is going out with Martina, the person he has had a crush on for the last three years. We were not sure that was true. Now, seeing how busy he is, we arrive at the conclusion that either that was true and he is completely devoted to Martina, or he is going out with Sue, who we know to be an extremely socially busy person.

S: I see how busy he is. IS he REALLY going out with MarTIna or is he going out with SUE?

S': I see how busy he is. I wonder whether he REALLY IS going out with MarTIna or he is going out with SUE?

But, if the sentence has ellipsis in the second disjunct, as in (105), the relevant reading (106b) disappears and the sentence with the double focus is deviant. As in the case of declaratives, this is because the LF representation that would give rise to this reading violates the Focus Condition. In the LF representation (106a), the two disjuncts are not semantically parallel and hence the Focus Condition is not met (in particular, $\llbracket C_1 \rrbracket$ does not belong to, nor does it imply, a member of $\llbracket C_2 \rrbracket^f$).

(105) ???I see how busy he is. Is he REALLY going out with MarTIna or with SUE?

(106) a. *Q_i t_i [_{C₁}'[VERUM_F is he REALLY going out with MarTIna_{F₁}]'~C]~C₁ or [_{C₂}'~~is he going out~~ with SUE_{F₂}]'~C]~C₂

b. *'Which is true: [it is certain that we should add to CG that he is going out with Martina], or [he is going out with Sue]?'

Interrogative disjunctive constructions with preposed negation in the first disjunct are no

different. When no ellipsis is involved, it is possible to have preposed negation and VERUM in the first disjunct without a corresponding VERUM in the second disjunct, as illustrated in (107).²⁶

- (107) Context: S is organizing a party and Paul is supposed to bring punch and cola.
 A: I'm sick of Paul! You can't trust him with anything . . .
 S: Why are you so mad at him? Didn't he bring the PUNCH, or did he not bring the COLa?

But, once ellipsis is involved, the relevant reading (108b) disappears and the double focus pronunciation makes the sentence odd. Again, this is because its possible LF representation is ill formed: (108a) does not fulfill the Focus Condition.

- (108) a. * $Q_i t_i [C_1 [\text{VERUM}_F \text{ didn't he bring the PUNCH}_{F_1}] \sim C_1 \text{ or } [C_2' \text{ did he not bring the COLa}_{F_2}] \sim C_2$
 b. *'[Which is true: it is certain that we should add to CG that he did not bring the punch], or [he did not bring the cola]?'

5.2.4 *Verum Focus outside the Disjuncts* We have seen that when ellipsis is involved, verum focus and VERUM cannot be placed within one or both disjuncts to generate the alt-reading. But what happens if verum focus is placed outside the two disjuncts? Recall that unlike *either*, *whether*/*Q* is a *wh*-element and it can undergo *wh*-movement. Hence, the question is this: can the alt-reading be generated by having verum focus outside the two disjuncts and letting *whether*/*Q* move over it, as in the schema (109)?

- (109) [$Q_i \text{ VERUM}_F \dots t_i [X_P \dots A \dots] \text{ or } [X_P \dots B \dots]$]

The answer is no: this structure cannot generate the alt-reading for questions (99) and (102) above or for (110) below. We illustrate this with example (110), where disjunction coordinates two *that*-clauses and verum-focused *didn't* is base-generated outside the disjuncts. There are in principle two potential LF representations for this sentence, which are spelled out in (111).

²⁶ The following examples show that disjunctive structures with preposed negation in the first disjunct can form an alt-question and not just two separate yn-questions, since the (b) sentences can be used as a report of the direct (a) questions.

- (i) a. Aren't you gonna lift a finger to help or will you finally give us a hand?
 b. I asked him whether he wasn't gonna lift a finger to help or he would finally give us a hand.
 (ii) a. Can't you call her yourself or do I need to do that too?
 b. I asked him whether he couldn't call her himself or I had to do that too.
 (iii) a. A: John hasn't had a date in a long time.
 S: Are you sure? Didn't he go to the movies with MarTIna, or did he go with his SISter?
 b. I asked him whether he didn't go to the movies with MarTIna or he went with his SISter.

- (110) Didn't Mary say that John was retiring or resigning?
- (111) a. * Q_i VERUM_F [didn't Mary say t_i [that John was reTIRing] or [~~that John was reSIGNing~~]] (alt-reading)
 b. Q_i t_i (or not) [VERUM_F [didn't Mary say [that John was retiring] or [~~that John was resigning~~]]] (yn-reading)

The LF representation in (111a) follows the schema in (109) and corresponds to the alt-reading, but it contains an intervention configuration like the one illustrated in (91b): a blocking operator—in this case, VERUM_F—intervenes between Q and its trace position. Hence, this LF representation is ruled out. There is no intervention effect in the LF representation in (111b), but this configuration generates the yn-reading, not the alt-reading.²⁷

To sum up, in this section we have argued for the following points. We have proposed to extend Schwarz's (1999) ellipsis analysis of declarative *either . . . or* constructions to interrogative *whether/Q . . . or*, adding Larson's (1985) insight that *whether/Q* can undergo *wh*-movement. Given the overt sequence (112), three potential LF representations generating the alt-reading arise, indicated in (112a–c). The LF structure (112a) violates the FDC, as in its declarative counterpart, and it is thus ruled out. The same fate awaits (112b), which does not satisfy the Focus Condition for the double focus on the disjuncts. The third possibility in (112c) arises because *whether/Q* can undergo movement. Here, VERUM_F is outside the disjuncts and *whether/Q* moves over it from the periphery of the first disjunct. However, this final possibility is also illicit, since it presents an intervention effect for the *wh*-chain (Kim 2002).

- (112) Whether/Q X_{VERUM_F} . . . XP or YP.
 a. *whether/ Q_i t_i [VERUM_F . . . XP_F] or [~~VERUM_F . . . YP_F]~~
 b. *whether/ Q_i t_i [VERUM_F . . . XP_F] or [~~· · · YP_F]~~
 c. *whether/ Q_i VERUM_F . . . t_i [. . . XP_F] or [~~· · · YP_F]~~

In conclusion, both in declaratives and in non-*wh*-questions, wide scope disjunction is impossible when, at the same time, a verum focus element—*REALly AUX*, preposed *NEVer*, or preposed negation—is present and the second disjunct includes ellipsis.²⁸

²⁷ Recall that in simple questions like (i), preposed and nonpreposed negation behave differently with respect to alt-readings, an effect that we have explained in terms of the unacceptability of the ellipsis of focused VERUM. For complex questions like (110), we propose that the violation is due not to ellipsis but to an intervention effect. Hence, we do not predict any difference between preposed and nonpreposed negation, since both types of negation contribute blocking operators (preposed *n't* contributes VERUM_F and negation, and nonpreposed *not* contributes negation). This prediction is borne out: the alt-reading in (ii) is very hard to construe. We thank a reviewer for bringing this example to our attention.

- (i) a. Did John not reTIRE or reSIGN? (alt-reading possible)
 b. *Didn't John reTIRE or reSIGN? (alt-reading impossible)
 (ii) Did Mary not say that John was retiring or resigning?

²⁸ Recall that in footnote 8, we showed that contrastive focus on regular polarity-related elements not involving VERUM does not block the wide scope reading of disjunction, as in (i). Contrastive focus in a random NP does not block it either, as shown with the extra focus on, say, *MARK* in (ii).

5.3 Further Considerations: The Relation between Neg Preposing and Verum Focus

A remaining question is why preposed negative items in English such as *didn't* and *NEVer* necessarily contribute verum focus, whereas nonpreposed negative items do not necessarily do so. It turns out that the asymmetry between preposed and nonpreposed negation is not a peculiarity of English, but is found in a number of languages. In (113)–(116), the (a) examples have negation in a relatively low site, and both the yn-reading and the alt-reading are available, depending on the focus intonation; the (b) examples have negation higher in the structure and display only the yn-reading.

(113) German

- a. Hat Hans Tee oder Kaffee nicht getrunken?
has Hans tea or coffee NEG drunk
'Did Hans not drink coffee or tea?' (yes-no, alternative Q)
- b. Hat (nicht) Hans (nicht) Tee oder Kaffee getrunken?
has NEG Hans NEG tea or coffee drunk
'Didn't Hans drink coffee or tea?' (yes-no Q)

(114) Spanish

- a. ¿Juan no bebió café o té?
Juan NEG drank coffee or tea
'Did Juan not drink coffee or tea?' (yes-no, alternative Q)
- b. ¿No bebió Juan café o té?
NEG drank Juan coffee or tea
'Didn't Juan drink coffee or tea?' (yes-no Q)

-
- (i) ?Either John has often CLEANED or FILLED the tires (though I don't know which). But either he has NEVer BALanced or ROTated them (I don't know which).
- (ii) Either JOHN bought flowers for his MOTHER or for his SISTER. And either MARK bought flowers for his UNcle or for his NEPHew.

What is the difference between contrastive focus involving VERUM and contrastive focus involving other elements? The crucial difference is this: a lexical item contributing the meaning of, say, *Mark* can be present at LF no matter whether it was phonologically accented or not; but the VERUM operator is present at LF only if there is a particular overt construction with focus that triggers its presence and focus-marks it. This means that the second sentence in (ii) has available an LF representation where *Mark* (or coindexed *he*) is present and unfocused in the second disjunct, as in (iii). That this LF representation is correct can be seen when we spell out the full version overtly, as in (iv): *he*₂ does not bear focal stress, and in fact is quite odd with it. (See Tomioka 1999 for a derivation of sloppy readings without c-command, and see Hardt 1993 for sloppy readings of nonpronominal expressions.) Such an LF representation is not available for the VERUM operator: either we have both the meaning of VERUM and focus marking of VERUM in the elided disjunct, as in (84a) and (112a) in the text, or we have neither, as in (84b) and (112b–c).

- (iii) Either [_{IP} MARK_{2,F} bought flowers for his UNcle_F] or [_{IP}₂ ~~he~~₂ bought them for his NEPHew_F].
- (iv) Either JOHN₁ bought flowers for his MOTHER or he₁ (*/*HE*₁) bought them for his SISTER. And either MARK₂ bought flowers for his UNcle or he₂ (*/*HE*₂) bought them for his NEPHew.

(115) *Modern Greek*

- a. O Yannis den ipie kafe i tsai?
 the Yannis NEG drank coffee or tea
 ‘Did Yannis not drink coffee or tea?’ (yes-no, alternative Q)
- b. Den ipie o Yannis kafe i tsai?
 NEG drank the Yannis coffee or tea
 ‘Didn’t Yannis drink coffee or tea?’ (yes-no Q)

(116) *Bulgarian*

- a. Dali Ivan ne pie kafe ili caj?
 Q Ivan NEG drink coffee or tea
 ‘Is Ivan not drinking coffee or tea?’ (yes-no, alternative Q)
- b. Ne pie li Ivan kafe ili caj?
 NEG drink Q Ivan coffee or tea
 ‘Isn’t Ivan drinking coffee or tea?’ (yes-no Q)

Note that the (un)availability of the alt-question reading does not correlate with a specific position of negation. Rather, it correlates with relative positions of negation: that is, canonical versus preposed position. In Bulgarian, just as in English, the preposed negation comes before the subject, suggesting that it occupies C^0 . And just as in English, the questions with preposed negation have only the yn-reading, whereas the questions with nonpreposed negation can have either the yn-reading or the alt-reading. However, in Spanish and Modern Greek, although the preposed negation inverts with the subject, it has been convincingly argued by Suñer (1994) for Spanish, and Alexiadou and Anagnostopoulou (1998) for Modern Greek, that the verb along with negation is not in C^0 in sentences with VSO order in these languages. Rather, the verb (along with negation) moves to I^0 and the subject stays in a VP-internal position. Therefore, examples (113)–(116) show that although the preposed negation is not in the same position in all these languages, the data pattern the same way: that is, questions with preposed negation do not have the alt-reading, whereas questions with negation in canonical position do. If we extend our analysis to these languages, we obtain the following crosslinguistic picture: neg preposing has the specific function of introducing focus-marked VERUM, whereas canonical negation does not contribute any special function.

Although we do not have a full answer for why preposed negation should necessarily contribute verum focus, we would like to point out that languages in general associate a fixed discourse function with sentences with noncanonical order, such as scrambling in Korean and Japanese; left-dislocation, topicalization, and VP-fronting in English; and focus movement in Yiddish and Hungarian (É. Kiss 1981, Prince 1984, 1998, 1999, Ward 1988, Choi 1999). Two of these are illustrated in (117).

(117) a. *Topicalization*

Sam_i, he doesn’t like t_i.

b. *Left-dislocation*

My wife_i, somebody stole her_i handbag last night.

(Ross 1967:(6.137); cf. Prince 1998:(2c))

By contrast, discourse functions of sentences with canonical order are more flexible. Canonical syntax does not impose any particular discourse function. Different discourse functions can then be achieved by varying the position of the pitch accent, as in (118), and these focal accents can in general be licensed in more ways.

- (118) a. JOHN made the pie.
 b. John made the PIE.
 c. John MADE the pie.

The difference in discourse behavior between preposed *didn't* and *NEVer*, on the one hand, and canonical *not* and *never*, on the other, is just one more instance of this form–discourse function mapping. When negation or *NEVer* is preposed, this noncanonical syntactic structure has the fixed discourse function of introducing and focus-marking the operator VERUM. But when negation and the adverb occupy their canonical position, the speaker is free to assign focus to any part of the sentence (and license that focus marking in different ways).²⁹

In fact, preposed *didn't* and preposed *NEVer* share two important features with a construction known in the pragmatic literature as focus preposing (Prince 1999). First, contrary to other left-periphery adjunctions, focus-preposed material bears a tonic stress. For instance, Prince (1999) shows that, although both topicalization and focus preposing involve fronting of an NP constituent, the tonic stress (i.e., focus marking) falls within the clause in the topicalized structure, as in (119a), whereas it falls on the preposed NP in the focus-preposed structure, as in (119b). The difference in the position of focus marking is reflected in the difference in discourse functions and information structure that they encode (see Prince 1998, 1999).

- (119) a. *Topicalization*
 Thanks to all who answered my note asking about gloves. I didn't look at this bb for several days and was astounded that there were 11 answers. *Some_i I MISSED t_i, darn.*
 (Prodigy:3/6/93; cf. Prince 1999:(1b))
 b. *Focus preposing*
 She was here two years. [checking transcript] *FIVE semesters_i she was here t_i.*
 (KM; cf. Prince 1999:(18))

Second, in languages where focus preposing is readily available for nonnegative XPs as well, like Spanish, it patterns like preposed *didn't* and *NEVer* with respect to disjunction: disjunction cannot have scope over the preposed constituent. This is illustrated in the following examples. (120) is a simple example of focus preposing of a quantificational NP. If we add disjunction to it, as in (121), we obtain a reading where the quantificational NP has scope over disjunction, as in (121a); but the wide scope disjunction reading in (121b) is impossible, no matter what intonation we place on the disjuncts (in fact, stressing the disjunctive verbs is odd).

²⁹ See footnotes 4 and 8 on nonpreposed focused *NOT* and *NEVer*.

- (120) EXACTAMENTE TRES LIBROS ha leído Juan este semestre.
 exactly three books has read Juan this semester
 ‘Exactly three books Juan has read this semester.’
- (121) EXACTAMENTE TRES LIBROS ha comprado o leído Juan este semestre.
 exactly three books has bought or read Juan this semester
 ‘Exactly three books Juan has bought or read this semester.’
- a. ‘There are exactly three books x such that Juan has bought or read x .’
 b. *‘Juan has bought exactly three books, or Juan has read exactly three books.’

On the other hand, a scope-bearing element not having to do with disjunction (e.g., *espera* ‘expect’) can have scope over preposed material, as in (122).

- (122) EXACTAMENTE TRES LIBROS espera María que escribas este año.
 exactly three books expects Maria that you-write this year
 ‘Exactly three books Maria expects you to write this year.’
expect > *exactly three*: ‘Maria expects that you cause for there to (newly) exist exactly three books.’

In sum, the peculiar behavior of preposed polarity elements with *didn’t* and *NEVer* is part of a much wider phenomenon having to do with how languages in general associate noncanonical syntactic forms with particular discourse functions. In the case of preposed *didn’t* and *NEVer*, they are associated with the discourse function of verum focus.³⁰

³⁰ All this raises another question: can we generalize the connection we established between neg preposing and VERUM in declaratives and non-*wh*-questions to other types of constructions? A construction that immediately comes to mind is negative *wh*-questions, as in (ib). However, in terms of meaning, the question with preposed negation (ib) is very similar to the one in (ia) and does not seem to involve VERUM. For reasons not known to us, the epistemic conversational *really* can only be placed outside the *wh*-question, not within it, as in the Spanish example (ii).

- (i) a. What did Iqbal not eat?
 b. What didn’t Iqbal eat?
- (ii) De verdad, qué (no) ha comido Iqbal?
 of truth what (not) has eaten Iqbal
 ‘REALLy, what has (/hasn’t) Iqbal eaten?’

Another construction that could in principle be relevant is counterfactual inversion, as in (iii).

- (iii) a. Had I not been there, Sue would have drowned.
 b. *?Hadn’t I been there, Sue would have drowned.

However, neg preposing is impossible in counterfactual inversion (at least for most speakers) and thus we cannot test the difference between preposed and nonpreposed negation. We do not currently know whether this is an accidental gap due to the historical evolution of English counterfactual inversion, or a more deeply rooted fact about the incompatibility of VERUM and counterfactuals. It seems that the semantic contribution of VERUM, when embedded in a regular (noncounterfactual) conditional like (iv) (see Höhle 1992 for VERUM arising from a focused complementizer), is to raise the implicature that the speaker does not think it very likely that the *if*-clause proposition is true. But this implicature is pointless in counterfactuals, since counterfactuals presuppose—by definition—the falsity of the proposition in the *if*-clause.

- (iv) I don’t think Ramon will marry her. But, IF he marries her, he’ll win a million dollars.

6 Conclusion

We began the article by observing that non-*wh*-questions with preposed negation and declaratives with neg preposing lack the wide scope reading of disjunction, and we showed that the same pattern is attested in affirmative questions and disjunctive declaratives with verum focus. We gave a unified focus-based account arguing that the lack of a wide scope disjunction reading in both questions and declaratives follows from the interaction between the felicity conditions of focus and the LF syntax of disjunctive structures. More specifically, we have argued for the following points: (a) Preposed negation in non-*wh*-questions, as well as in neg-preposing declaratives, carries hardwired verum focus, which introduces and focus-marks the conversational epistemic operator VERUM. (b) *Whether/Q . . . or* constructions involve ellipsis—like *either . . . or* constructions in Schwarz 1999—and *wh*-movement—as in Larson 1985. And (c) verum focus cannot be licensed in the LF representation of wide scope disjunctive structures that involve ellipsis because it always leads to a grammatical conflict: it violates the Focus Deletion Constraint, it blocks the fulfillment of the Focus Condition, or it induces an intervention effect.

In the bigger picture, the data and analysis presented here illustrate how discourse considerations—in particular, the felicity conditions of focus and ellipsis—may limit scope. It has been argued (Rooth 1992, Fox 2000) that focus triggers scope parallelism in ellipsis constructions. Here, a new type of focus/scope interaction in ellipsis has been presented: the licensing conditions on focus and the ban against deletion of focus-marked material within elliptical structures join forces to rule out the wide scope reading of disjunction.

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