

Reconstructing the syntax of focus operators*

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Abstract This paper presents novel evidence that the exclusive operator *alleen* in Dutch (and *nur* in German) can directly attach to the focus constituent it associates with, and against an analysis like the one in [Jacobs 1983](#) and [Büring & Hartmann 2001](#) which analyzes all instances of *alleen/nur* as sentential adverbs that take a single syntactic argument that denotes a proposition. Instead, we argue that *alleen/nur* takes two syntactic arguments, which combine to denote a proposition. The evidence comes from novel data showing scope reconstruction of [*alleen/nur* + DP] sequences from the prefield in Dutch (and German), adding to earlier arguments in [Reis 2005](#) and [Meyer & Sauerland 2009](#).

Keywords: focus association, scope reconstruction, *only*, adverb placement

1 Introduction

In English, focus-sensitive operators like *only* can occur both in adnominal and in adverbial positions, as shown in (1a) and (1b) respectively. In (1a), *only* occurs adjacent to the DP it associates with, and arguably adjoins directly to the DP. In the structure in (1b), *only* attaches in adverbial position to the VP, which contains the semantic focus. *Only* differs from adverbs like *always* in that it can adjoin to both VPs and DPs, while adverbs are more restricted, as shown in the comparison between (1a) and (2a).

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- (1) a. Mary used to pass [_{DP} **only** [_{DP} [syntax]_F exams]] **Adnominal**
 b. Mary_i used to [_{VP} **only** [_{VP} t_i pass [Syntax]_F exams]] **Adverbial**
- (2) a. *Mary used to pass [_{DP} **always** [_{DP} [syntax]_F exams]] **Adnominal**
 b. Mary_i used to [_{VP} **always** [_{VP} t_i pass [syntax]_F exams]] **Adverbial**

The syntax of Dutch makes it harder to identify the left edge of the VP, and hence the attachment site of *alleen* is often not obvious. Two potential parses of the Dutch equivalents of (1a) and (1b) are given in (3a) and (3b), respectively. In (3a), *alleen* forms a constituent with the DP it associates with. In (3b), *alleen* is positioned in an adverbial position on the edge of the VP.

- (3) Maria heeft **alleen** [syntax]_F examens gehaald.
 Mary has only syntax exams passed
 ‘Mary only passed syntax exams.’
- a. [_{TP} Maria heeft [_{VP} [_{DP} **alleen** [_{DP} [syntax]_F examens]] gehaald]] **Adnominal**
- b. [_{TP} Maria heeft [_{VP} **alleen** [_{VP} [_{DP} [syntax]_F examens] gehaald]]] **Adverbial**

Jacobs (1983) and Buring & Hartmann (2001) argue that in German, only adverbial attachment is possible in these cases, as in the Dutch example in (3b). We will subsume both approaches under the term ‘Adverbial Analysis’, although they also differ in certain respects. They share the prediction that *nur* cannot attach to an argument DP, but must attach to the VP node containing the DP instead.¹ Bayer (1996), Reis (2005), Sudhoff (2010), and many others assume that both adverbial and adnominal attachment are available, we will subsume these approaches under the term ‘Mixed Analysis’, following Reis (2005).

In (3), we only present data from Dutch and not their German equivalents, but all claims in this paper about Dutch apply equally to German as well, unless otherwise noted. We have included an appendix with German translations of all examples and their respective grammaticality/felicity judgments. The reason for addressing both languages is that our argument directly relates to prior arguments in the literature on both Dutch and German, and by making it clear that the relevant facts are the same in both languages we

¹ Kayne (1998) presents a related analysis for English, which also assumes that *only*, when it seems to attach to a DP, actually adjoins to an adverbial position. We will not explore the case of English in this paper.

can bring together discussions in the literature on the two languages that hitherto have been disjointed.

As already noted when it was first proposed in [Jacobs 1983](#), the Adverbial Analysis has a surprising consequence: It predicts that in cases where *alleen/nur* is placed adjacent to the constituent in first position, it must adjoin to a node containing the entire sentence, like a sentential adverb, as in (4a), rather than forming a constituent together with the subject which occupies the first position of a V_2 sentence, as in (4b), in which *only* attaches directly to the focus constituent:

- (4) a. Adverbial attachment:
[Alleen [Anna heeft Maria gekust]].
b. Adnominal attachment:
[Alleen Anna] [heeft Maria gekust].
Only Anna has Maria kissed
'Only Anna kissed Mary.'

In other words, cases in which *only* and its focus are apparently placed in first position and the verb in second position are analyzed as involving a verb-third word order instead, which is usually considered impossible in German and Dutch. This analysis also seems in conflict with the fact that this word order necessarily involves association with the subject, and is incompatible with sentence-wide focus:

- (5) A: 'Did anyone dance?'
B: #Nee. Alleen [Anna heeft Maria gekust]_F.
No. Only Anna has Maria kissed
Intended: 'The only thing that happened is that Anna kissed Mary.'

The Dutch response in (5) cannot convey that the only thing that happened is that Anna kissed Maria, which is what the context in (5) would require. *Only* cannot associate with the entire sentence in (5), it has to associate with the subject, conveying that nobody other than Anna kissed Maria. The sentence would be compatible as a response to the question 'Did Hans kiss Mary?'. In general, *only* can only associate with its sister or with constituents within its sister constituent (i.e., constituents it c-commands). The association pattern in (5) is then as expected if *only* must attach to the subject in this configuration, but remains unexplained under the Adverbial Analysis.

The strength of the Adverbial Analysis is that it can explain certain syntactic restrictions in Dutch and German that seem surprising under a Mixed

Analysis. One such restriction is that *nur/alleen* cannot attach inside Prepositional Phrases (**mit nur Hans/ *met alleen Hans* ‘with only Hans’),². This is expected if *nur/alleen* can attach only in adverbial positions (Jacobs 1983, Buring & Hartmann 2001).

Jacobs (1983) and Buring & Hartmann (2001) also note that the Adverbial Analysis predicts that in sentences in which *nur* associates with the verb, it will only be able to occur adjacent to the verb (its focus) if material that would otherwise intervene can scramble ‘out of the way’. This prediction seems to be borne out. As the comparison between (6a) and (6b) shows, *nur* cannot surface adjacent to the verb in (6b), because directional PP complements cannot scramble.

- (6) a. weil Peter Maria_i [_{VP} nur [_{VP} t_i [küsste]_F]].
 because Peter Mary only kissed
 ‘because Peter only kissed Mary.’
- b. weil man den Wagen nur [_{VP} in die Garage (*nur)
 because one the car only into the garage (*only)
 [fahren]_F darf].
 drive may
 ‘because one can only drive the car into the garage.’

Adapted from Buring & Hartmann (2001: ex.20a and 22a)

Interestingly, it seems that *nur* actually has to be placed as close to its focus as syntactically possible, or at least there is a strong preference for positioning it in this way. Jacobs (1983) and Buring & Hartmann (2001) capture this by positing a constraint that directly enforces this word order preference for being placed as close to the focus as possible, and use this constraint to explain why it often appears as if *only* attaches to the constituent it associates with—whenever possible, it will occur adjacent to it.

In addition to arguments in terms of surface syntactic distribution, Buring & Hartmann (2001) add a novel argument in favor of the Adverbial Analysis and more specifically for the claim that *nur*, when sentence-initial, does not attach to the constituent immediately preceding the verb, but to a node containing the entire sentence. The argument rests on the claim that although DP reconstruction from first position is generally possible, *nur* can never reconstruct along with the DP, as would be expected if [ONLY + DP] formed a constituent.

² Other than in certain scalar uses that we will not discuss here. See Bouma, Hendriks & Hoeksema 2007 for apparent exceptions in Dutch and German.

In this paper, we will present evidence that reconstruction of [ONLY + focus constituent] is possible after all, strengthening earlier evidence against Buring & Hartmann's (2001) claim presented in Reis 2005 and Meyer & Sauerland 2009. In the following, we will use the term ONLY when referring to the exclusive operator when we mean to refer to both *alleen* and *nur*, and use the language-specific operators (*alleen*, and *nur*) otherwise.

Before embarking on this argument, we will outline an analysis of ONLY that is compatible with the syntactic flexibility assumed in the 'mixed' approach, and yet can account for some of the syntactic constraints that motivated Jacobs (1983) and Buring & Hartmann (2001) to adopt the Adverbial Analysis. We will then use scope reconstruction as a tool to compare the two accounts.

2 A two-place syntactic analysis

Jacobs (1983) argues that German *nur* always attaches to a clausal node;³ Buring & Hartmann (2001) argue that in German, *nur* always attaches to maximal projections that are what they categorize as non-arguments. The latter analysis has the result that *nur* can attach to extended projections of the verb, but not to argument DPs. In both analyses, in order to associate with an argument DP, *nur* has to attach to an XP node containing it (e.g., VP or CP), similar to sentence adverbials like *always*. We therefore call this type of analysis the 'Adverbial Analysis'.

We will compare this analysis to the analysis of ONLY proposed in Wagner 2006, under which ONLY takes two syntactic arguments, a constituent that acts as the focus and a constituent that combines with it to form a proposition as shown in (7) (see Rooth 1985, Drubig 1994, Krifka 1996, Bayer 1996 for earlier analyses of *only* with similar assumptions).

³ Unless *nur* is used in a scalar way, a use of *nur* that we will not discuss in this paper.

(7) $\forall_{\sigma}: [\mathbf{Only}] = \lambda C. \lambda w. \lambda x \in D_{\sigma}. \lambda P \in D_{\langle \sigma, \langle s, t \rangle \rangle}.$

Presupposes⁴: $\exists z. P(z)$ in w .

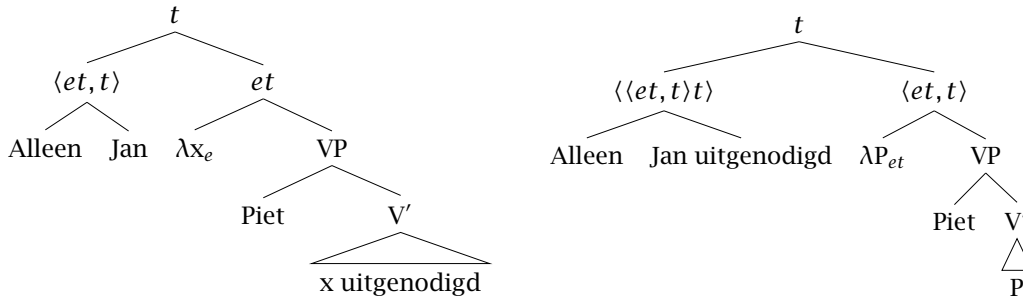
Asserts: $\forall y \in C \cap D_{\sigma}: [y \neq x \rightarrow P(y)]$ is false in w

Similar to the analysis in [Büring & Hartmann 2001](#), ONLY requires a whole family of lexical entries, one for each type σ of constituent that it can attach to. While in [Büring & Hartmann 2001](#) *only* always attaches to a node in the extended projection of a verb or a non-argument, under the current account ONLY can combine with a constituent of any type, as long as an LF can be derived in which [ONLY + focus constituent] are in a sister relation to a constituent that it can compose with to form a proposition. In this analysis, any syntactic constraints on the distribution of ONLY must be due to the impossibility of deriving an appropriate LF to interpret ONLY ([Bayer 1996](#)). Let's look at an example:

(8) Piet heeft alleen Jan uitgenodigd.
 Piet has only Jan invited

The LF's of (8) predicted by the two-place analysis are illustrated below and show 'adnominal' and 'adverbial' attachment respectively.

(9) Adnominal and Adverbial Attachment



Adnominal: Only Jan λx Piet invited x **Adverbial:** Only Jan invited λx Piet x

⁴ Whether one assumes that ONLY has an existential presupposition, as in (7), or presupposes the content of the entire sentence excluding ONLY (the 'prejacent') is not critical for our discussion. We note, however, that assuming an existential presupposition for ONLY (instead of presupposing the content of the entire sentence excluding ONLY) provides a potential account for Jacob's observation that ONLY attaches as closely to its focus as is syntactically possible. By adjoining ONLY as closely as possible, one effectively assures that the presupposition encoded by *only* is maximized (see [Wagner 2006](#): p. 315, who also proposes this). An attachment site with a smaller focus constituent will usually lead to a stronger presupposition—for example, presupposing that Piet invited someone (presupposition of DP-attachment) asymmetrically entails that Piet did something (presupposition of VP attachment). This line of argumentation, however, makes potentially problematic predictions about interactions with monotonicity that we won't explore here.

The two analyses of *only* considered here—the two-place analysis according to which both adnominal and adverbial attachment are possible, and the Adverbial Analysis, according to which only adverbial attachment is possible—derive the same overall truth conditions, assuming that we restrict the alternatives appropriately.⁵ Both analyses assume that focus association is constrained such that ONLY can only associate with constituents within the constituent it attaches to. Both employ Alternative Semantics to explain why the apparent semantic focus does not necessarily have to be the *entire* constituent it attaches to, but can be further contextually restricted.

The two analyses differ regarding their claims about the syntax of ONLY. However, they are both compatible with some of the facts that led [Jacobs \(1983\)](#) and [Büring & Hartmann \(2001\)](#) to propose the Adverbial Analysis.

For example, the above-mentioned unavailability of attachment inside PP's and VP's seems like a straightforward argument in favour of the Adverbial Analysis. However, the particular version of the Mixed Analysis assumed here is compatible with this observation. Following [Bayer \(1996\)](#), we argue that the unavailability of attachment inside PP's can be related to the fact that preposition stranding is not allowed in Dutch and German. The LF required to interpret *only*, illustrated in (10), cannot be derived because the preposition is left behind:⁶

- (10) *LF: [alleen Hans]. [λx . Jan ging op de foto met x]
 [only Hans]. [λx . Jan went on the picture with x]
 'Jan only took a picture with Hans.'

Similarly, we can account for why ONLY cannot surface to the right of a directional PP in sentence in (11a) because this is not a position from which [alleen + focus] could move to form the right configuration for interpretation at LF. The constituent structure that would be needed in (11a) can independently be shown to be infelicitous by the the observation that VP-fronting is unnatural in structures where a directional PP is stranded:

⁵ See [Rooth 1985](#): p. 85, fn 5 and [Zimmermann 2017](#) for some arguments that suggest that the Adverbial Analysis makes the wrong predictions about truth conditions in certain cases, such as *Only three is an odd number*. This sentence is intuitively false, and yet, if we assume that *only* ranges over propositional alternatives, it should come out as true. Since numbers are rigid designators, any sentence of the form *x is an odd number that involves an actual odd number* is a tautology and denotes the same proposition.

⁶ Note, however, that the distribution of *alleen* in Dutch and of *nur* in German has been shown to be different, we will not explore the full complexity of the data here ([Bouma, Hendriks & Hoeksema 2007](#)).

- (11) Can I carry the car into the garage?
- a. Je kunt de auto (alleen) in de garage (*alleen) [rijden]_F.
 You can the car only in the garage only drive
 ‘You can only drive the car into the garage.’ **Baseline**
- b. [In de garage rijden]_i kun je de auto *t_i*.
 In the garage drive can you the car *t_i*
 ‘You can drive the car into the garage.’ **Movement of VP**
- c. *[Rijden]_i kun je de auto in de garage *t_i*.
 Drive can you the car in the garage *t_i*
 ‘You can drive the car into the garage.’ **Movement of verb**

While (11b) shows that the VP containing the PP may be fronted, (11c) shows that movement of the verb by itself is unnatural. This is as expected if fronting a predicate always involves fronting the entire VP node containing it, and if directional PPs cannot scramble out of the VP.⁷ The source of the infelicity of placing *alleen* next to the verb in (11a) is the same in both theories: *alleen* actually has to attach to a VP node containing the focus in both theories. In the Adverbial Analysis, this is generally true due to semantic and selectional properties of ONLY; in the two-place theory this is a result of how ONLY interacts with syntax: By attaching ONLY to a constituent that cannot move, the right configuration to interpret ONLY cannot be derived at LF.

In sum, at least two of the syntactic arguments from Jacobs (1983) and Buring & Hartmann (2001) do not distinguish between the Adverbial Analysis and our particular version of a Mixed Analysis. Sudhoff (2010) discusses several other related data points, and shows corpus data that illustrates that the distribution of *nur* is in fact not as restricted as Jacobs (1983) claimed. A discussion of the full range of syntactic arguments is beyond the scope of this paper. See Bayer 2016 and Quek & Hirsch 2017 for relevant recent discussions. In the following, we will focus on how the two analyses compare when it comes to the facts about scope reconstruction.

⁷ Note that in cases in which all other material can be scrambled, moving a VP only containing the verb is acceptable (i):

- (i) [_{VP} *t_i* Gekust]_k heeft Peter Maria_i *t_k*.
t_i kissed has Peter Maria *t_k*
 ‘Peter kissed Mary.’ **Movement of verb**

3 The reconstruction argument

Büring & Hartmann (2001) argue that [*nur* + DP] generally cannot reconstruct because *nur* and the following DP do not form a constituent under the Adverbial Analysis. The sequence in first position in (12), for example, is argued to be unable to reconstruct under the universal quantifier *every*. The inverse scope reading in (12b) should then be unavailable, which is unexpected if *nur* can attach to a DP:

- (12) Nur [Maria]_i liebt jeder _{t_i}.
Only Mary-ACC loves everyone-NOM _{t_i}
- a. **Surface Scope:** ✓ ‘Mary is the only one such that everyone loves her.’
 - b. **Reconstructed Scope:** * ‘Everyone loves only Mary.’

If the reconstructed reading was available, then this would constitute evidence for [*nur* + DP] to form a constituent.

Reis (2005) and Meyer & Sauerland (2009) countered this argument with the observation that reconstruction of the [*nur* + DP] sequence in the prefield is possible with certain other quantifiers:

- (13) Nur Maria_i liebt keiner _{t_i}.
only Mary-ACC lover nobody-NOM _{t_i}
- a. **Surface Scope:** ✓ ‘The only one nobody loves is Mary.’
 - b. **Reconstructed Scope:** ✓ ‘Nobody loves Mary and no other person.’
(Meyer & Sauerland 2009: Ex.11)

In this example with the negative quantifier ‘*keiner*’, both readings are clearly available in (13). One natural way to pronounce this sentence under the reconstructed scope reading is to use a contrastive topic intonation (Büring 1997), and Sudhoff (2010: p.168) reports that under this intonation only the reconstructed reading is available. When using the same intonation in (12), a reconstructed reading seems unavailable, just as Büring & Hartmann (2001) observe. But as Sudhoff (2010) points out, this is not surprising, given that the reconstructed reading would be incompatible with the pragmatic import of this intonation: According to Büring (1997) the intonation implies that there has to be some alternative that remains disputable after uttering the sentence, but the reconstructed reading would arguably resolve all relevant

alternatives.⁸ The important point about (13) is that if it is true that reconstruction is possible here, then this shows that *nur* can at least *sometimes* attach to DPs, and the Adverbial Analysis can therefore not be correct in its strongest form.

Meyer & Sauerland (2009) assume with Buring & Hartmann (2001) that the reconstructed reading in (12) is indeed at least undetectable, but they present an alternative explanation to Buring & Hartmann's for this. Meyer & Sauerland (2009) argue that the availability of (12b) is masked by a reading that can be judged true in a larger set of circumstances, namely (12a). Their argument is based on the *Truth Dominance* principle, which claims that if a reading is ambiguous and it is true under its most accessible reading, it will be judged as true (see also Reinhart 1976, Abusch 1994). In (12), the reconstructed scope reading is undetectable as its truth entails that of the surface scope reading. In other words, we cannot find a context where the reconstructed scope reading is true and the surface scope reading is false; if everyone loves only Mary, it also has to be the case that Mary is the only one who is loved by everyone. In (13), by contrast, this explanation correctly predicts that the reconstructed reading should be detectable. Given that the reconstructed scope reading does not entail the surface scope reading, this sentence has a logically independent reading that can be tested for. In structures with a negative quantifier in subject position, as is the case for (13), the reconstructed reading is available in (13b) because the entailment relations are reversed.

In the prior literature, the claim that the original example in (12) does not allow reconstruction has not been contested. We first note, however, that the intuition that the reconstructed reading is absent in (12) is intuitively not obvious at all when pronouncing the sentence with main prominence on the fronted constituent (Bayer (2016) independently made this observation). In the following, we will discuss several arguments that show that reconstruction in fact is available and detectable for [ONLY+universal] after all. In addition, we look at the scopal interactions between ONLY and various adverbs, which provide clear evidence for the possibility of reconstructing [ONLY + DP]. Our arguments show that the parse of (12) that treats [ONLY + DP] as a

⁸ See Buring 1997 for a detailed discussion of such disambiguation effects due to contrastive topic marking. Buring (1997) implements this using alternative questions (or 'topic-semantic values') rather than alternative propositions, we will not get into the details here.

constituent is available after all, and we will in fact see evidence that it might be the *only* parse available.⁹

3.1 Argument 1: Revealing a logically stronger reading

In ambiguous structures in which the two readings stand in an entailment relationship, the presence of the stronger reading is notoriously hard to detect. This makes it difficult to probe our intuitions about (12). In any situation in which everyone likes only Mary it will also be true that only Mary is such that everyone likes her. A similar issue often arises with evaluating the scope of negation. Consider the following example, in which the existential operator within the negative quantifier might take different scopes with respect to negation (Potts 2000):

- (14) The company needs to fire no employee.
- a. There are no employees x such that the company is obligated to fire x .
 - b. It is not the case that the company is obligated to fire employees.

It is clear that reading (a) can be true while (b) is false, for example, maybe the company decided that they need to fire one employee but does not know which one. Then there is no particular employee that the company must fire, as claimed in (a). It thus seems clear that the sentence has reading (a). But how can we be sure that it also has reading (b)? To show proof of an ambiguity, we would want to construct a scenario in which (b) is true and (a) is false (cf. Gillon 1987). But this is impossible here, since any situation that makes (b) true will also make (a) true, since (b) entails (a). However, Potts (2000) (see also Gajewski 2005: pp. 43-44) illustrates a strategy to show that (14) is indeed ambiguous, by adding the following context:

- (15) Suppose Mike, nervous employee of much-hyped.com whose stock has plummeted, says to his fellow employee Greg, “I hear the company’s going to fire someone. We’re all equally likely to get the boot; they just need to make a cut.”

⁹ Buring & Hartmann (2001: pp. 263-267) also discuss cases in which ONLY at least apparently attaches to fronted CPs. They use these examples to argue that *nur* cannot attach to non-arguments rather than about being restricted to attach to extended projections of the verb. We will not discuss CP-adjunction here, but acknowledge this data would also need to be addressed for a more complete argument.

Potts observes that Greg could use (14) to contradict Mike's statement. But if (14) only had reading (a), this contradiction would not make any sense. The felicity of using the sentence to contradict Mike therefore shows that reading (b) must be available. The trick is to create a situation in which only the logically stronger reading would lead to a contradiction. We can apply this test to our case (thanks to Junko Shimoyama for the suggestion). Consider the sentence in (16). If reconstruction is possible, it should have two readings:

- (16) Alleen de vluchtwagen heeft iedereen gezien.
only the escape car has everyone seen.
Surface Scope: 'Only the escape car is such that everyone saw that.'
Reconstructed Scope: 'Everyone only saw the escape car.'

We can test for the reconstructed reading by creating a situation in which only that reading would be a coherent way to deny something that was previously said.

- (17) **Context:** *There's been a bank robbery, and the inspector asks one of his assistants about the investigation.*
A: Did anyone see the bank robber?
B: Nee, alleen de vluchtwagen heeft iedereen gezien.
No, only the escape car has everyone seen
Surface Scope: 'Only the escape car is such that everyone saw that.' (infelicitous)
Reconstructed Scope: 'Everyone only saw the escape car.'

If (16) only had the surface scope reading, the dialogue in (17) should be incoherent, but it is perfectly fine—at least when the response is pronounced with main prominence on the subject. Rather than looking at which propositions our target sentence involving *alleen* can be used to contradict, we can also test what responses are possible contradictions of that sentence. Consider the following dialogue:

- (18) A: Er zijn zoveel getuigen, maar er is geen enkel spoor.
There are so many witnesses, but there is no single clue.
Alleen de vluchtwagen heeft iedereen gezien.
Only the escape car has everyone seen

B: Dat is niet waar! Een klein jongetje heeft ook de dader
 That is not true! A little boy has also the perpetrator
 gezien.
 seen
 ‘That’s not true. A little boy also saw the perpetrator.’

These tests based on the coherence of contradictions show that reconstruction is possible, even in cases where it is hard to detect for the reasons outlined in Meyer & Sauerland 2009. The possibility of reconstruction shows that [ONLY + DP] can form a constituent after all.

3.2 Argument 2: Scope reconstruction relative to adverbials

Another test can be devised based on the relative scope of a constituent in first position and adverbs in the middle field.¹⁰ An argument placed in first position can scope below an adverb:

(19) Twee mensen uit New York zullen alweer komen.
 two people from New York will again come
again > **two people from New York** / **two people from New York** >
again

A standard assumption is that low scope requires reconstruction into the trace position. Interestingly, when an argument precedes an adverb in the middle field, the argument cannot take scope below the adverb:¹¹

¹⁰ ‘Middle field’ is a descriptive term used in V2 languages like German and Dutch that describes all constituents that linearly follow the inflected verb and precede the sentence final predicate(s). Our argument is compatible with standard approaches to the syntax of V2 such as Travis 1984.

¹¹ As shown in the appendix, the same generalization holds in German. We note that this conflicts with the generalization about scope and word order in Frey 1993. According to Frey, word orders which deviate from the canonical word order lead to scope ambiguities, since they always allow reconstruction of the moved argument into the lower trace position, including reconstruction below an adjunct (Frey 1993: 193ff). This, however, appears not to be true for the adverb *alweer* in Dutch and *wieder* in German, since neither word order in (20) is ambiguous. One possible explanation why movement across an adverb cannot reconstruct in the middle field is that the traces left by movement in the middle field are necessarily all of type *e*. Another possibility is to assume that arguments can be base-generated above the adverb (see Fanselow 2003, 2001, Neeleman & Koot 2008: for discussion), and to further assume that base-generating an argument low and then moving above an adverb is impossible. For example, Neeleman & Reinhart (1998) assume a cross-derivational constraint that prefers base-generation over deriving a word order by movement. Maybe movement to first

- (20) a. dat twee mensen uit New York alweer zullen komen.
 that two people from New York again will come
 ‘that again two people from New York will come.’
 b. dat alweer twee mensen uit New York zullen komen.
 that again two people from New York will come
 ‘that two people from New York will again come.’
 (*modified from Neeleman & Koot 2007 as cited in Szendroi 2010*)

We can use reconstruction under adverbs from first position as a further test for the constituency of [ONLY+DP]. To do so, we need a context that is incompatible with the surface scope reading. In order to test whether our context is successful in making surface scope infelicitous, we can use the configuration in which *only* precedes *alweer* in the middle field, where we know independently that reconstruction should be impossible. And indeed, our context is successful in making wide scope over the adverb infelicitous:

- (21) A: Last week, everyone but Jan did their homework. What do you think happened this week?
 B: Ik denk dat alweer alleen Jan zijn huiswerk niet heeft
 I think that again only Jan his homework not has
 gemaakt.
 made
 ‘I think that John was again the only one who didn’t do his homework.’
 B’: #Ik denk dat alleen Jan alweer zijn huiswerk niet heeft
 I think that only Jan again his homework not has
 gemaakt.
 made
 a. **Surface Scope, available but infelicitous:**
 ‘John is the only one who again didn’t do his homework.’
 b. **Reconstructed Scope, unavailable:**
 ‘John was again the only one who didn’t do his homework.’

The reason for the infelicity of B’s response is that it conveys that nobody other than Jan did not do their homework for a second time, but since last week everyone other than Jan did do their homework, none of them could possibly have not done it again this week anyway. By contrast, the response position, for some reason, can leave high type traces, or maybe syntactic reconstruction is possible. Important here is that the two configurations differ in this regard.

in B is perfectly felicitous. We can now use this judgment as the baseline for the case in which [ONLY+DP] occur in first position as shown in (22). The sentence is felicitous, at least when pronounced with nuclear stress on *Jan*:

- (22) A: Last week, everyone but Jan did their homework. What do you think happened this week?
B: Alleen Jan heeft alweer zijn huiswerk niet gemaakt.
Only John has again his homework not made

This is as expected if [ONLY+DP] can form a constituent, and jointly reconstruct under the adverb, but unexpected otherwise.

3.3 Argument 3: Question-answer congruence

Our third argument is closely related to the second. It relies on the observation that it is infelicitous to introduce certain adverbs into an answer if they do not already form part of the question. The source of such effects is that the alternatives that the answer makes salient have to be congruent with the question (Hamblin 1973, von Stechow 1986–1989, Rooth 1992). We will illustrate this effect based on an English example involving *again*. We should note, however, that the word order that we have to use in English in order to be sure of the scope of *again* is not the most natural. It would be most natural to place *again* in final position, but then both low and wide scope attachments are possible. Instead, we have to ‘sandwich’ *again* between the auxiliary and the VP. Note that we are only using English here to convey the basic intuition about the Dutch example, where this issue does not arise. Consider the following dialogue (cf. discussion in McKillen 2016: pp. 117–119):

- (23) **Context:** *The TAs discuss who they think failed the last exam.*
A: Who do you think failed this time? (Requires answers of the type: *x failed*)
B: (*Infelicitous*): Only John has again failed.
B': (*Felicitous, if last time only John failed*): Again, only John has failed.

The response that B gives seems odd here, since the answer seems too narrow given the question. It only tells us who will fail for a second time, but leaves open the possibility that some others might fail for the first time. This is because all the alternatives that *only* ranges over have to involve *again*. In

order for the response to be felicitous given the question, *again* has to take wide scope over *only*, as in the response B', in order to prevent *again* to be a necessary part of the alternatives excluded by the answer. The felicity judgments are different when we include *again* in the question:

(24) **Context:** *The TAs discuss who failed the exam. In the first exam, a few students, including John, failed.*

A: Who has again failed? (Requires answers of the type: *x has again failed*)

B: (*Felicitous, even if awkward word order*) Only John has again failed.

B': (*Infelicitous, since incompatible with context*) Again, only John has failed.

Here, B's answer is felicitous, the question is about who failed *again*, so congruent answers all contain *again*. But B''s response is incongruous: Last time, it wasn't just John who failed, and thus the presupposition of *again* is not satisfied. These examples illustrate how we can use question-answer congruence to test for the scope relations between *only* and *again*. With this particular word order, the scope between *only* and *again* is fixed in English. Let's use this to test for the availability of reconstruction in Dutch:

(25) **Context:** *The TAs discuss who they think has failed the past exam.*

A: Who has failed?

B: Alleen Jan is alweer gezakt.

Only Jan is again failed

Surface Scope, odd here 'Only Jan has again failed.'

Reconstructed Scope, felicitous if last time only Jan failed:

'Again, only Jan failed.'

The fact that (25) is a felicitous answer in this context shows that reconstruction of [ONLY+DP] as a constituent is indeed possible, once again with main prominence on the subject (*alleen Jan*). The reason reconstruction is available in Dutch but not in the English illustrates a difference between English and V₂ languages like Dutch (and German), where reconstruction of the first constituent is generally more freely available.

3.4 Extending the observations to other adverbs

To ensure that the reconstruction effects are not tied to specific properties of AGAIN, we extend our observations to two other adverbs, POSSIBLY and DEFINITELY. The reconstructed scope is easily detectable in sentences with existentially quantified adverbs such as POSSIBLY because here, the reading obtained under surface scope entails the reconstructed reading.

- (26) Alleen Maria is deze keer mogelijk geslaagd.
Only Mary is this time possibly passed
- a. **Surface Scope:** Only Mary is such that she possibly passed this time
 $\forall p' \in \text{Alt}, \neg \diamond p'$ unless $p' = p$
'Mary possibly passed, and for the others, it is not possible that they passed.'
 - b. **Reconstructed Scope:** It is possible that Mary is the only one who passed this time
 $\forall p' \in \text{Alt}, \diamond \neg p'$ unless $p' = p$.
'Mary possibly passed, and for the others, it is possible that they didn't pass.'

In a context in which people other than Mary have possibly passed, the reconstructed reading leads to a true statement and the surface scope reading to a false one. The sentence in (27) illustrates that the reconstructed reading is available. The unambiguous paraphrases of the two readings in English show that the surface scope reading would be infelicitous here but the reconstructed scope reading is felicitous:

- (27) Alleen Maria is deze keer mogelijk geslaagd, maar het kan zijn dat
Only Mary is this time possibly passed, but it can be that
Jan het ook gehaald heeft.
Jan it also passed has
- a. **Surface Scope:** #'No other person than Mary has possibly passed this time, but it can be that Jan passed too.'
 - b. **Reconstructed Scope:** 'It's possible that only Mary passed this time, but it could be that Jan passed too.'

To be sure that it is really reconstruction that makes the Dutch example felicitous we can compare the example with placing [ONLY+DP] before the

adverb within the middle field. Here, as expected, only the surface scope reading is available:

- (28) #Deze keer is alleen Maria mogelijk geslaagd, maar het kan zijn dat
 This time is only Mary possibly passed, but it can be that
 Jan het ook gehaald heeft.
 Jan it also made has.
- a. **Surface Scope, infelicitous:** #‘Only Mary is such that she possibly passed this time, but it can be that Jan passed too.’
 - b. **Reconstructed Scope, unavailable:** ‘It is possible that only Mary passed this time, but it can be that Jan passed too.’

When using a universally quantified adverb, such as DEFINITELY, the reconstructed scope reading is harder to detect because it entails the surface-scope reading.

- (29) Alleen Maria is deze keer beslist geslaagd.
 Only Mary is this time definitely passed
- a. **Surface Scope:** Only Mary is such that she passed for sure this time
 $\forall p' \in \text{Alt}, \neg \Box p'$ unless $p' = p$
 ‘Mary passed, and for people other than her, it is not necessarily the case that they passed.’
 - b. **Reconstructed Scope:** For sure, only Mary passed this time
 $\forall p' \in \text{Alt}, \Box \neg p'$ unless $p' = p$.
 ‘Mary passed, and it is definitely the case that no person other than Mary passed.’

Again, we can reveal a logically stronger reading by asking whether the sentence is felicitous in a context where the surface scope reading is denied. Speaker A thinks that there is a chance that Jan passed. Speaker B objects to A’s utterance and utters B. The objection is only felicitous under the reconstructed reading, because the surface scope reading does not say anything about the possibility of whether Jan passed or not.

- (30) A: Jan is misschien geslaagd.
 John is maybe passed
 ‘John maybe passed.’

- B: Nee. Alleen Maria is beslist geslaagd, Jan heeft zich niet
 Nee. Only Mary is definitely passed, John has himself not
 eens voorbereid, hij kan het niet gehaald hebben.
 even prepared, he can it not passed have.
 ‘No. Definitely only Mary passed, John didn’t even study, he can’t
 have passed the exam.’

We can also apply the semantic requirement on congruent sentential answers to this case. The question in (31) generates a set of propositions of the type x *passed*, not x *definitely passed*. The answer in (31a) is felicitous. The response in (31b) conveys who definitely passed, but leaves open the possibility that others past as well, and hence seems a bit odd:

- (31) Wie is er geslaagd?/ Who passed?
 a. [Alleen Maria]_{*i*} is deze keer beslist t_i geslaagd.
 Only Mary is this time definitely t_i passed
 ‘It is definitely the case that only Mary passed’
 b. #Deze keer is alleen Maria beslist geslaagd.
 This time is only Mary definitely passed
 #‘Only Mary is such that she definitely passed.’

To summarize, by now we have seen several arguments showing that reconstruction of [ONLY+DP] is possible, which shows that the two can form a constituent. This means that the adnominal parse in (4b) is available. We now turn to an argument that shows that the adverbial parse in (4a), according to which *only* attaches to the entire clause, and the DP occurs in second and verb in third position, is in fact unavailable.

3.5 Evidence from long-distance movement

When the constituent surfacing in the first position in V_2 originates in an embedded clause, it has a special property: It is obligatorily interpreted within the embedded clause, and cannot take scope over the material that forms part of the matrix clause. Wagner (2004) observes that in German, when a constituent is fronted from an embedded clause, the fronted constituent cannot bind a variable in the subject of the matrix clause, while a variable in the fronted constituent can happily be bound by the following matrix subject (32). The same is true for Dutch, where long-distance movement also appears to obligatorily reconstruct:

- (32) a. *Elke student_i, denkt hij_i/zijn_i moeder, maakt een goede kans.
 Every student thinks he/his mother makes a good chance.
 *‘He_i/His_i mother thinks that every student_i had a good chance.’
- b. Zijzelf_i/Haar_i zoon, denkt elke moeder_i, maakt een goede kans.
 herself/her son thinks every mother makes a good chance.
 ‘Every mother_i thinks she/her_i son had a good chance.’

Similar asymmetries arise with respect to Condition C effects:

- (33) a. *Paul_i, dacht hij_i, maakt geen enkele kans.
 Paul thought he makes no single chance
- b. Hij_i, dacht Paul_i, maakt geen enkele kans.
 He thought Paul makes no single chance
 ‘Paul_i, thought he_i, had no chance.’

We can use fronting from embedded clauses to test whether [ONLY + DP] can reconstruct (thanks to Stefan Keine, p.c., for the suggestion):¹²

¹² Note that there is a controversy whether these types of examples with apparent embedded V₂ clauses really involve fronting to first position. Reis (1995) argues instead that these are verb-initial interpolated parentheticals, but see Wagner 2004 for arguments that there at least also must be a parse in which they are true V₂ matrix clauses. We point out that the reconstruction facts in (33) are the same when a verb-final clause with a complementizer is embedded, a configuration which uncontroversially involves long-distance fronting, although extraction from embedded verb-final clauses is a bit marked (even more so in German). We find obligatory reconstruction of *alleen* also with this configuration:

- (i) [Alleen Jan]_i dacht Maria alweer dat t_i gezakt is.
 Only Jan thought Mary again that failed is
 ‘Maria thought again that only Jan failed.’
Surface Scope, unavailable:
 ‘It is only the case that Mary thought again that *Jan* failed.’
Reconstructed Scope, available:
 ‘Maria thought again that only *Jan* failed.’

- (34) [Alleen Jan]_i, dacht Maria alweer, t_i is gezakt
 Only Jan, thought Mary again, t_i is failed
 'Maria thought again that only Jan failed.'
Surface Scope, unavailable:
 'It is only the case that Mary thought again that *Jan* failed.'
Reconstructed Scope, available:
 'Maria thought again that only *Jan* failed.'

In (34), the fronted object of the embedded clause cannot take scope over the adverb in the matrix clause. The sentence only allows for the reconstructed reading. In other words, when [ONLY+DP] is moved into first position of an embedding V₂ clause, [ONLY + DP] obligatorily reconstructs into the embedded clause.¹³

The availability of the reconstructed reading in (34) shows that ONLY can form a constituent with the following focus constituent. However, the examples involving long-distance movement support a stronger claim: The fact that reconstruction is obligatory shows that ONLY apparently *must* form a constituent with the focus constituent. Otherwise, we would expect that *only* should be able to attach to the left periphery of the matrix clause, and therefore be able to take scope over adverbs in the matrix clause. If *only* could attach high as in the adverbial parse in (4a), then the wide scope reading over the matrix adverb should be available. Unless there is an independent reason that blocks attaching *only* to the entire sentence exactly when the constituent in first position originates in an embedded sentence, the scope facts for long-distance movement are unexpected if the adverbial parse of first-position *only* was possible. The facts are as expected if ONLY+DP in first position in fact *must* form a constituent.

And yet, there is an important difference between the long-distance case and the examples we looked at earlier: We saw that our earlier examples

¹³ In earlier examples we observed that reconstruction from first position is often only possible when the constituent in first position receives main prominence. There is a related prosodic pattern in long-distance movement: As observed in Wagner 2004, when a constituent is moved to the first position of a matrix clause from an embedded clause, the material in the matrix clause appears to be deaccented or at least realized with a reduced pitch range. This pattern again suggests that prominence in some configurations tracks reconstruction, such that the material between the constituent that reconstructs and the reconstruction site is realized with reduced prominence. We do not offer an explanation for these effects, but merely note that prosody appears to correlate with reconstruction. Exploring this apparently systematic prosodic effect further would warrant a separate investigation.

were always ambiguous between surface scope and inverse scope. One way to think about this is that fronting to first position *obligatorily* reconstructs when the fronted constituent originates in an embedded clause but optionally reconstructs when it originates in the same clause. However, our observations are also compatible with the view that reconstruction of [ONLY+DP] is in fact always obligatory. Looking again at the example in (21), note that it is not apparent from which position *alleen Jan* has moved to first position. It could have moved from a position above the adverb (see (35a)), or from within the VP underneath the adverb (see (35b)). The ambiguous sentence may thus have two different possible derivations, in each [only Jan] will be interpreted in its position before dislocation to first position:

- (35) a. LF: [_{CP}[Only Jan]_i [_C has [_{TP} t_i again [_{VP} passed]]]]
 For no other person x than [John] it holds that [x passed again]
- b. LF: [_{CP}[Only Jan]_i [_C has [_{TP} again [_{VP} t_i passed]]]]
 It is again the case that for no other person x than [John] it holds that [x passed]

We could thus derive both readings even if reconstruction of [only Jan] was in fact obligatory even here, just as in the case of long-distance movement, so we might not need to find a reason why reconstruction from first position would be obligatory only when it involves long-distance movement.¹⁴

4 Conclusion

In this paper we presented novel evidence for the availability of scope reconstruction of [ONLY + DP] sequences from the prefield in Dutch (and German), including cases where this reading was previously thought to be unavailable or at least undetectable. This shows that [ONLY + DP] can form a constituent, contrary to what is predicted by the adverbial analyses of ONLY in Büring & Hartmann 2001 and Jacobs 1983, adding to earlier arguments in Reis 2005 and Meyer & Sauerland 2009. We also showed evidence suggesting that the adverbial parse in which *only* attaches to the entire sentence is in fact unavailable. The data is compatible with an alternative two-place syntactic analysis of ONLY, which also provides an alternative way of thinking about some of

¹⁴ A more thorough discussion of the precise mechanism for reconstruction goes beyond the scope of this paper. See Lechner 2013 for relevant discussion and tests that could be used to explore this further.

the syntactic restrictions of ONLY that formed the original motivation for the Adverbial Analysis.

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Appendix

- (4) a. [Nur [Anna hat Maria geküsst]].
 b. [Nur Anna] [hat Maria geküsst].
 Only Anna has Maria kissed
 ‘Only Anna kissed Mary.’
- (5) A: ‘Did anyone dance?’
 B: #Nein. Nur [Anna hat Maria geküsst]_F.
 No. Only Anna has Maria kissed
 Intended: ‘Anna only kissed Mary (nothing else happened).’
- (11) Can I carry the car into the garage?
 a. Du kannst den Wagen (nur) in die Garage (*nur) [fahren]_F.
 You can the car only in the garage (*only) drive
 ‘You can only drive the car into the garage.’ **Baseline**
 b. [In die Garage fahren]_i kannst du den Wagen t_i .
 In the garage drive can you the car t_i
 ‘You can drive the car into the garage.’ **Movement of VP**
 c. *[Fahren]_i kannst du den Wagen in die Garage t_i .
 Drive can you the car in the garage t_i
 ‘You can drive the car into the garage.’ **Movement of verb**
- (i) [_{VP} t_i Geküsst]_k hat Peter Maria_i t_k .
 t_i kissed has Peter Maria t_k
 ‘Peter kissed Mary.’ **Movement of verb**
- (16) Nur das Fluchtfahrzeug hat jeder gesehen.
 one the escape car has everyone seen
Surface Scope: ‘Only the escape car is such that everyone saw that.’
Reconstructed Scope: ‘Everyone only saw the escape car.’
- (17) **Context:** *There’s been a bank robbery, and the inspector asks one of his assistants about the investigation.*
 A: Did anyone see the bank robber?
 B: Nein, nur das Fluchtfahrzeug hat jeder gesehen.
 No, only he escape car has everyone seen
Surface Scope: ‘Only the escape car is such that everyone saw that.’ (infelicitous)
Reconstructed Scope: ‘Everyone only saw the escape car.’

- (18) A: Es gibt so viele Zeugen, aber keine Spur. Nur das
 There are so many witnesses but no clues only the
 Fluchtfahrzeug hat jeder gesehen.
 escape car has everyone seen
- B: Das stimmt nicht! Ein kleiner Junge hat auch den Täter
 That true not a little boy has also the perpetrator
 gesehen.
 seen
 'That's not true. A little boy also saw the perpetrator.'
- (19) Zwei Leute aus New York sollen wieder kommen.
 two people from New York will again come
**again > two people from New York, two people from New York >
 again**
- (22) A: Last week, everyone but Jan did their homework. What do you
 think happened this week?
- B: Nur Jan hat wieder seine Hausaufgaben nicht gemacht.
 Only Jan has again his homework not made
- (20) a. dass zwei Leute aus New York wieder kommen sollen.
 that two people from New York again will come
 'that again two people from New York will come'
- b. dass wieder zwei Leute aus New York kommen sollen.
 that again two people from New York will come
 'that two people from New York will again come'
- (21) A: Last week, everyone but Jan did their homework. What do you
 think happened this week?
- B: #Ich glaub dass nur Jan wieder seine Hausaufgaben nicht
 I think that only Jan again his homework not
 gemacht hat.
 made has
- a. **Surface Scope, available but infelicitous:** 'John is the only one
 who again didn't do his homework.'
- b. **Reconstructed Scope, unavailable:** 'It is again the case that only
 John didn't do his homework.'

- (25) **Context:** *The TAs discuss who they think will fail the upcoming exam.*
- a. Wer ist durchgefallen?
Who is failed
 - b. Nur Jan ist wieder durchgefallen.
Only Jan is again failed
Surface Scope, odd here, even if last time multiple people failed
'Only Jan has again failed.'
Reconstructed Scope, felicitous if last time only Jan failed:
'Again, only Jan has failed.'
- (26) Nur Maria hat dieses mal möglicherweise bestanden
Only Mary has this time possibly passed.
- a. **Surface Scope:** Only Mary is such that she possibly passed this time
 $\forall p' \in \text{Alt}, \neg \diamond p'$ unless $p' = p$
'Mary possibly passed, and for the others, it is not possible that they passed.'
 - b. **Reconstructed scope:** It is possible that Mary is the only one who passed this time
 $\forall p' \in \text{Alt}, \diamond \neg p'$ unless $p' = p$.
'Mary possibly passed, and for the others, it is possible that they didn't pass.'
- (27) Nur Maria hat dieses mal möglicherweise bestanden, aber es kann
Only Mary has this time possibly passed, but it can
sein dass Jan auch bestanden hat.
be that Jan also passed has
- a. **Surface Scope:** #'No other person than Mary has possibly passed this time, but it can be that Jan passed too.'
 - b. **Reconstructed Scope:** 'It's possible that only Mary passed this time, but it might be that Jan passed too.'
- (28) #Dieses mal hat nur Maria möglicherweise bestanden, aber es kann
This time has only Mary possibly passed, but it can
sein dass Jan auch bestanden hat.
be that Jan also passed has
- a. **Surface Scope:** #'It's possible that only Mary passed this time, but it can be that Jan passed too.'
 - b. **Reconstructed Scope, unavailable:** 'No other person than Mary has possibly passed this time, but it can be that Jan passed too.'

- (29) Nur Maria hat dieses mal bestimmt bestanden.
 Only Mary has this time definitely passed
 'It is definitely the case that only Mary passed./Only Mary has definitely passed.'
- a. **Surface Scope:** Only Mary is such that she passed for sure this time
 $\forall p' \in \text{Alt}, \neg \Box p'$ unless $p' = p$
 'Only has definitely passed.'
- b. **Reconstructed Scope:** For sure, only Mary passed this time
 $\forall p' \in \text{Alt}, \Box \neg p'$ unless $p' = p$.
 'It is definitely the case that only Mary passed.'
- (30) A: Jan hat vielleicht bestanden
 John has maybe passed
 'John maybe passed.'
- B: Nein. Nur Maria hat bestimmt bestanden. Jan hat sich nicht
 no only Mary has definitely passed, Jan has himself not
 vorbereitet, der kann das nicht bestanden haben.
 prepared he can that not passed have
 'No. I'm sure only Mary passed, John didn't even study, he can't have passed it.'
- (31) Wer hat bestanden? 'Who passed?'
- a. Nur Maria hat dieses mal bestimmt bestanden.
 Only Mary has this time definitely passed
 'It is definitely the case that only Mary passed./Only Mary has definitely passed.'
- b. Dieses mal hat nur Maria bestimmt bestanden.
 This time has only Mary definitely passed
 'Only Mary has definitely passed.'
- (32) a. *Jeder Student_i, (so) sagt er_i/seine_i Mutter, hat eine gute
 Every student, (so) said he/his mother, has a good
 Chance.
 chance
- b. Ihr_i (eigenes) Kind, (so) glaubte jede Mutter_i, hatte eine gute
 her (own) child so believed every mother had a good
 Chance.
 chance
 'Every mother believed her (own) child had a good chance.'

- (33) a. *Paul_i, (so) dachte er_i, hatte keine Chance.
Paul (so) thought he has no chance
b. Er_i, (so) dachte Paul_i, hatte keine Chance.
He (so) thought Paul had no chance
'Paul_i thought he_i had no chance.'
- (34) [Nur Jan]_i hat Maria wieder behauptet t_i ist durchgefallen.
Only Jan has Mary again claimed is failed
Surface Scope, unavailable: 'It is only the case that Mary claimed that *Jan* failed.'
Reconstructed Scope, available: 'Maria claimed again that only *Jan* failed.'

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