The Syntax of Focus Association in Dutch & German: Evidence from Scope Reconstruction

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1. Introduction

In English, focus-sensitive operators like *only* can occur both in adnominal and in adverbial positions, as shown in (1-a) and (1-b) respectively. In (1-a), *only* occurs adjacent to the DP it associates with, and arguably adjoins directly to the DP. In the structure in (1-b), *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 (1-a) and (2-a).

(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 verb final word order in Dutch makes it harder to identify the left edge of the VP, and hence the attachment site of *alleen* is not obvious. Two possible parses of the Dutch equivalences of (1-a) and (1-b) are given in (3-a)/ Figure 1 and (3-b)/ Figure 2, respectively. In (3-a), *alleen* forms a constituent with the DP it associates with. In (3-b), *alleen* is positioned in an adverbial position on the edge of the VP. Jacobs (1983) and Büring & Hartmann (2001) argue that in German only adverbial attachment as in (3-b) is possible ('Adverbial Analysis'),[1] while Bayer (1996), Reis (2005), and many others assume both adverbial and adnominal attachment to be available ('Mixed Analysis').

(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**

As already noted in Jacobs (1983), the Adverbial Analysis has one very counterintuitive consequence: It predicts that in cases where *nur* is placed adjacent to the constituent in first position, it actually attaches to a node containing the entire sentence. In order words, this configuration is assumed to involve a verb-third word order under this analysis, which is usually considered impossible in German and Dutch.

One weakness of the adverbial analysis is that the assumed syntactic configuration seems to be in conflict with the fact that this word order is incompatible with sentence-wide focus:

[1] In fact, 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.
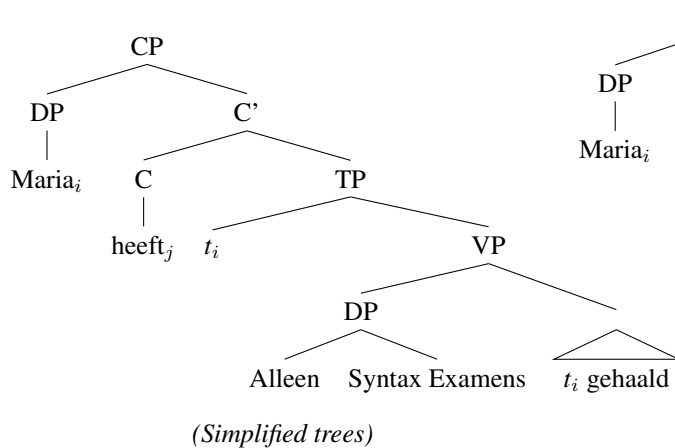
CP
DP   C'
Maria$_i$ C   TP
            heeft$_j$ t_i VP
                              DP
                        Alleen Syntax Examens t_i gehaald

(Simplified trees)

CP
DP   C'
Maria$_i$ C   TP
            heeft$_j$ t_i VP
                              Alleen   VP
                                        DP
                                  Syntax Exam. t_i gehaald

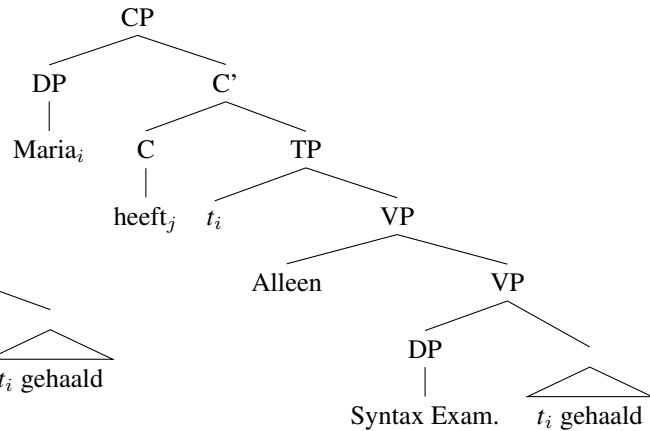**Figure 1:** Adnominal Attachment   **Figure 2:** Adverbial Attachment

(4) A: Hat irgendwer getanzt?
          has anyone   danced
          'Did anyone dance?'
     B: #Nein. Nur Anna hat Maria geküsst.
          No.   Only Anna has Maria kissed
          'Only Anna kissed Mary.'   (Cannot convey: It's only the case that Anna kissed Mary.)

The answer cannot convey that the only thing that happened is that Anna kissed Maria, which is what the context in (4) would require. *Only* cannot associate with the entire sentence in (4), it has to associate with the subject, conveying that nobody other than Anna kissed Maria. It would be compatible as a response to the question 'Did Hans kiss Mary?'.

The strength of the Adverbial Analysis is that it can explain certain syntactic restrictions in German that seem surprising under a Mixed Analysis. One such restriction is that *nur* 'only' cannot attach inside Prepositional Phrases,[2] as expected if it can attach only in adverbial positions (Jacobs, 1983; Büring & Hartmann, 2001):

(5) *[$_{PP}$ mit nur Hans]
          with only Hans
      'with only Hans.'

Jacobs (1983) and Büring & Hartmann (2001) 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 (6-a) and (6-b) shows, *nur* cannot surface adjacent to the verb in (6-b), because directional PP complements cannot scramble.

(6) a. weil   Peter Maria$_i$ [$_{VP}$ **nur** [$_{VP}$ t_i [küsste]$_F$]]. (nicht umarmte.)
          because Peter Mary   only   kissed   (not embraced.)
          'because Peter only kissed Mary. (He didn't embrace her.)'
     b. weil   man den Wagen [$_{VP}$ **nur** in   die Garage (*nur) [fahren]$_F$ darf]. (nicht aber schieben.)
          because one the car   only into the garage (*only) drive   may (not but push.)
          'because one can only drive the car into the garage. (You can't push it in.)'

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 Büring & Hartmann (2001) capture this word order preference by positing a constraint that enforces this word order preference. This constraint is how Jacobs (1983) and Büring & Hartmann (2001) explain why it often appears as if *only* attaches to the constituent it associates with—whenever possible, it will occur adjacent to it.

Büring & Hartmann (2001) construct a novel argument in favor of the adverbial analysis and the surprising claim

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[2] Other than in certain scalar uses that we will not discuss here. See Bouma et al. (2007) for apparent exceptions in Dutch and German.

that *nur*, when sentence-initial, indeed 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 it formed a constituent with it.

In this paper, we will present evidence that reconstruction of [ONLY + focus] is possible after all, strengthening earlier evidence against Büring & Hartmann's (2001) claim that was presented in Reis (2005) and Meyer & Sauerland (2009). We will base our argument mostly on data involving the Dutch exclusive *alleen*, whose syntax is similar to German in all aspects relevant for this paper. In the following, we will use ONLY when referring to the exclusive operator across the three languages, and refer to the language-specific operators otherwise (*only, alleen,* and *nur*) otherwise.

Before we turn to the reconstruction data, we will present a particular analysis that falls under the family of Mixed Analyses, which accounts for some of the same syntactic constraints used by Jacobs (1983) and Büring & Hartmann (2001) to motivate the Adverbial Analysis.

2. A Two-Place Syntactic Analysis

Under the analysis presented in Büring & Hartmann (2001), ONLY takes a single argument, the constituent it attaches to, similar to adverbs like *always*. We will compare this analysis to the two-place analysis of ONLY proposed in Wagner (2006), under which ONLY takes two syntactic arguments, and introduces an existential presupposition (see Rooth (1985); Drubig (1994); Krifka (1996); Bayer (1996) for alternative two-place analyses, and Sudhoff (2010) for a hybrid view). The first syntactic argument that ONLY takes is a constituent that has to contain the semantic focus. The second syntactic argument is an open proposition which is looking for an argument of the type of the focus constituent:

(7) $\forall_\sigma$: $[\![\boldsymbol{Only}]\!] = \lambda C.\lambda w.\lambda x.\in D_\sigma.\lambda p. \in D_{<\sigma,<s,t>>}$.
Presupposes: $\exists$ x. p(x) in w.
Asserts: $\forall y \in C \cap D_\sigma$: [y $\neq$ x $\rightarrow$ p(y) is false]

The lexical entry in (7) allows ONLY to 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. Under this account, any syntactic constraints on the distribution of ONLY must be due to the impossibility of deriving an appropriate LF to interpret ONLY (Bayer, 1996). The LF's of (8) predicted by the Two-Place Analysis are illustrated in Figure 3 and 4, which show adnominal and adverbial attachment respectively.

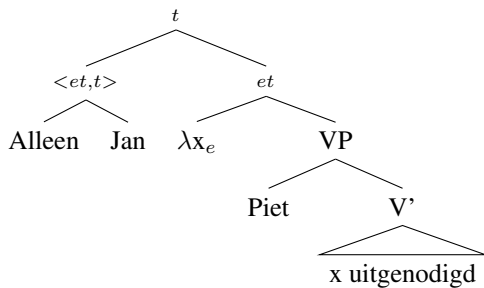(8) Piet heeft alleen Jan uitgenodigd.
Piet has only Jan invited

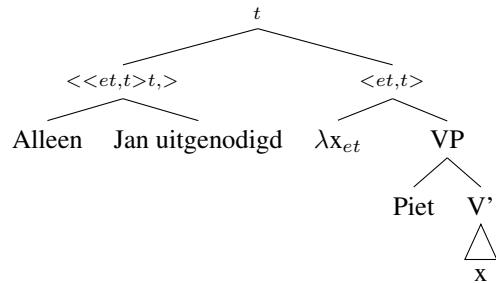**Figure 3:** Adnominal: Only Jan λx Piet invited x

Figure 4: Adverbial: Only Jan invited λx Piet x

Whether one assumes that *only* has an existential presupposition or presupposes the content of the entire sentence excluding ONLY is not criticial for the choice of syntactic theory.[3] Under either presupposition, the two analyses derive the same overall semantics of a sentence containing ONLY. The two analyses differ in where they assume

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[3] Assuming an existential presupposition for ONLY (instead of presupposing the content of the entire sentence excluding ONLY) potentially provides a way to capture why ONLY might need to be attached as closely to its focus as is syntactically possible: A closer attachment site will often lead to a stronger presupposition than an attachment site higher up—for example, presupposing that Piet invited someone (presupposition of DP-attachment) asymmetrically entails that Piet did something (presupposition of VP

ONLY attaches syntactically, how many arguments it takes, and how these arguments contribute to the propositional alternative set which it ranges over. Both analyses assume that focus association is constrained such that ONLY can only associate to 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.

2.1. Capturing the restrictions on focus attachment

Recall that Büring & Hartmann (2001) discuss the unavailability of attachment inside PP's and VP's as an argument in favour of the Adverbial Analysis. The two-place syntactic analysis has to derive these restrictions from constraints on movement. 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 (9), cannot be derived because the preposition is left behind:

(9)   *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.'

Following a similar line of reasoning, ONLY cannot surface to the right of a directional PP in sentence (10-a) because this is not a position from which [alleen + focus] could move to form the right configuration for interpretation at LF. This can be motivated independently by the observation that VP-fronting is unnatural in structures where a directional PP is stranded:

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

While (10-b) shows that the VP containing the PP may be fronted, (10-c) shows that movement of the verb is unnatural. This is as expected if the verb alone cannot move, but rather has to be moved as part of a VP node containing it, and if directional PPs cannot scramble out of the VP. Note that this is indeed due to the impossibility of stranding the PP, not because nodes only containing verbs generally cannot be fronted, as is illustrated in (11):

(11)   [$_{VP}$ t_i Gekust]$_k$ heeft Peter Maria$_i$ t_k.
        t_i kissed   has   Peter Maria t_k
        'Peter kissed Mary.'   **Movement of verb**

The source of the infelicity of placing *alleen* next to the verb is the same in both theories: *alleen* actually has to attach to a VP node containing the focus in both theories. In the Adverbial Focus because this is generally true, in the two-place theory because otherwise, the right configuration to interpret it cannot be derived at LF.

In this section we have shown that at least two of the syntactic arguments from Jacobs (1983) and Büring & Hartmann (2001) do not distinguish between the Adverbial and our Two-Place Analysis. Sudhoff (2010) discusses several other cases, 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. In the following, we will focus on how the two analyses compare when it comes to scope reconstruction.

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attachment). The positioning of ONLY can therefore be assumed to be driven by Maximize Presupposition, rather than directly stipulating that it needs to be linearly or structurally close (cf. Wagner, 2006:315). It is not clear though that such an account would make the right prediction in downward entailing environments.

3. The Reconstruction Argument

Büring & Hartmann (2001) argue that [*nur* + DP] generally cannot reconstruct, as would be expected under the Adverbial Analysis where it does not form a constituent. The sequence in first position in (12), for example, is argued to be unable to reconstruct under the universal quantifier *every*. The reading in (12-b) should then be unavailable. This would be 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.   **LF of *only* $> \forall$**: only Mary y everyone x [x loves y]
            'Mary is the only one such that everyone loves her.'   **Surface Scope**.
        b.   **LF of $\forall > only$**: Everyone x only Mary y [x loves y]
            'Everyone loves only Mary.'   **Reconstruction Scope**.

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.   'The only one nobody loves is Mary.'   **Surface Scope**
        b.   ✓ 'Nobody loves Mary and no other person.'   **Reconstruction Scope**

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.[4]

Meyer & Sauerland (2009) assume with Büring & Hartmann (2001) that the reconstructed reading in (12) is indeed undetectable, irrespective of intonation, but they present an alternative explanation to Büring & Hartmann's. Meyer & Sauerland (2009) argue that the availability of (12-b) is masked by a reading that can be judged true in a larger set of circumstances, namely (12-a). 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 reconstruction 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 reconstruction 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 (13-b) because the entailment relations are reversed.

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 the prior literature, the claim that (12) does not allow reconstruction has not been contested, with one exception. We note, however, that the intuition that the reconstructed reading is indeed absent in (12) is actually much less obvious when pronouncing the sentence with main prominence on the fronted constituent (see also Bayer, 2016). In the following, we will discuss a way to show that reconstruction in fact available for universals after all—but only under this pronunciation with main prominence on the fronted constituent. In addition, we look at the scopal interaction between ONLY and adverbs, which provides additional evidence for the possibility of reconstructing [ONLY + DP] .

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

3.1. Argument 1: Revealing a logically stronger reading

A logically stronger reading can be revealed by denying the truth of the weaker reading, here the surface scope reading (see Potts (2000) and Gajewski (2005) for applying this test in other cases). Consider the sentence in (14). The surface scope reading is compatible with some people also having brought something else in addition to a bottle of wine. The reconstructed scope reading conveys that everyone brought nothing but a bottle of wine, and is incompatible with some people having brought something else. Now consider the context and conversation in (15). Speaker A thinks that everyone brought only a bottle of wine. Speaker B objects to A's utterance. Importantly, the objection only makes sense if A's utterance is interpreted under the reconstructed reading. The fact that B's response sounds coherent suggests that the reconstructed reading is available for A's response.

(14) Alleen een flesje   wijn had iedereen meegenomen.
      Only   a   small bottle wine had everyone brought
      Surface Scope: 'Only a bottle of wine is such that everyone brought that.'
      Reconstruction Scope: 'Everyone brought only a bottle of wine.'

(15) **Context:** *I organized a small potluck party for my birthday and I asked my guests to bring some wine and something to snack.*
      Did everyone bring a bottle of wine and a snack?
      A: Nee, ALLEEN EEN FLESJE WIJN had iedereen meegenomen.
          No, Only a bottle wine   had everyone brought
      B: Dat is niet waar, Jan had ook een zak chips meegenomen.
          That is not true, Jan had also a   bag chips brought
          'That's not true, Jan also brought a bag of chips.'

This test shows that reconstruction is possible, even in cases where it is hard to detect, for the reasons outlined in Meyer & Sauerland (2009). We note, however, that the dialogue seems more coherent when A's utterance has prominence on the fronted constituent—suggesting that we would only think that A had the reconstructed reading in mind if the sentence was pronounced in this way. We will see clearer evidence for this prosodic effect in the following.

3.2. Argument 2: Scope reconstruction relative to adverbials

When occurring in the middle field,[5] an argument occurring to the left of an adverb cannot reconstruct, nor can it move at LF to take wide scope, in other words, it has to take surface scope:

(16) a. dat twee mensen uit   New York alweer zullen komen.
          that two people from New York again   will   come
          two people from New York > again, *****again > two people from New York**
      b. dat alweer twee mensen uit   New York zullen komen.
          that again   two people from New York will   come
          again > two people from New York, *****two people from New York > again**
          (modified from Neeleman & Koot (2007))

However, an argument placed in first position can optionally reconstruct underneath an adverb in the middle field:

(17) 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

In this section, we use the observed differences between (16) and (17) in the availability of reconstruction to investigate whether [ONLY+DP] can reconstruct under adverbs. In section 5, we provide a possible explanation for these differences. Consider the context in (18):

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5 '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 or predicate cluster. Our argument discussion here does not assume a particular theory of how to account for the syntax of V2, but is compatible with standard approaches such as Travis (1984).

(18)   **Context that favours the Reconstruction Reading:**
The students in Syntax 1 this year are very eager. They attend every class and submit every piece of homework. There is just this one student, Jan, who I can't get to do anything. In the past weeks he never submitted his homework. Also this week, as expected, everyone but Jan submitted their homework. Who didn't submit his homework?

The sentence in (19) sounds felicitous in this context, at least when pronounced with nuclear stress on *Jan*:

(19)   ALLEEN JAN heeft alweer zijn huiswerk   niet gemaakt.
         Only   John has   again   his   homework not made
   a.   **Surface Scope:** 'John is the only one who again didn't do his homework.'
         Available but infelicitous in this context
   b.   **Reconstruction Scope:** 'It is again the case that only John didn't do his homework.'
         Available and felicitous

However, the surface scope reading of the sentence in (19) should be incompatible with (18), since it presupposes that someone other than Jan did not submit his homework some previous time. We can see this clearly when looking at the example where [ONLY+DP] is placed in the middle field:

(20)   a.   #Ik hoorde dat ALLEEN JAN alweer zijn huiswerk   niet heeft gemaakt.
            I heard   that only Jan   again his homework not has   made
       b.   Ik hoorde dat alweer ALLEEN JAN zijn huiswerk   niet heeft gemaakt.
            I heard   that again only Jan   his homework not has   made

The infelicity of (20-a) is as expected under either analysis. In the two-place analysis since reconstruction under an adverb in the middle field is more generally impossible in Dutch (and German); under the adverbial analysis, we similarly expect the scope between *only* and *again* to be fixed. The fact that (19) is felicitous, in contrast to (20-a), shows that a reading which *only* scopes below *again* is available here. This is unexpected under the Adverbial Analysis. It is expected under the two place analysis since [ONLY+DP] can reconstruct under *again*.

3.3. Prosodic 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 in an answer that does 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; 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 to be sure that we can fix the scope of *again* is not the most natural—we have to 'sandwich' *again* between the auxiliary and the VP. Consider the following dialogue:

(21)   **Context:** *The TAs just finished grading the second exam of Syntax 1 and they are discussing the results with the instructor of the course. For the first exam, only John failed. The instructor asks:*

(22)   A: Who has failed?
              Requires answers of the type: *x failed*
         B: *(Infelicitous)* Only John has again failed.
         B′: *(Felicitous)* Again, only John has failed.

The response B gives seems a bit odd, since it suggests that all alternatives that *only* operates over are of the form *x has again failed*, suggesting that all alternatives that *only* operates over have to contain *again* (an observation from McKillen, 2006). But this would be too narrow of an answer given the question. *Again* has to take wide scope over *only*, as in the response B′, to prevent *again* to be a necessary part of the alternatives excluded by the answer. Things are different when we include *again* in the question:

(23)   **Context:** *The TAs just finished grading the second exam of Syntax 1 and they are discussing the results with the instructor of the course. For the first exam, John, Mary and Sue failed. The instructor asks:*

7

(24)   A: Who has again failed?
              Requires answers of the type: *x again failed*
       B: *(Felicitous, even if awkward)* Only John has again failed.
       B′:   *(Infelicitous)* Again, only John has failed.

We can use this to test for the availability of reconstruction in Dutch. The fact that (25-b) is a felicitous answer to (25-a) shows that reconstruction of [ONLY+DP] as a constituent is possible. We note that again main prominence has to be placed on *Jan*.

(25)   a.   Wie is er gezakt?
            Who failed?
       b.   ALLEEN JAN is alweer gezakt.
            Only Jan is again failed.
            Surface Scope: 'Only Jan failed again.'
            Reconstruction Scope: 'Again, only Jan failed.'

The reason reconstruction is available in Dutch but not in the English example in (22) illustrates a difference to V2 languages like Dutch and German, where reconstruction of the first constituent is generally more freely available, a point to which we return below.

We have presented several arguments that scope reconstruction of [ONLY +DP] is possible, contrary to the claims in Büring & Hartmann (2001), and as expected with our two-place analysis of *only*. In the remainder of this paper, we aim at proposing an explanation for why reconstruction below adverbs is possible from the prefield but not within the middlefield.

4. Explaining constraints on reconstruction: Prefield vs. Middlefield

In this section we try to gain a better understanding on the conditions of reconstruction.

4.1. Reconstruction of an argument below an adverb

In Dutch, the linear order between an adverb and an argument in the middle field determines their relative scope, which is as expected if their relative word order reflects the syntactic c-command relation between them (cf. Neeleman & Koot, 2007). However, sentences in which the argument moves to the prefield are often ambiguous with respect to whether it takes wide or narrow scope relative to an adverb.

How one thinks about explaining this difference will depend on one's theory of adverb placement. There is a debate in the literature as to whether adverbials can be base-generated below VP internal arguments or whether objects that surface above an adverb have scrambled to this position (a.o. Fanselow (1993); Neeleman & Koot (2008)). One way to explain why reconstruction of apparent movement of an argument over an adverb is impossible is to adopt a base-generation view of adverb placement, and in addition that movement across an adverb is in fact impossible.

There is an alternative way to explain this restriction, however. If movement across an adverb leaves a variable that is necessarily of type *e*, that is, it can vary over individuals, but not higher-type objects, then the impossibility of reconstruction immediately follows. A derivation in which the quantifier or [ONLY+DP] is interpreted in its base-generated position is impossible because we cannot 'plug' the meaning of [ONLY+DP], which is of a higher type, into the individual variable that we left in the trace position. This will account for the fixed scope, but only if we assume that syntactic reconstruction of [ONLY+DP] is not possible.

Under either story, there is a straightforward account for why reconstruction from the prefield *is* possible. Suppose that movement to the first position is post-cyclic, that is, it follows semantic interpretation. Under this view, the 'reconstruction' effects observed do not really involve reconstruction.

This view predicts that 'reconstruction' effects for constituents in the prefield should in fact be obligatory—from the point of view of interpretation, this movement step has never happened. And yet what we observe is that the scope of [ONLY + DP] is in fact ambiguous in prefield position. Why would this be the case? Note that it is not apparent from which position *Alleen Jan* has moved to first position. This constituent could have moved from a position above the adverb (see (27-a)), or from within the VP underneath the adverb (see (27-b)). A sentence like (27) thus has 2 possible derivations. Movement to first position is interpreted in its original position in both cases, but it will 'reconstruct' to different positions. The interpretation in those positions will be fixed, either because of the base-generation account or because of the type-e trace account, whichever one may subscribe to. We illustrate the two derivations below:

(26) **Context favouring *Again* > *Only*:** *A group of students did their second math test of the year. Last time Jan was the only one who passed. Now, this same scenario seems to have been repeated: no other student than Jan passed the math test.*

(27) [ALLEEN JAN]$_i$ is alweer geslaagd.
Only Jan   is again   passed

     a.   LF: $[_{CP}$[Only Jan]$_i[_C$ is $[_{TP}$ $\mathbf{x}_i$ λx again $[_{vP}$ $\mathbf{x}_i$ passed]]]]]
          For no other person x than [John] it holds that [x passed again]

     b.   LF: $[_{CP}$[Only Jan]$_i[_C$ is $[_{TP}$ again $[_{vP}$ $\mathbf{x}_i$ passed]]]]]
          It is again the case that for no other person x than [John] it holds that [x passed]

There is independent evidence for the post-cyclic nature of movement to first position. Association with *only* generally requires surface-c-command. For example, it is famously impossible to backwards-associate with the subject when *only* is attached to the VP in English (Jackendoff, 1972). In German and Dutch, there are apparent counterexamples to this otherwise robust generalization: *Alleen*, when placed in the 'middle field', can backwards associate with constituents in first position in both German and Dutch (cf. Jacobs, 1983; Jaeger & Wagner, 2003:for German).[6] If this movement follows semantic interpretation, it no longer constitutes a counterexample—at the point at which *alleen* is interpreted, the constituent which will subsequently move to first position is still in its c-command domain. See also Fanselow & Lenertová (2010) for further evidence.

4.2. Reconstruction of an argument below another argument

Placing an argument to the left of an adverb does not seem to be compatible with reconstruction in Dutch, unless the argument moved to first position. However, movement of an argument across another argument does appear to be reconstructable. In the following example, the reconstructed reading is in fact the preferred one, at least when the sentence is pronounced with a contrastive topic intonation:

(28) **Context:** Do you know of any museum that exhibits only Van Gogh?

(29) Ik denk dat alleen Van Gogh geen enkel museum heeft.
I think that only Van Gogh no single museum has

     a.   **Surface Scope:** Only Van Gogh is such that no museum has it.
     b.   **Reconstructed Scope:** No museum is such that they have only Van Gogh.

To account for this difference between movement across an adverb and movement across an argument, one could follow Lechner (1998), who suggests that in sentences with argument inversion, leaving a higher type trace is possible (see Stechow (1991) for a discussion of higher type traces). High-type traces have the effect that constituents can *semantically* reconstruct, because their denotation is simply fed into the variable that was left in the trace position. Under such an analysis, the difference between the reconstructed reading and the non reconstructed reading resides in whether movement left a high type trace (semantic reconstruction) or a trace of type e (no semantic reconstruction).

Note that since the transitive verb is of type $\langle e, \langle e, t \rangle \rangle$, it requires an *e*-type expression as its internal argument. The [ONLY+DP] sequence cannot be interpreted in this position, as quantified expressions are not licensed inside VPs. To illustrate with the example in (29), as shown in (30), the object *alleen van Gogh* is moved to a position above the VP, here YP. It then moves to a position above the subject. It is this second movement step that would be able to leave a high type trace (a high type trace in the original position would not be interpretable). For Lechner (1998), this first movement step involves movement to AgroP, but the exact position is irrelevant for the current discussion.

(30)   dat $[_{ZP}$ alleen van Gogh$_i$ $[_{XP}$ geen enkel museum$_k$ $[_{YP}$ T$_i$ $[_{VP}$ t_k t_i heeft.]]]]]

Why would adverbs differ from arguments in this way? It seems undesirable to stipulate that certain movements can leave high-type traces and others do not. One answer could be the base-generation of adverbs in their surface position. Under this view, positioning an argument to the left of an adverb does not involve movement. We could then assume that leaving high type traces is always permissible, and would not have to posit two kinds of movement. Another possibility is that we might be able to identify a reason why *syntactic* reconstruction is possible in cases of argument inversion but not otherwise, or that there argument inversion can optionally be post-cyclic.[7]

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[6]   ONLY can also associate with the verb in second position, suggesting that it moves there post-cyclically as well.

[7]   One puzzle that might further inform the decision of how to analyze reconstruction effects is that [ONLY + focus], when occurring

5. 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 in cases where this reading was previously thought to be unavailable or at least undetectable. This provides additional evidence against the analysis of ONLY in Büring & Hartmann (2001), adding to earlier arguments in Reis (2005) and Meyer & Sauerland (2009). We also showed how a two-place syntactic analysis of ONLY provides an alternative explanation for some of the syntactic restrictions on its distribution for which the Adverbial Analysis was originally proposed. In addition, we provided a preliminary discussion for some of the constraints on scope reconstruction that we ran into along the way.

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in the middle field, cannot reconstruct under just any argument: For example, when the lower argument itself has a focus operator attached to it, Wagner (2012) claims that only partial reconstruction of the argument that ONLY attaches to is possible. If true, this provides a puzzle for the analysis just sketched, but also for an alternative analysis that posits two types of movement.