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# Right Node Raising: Ellipsis or Across the Board Movement?\*

Klaus Abels

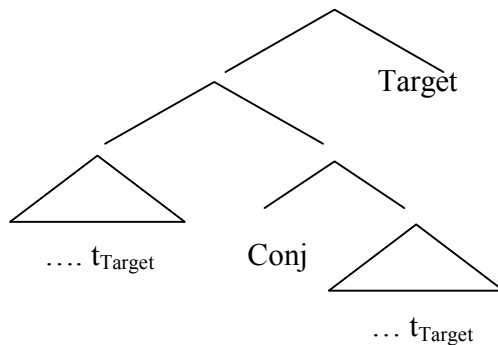
Universität Leipzig

## 1. Introduction

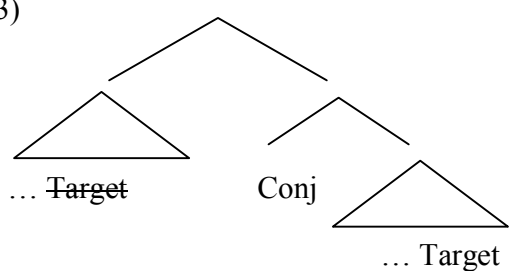
There is a debate whether Right Node Raising (RNR) as in (1) involves rightward Across the Board (ATB) movement in the syntax (Ross 1967; Bresnan 1974; Hudson 1976; Maling 1972; Postal 1974, 1998; Sabbagh 2003) or whether it is derived by ellipsis in the first conjunct (Wexler and Culicover 1980; Levine 1985, 2001; Kayne 1994; Bošković no year; Wilder 1997b; Hartmann 2000). The movement hypothesis arrives at (2) as the surface constituent structure whereas the ellipsis analysis postulates the surface constituent structure in (3). The ‘Target’ of RNR designates here and throughout the string that is shared between the two conjuncts, i.e., *an expensive Chinese vase* in (1). In this paper I attempt to decide between these two structures. I argue that (3) is to be preferred.

(1) John bought and Mary broke an expensive Chinese vase.

(2)



(3)



It should be noted that structure (2) (with or without the traces) is also used in some analyses of RNR in GPSG (Gazdar 1981; Maling and Zaenen 1982), Dynamic Syntax (Cann, Kempson, Marten and Otsuka in press) and Categorical Grammar (Steedman 1996) although there is not necessarily a process of movement or a notion of

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chains in these theories. Furthermore, structures like the one in (3) are also employed in approaches that do not literally assume deletion in the first conjunct (e.g. Wilder 1998; 1999; 2001). The title of this essay mentions movement and ellipsis; however, the arguments presented here call into question all approaches to RNR where the Target is routinely outside of both conjuncts. Moreover, the solution eventually adopted is Wilder's multidomination rather than an ellipsis approach. For terminological clarity I will refer to the two proposals under discussion as the in-situ and the ex-situ analyses of RNR.

The question is thus whether the Target of RNR is outside of both conjuncts ((2)) or not ((3)).<sup>1</sup> Typical movement operations have three salient properties: (i) movement changes the linear order of elements (re-ordering); (ii) movement is subject to locality constraints; and (iii) movement changes structural relations (re-bracketing).

Most of the literature on RNR is on movement properties (i) and (ii) and a number of other conventional side effects of, or preconditions for, movement and ellipsis. This essay is an attempt to ask questions directly about the surface constituency of RNR. This seems worthwhile since there is no consensus yet concerning the nature of RNR.

Asking questions directly about (iii) might prove to be particularly revealing, since re-bracketing is doubtlessly the core property of movement; it characterizes the modeling of movement (or unbounded dependency constructions) in transformational and non-transformational models of the grammar.

I take the ex-situ approach to be making the claim that RNR has the structure in (2) on the surface, i.e., the movement is syntactic. Movement shall count as 'syntactic' if re-bracketing information becomes available both to the phonological and the interpretive components. Before moving on to the arguments original to this paper, let me very briefly summarize the main results of the literature concerning movement properties (i) and (ii).

## 2. Is RNR order changing?

There is a connection between changes in word order ((i)) and re-bracketing ((iii)): typically (i) is modeled in terms of (iii). It is therefore instructive to note that RNR never has an effect on word order (abstracting away, of course, from the possible displacement of the Target from the end of the first conjunct to the end of the second conjunct). Consider the following examples.

- (4) a. ✓Mary promised that she would buy and Frank feared that he would break an expensive Chinese vase.

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<sup>1</sup> I follow Postal 1994 in assuming that examples like (i) also involve RNR—although I remain agnostic on the question whether they also allow a Parasitic Gap construal (see Engdahl 1983; Nissenbaum 2001; Takahashi 2004 this volume; Williams 1986/1987).

- (i) The twins offended, by not recognizing, their favorite uncle from Cleveland.

If RNR is possible in non-coordinated structures, the formulation in the text is terminologically inaccurate. It would be better to say that the question is whether the Target is dominated by the lowest node that dominates both base positions of the Target ((3)) or not ((2)). I find this formulation too cumbersome to use and will sometimes speak loosely of conjunct internal and external positions of the Target. This is in no way meant to limit the discussion to cases like (1) excluding (i) but merely a shorthand.

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- b. \*Mary promised [CP that she would buy] last week and Frank feared [CP that he would break] yesterday an expensive Chinese vase.

Example (4a) is a matrix conjunction of two complex clauses. On the ex-situ analysis of RNR, the Target *an expensive Chinese vase* is overtly in a position above the conjunction, which conjoins the matrix clauses. In other words, RNR is not clause bounded on the ex-situ analysis. However, when the matrix adverbs *last week* and *yesterday* are introduced in the sentence, RNR becomes impossible ((4b)). The generalization here is that RNR does not re-order material across material from a higher clause.

Consider now examples (5). On the ex-situ analysis, RNR can strand prepositions (5a), however, it never re-orders material out of a PP even locally ((5b)) (see Bošković no year; Sabbagh 2003). Again it seems that although RNR, on the ex-situ analysis, involves re-bracketing at a very high node, re-ordering at the same structural level is impossible.<sup>2</sup>

- (5) a. ✓Mary found a solution to and John will write a book about one of the great unsolved problems of syntax.  
b. \*Mary found a solution to the day before yesterday and John will write a book about next year one of the great unsolved problems of syntax.

However, it would be wrong to say that re-ordering and RNR are completely incompatible. This is shown in (6a).

- (6) a. ✓Mary wrote the day before yesterday and John read yesterday an important paper on RNR.  
b. ✓Mary wrote the day before yesterday an important paper on RNR.  
c. ✓John read yesterday an important paper on RNR.

Importantly, the re-ordering in examples like (6a) is extremely local. In fact, it observes all restrictions that Heavy NP Shift (HNPS) and extraposition are subject to. Thus HNPS is possible in (6a) as (6b) and (6c) show but would have been impossible in (4) due to Ross's (1967) Right Roof Constraint and in (5) because extraposition never strands prepositions. This strongly suggests that RNR itself never re-orders constituents. Rather RNR tolerates rightward re-ordering of the Target iff re-ordering by HNPS or extraposition is independently possible (for detailed discussion see Bošković no year; Hartmann 2000; Levine 2001; Sabbagh 2003; Wilder 1998, see also fn. 2). We can formulate this finding as the Right Edge Generalization (7). The Right Edge Generalization says that RNR is possible only if the Target is at the right edge of both of the conjuncts. Cases like the above indicate that sometimes HNPS or extraposition is a necessary step to satisfy the Right Edge Generalization which then makes RNR possible.

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<sup>2</sup> Postal 1998 challenges this generalization using example (ia), which he judges grammatical. My informants reject (ia). See Levine 2001:163 for discussion of the relevance of this example and certain conditions under which both (ia) and (ib) might become acceptable.

- (i) a. Mike may have talked to  $t_i$  about love and certainly talked to  $t_i$  about marriage [the tall woman in the black dress]<sub>i</sub>.  
b. \*I talked to  $t_i$  about love [the tall woman in the black dress]<sub>i</sub>.

(7) Right Edge Generalization (modeled on Sabbagh 2003):

In a configuration of the form  $[_{XP_1} \dots Y \dots] \text{ conj } [_{XP_2} \dots Y \dots]$ , Y must be the rightmost element within  $XP_1$  and within  $XP_2$  before RNR may apply.

The upshot is that RNR itself is string vacuous; it does not exhibit movement property (i) above: RNR does not re-order words.

**3. Is RNR island sensitive?**

As discussed at length in the literature (starting with Wexler and Culicover 1980), RNR is not sensitive to a number of well-established islands.<sup>3</sup> In this respect, RNR is similar to ellipsis processes, which are also insensitive to many islands.

(8) *wh*-island

- a. ✓John wonders when Bob Dylan wrote \_ and Mary wants to know when he recorded \_ his great song about the death of Emmett Till.
- b. \*What does John wonder when Bob Dylan wrote.
- c. ✓John wonders when Bob Dylan wrote his great song about the death of Emmett Till and Mary wants to know when Frank Sinatra did.

(9) Complex NP Constraint

- a. ✓I know a man who buys \_ and you know a woman who sells \_ gold rings and raw diamonds from South Africa.
- b. \*What do you know a man who sells?
- c. ✓I know a man who buys gold rings and raw diamonds from South Africa and you know a woman who does.

(10) Adjunct Condition (modeled on an example in Sabbagh 2003)

- a. ✓Josh got angry [after he discovered \_\_], and Willow quit [after finding out about \_\_]—the company's pro-discriminatory policy.
- b. \*What did Josh get angry after he discovered?
- c. ✓Josh got angry after he discovered the company's pro-discriminatory policy, and Willow quit after he did.

RNR does not exhibit movement property (ii) above, i.e., it is not island sensitive.<sup>4</sup> So far, there is no prima facie evidence that RNR involves movement.

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<sup>3</sup> Again the verdict is not totally unanimous since for example Postal 1998 and Sabbagh 2003 dissent. For a reply to Postal's claims and arguments see Levine 2001. Sabbagh claims that RNR is subject to the adjunct condition (which is counterexemplified by example (10) below). He also argues that RNR is subject to the Coordinate Structure Constraint (CSC) together with the ATB exceptions. It is unclear whether the CSC should be treated as an island effect or whether it follows from some more generally parallelism constraint imposed on coordinate structures (see also fn. 12).

<sup>4</sup> There are many additional asymmetries between RNR and movement not considered here at all; thus,  $N'$  can be the target of RNR and ellipsis but not of movement (e.g. Bošković no year); in most languages,  $P^\circ$  cannot be stranded by movement, but it can be stranded by RNR (McCloskey 1986; Abels 2003; Hartmann 2000);  $C^\circ$  can never be stranded by movement, but RNR does strand complementizers (see Bošković no year; Postal 1998 for examples and Abels 2003 for additional discussion); there are second conjunct effects for agreement with RNR that are absent under movement (Hartmann 2000); the identity conditions on RNR targeting VP are essentially the same as those for VP-ellipsis (Bošković no year); etc (see also fn. 7). Such cases cast further doubt on the idea that RNR might involve ATB movement, but for

#### 4. Does RNR involve syntactic re-bracketing?

Recall that the interpretation given above to the notion ‘syntactic re-bracketing’ was that re-bracketing is syntactic if it feeds information into both interfaces. In order to test this, we need to consider structure-sensitive processes at the PF and the LF interfaces. I will use VP-ellipsis and scope as my probes into the structures of PF and LF respectively.

##### 4.1. Does PF see any RNR-related re-bracketing?

I assume that VP-ellipsis is a PF deletion operation (see among many others Baker 1971, 1981; Chomsky 1995a, b; Chomsky and Lasnik 1993; Fox and Lasnik 2003; Johnson 1996; Kennedy and Merchant 2000; Lasnik 1999; Merchant 2001, to appear; Sag 1978, 1980; Wilder 1997a, b), that it is structure sensitive—as its name suggests, and that it deletes VPs of vPs or some such projection.

Observe first that VPs containing traces are not immune to ellipsis (e.g., VP-ellipsis in comparatives, Antecedent Contained Deletion (ACD), etc.). More to the point, ATB movement and VP ellipsis are compatible with each other. This is shown in (11) for *wh*-movement. The structure of (11) is sketched in (12). The trace-containing, embedded VP, *visited*  $t_{who}$ , in the second conjunct is elided under identity with its counterpart in the first conjunct. The binder of the traces, *who*, is not deleted because it is situated outside of both conjuncts at the point when VP-ellipsis applies.

- (11) ?Who did you say that John had visited long ago but that Mary hadn’t until yesterday?  
 (12) who [... [VP visited  $t_{who}$ ] ...] but [... [~~VP visited  $t_{who}$~~ ] ...]

Under the *ex-situ* analysis, RNR involves structures that are virtually identical to (12) except that the Target is on the right rather than on the left. We expect to find examples with the structure in (13). They would be cases where RNR has lifted the Target out of both conjuncts with subsequent ellipsis of the second embedded VP.

- (13) [... [VP ...  $t_{Target}$ ] ] conj [... [~~VP ...  $t_{Target}$~~ ] ] Target  
 (14) [... [VP ... ~~Target~~] ] conj [... [~~VP ... Target~~] ]

The prediction of the *in-situ* analysis is strikingly different. Under the *in-situ* analysis the target of RNR remains in its VP in the second conjunct; therefore, when the VP is elided, the Target of RNR is elided, too, as shown in (14); it can’t survive VP-ellipsis.

The predictions of the two approaches are tested in example (15c). Examples (15a) and (15b) are controls showing that RNR of the Target, *the achievements of the first year syntax students*, and VP-ellipsis in the second conjunct are allowed in this context. Example (15a) might be a bit heavy because of the redundant repetition of *talk about* in the second conjunct, but it is certainly much better than (15c).<sup>5,6</sup>

reasons of space I cannot discuss these examples here. For reasons of space I also omit discussion of some of the more circumstantial examples in Sabbagh 2003, which he interprets as pointing to the opposite conclusion.

<sup>5</sup> The examples have to be this complex to control for possible interfering pseudo-gapping derivations (see also fn. 6).

- (15) a. RNR  
 ✓Jane talked about and/but Frank didn't talk about the achievements of the syntax students.  
 b. VPE  
 ✓Jane talked about the achievements of the syntax students and Frank didn't.  
 c. VPE & RNR  
 \*Jane talked about and/but Frank didn't the achievements of the syntax students.

I conclude from paradigms like this that the constituency relevant to PF is as in (14) not as in (13). In other words, the structure posited by the ex-situ analysis is not visible at the PF interface. This failure of PF to be sensitive to the structure postulated by the ex-situ account is by itself a real problem for that account. In fact, we could stop here and reject the ex-situ hypothesis because the ex-situ structure is not syntactic in the sense given above, it doesn't feed into both interfaces. Let me nevertheless investigate whether other evidence for the ex-situ analysis can be found.

#### 4.2 Does LF see RNR-related re-bracketing?

If RNR involved syntactic movement, then we might expect two further kinds of effects: (a) RNR induced re-bracketing might feed and/or bleed other syntactic processes; (b) the final representation generated under RNR ((2)) should be directly reflected in LF scope relations. There is a consensus that there are no feeding/bleeding effects of the type mentioned under (a).<sup>7</sup> However, there are arguments that the kind of effect mentioned under (b) can actually be observed. I discuss these arguments in the following paragraphs.

Observe that the ex-situ structure in (2) gives the Target of RNR scope over both conjuncts. Abbott 1976; Jackendoff 1977; Gazdar 1981; Postal 1998 discuss examples like (16) and (17) (Hartmann (2000) disputes the data). These examples provide evidence for structure (2) because they require the Target to take scope above both conjuncts.<sup>8</sup>

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<sup>6</sup> It might be thought that (15c) can be ruled out by appealing to Case adjacency. (15c) would be ungrammatical because the Target DP is not adjacent to its Case assigner *about*. Supposing that Case adjacency plays a role in the grammar, it seems unlikely that it is a relevant factor here since Case adjacency relations are routinely destroyed on the surface by RNR ((6a)), (ATB and non-ATB) movement ((11)), and a type of remnant VP-ellipsis as in (i) usually referred to as pseudogapping (see Jayaseelan 1990; Lasnik 1999; Takahashi 2004 this volume among many others).

(i) Mary hasn't dated Bill, but she has Harry. (Jayaseelan 1990:64 ex. 61a)

<sup>7</sup> Thus Postal 1998 chapter 4.3 observes that the putative, island defying movement underlying RNR does not bleed syntactic islands for movement out of the Target of RNR. In fact, once HNPS is factored out, movement out of the Target of RNR is constrained exactly as if the Target of RNR was in situ (see Wexler and Culicover 1980; Bošković, no year; Sabbagh 2003). The same is true for condition C of the binding theory (Levine 1985), NPI licensing (Hartmann 2000; Phillips 1996a), and variable binding (Phillips 1996b). Although Sabbagh is right in pointing out that none of these facts are knock-down arguments against the ATB analysis of RNR, the lack of evidence in its favor is conspicuous.

<sup>8</sup> Perlmutter and Ross 1970 and Postal 1998 also discuss examples like (i) (see also the examples from Camacho 1996 cited in Wilder 2001). I have nothing to say about them.

- (i) ✓ A man just came in and a woman just left who were very similar to each other.  
 (ii) \* A man just came in who were very similar to each other and a woman just left who were very similar to each other.

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- (16) a. ✓John sang, and Mary recorded, two quite different songs.  
b. ✓John sang a song and Mary played the drums (together) (at {equal |similar |different} volumes)
- (17) ✓John sold, and Mary bought, gold rings and raw diamonds from South Africa respectively.

Example (16a) has a reading where John sang a song; Mary recorded a song; the songs were different from each other; and no further songs need to be contextually salient. Example (17) means that John sold gold rings and that Mary bought raw diamonds from South Africa. It is clear that the Target of RNR cannot be the exclusive argument either of the first or of the second conjunct. This is dramatically illustrated in (18) and (19), which are the putative sources for (16) and (17) under an ellipsis approach. The readings (18) and (19) get, if any, are completely different from those of (16) and (17).<sup>9</sup>

- (18) a. John sang two quite different songs and Mary recorded two quite different songs.  
b. John sang a song (together) (at {equal|similar|different volumes}) and Mary played the drums (together) (at {equal |similar |different} volumes)
- (19) John sold gold rings and raw diamonds from South Africa and Mary bought gold rings and raw diamonds from South Africa (respectively).

Let's call the items *different*, *equal*, *similar*, *together*, *respectively*, etc. 'distributives'. To interpret distributives we require the presence of a distributive/cumulative operator (OP). OP must scope over a plural predicate (see Gawron and Kehler to appear for *respectively* and Beck 2000 for *different*). Since each conjunct in (16) and (17) by itself is singular, OP must scope above the entire coordination structure. The distributive in turn must take scope above OP and hence above the conjunction. This is shown in (20). For interpretive purposes we need an LF with roughly the structure in (2).

- (20) [respectively/different ... [OP<sub>dis/cum</sub> ... [<sub>andP</sub> Conj<sub>1sg</sub> [and Conj<sub>2sg</sub>]]]]

Assuming this semantic argument to be correct—and I know of no reason to doubt it—the ex-situ analysis has the advantage that it directly generates interpretable structures. The in-situ analysis has to derive interpretable structures by an additional process of covert ATB movement. Let's call this process *Distributive Scoping*.

Proponents of the in-situ analysis of RNR then have to meet the challenge of characterizing and explaining the properties of Distributive Scoping. They also have to explain why the non-elliptical versions of (16) and (17) ((18) and (19)), do not have the same readings; why other elliptical structures like (21) and (22) do not have these readings either; and finally, why RNR may disobey the generalization that ATB move-

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<sup>9</sup> The argument from (16) and (17) is completely parallel to an argument advanced for example in Gazdar 1981; Jackendoff 1977, where it is argued that systems that derived (i) from (ii) by a process of Conjunction Reduction could not account for the meaning of (ii).

- (i) The same man got drunk and was arrested by the cops. (Jackendoff 1977:193)  
(ii) The same man got drunk and the same man was arrested by the cops.



ment is never covert (Bošković and Franks 2000; Citko 2002). This is a challenge for the in-situ theory, but not an insurmountable one. I return to these points in section 5 below.

- (21) a. John sang two quite different songs and Mary did, too.  
 b. John sang (together) (at {equal |similar |different} volumes) and Mary did, too.
- (22) John sold gold rings and raw diamonds from South Africa (respectively) and Mary (respectively) did (respectively), too (respectively).

The ex-situ analysis of RNR appears to have the advantage of not having to postulate the additional process of Distributive Scoping. However, this advantage is only apparent as becomes clear once we look at more data. Consider example (23).

- (23) ✓John says that Friederike must, and that Konrad may, record two quite different songs.

The example has the relevant reading where *two quite different songs* distributes over the two conjuncts. Notice that the Target of RNR in this case is the entire VP *record two quite different songs*. The object DP, *two quite different songs*, is embedded within this VP and, therefore, does not c-command out. For this reason, the distributive cannot take scope over the two conjuncts. What is needed, even under the ex-situ analysis, is an independent process of Distributive Scoping.

The conclusion that Distributive Scoping is needed independently of RNR can also be reached by considering examples like the following. The context forces the high reading (above the conjoined matrix subject) of *two quite different songs*.

- (24) (*My friend Konrad has written a song called Revolution #10 and my friend Friederike has recorded a song called Revolution #11. The songs have similar titles, but they are quite different from each other. Revolution #10 is the only song Konrad ever wrote and Revolution #11 the only song Friederike ever recorded.*)  
 ✓Konrad has written and Friederike has recorded two quite different songs.
- (25) (*A friend of mine, Friederike knows a man who has recorded a song called Revolution #10 - another friend of mine, Konrad, doesn't know that man. Konrad, though, knows a different man who has recorded a song called Revolution #11 - but Friederike doesn't know that man. These are the only songs the two men have every recorded. The two songs are quite different from each other.*)  
 ✓Konrad and Friederike know men who have written quite different songs.

The most obvious advantage of the ATB analysis disappears. Distributive Scoping is necessary in (24) and (25) independently of RNR. We can now move on to a more intricate question. Although distributives can scope quite high, their scope is not unbounded. Thus, scoping a distributive out of a *wh*-question gives deviant results ((26)).<sup>10</sup>

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<sup>10</sup> Not all speakers find example (26) unacceptable. As far as I can tell, those speakers who accept (26) also accept example (27). These speakers are unproblematic under either account of RNR. For that reason their pattern of judgments is also uninformative.

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- (26) *(My friend Konrad is wondering when Bob Dylan wrote his song Mister Tambourine Man and my friend Friederike would like to know when Bob Dylan wrote his song The Times they are a changing.)*  
?\*Konrad and Friederike are wondering when Bob Dylan wrote two quite different songs.

On the ex-situ analysis, RNR (which as we saw above in (8) is not sensitive to *wh*-islands) should be able to bleed *wh*-island sensitivity for Distributive Scoping. This expectation of the ex-situ analysis is not borne out as (27) shows.

- (27) *(My friend Konrad has written a song called Revolution #10 and my friend Friederike has recorded a song called Revolution #11. Despite bearing similar titles, the two songs are quite different from each other. I would like to know when Konrad wrote his Revolution #10 and you would like to find out when Friederike recorded Revolution #11. Revolution #10 is the only song Konrad ever wrote and Revolution #11 the only song Friederike ever recorded.)*  
?\*I wonder when Konrad wrote and you would like to know when Friederike recorded two quite different songs.

On the in-situ approach, RNR never lifts the Target out of the *wh*-island and unaltered *wh*-island sensitivity is expected. The data from Distributive Scoping thus bear out the prediction of the in-situ analysis and contradict that of the ex-situ analysis.

The conclusion that Distributive Scoping is a covert operation, and independent of RNR, can also be reached by applying the VP-ellipsis test from subsection 4.1. Example (28) is modeled on (15c). If Distributive Scoping were overt, the Target should survive VP-ellipsis. Since it doesn't, Distributive Scoping must be a covert operation.

- (28) Jane talked about and/but Frank didn't \*(talk about) two very different sets of problems.

There are then good reasons to believe that even in the cases where the Target is interpreted with high scope, it is situated in-situ on the surface.

Let's turn to quantifier scope. Sabbagh 2003 observes that sentences like (29a) have a reading where the existential subject quantifier takes scope above the conjunction and the universal object quantifier takes scope above the subject and hence, by transitivity, above the conjunction. On this reading, for every patient admitted last night there is a potentially different nurse who did two things: give a flu shot and administer a blood test.

- (29) a. Some nurse gave a flu shot to, and administered a blood test for, every patient who was admitted to the hospital last night.  
b. Some nurse gave a flue shot to every patient and administered a blood test for every patient.

Crucially, this reading is not available in (29b) which is (modulo the relative clause) the source of (29a) on an ellipsis account. Example (29b) illustrates the generalization mentioned above according to which covert ATB movement is banned. The

example does not pose any additional challenges, since the in-situ analysis has to explain why covert ATB movement is possible with RNR—and just with RNR—anyway.

The same basic point is made again by examples involving ACD ((30)) also from Sabbagh (2003). The point here is that the example with RNR ((30a)) allows resolving the ACD ellipsis above the conjunction ((30b)), but the putative non-elliptical source (30c) does not ((30d)). This is explained (again relying on the ban against covert ATB movement), Sabbagh argues, if we assume the standard analysis of ACD according to which the constituent containing the ellipsis site must move to a position external to its antecedent (see Larson and May 1990; May 1985 and many others).

- (30) a. Josh said he was going to give a flu shot to, and administer a blood test for, every patient Mary did  $\Delta$ .  
 b.  $\Delta$ =(say he was going to) give a flu shot to  $t$  and administer a blood test for  $t$   
 c. Josh said he was going to give a flu shot to every patient Mary did  $\Delta_1$  and administer a blood test to every patient Mary did  $\Delta_2$ .  
 d.  $\Delta_1$ =give a flu shot to  $t$ ;  $\Delta_2$ =administer a blood test for  $t$

The ex-situ analysis again generates a prediction concerning the locality of ACD resolution. Since RNR lifts the Target to a position outside of both conjuncts even if there are islands intervening, ACD resolution should become immune to islands within the conjuncts. This prediction is tested in example (31), which attempts ACD resolution—aided by RNR—into a Complex NP (which are not islands for RNR ((9))).

- (31) a. \*Josh said he would give a vaccination to a man who has contracted, and administer a blood test for a man who has attained immunity against, every disease Mary does  $\Delta$ .  
 b.  $\Delta$ =say he would give a vaccination to a man who has contracted  $t$  and administer a blood test for a man who has attained immunity against  $t$

The choice of auxiliary in the Target (*do* rather than *have*) forces ACD resolution outside of the relative clause. Contrary to the prediction made by the ATB analysis of RNR, the example is unacceptable. The Target of RNR behaves for purposes of the Complex NP Constraint as though it is in situ. Thus, examples like (31) show yet again that the re-bracketed structure (2) is invisible—this time for the purposes of ACD resolution.

In this sub-section we have seen that there is no evidence from LF for postulating structure (2) in the overt syntax. In particular, island amelioration (i.e., island bleeding) effects for distributive interpretation ((26) and (27)) and for ACD resolution ((31)), expected under ex-situ analysis, are absent.

## 5. Towards an account of scope and distributives under RNR

Above we encountered a number of problems facing the in-situ analysis of RNR. I conceded that “[p]roponents of the in-situ analysis of RNR then have to meet the challenge of characterizing and explaining the properties of Distributive Scoping. They also have to explain why the non-elliptical versions of (16) and (17) ((18) and (19)), do not have the same readings; why other elliptical structures like (21) and (22) do not have

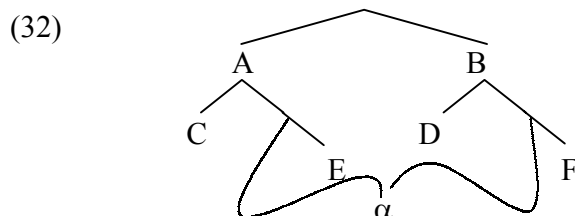
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these readings either; and finally, why RNR may disobey the generalization that ATB movement is never covert (Bošković and Franks 2000; Citko 2002).”

Meanwhile, we have discovered that proponents of the ex-situ analysis have to assume Distributive Scoping, too, rendering this issue orthogonal to the debate. I will therefore not pursue the question of how to characterize Distributive Scoping.

What needs to be resolved is the other set of issues. I suggest to connect the three remaining issues using Wilder’s multi-domination approach to RNR. It has been pointed out several times that the Merge theory of phrase structure needs to be both artificially restricted (in the application of Merge) and enriched (by a copy theory) to guarantee that the single mother constraint of earlier formalizations of phrase structure still holds (see among many others Bobaljik 1995; Gärtner 1999, 2002; Citko 2002; Wilder 2001).

Once copies and the restrictions on Merge are abandoned and multi-domination is allowed, the power it brings with it needs to be restricted. One of the recurrent themes in the literature on the issue is the idea that principles of linearization such as Kayne’s (1994) LCA might be appealed to in order to restrict the power of multi-domination.



A structure like (32) will be ruled out by the LCA. On plausible assumptions about the definition of c-command in multi-dominance structures, A asymmetrically c-commands D,  $\alpha$ , and F in (32). It follows from the LCA that everything D dominates, i.e., C,  $\alpha$ , and E, has to precede D,  $\alpha$ , and F. In addition C c-commands  $\alpha$  and E, and  $\alpha$  c-commands E, deriving the order  $C \ll \alpha \ll E$ . Without having to look any further, we can see that there is a violation of the condition that c-command map onto a linear (i.e., total, asymmetric, irreflexive) order of terminals since  $\alpha$  has to both follow and precede E. In its original formulation the LCA rules out all multi-dominance structures.

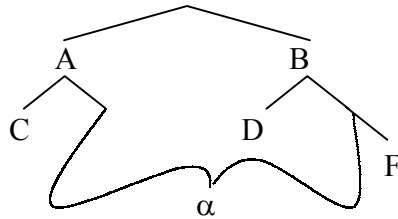
If we want to avoid reintroducing copies and model movement via multi-domination after all, we need to open up a loophole—the multi-dominance theory’s equivalent of copy deletion (see Wilder 2001 section 6 for discussion and a formulation). Citko 2002 observes that once such a loophole has been opened up, it automatically allows ATB-dependencies. What is crucial for the approach is that in ATB dependencies, like in all movement dependencies, there is only one token of the moved material. On these assumptions, Citko 2002 points out, we have an immediate account of the generalization that there is no covert ATB movement. In (29b) for example there are two tokens of the object quantifier—otherwise the structure could not have been linearized as (29b). But these two (type-identical) tokens can never amalgamate into a single chain by covert movement, since movement modeled as multi-domination, requires token-identity. This is Citko’s explanation for the generalization that ATB-movement is generally covert.

In order to account for RNR structures in terms of multi-domination, Wilder opens up a second loophole in the LCA. Kayne’s original formulation entails that if a category A asymmetrically c-commands another category B, then all terminals dominated

by A precede all terminals dominated by B. Wilder introduces the notion of *full dominance* and demands that if a category A asymmetrically c-commands another category B, then all terminals fully dominated by A precede all terminals fully dominated by B.<sup>11</sup>

This modification still rules out (32). To see this, consider the following facts.  $\alpha$  asymmetrically c-commands, and hence precedes, E ( $\alpha \ll E$ ). A asymmetrically c-commands D,  $\alpha$ , and F; hence, whatever A fully dominates (C and E) must precede D,  $\alpha$ , and F ( $C \ll D$ ,  $C \ll \alpha$ ,  $C \ll F$ ,  $E \ll D$ ,  $E \ll \alpha$ ,  $E \ll F$ ). We need not look further.  $\alpha$  must precede E and E must precede  $\alpha$  in violation of the demand that the LCA yield a linear order of terminals. According to Wilder, RNR structures resemble (32) in that the Target is shared between the conjuncts (i.e., multi-dominated). Crucially, however, in RNR structures nothing ever follows the Target within the first conjunct (by the Right Edge Generalization (7)), i.e. the offending element, E in (32), is absent as seen in (33). In contrast to (32), (33) can readily be linearized. The derived order is  $C \ll D \ll \alpha \ll F$ . Wilder thus derives the effect of the Right Edge Generalization for the first conjunct.<sup>12</sup>

(33)



Above we saw why covert ATB movement is banned in cases like (29b): because it would require amalgamating two different type-identical tokens into a single chain. RNR does not pose any such obstacle to covert ATB movement, since RNR involves only one (multi-dominated) token, just like regular, overt cases of ATB movement. Finally, I will assume that regular ellipsis processes (e.g., VP-ellipsis, gapping, pseudogapping, etc.) do not involve multidomination (token identity).<sup>13</sup> From this final assumption it follows that ellipsis structures like (21) and (22) never allow covert ATB either.

This completes the account of the issues left open in section 4 for the in-situ analysis of RNR.

<sup>11</sup> Put simply, A fully dominates C if all paths from C to the root of the tree pass through A. Thus in (32) above A fully dominates C and A, but does not fully dominate  $\alpha$ .

<sup>12</sup> Wilder claims that the Right Edge Condition only holds of the first conjunct in RNR, claiming, in effect, that his account derives all there is to the Right Edge Condition. The examples that Wilder uses to illustrate this point might not involve RNR at all, though. This does not seem to pose an insurmountable problem, however, since the second half of the Right Edge Condition (that the Target has to be rightmost also in the final conjunct) might be attributable to some kind of parallelism constraint. Such a constraint is needed independently of ellipsis, RNR, or ATB movement as (i) illustrates. The possessive pronoun here is either bound in both conjuncts or it is free in both conjuncts. A mixed reading of the sentence is impossible.

(i) Every boy cleaned his desk and every girl cleaned her desk.

<sup>13</sup> We need not stipulate this assumption. Since the Right Edge Generalization does not hold for these processes, they can only involve multidomination (structure sharing) on pain of being unlinearizable—unless we assume a number of otherwise totally unmotivated movement operations and an implausible constituent structures.

## 6. Conclusions

In this paper I have argued that a previously unnoticed prediction concerning the interaction of RNR and VP-ellipsis argues against the ex-situ analysis of RNR and for the in-situ analysis. I then turned to what I take to be the strongest argument against the in-situ approach, namely facts concerning distributives and quantifier scope. I showed that island effects for scope taking are not bled by RNR. Again this is in line with the predictions of the in-situ analysis but contradicts predictions that the ex-situ analysis can hardly avoid. However this raises the question why RNR and only RNR should allow covert ATB movement. This, I argued, follows under Wilder's (2001) multi-dominance theory of RNR, which is on the whole strongly confirmed by the facts considered here.

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Institut für Slavistik  
Universität Leipzig  
Beethovenstr. 15  
D-04107 Leipzig

abels@gmx.net  
<http://www.uni-leipzig.de/~abels>