

Displacement Effects by Multi-dominance in Right Node Raising Constructions

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Park, Myung-Kwan. 2006. Displacement Effects by Multi-dominance in Right Node Raising Constructions. *The Linguistic Association of Korea Journal*, 14(1), 37-65. This paper explores the most effective approach to the Right Node Raising (RNR) construction in English. Examining three previous (i) deletion, (ii) multi-dominance, (iii) movement analyses of this construction, I argue that they encounter certain empirical and theoretical problems. Pursuing an alternative analysis, I propose a midway coordination under multi-dominance account for the construction. In particular, I argue à la de Vos and Vicente's (2005) that the right-most shared material or pivot is generated with its tokens separately in each conjunct clause of the construction and subsequently at a later point of derivation, the two tokens in each conjunct clause undergo coordinate conjunction/unification, finally being placed at the right-edge position. I argue that coordinate conjunct/unification applies under multi-dominance. I further argue that multi-dominance behaves in the similar fashion to movement, in that it brings about 'displacement' (change in word order) effects, but that the former diverges sharply from the latter, in that the former preserves syntactic relations already built, whereas the latter creates an array of new syntactic relations.

Key Words: Right Node Raising, deletion, multi-dominance, movement, coordination, displacement, midway conjunction

1. Introduction

In my earlier papers (Park (2005a) and Park (2006)), I argued that the deletion approach to the RNR construction does not work particularly in accounting for the following examples:

- (1) John loves, and Mary hates — [[oysters] and [clams]] — respectively.
- (2) Marsha argued for on Tuesday, and Louise argued against on Thursday [[communism] and [facism]] — respectively. (Postal (1998: 134))

The remarkable structural feature of these examples is that the two conjunct DPs at the right edge are interpreted as linked to the preceding two (incomplete) conjunct clauses, respectively. In other words, the example of (1) is interpreted as (3):

- (3) John loves oysters, and Mary hates clams.

It seems that this interpretation the example of (1) has cannot be accounted for by the deletion approach to the RNR construction. The approach was initially proposed (cf. Gleitman (1965), Wexler and Culicover (1980), Wilder (1997/8) and others) to account for simpler instances of the construction like (4):

- (4) John loves, and Mary hates — [oysters].

The upshot of the approach is that the example of (4) is derived from the following underlying structure which has two full conjunct clauses, with deletion applying to one element at the right edge of the first conjunct clause under identity with another one at that of the second one (the deleted element is represented by the striking-through marking):

- (5) John loves ~~oysters~~ and Mary hates oysters.

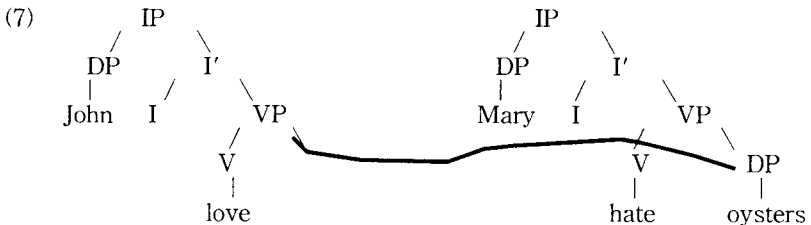
Despite its apparent merit, the deletion approach seems unable to be extended to the more complex examples like (1) and (2). The problem is that the approach cannot account for the interpretation (3) that the example in (1) has. In particular, the deletion approach assumes that

some clause element undergoes deletion under identity with the corresponding one. Given this assumption, the most plausible hypothesis we can conceive of under the deletion approach is that (1) is derived from the following structure:

- (6) John loves ~~oysters~~, and Mary hates — [[oysters] and [clams]], respectively.

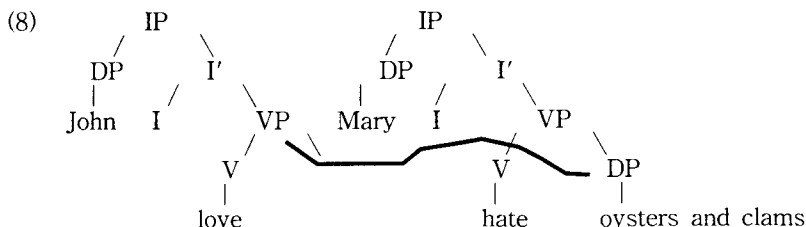
Though the postulated structure (6) yields the example of (1), however, the derivation of the latter from the former makes an incorrect prediction that the verb *hates* in the second conjunct clause takes as its object the whole conjoined DP *oysters and clams*. It seems that this problem is insurmountable, which means that we cannot adopt the deletion approach to the RNR construction (See Park (2006) for additional arguments against the deletion approach).

The alternative approach to the construction at issue, which was pursued by various scholars like McCawley (1982, 1987), Goodall (1987), Wilder (1998), Phillips (2003), and Abels (2004), is the idea that the right-most element in the construction is dominated by more than one mother node. In concrete, this multi-dominance approach postulates the following structure for (4):



Notably, however, it seems not easy to provide a representation for the example in (1) under the multi-dominance approach, still reflecting its interpretation in (3). The following structure of (1) under this approach makes an incorrect prediction that the whole conjoined DP at the right edge is interpreted as linked both to the first and the second conjunct

clause:



One way out of this problem is to assume that (8) is the Overt Syntax representation, but the distributive interpretation of the conjoined DP is achieved at Covert Syntax, as argued by Gawron and Kehler (2004). In particular, it can be supposed that the adverb *respectively* that occurs in the position behind the conjoined DP has the operator function of distributing it, interpretationally linking each conjunct of it to the first and the second conjunct clauses.

Notwithstanding its explanatory appeal, however, the multi-dominance and covert interpretation approach to the RNR construction encounters a problem that arises when the right-most conjoined element functions as a grammatical licenser or licensee. First, the RNR construction in Spanish shows that each conjunct of the right-most conjoined element induces clitic doubling in the preceding clauses as follows:

- (9)a. Juan **le** compro un libro Δ , y **le** regalo un CD
 J CL.sing bought a book and CL.sing gave a CD
 — a Maria y a Susana
 to M and to S
Reading: He bought Maria a book and gave Susana a CD.
- b. Juan **les** compro un libro Δ , y **les** regalo un CD
 J CL.pl bought a book and CL.pl gave a CD
 — a Maria y a Susana
 to M and to S
Reading: He bought a book to Maria and Susana and gave a CD to them too. (Vicente and de Vos (2005))

As Vicente and de Vos (2005) note, singular object clitics are doubled when the right-most conjoined element is interpreted distributively as in (9a), whereas plural ones are doubled when it is interpretive collectively as in (9b). To account for the occurrence of singular object clitics in (9a), we have to say that the (structural) output of covert interpretation triggers clitic doubling. However, if it is true that not covert but overt structure feeds clitic doubling, the multi-dominance and covert interpretation approach to the RNR construction cannot be successful.

In addition to its role as a licenser, the right-most conjoined element can function as a licensee. The following examples in English make the point:

- (10)a. Mary says that John, and Susan hears that they — sing*(s) and dance*(s), respectively.
 b. Mary says that they, and Susan hears that John — smoke*(s) and drink*(s), respectively.

In (10a-b), the verbal agreement on each conjunct of the conjoined element concords with the embedded subject of the first and the second conjunct clauses. It seems possible to say that covert distribution of the conjoined element accounts for the verbal agreement. If it is, however, true that agreement reflects on not Covert but Overt Syntax (OS),¹⁾ the

1) One possibility that I have to refute to maintain the argument in the text is that two conjuncts of the conjoined DP at the right edge of RNR constructions are 'distributed' at Overt Syntax by the help of the 'distributing' adverb *respectively*, as suggested by Dae-Ho Chung (per. comm.). The test case for this purpose may be the examples in (i), reported by Postal (1998: 108):

- (i)a. Logical and empirical truth are/*is necessary and contingent, respectively
 b. Thai and Burmese food are/*is light and greasy, respectively

In (i) the verb displays plural agreement though the adverb *respectively* forces 'distributive' interpretation of the two subjects and predicates. If the interpretation occurred at Overt Syntax, feeding the realization of agreement, the singular form would be allowed in (i) and (ii). This implies that the overt distribution by the adverb does not obtain.

Furthermore, the idea that the adverb *respectively* induces overt

multi-dominance plus covert interpretation approach to the RNR construction is supposed not to be on the right track.

In fact, if it is true that both clitic doubling in Spanish and subject-verb agreement in English are a reflection of the OS structure, it is supposed that each conjunct of the conjoined element at the right edge of the RNR construction is generated separately in the first and the second conjunct clauses. In this analysis the relevant structure of the RNR construction will be represented schematically as follows. Let us suppose that X and Y below represent the terms which will later constitute the two conjuncts of the conjoined element at the right edge of the RNR construction:

(11) [[_{conjunct clause} ... X] CONJ [_{conjunct clause} ... Y]]

This proposed structure has certain advantages. First, this structure accounts for the 'distributive' reading of the conjoined element. Indeed,

'distribution' of the conjoined DP makes another wrong prediction. The example of (ii) illustrates this point:

(ii) Michelle may believe, and Amanda certainly does believe — that she was a genius.

As noted by Jacobson (1999), Postal (2000) and Park (2005b), the pronoun *she* within the right-edge shared material is interpreted ambiguously, linking anaphorically both to *Michelle* and *Amanda* inside the preceding conjunct clauses. However, the following example noted by Postal (2000) does not allow for the same interpretation of the pronoun:

(iii) Michelle and Amanda respectively assumed and proved that she was a genius.

(**Reading:** Mechelle assumed, and Amanda proved, that she was a genius.)

Note that if *respectively* functioned as a 'distributor' at Overt Syntax, pairing each conjunct of the conjoined subject with each conjunct of the conjoined verbs (as represented in the annotation), the example of (iii) would have the pronoun inside it interpreted in the same way as that in (ii). Contrary to the prediction, this is not the case, which implies that *respectively* does not contribute to overt distribution of the conjoined/plural element modified by it. I will return to this issue below in the later section.

the distributive reading of it is construed as a reflection of the OS structure. Second, this structure accounts for both clitic doubling in Spanish and subject-verb agreement in English as in (9a) and (10) on the basis of the hypothesis that these phenomena result from the OS configuration.

However, the postulated structure in (11) poses a certain question: how X and Y are combined together to construct the conjoined element at the right edge of the RNR construction. One possibility is to suppose that X undergoes rightward movement and then attaches just to a position in front of Y, inserting the conjunction *and* between them (Furthermore, we still have to take care of adding the adverb *respectively*). Another possibility is to suppose that X and Y are combined together simply by the conjunction operation. Though this operation is not so clear at this point, I suppose that it is similar or identical to the one we apply in constructing base-generated coordination structure in general.

Note that, as we are already aware, there are two types of RNR construction: (i) where the right-most RNRred element has conjunction structure; and where it has simple structure. The OS structure of the second type can be represented as follows:

(12) [[*conjunct clause* ... X] CONJ [*conjunct clause* ... X]]

The feature of the simple RNR construction is that the right-edge term in the first conjunct clause is identical to that in the second one. The derivation of this construction can be achieved, on the one hand, by the movement operation. In concrete, two right-edge X's are merged into one term via across-the-board (ATB) style movement. Another hypothesis is, on the other hand, to resort to the conjunction operation. Since two X's are obviously identical, they can be unified into one term by means of the conjunction operation.

In the following sections I will first examine how the right-most element either of the simple or the conjoined type is derived in the RNR construction. In particular, I will demonstrate that the movement

approach to this derivation does not work. I will finally show that the not base-generated but midway coordination under multi-dominance approach is the most superior in accounting for the peculiar properties of the right-most element in the construction at issue.

2. Why the movement approach fails

As noted in the previous section, the simple type of RNR construction where the right-edge element—let me henceforth call this element the ‘RNRed’ pivot or just the pivot—involves non-coordinate structure can be supposed to be derived by the ATB style movement. For concreteness’ sake, let us repeat the schematic initial structure of the simple RNR construction from (12):

$$(13) \text{ [}_{\text{conjunct clause}} \dots X \text{] CONJ [}_{\text{conjunct clause}} \dots X \text{]}$$

Since, as generally acknowledged, ATB movement can be understood as movement followed by union of two terms involved (i.e., two X’s in (13))²⁾, the output of the rightward ATB movement will be as follows (still suppressing some irrelevant details):

$$(14) \text{ [}_{\text{conjunct clause}} \dots t \text{] CONJ [}_{\text{conjunct clause}} \dots t \text{] X}$$

↑

The ATB movement analysis of the RNR construction apparently has certain advantages. In particular, we do not have to postulate any additional theoretical concept to account for the derivation of the RNR construction because the construction in question can be analyzed by resorting to the rule of ATB movement (Williams (1978)), which was independently required for the following construction as follows:

2) Though, Ciko (2005) advances the opposite idea that union precedes movement.. However, see the footnote (4) below for the problem this idea raises.

- (15) [Which woman] did Fred date t and Bob marry t ?
 ↑ _____|_____

The example of (15) has one shared Wh-phrase linked to the two trace positions in the following two conjunct clauses. It is generally acknowledged that this example involves leftward ATB movement. If it is true that the RNR construction is derived by the rule of ATB movement, both the leftward ATB movement and RNR constructions are the same except for the difference in directionality of ATB movement involved.

The assimilation of the RNR construction to the leftward ATB movement construction has another advantage. Recall that the complex type of RNR construction where the pivot has coordinate structure poses a challenge to the existing deletion or multi-dominance analyses. However, the ATB movement account for this type of RNR construction does not confront any problem because the same structure as the coordinate pivot in it can also be realized in the construction involving leftward ATB movement as follows:

- (16) [Which nurse]₁ and [which hostess]₂ did Fred date t_1 and Bob marry t_2 respectively?

This example clearly shows that ATB movement is understood as a process consisting both of movement and union, i. e., coordinating conjunction. This understanding of ATB movement offers a simple analysis of the complex type of RNR construction: it just involves rightward ATB movement.

However, the movement supposedly instantiated in (14) infringes on a certain restriction on rightward movement. First, extensively argued by Johnson (1985), rightward movement obeys the stricter sense of locality than leftward movement: it adjoins a phrase X to the maximal projection immediately dominating X. Though this restriction on rightward movement is still regarded as not fully understood, let us suppose that it is a genuine descriptive generalization.

It is noteworthy that this restriction is not obeyed by the derivation of the RNRed pivot in (14) via ATB movement. To understand its more concrete derivation, let us consider the example of (5), repeated below:

(17) [John loves t] and [Mary hates t] oysters.

|_____||_____↑

According to Johnson's proposed restriction on rightward movement, the object DP cannot undergo extraction out of the VP immediately dominating it. However, the movement-based derivation of the RNRed pivot in (15) will have to allow for the extraction of the pivot outside it, which obviously is in conflict with the restriction.

In addition to the problem due to the locality restriction, there are several other ones that the ATB movement-based approach to the RNR construction raises. To show that the ATB movement analysis does not hold good, let me juxtapose the RNR construction with the one involving leftward ATB movement. First, it is often noted that the latter manifests Island effects as in (18), whereas the former does not, as follows:

- (18)a. *Which pictures of Fred does [Mary own a man who buys],
and [Bill know a man who sells]? (CNPC)
- b. *Which policy did [Josh get angry after he discovered], and
[Willow quit after finding out about]? (Adjunct Condition)
- (19)a. [Mary owns a man who buys], and [Bill knows a man who
sells] — pictures of Fred.
- b. [Josh got angry after he discovered], and [Willow quit after
finding out about] — the company's pro-discriminatory policy.

Under the uniform ATB movement analysis of the two constructions, the contrast in Island effects between them seems to constitute a puzzle.

Second, the RNR and leftward ATB movement constructions behave in the same fashion with respect to Preposition Stranding as follows:

- (20) Who did Ted offer apples to], but [Bill actually give peaches to]?
(21) [Ted offered apples to], but [Bill actually gave peaches to] — the lovely young secretary.

Moreover, as Postal (1998) notes, leftward (ATB) movement does not allow for Preposition Stranding in the exactly same environments where RNR does not.

- (22) a. *What way did Jerome tickle Marsha in ?
 b. *Whose sake did Ernie do that for ?
(23) a. *Jerome may have ticked Marsha in, and Frank certainly should have tickled he in — the way that I told you.
 b. *Ernie may have done it for, and Gwen certainly should have tickled her in — the way that I told you.

However, Heavy NP Shift—which is known as one instantiation of rightward movement—does not allow for Preposition Stranding as in (24). Note that if the RNR pivot is derived by rightward ATB movement, (21) and (25) are predicted to be ill-formed, contrary to fact:

- (24) *John talked about yesterday the man you met in Paris.
(25) John talked about, and Mary ignored — the man you met in Paris.

Third, it is often noted that some type of constituents like TP or NP (in the DP system of phrase structure) cannot undergo leftward movement (the reason for their immobility is not known yet) as in (26). The same constituents, however, can occur as a pivot in the RNR construction as in (27):

- (26) a. *[Mary will graduate on time] John believes that, and Bill claims that.
 b. *[Dresses] I like expensive, and you like cheap.
(27) a. John believes that, and Bill claims that — Mary will graduate on

time.

- b. I like expensive, and you like cheap — dresses.

Under the ATB movement analysis both constructions are expected to behave in the parallel fashion. But they indeed do not. This contrast between them is puzzling under the unified analysis of both constructions.

Fourth, there is a consensus that movement proceeds upward, not downward. This upward process of movement means that if it is true that RNR is a result of rightward ATB movement, the 'RNRed' pivot will adjoin to TP as a final landing site, in that the RNR construction in general involves conjunction of two TP's. However this expectation is not achieved. The test case will be the following paradigm of examples noted by Abels (2004):

(28) a. **RNR**

[John talked about] but [Frank didn't talk about] — the achievements of the syntax students.

b. **VP Ellipsis**

Jane talked about the achievements of the syntax and Frank didn't [_{VP} e].

c. **RNR & VP Ellipsis**

*John talked about but Frank didn't [_{VP} e] the achievements of the syntax students.

The example of (28a) is an example of RNR construction, while the example (28b) is an example of VP ellipsis construction. Note that if the 'RNRed' pivot underwent ATB movement to adjoin to TP outside the elided VP, the example of (28c) would be grammatical. The ungrammatical status of this example means that the pivot does not undergo movement upward.

I started with the section by examining whether the movement approach to the RNR construction is effective. It was noted that ATB movement can be the persuuable option which derives the construction at

issue, explaining the simple and complex types of RNR constructions. However, the movement approach is not a viable one, in that the RNR construction diverges in some important syntactic aspects from the regular movement and leftward ATB movement constructions: (i) it is not subject to island effects; (ii) in contrast to canonical rightward movement, it allows for apparent Preposition Stranding; (iii) the pivot is apparently immobile but still can be 'RNRed'; (iv) the pivot does not show effects of upward movement. Seeing that these properties of the RNR construction cannot be accounted for effectively by the movement approach, I will explore an alternative approach shortly in the next section.

3. A proposal: midway coordination under multi-dominance

The idea I am going to pursue to account for the derivation of the RNR construction is that (each conjunct of) the pivot is generated separately in each conjunct clause and in the course of derivation its two separate conjuncts are unified into one term under coordination. Let us start with discussing the complex type of RNR construction in (1), repeated below:

(29) John loves, and Mary hates — [[oysters] and [clams]], respectively.

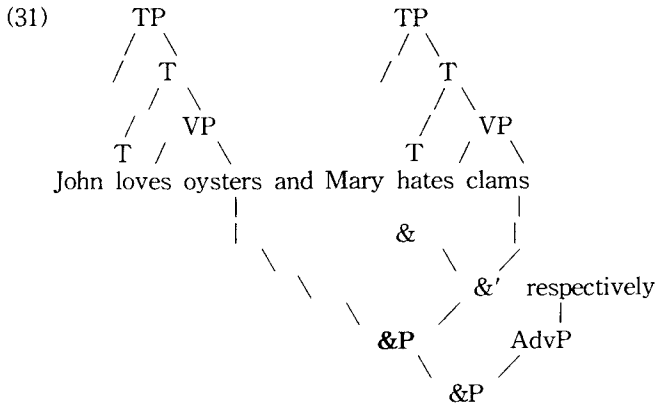
This surface structure is derived from the following initial structure:

(30) John loves oysters, and Mary hates clams.

Under the approach I am pursuing, the distributive reading of the coordinate pivot is ascribed to the fact that each conjunct of it is base-generated separately in each conjunct clause.

(30) can be a good sentence when it itself is realized as a surface structure. However, as de Vos and Vicente's (2005) propose, grammar allows another option: combining together the right-edge object DPs, *oysters* and *clams*, out of this structure in (30) by means of the

coordinating conjunction inserted. In other words, on top of the structure built in the derivation of (30), the right-edge two object DPs undergo the process of union which we usually capitalize on to create coordinate structure. In addition to this process, the adverb *respectively* that has a function of transparently pairing each conjunct of the resulting coordinate pivot with one of the preceding conjunct clauses is also attached to it. Let us assume with Collins (1988) that a coordinating conjunction projects its own structure. The derivation of (30) to the resulting structure with the right-edge objects coordinated will be as follows:



Note that in our conception, RNR involves a derivational step of combining together the two right-edge elements³⁾ as represented below the example of (31) in addition to the structure built in the usual course of derivation as represented above it. This step of derivation is apparently not a usual one, but is independently required anyway in that it is also found in the leftward ATB movement construction noted above in (16),⁴⁾ repeated below:

3) It has often been noted that the RNR construction displays right-edge effects, originally ascribed to Oerle (1991): under my analysis, only the two right-edge elements are combined together to build the pivot. See Wilder (1999), Abels (2004) and Park (2005a) for the idea of how these effects can be accounted for.

(32) [Which nurse]₁ and [which hostess]₂ did Fred date t₁ and Bob marry t₂ respectively?

4) Recently, Ciko (2005) argues that the simple type of leftward ATB movement construction involves *parallel merge*. In (i), for instance, *read* and *what* are combined together by the usual operation of external merge, and subsequently *what* inside the resulting structure and *recommended* are merged together by the proposed operation of parallel merge, producing the structure in (ii):

(i) I wonder what Gretel recommended and Hansel read.
 (ii)

According to Ciko, the notion of parallel merge has two important properties: (A) it involves two distinct rooted objects (just like External Merge); (B) it combines the two rooted objects by taking a subpart of one of them (just like Internal Merge).

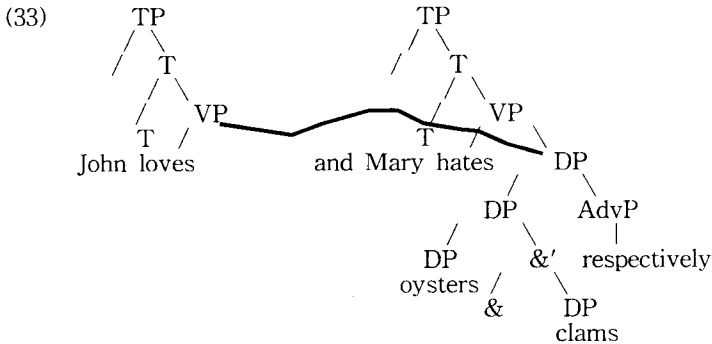
It is not clear, however, how Ciko's proposed structure can be extended to the sentence (16) where the ATB-moved element has coordinate structure. Before the coordinate structure is formed before the movement, the structure of (16) up to TP will be as follows:

(i)

Note that in (ii), the process of building the coordinate structure *which nurse and which hostess* reflects on neither of the two properties of parallel merge: first, it does not involve two distinct rooted objects; second, since the first property does not obtain, it follows that the second property does not, either. This state of affairs seems to cast doubt on Ciko's proposed operation of parallel merge in the derivation of the leftward ATB movement construction.

Though in (32), *which nurse* and *which hostess* are generated separately in the trace position of each conjunct clause, they are combined together to produce the desirable surface structure. I assume that joining together the two right-edge objects in (31) is exactly the same operation as applied in deriving (32).

The simultaneously existing two structures: (i) one regular clausal structure and (ii) another coordinate structure combining together the two objects raise a certain problem, specifically how the coordinating conjunction which is inserted in another dimension of structure to join together the two objects is incorporated into the main clausal structure. The option that grammar also allows seems to be 'minimal restructuring' of the clausal structure built. In other words, the coordinate structure formed by combining together the two objects in another dimension is allowed to be merged into the clausal structure already built. In this conception, the resulting structure will be as in (33):



Note that in (33), the coordinate structure yielded by combining together the two objects is joined into the object position of the second conjunct clause. One point is in order about the resulting structure. This is the fact that the two VPs in the first and the second conjunct clauses multiply dominate the coordinate object DP in (33), where the domination of it by the first VP is represented by the thick line (See Park (2005: 427-430) for evidence showing that the domination line

plays an important role in the syntactic component). Following Gärtner (1999) and Abels (2001)⁵, I assume that multiple dominance brings about 'displacement' effects when the usual option of movement cannot be applied. Since, as noted above, rightward movement does not exist or it is subject to the stringent restriction on locality, it is not an option we can apply to relocate the object of the first conjunct clause in (33). The option of multi-dominance is applied instead. Note that multi-dominance differs from movement, in that an element 'displaced' via multi-dominance is still dominated by the mother node dominating it in its original position, but movement proceeds to the position that the mother node dominating a moving element prior to movement cannot dominate. In this sense, multi-dominance structure involves relocating a certain syntactic object from one position to another, with other syntactic relations such as dominance preserved. Its apparent single effect is to generate a new word order. By contrast, the structure resulting from movement involves the genuine sense of displacement from the launching site, creating an array of new syntactic relations.

It seems that the distinguishing property of multi-dominance has certain desirable consequences. First, elements relocated via multi-dominance is the ones that have not undergone the strict sense of movement: i. e., moving from one position dominated by its mother node to another position that the mother cannot dominate but c-commands it. In this sense the elements relocated via multi-dominance show in-situ effects syntactically; however, they display displacement effects only in phonological/linear change of word order. Therefore, the RNR construction does not show Preposition Stranding effects as in (21) and (25). The pivot in the construction actually does not move from the complement of a preposition whatsoever. Second, the fact that immobile constituents occur as a pivot

5) In fact, they argue that 'displacement' effects do not result from the operation of movement, as generally assumed, but from that of multi-dominance. My view in the text is more restrictive: movement and multi-dominance are both available to grammar, and only when the former cannot be applied, the latter kicks in.

of the RNR construction as in (26a) and (27a) follows immediately from the line of analysis I have pursued, because they actually have not undergone movement anyway; they are just readjusted in terms of word order. Third, the lack of island effects in the RNR construction as in (19a-b) is predicted in my analysis because the pivot after relocation in word order through multi-dominance is still dominated by the mother node dominating it before the relocation. In other words, despite its relocation in word order the pivot behaves as if it stays in-situ in its original position, thereby not displaying any island effects at all.

Even though multi-dominance does not affect genuine syntactic relations already built, the relocation of the terminal node it effects has consequences on understanding some apparently familiar phenomena. As I indicated, since multi-dominance just brings about a change in word order of the terminal node, without other syntactic relations tampered with, the change in linear word order is understood rather as phonological than syntactic. In this sense, when certain an effect relating to the pivot is not in full force, the effect is not ascribed to syntactic relations but to linear or phonological ones.

Such an effect is the well-known *that*-trace one. The effect was investigated into extensively with the understanding that it is due to genuine syntactic relations. If this were correct, however, under our hypothesis that as I have argued, RNR preserves syntactic relations, (34a) and (34b) would be unacceptable just like (34c).

- (34)a. ?That is the meeting which₁ I've been thinking that, and Jim's been saying that — [t₁ could well be cancelled]. (de Chene (1995))
- b. ?Which gangster₁ did the DA claim that, though he couldn't prove — [t₁ was responsible for the killing]? (Merchant (2001: 184))
- c. *Which senator₁ is it probable [that t₁ will resign]?

The contrast in grammaticality between (34a-b) and (34c) implies that despite apparently having the same structural relations, they differ in

other non-structural relations. In particular, as Swingle (1993) noted, the RNR construction in general has tripartite domains whose boundaries are marked by the two intonation phrase boundary pauses. One pause occurs before the conjunction between the two conjunct clauses; the other occurs before the pivot. It seems that the intervening pause between the pivot and the preceding constituents exerts amelioration on *that*-t effects (See also Culicover (1993) for the idea that the intervening adverb also does the same). To an extent that this analysis is right, it constitutes another evidence in support of the *that*-t effect qua a not syntactic but phonological one (See also McClosky (1997) and Merchant (2001) for the same line of idea).

Second, the null Comp phenomenon is another moot point. It has been noted that a null Comp occurs in restricted environments. With the introduction of the notion of *govern* (Chomsky (1981)), it was argued that a null Comp appears in a position governed by a verbal element, which accounts for the contrast between (35b) and (35c). Under this conception, however, the ungrammaticality of (35a) constitutes a counter-example, in particular provided that RNR preserves syntactic relations:

- (35) a. *They believed, and Mary claimed — John would murder Peter.
 b. *John would murder Peter, they claim.
 c. They believed John would murder Peter. Bošković and Lasnik (2003)

However, as Bošković and Lasnik (2003) and Ahn (to appear) argue, if the null Comp phenomenon reflects on not syntactic but phonological properties, the paradigm of examples in (35) receive a natural explanation. In particular, it seems that the pivot of the RNR construction as in (35a) behaves in the identical fashion to displaced elements as in (35b), in that they constitute an independent intonation phrase. Therefore, the null Comp qua a PF clitic inside this phrase ends up being stranded, subsequently producing the ill-formed structure.

Third, another case in point is the inadmissibility of a *that*-clause as

a complement of a preposition. It is a well-known fact that a *that*-clause cannot occur in a position directly governed by a preposition as in (36c). As Chae (1994) notes, however, when the direct government relation is disrupted either by an intervening element or by the displacement of a *that*-clause, the sanction is lifted, exerting redemption effects on the resulting structure as in (36d-f):

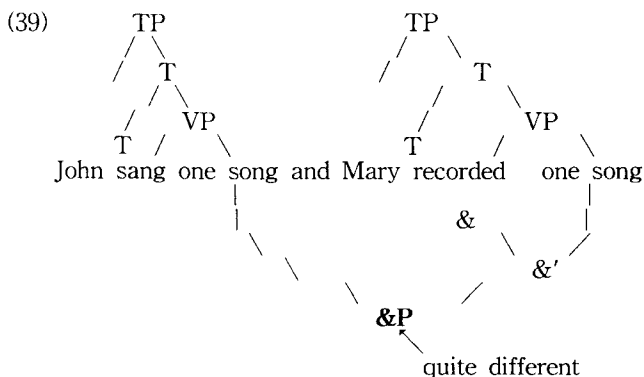
- (36)a. ?I count on, but Mary does not believe — that you are trustworthy.
 b. ??Mary does not believe, but I am willing to count on — that you are trustworthy.
 c. *I count on that you are trustworthy.
 d. ?I count on, among other things, that you are trustworthy.
 e. ?That he will be on time, you can count on.
 f. ?You can count on John, and that he will be on time. (Chae 1994: 170))

It is not obvious at this point whether the inadmissibility is due to syntactic or phonological reasons. However, the acceptability of (36a-b) gives some insight into understanding the inadmissibility. In particular, maintaining that RNR preserves syntactic relations, we have to say that the RNRed *that*-clause in (36a-b) is governed directly by a preposition. This implies that the acceptability of these examples have to be explained not by the syntactic relations available but by the phonological properties like non-adjacency between a preposition and a *that*-clause by means of word order or pause.

Let us now turn to the more opaque form of pivot in (37) and (38), where the pivot does not result from literally combining together the two right-edge objects by the use of a coordinating conjunction:

- (37) John sang, and Mary recorded — two quite different songs.
 (38) The Red Sox beat, and the Giants were beaten by — different teams.

Looking at the surface form of the pivot in (37) and (38), it seems reasonable to say that in addition to the option of combining together the right-edge two objects by the use of a coordinating conjunction, there is an option of doing so by the use of a null coordinating conjunction. In the latter case the result will be the one that is yielded by adding the first conjunct right-edge object *one song* to the second conjunct one *one song*. The syntactic change from *one song* 'and' *one song* to the desired form *two songs* is usually not allowed. However, under the Distributed Morphology framework which entertains the idea that lexical items are inserted postsyntactically during Spell-Out, it seems that the change has to be permitted⁶.



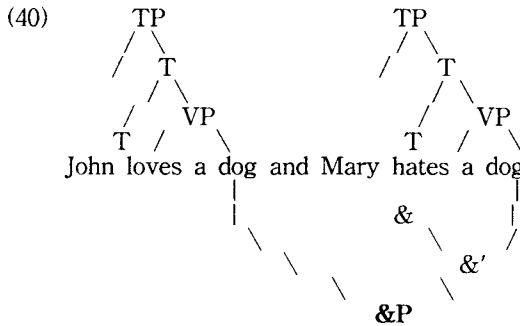
Another thing to take care of in (39) is how to attach the 'distributing' adjective *different*. Let us now suppose that adding the first conjunct right-edge object to the second conjunct one results in producing *two songs*. To this resulting structure the adjective *different* has to be inserted between *two* and *songs*. This step of derivation is apparently peculiar, but given the idea that adjuncts can be inserted non-cyclically

6) In addition to the RNR construction, the leftward ATB movement construction as in (i) needs the proposed idea anyway to build the form of the ATB-moved Wh-phrase:

(i) Which two (quite) different books_{1,2} did Mary like *t*₁ and John hate *t*₂?

(Lebeaux (1988); Chomsky (1995)), the adjective as an adjunct is allowed to adjoin between *two* and *songs*.^{7), 8)}

The third type of RNR construction is the one where the pivot results from unifying its two tokens into one. The relevant example is (40):



The unification obviously is successful when the two tokens of the pivot is the same referentially as well as being the same in syntactic form. The referential identity of the two tokens is expressed clearly by the use of the adjective such as *same* and *identical*, which supposedly

7) See also the example (i) of the footnote (6), where the 'distributing' adjective can also be attached to the ATB-moved Wh-phrase.

8) One caveat is order for the availability of the distributive reading created by the adjective *different*. Jason Merchant (personal communication) noted that unlike the examples in (37) and (38) of the text, the following examples do not allow for distributive interpretation of the pivot:

- (i) John must have, and Peter could have, been hassled by two different police officers.
- (ii) John can, and Peter must, pass two different tests.

In other words, (i) cannot be construed as "John must have been hassled by one police officer, and Peter could have been hassled by another police officer." Rather (i) is interpreted as "John must have been hassled by two different police officers, and Peter could have, been hassled by two different officers." Though further work is needed to account for this interpretation, it seems reasonable to say at this point that the structure resulting from adding the first conjunct right-edge element to the second conjunct one is appended with the adjective *respectively*, but the sub-constituent inside it cannot not be.

is added to the resulting unified term in the same fashion that the 'distributing' adjective *respectively* is, as in (41):

(41) John hummed, and Mary sang — the same/identical tune.

It is not always the case that the referential identity holds. Peterson (2001) notes that the following example allows the interpretation of two different cars in both actions:

(42) John bought, but Bill only leased — a new Saab.

To understand the peculiar status of this reading in the RNR construction, it is instructive to note that the typical coordination construction requires referential identity. In (43) the same car is involved in both actions:

(43) John road-tested and bought a new Saab.⁹⁾

By contrast, the leftward ATB movement construction allows the non-identity interpretation of the ATB-moved element as in (44), noted by Munn (1998):

(44) Who did Bill kill on Tuesday and Fred kill on Wednesday?

In fact, the identity reading is anomalous because of the impossibility of killing the same man twice.

However, when the ATB-moved element is specified for number, the

9) However, Gawron and Kehler (2004) note that the Wh question sentence in (i) corresponding to the example in (43) allows the non-identity reading of the moved element:

- (i)a. What did Bill eat and drink?
- b. He ate a hamburger and drank a coke.

The question in (ia) can be answered by the sentence in (ib).

usual non-identity reading disappears:

(45) Which man did Bill kill on Tuesday and Fred kill on Wednesday?

In other words, we cannot respond to (45) by saying "Bill killed the man on Tuesday, and Fred killed the woman on Wednesday." However, (45) allows for the functional interpretation of the ATB-moved element. Under this interpretation a good answer to (45) will be, for example, "his victim." The full clause answer constructed in this case is "Bill₁ killed his₁ (own) victim on Tuesday, and Fred₂ killed his₂ (own) victim on Wednesday," where the referent of the answer to the Wh-phrase is associated with the subject of each clause. This reading is more like the sloppy interpretation typically available in the ellipsis construction.

Notably, the full clause answer to (45) can be paraphrased into the RNR construction as follows:

(46) Bill₁ killed on Tuesday, and Fred₂ killed on Wednesday — his_{1/2} (own) victim.

To construct the pivot in the line of analysis I have pursued, we have to allow the two objects separately generated to be unified into one in (46) though they carry the different indices that are responsible for sloppy interpretation (in terms of Fiengo and May's (1994) coinage, β -index). In fact, this is possible in the RNR construction, as argued extensively in Park (2005b) and Park (2006).

To return to (43), it seems that the non-identity reading of the pivot in this example is not the genuine referential one but the sloppy one. It has to be pointed out that indefinite expressions are construed as variables whose values are determined by contextual operators (Lewis (1975); Heim (1982)). I suppose that the pivot *a new Saab* in (43) has the indices of its two tokens bound by an event operator in each conjunct clause, before its two tokens are unified into one.

4. Conclusion

In this paper I have attempted to demonstrate that previous three analyses of the RNR construction are not effective in accounting for various properties of the construction. First, the deletion approach faces problems especially due to the complex type of the construction. Second, the multi-dominance approach confronts problems with overt agreement triggered by the pivot. Third, the movement approach at initial appearance provides some explanatory power, in that the RNR construction can be analyzed on a par with the leftward ATB-movement construction; however, the most problematic aspect of this approach is that it relies on rightward movement which has often been supposed to obey the more severe sense of locality or not to exist at all.

Refuting the three previous analyses of the RNR construction, however, I have garnered from them some insights into it. In particular, the pivot is derived from its two tokens separately generated in each conjunct clause of the construction. Now, a more enlightening question raised is how the derivation proceeds. In forming the pivot out of its two tokens, it seems that two steps of derivation are needed. One is to displace the two tokens from their original positions to the right-edge position. Second, combining them together is called for. I have argued that the displacement is achieved not by the operation of movement, but by that of multi-dominance. This idea is somewhat novel at first appearance, but as Gärtner (1999) and Abels (2001) argue, the operation of multi-dominance is a useful theoretical concept which takes care of displacement effects in natural languages. But I have adopted a more restricted sense of the operation. I have argued that the operation of multi-dominance applies only when that of movement is banned or restrained. I have also argued that the operation of multi-dominance does not tamper at all with the syntactic relations already built, except for the relocation of right-edge elements in terms of word order. As for combining together the two tokens of the pivot after their relocation, the operation involved here is the one we apply in building usual coordinate

structure.

References

- Abels, Klaus. (2001). On a modular view of head movement. Ms., University of Connecticut. Storrs.
- _____. (2004). Right node raising: Ellipsis or across the board movement? Proceedings of NELS 34, ed. by Keir Moulton and Matthew Wolf. Amherst, MA: GLSA.
- Ahn, Duk Ho. To appear. Clauses in non-canonical positions in PF. *Syntax*.
- Boskovic, Zeljko. (1995/2005). Two notes on right node raising. *UConn Working Papers in Linguistics* Vol 13, 79-118. Eds. Masashi Nomura, Fumikazu Niinuma, and Lara Reglero. Department of Linguistics, University of Connecticut, Storrs.
- Boskovic, Zeljko and Howard Lasnik. (2003). On the distribution of null complementizers. *Linguistic Inquiry* 34: 527-546.
- Chae, Hee-Rahk. (1994). Right node raising in an indexed PSG. *Language Research* 30.1:161-180.
- de Chene, Brent. (1995). Complementizer-trace effects and the ECP. *Geneva Generative Papers* 3:1-4.
- Chomsky, Noam. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- _____. (1995). *The Minimalist Program*. Cambridge MA: MIT Press.
- Ciko, Barbara. (2005). On the nature of merge: External merge, internal merge, and parallel merge. *Linguistic Inquiry* 36:475-497
- Collins, Chris. (1988). Conjunction adverbs. Ms., MIT, Cambridge, Mass.
- Culicover, Peter. (1993). Evidence against ECP accounts of the *that-t* effect. *Linguistic Inquiry* 24:557-561.
- Fiengo, Robert and Robert May. (1994). *Indices and Identity*. Cambridge, MA: MIT Press.
- Gärtner, Hans Martin. (1999). Phrase-linking meets minimalist syntax.

- Proceedings of the West Coast Conference on Formal Linguistics* 18:159-169.
- Gawron, Mark and Andrew Kehler. (2004). The semantics of respective readings, conjunction, and filler-gap dependencies, *Linguistics and Philosophy* 27.2:169-207.
- Gleitman, Lila. (1965). Coordinating conjunctions in English. *Language* 41:260-293.
- Goodall, Grant. (1987). *Parallel Structures in Syntax*. Cambridge, UK: Cambridge University Press.
- Hartmann, Katharina. (2000). *Right Node Raising and Gapping: Interface Conditions on Prosodic Deletion*. Amsterdam: John Benjamins.
- Heim, Irene. (1982). *The Semantics of Definite and Indefinite Noun Phrases*. Doctoral dissertation, University of Massachusetts, Amherst.
- Jacobson, Pauline. (1999). Towards a variable free semantics. *Linguistics and Philosophy* 22:117-184.
- Johnson, Kyle. (1985). *A Case for Movement*. Doctoral dissertation, MIT.
- Kayne, Richard. (1994). *The Antisymmetry of Syntax*. Cambridge, Mass.: MIT Press.
- Lasnik, Howard. (1999). *Minimalist Analysis*. Oxford: Blackwell.
- Lebeaux, David. (1988). *Language Acquisition and the Form of Grammar*. Doctoral dissertation, University of Massachusetts, Amherst.
- Lewis, David. (1975). Adverbs of quantification. In *Formal Semantics of Natural Language*, ed. Edward Keenan, 3-15. Cambridge: Cambridge University Press.
- McCawley, James. (1982). Parentheticals and discontinuous constituent structure. *Linguistic Inquiry* 13: 91-106.
- _____. (1987). Some further evidence for discontinuity. In *Discontinuous Constituency: Syntax and Semantics 20*, ed. Huck, Geoffrey and Almerindo Ojeda, 185-200. New York: Academic Press.
- McClosky, James. (1997). Resumptive pronouns. Ms., University of California at Santa Cruz.
- Merchant, Jason. (2001). *The Syntax of Silence: Sluicing, Islands, and*

- the Theory of Ellipsis*. Oxford University Press: Oxford.
- Munn, Alan. (1998). ATB movement without identity. *Proceedings of the 14th Eastern States Conference on Linguistics*.
- Oehrle, Richard. (1991). Categorical frameworks, coordination and extraction. *WCCFL* 9: 411-425.
- Park, Myung-Kwan. (2005a). When things are cumulated or distributed across coordinate conjuncts. *Studies in Generative Grammar* 15.4: 415-431.
- _____. (2005b). Two types of pronouns and the identity/parallelism condition in the RNR construction of English. *Studies in Modern Grammar* 42:29-50.
- _____. (2006). Morphological/inflectional strict vs. sloppy identity in RNR constructions: Towards a midway coordination analysis. *Studies in Generative Grammar* 16.1: 175-191.
- Peterson, Peter. (2001). The distribution of grammatical information across sets: Some consequences for coordination. In *Proceedings of the 2001 Conference of the Australian Linguistics Society*.
- Phillips, Colin. (2003). Linear order and constituency. *Linguistic Inquiry* 34:37-90.
- Postal, Paul M. (1998). *Three Investigations of Extraction*. Cambridge, MA: MIT Press.
- _____. (2000). Strange pronouns. In *Jorge Hankamer WebFest*, ed. Sandy Chung, Jim McCloskey, and Nathan Sanders. <http://ling.ucsc.edu/Jorge/postal.html>.
- Progovac, Ljiljana. (2000). Coordination, c-command, and 'logophoric' n-words. In *Negation and Polarity*, ed. by Laurence R. Horn and Yasuhiko Kato, 88-114. Oxford University Press, Oxford.
- Swingle, Kari. (1993). The role of prosody in Right Node Raising. Ms., University of California at Santa Cruz.
- Vicente, Luis and Mark de Vos. (2005). Coordination under RNR (CoRNR): at the intersection of Syntax and PF, Presented at the West Coast Conference on Formal Linguistics (*WCCFL*) 24, 18-20, March 2005. Simon Fraser University, Vancouver.
- Wexler, Ken and Peter Culicover. (1980). *Formal Principles of*

Language Acquisition. Cambridge MA: MIT Press.

- Wilder, Chris. (1997). Some properties of ellipsis in coordination. In *Studies on Universal Grammar and Typological Variation*, ed. Artemis Alexiadou. and T. Alan Hall, 59-107. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- _____. (1998). Right Node Raising and the LCA. *WCCFL 18 Proceedings*, ed. S. Bird, A. Camie, J. Haugen and P. Norquest, 586-598. Somerville, MA: Cascadilla Press.
- Williams, Edwin S. (1978). Across-The-Board rule application. *Linguistic Inquiry* 9:31-43.

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