

Right-Dislocation as scrambling¹

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The present paper shows that Right-Dislocation (RD) in Japanese shares a number of characteristics with scrambling, but nonetheless cannot be identified as rightward scrambling. The proposed solution to this apparent contradiction is that there is no direct syntactic movement of the right-dislocated phrase. Rather, the right-dislocated phrase is a remnant of an extra clause which is deleted (or sluiced) after scrambling. It is therefore concluded that RD involves leftward movement (scrambling) and that its rightward effect is only apparent. The proposed analysis is supported by a number of facts that have not previously been reported, including the distribution of adverbs, pronominal coreference, anaphor binding, idiom interpretations and *wh*-questions. The proposed analysis is also consistent with Kayne's (1994) proposal that there are no rightward movement processes in syntax.²

1. INTRODUCTION

The canonical word order in Japanese is SOV, but this language has scrambling. Despite this fact, the verbal complex in this language appears sentence-finally. However, in colloquial Japanese, sentences like (1b), where a constituent apparently moves to the right of a verbal complex, are quite frequently observed. I will henceforth refer to sentences like (1b) as Right-Dislocation (RD) sentences.³

- (1) (a) John-ga LGB-o yonda yo.
 NOM ACC read
 ‘John read LGB.’
 (b) John-ga yonda yo, LGB-o.
 NOM read ACC
 ‘John read it, LGB.’

(1a) is the canonical word order, SOV, while (1b) has the non-canonical SVO order.

[1] This paper is a substantially revised version of Tanaka (1996). I would like to express my gratitude to Mika Kizu and *Journal of Linguistics* editors and anonymous referees. The author alone is responsible for whatever errors may be remaining.

[2] Kural (1997) argues that post-verbal constituents in Turkish, another SOV language, must be derived through rightward movement, contrary to Kayne's proposal.

[3] Throughout this paper, the particle *yo* is attached to the end of the sentences. It signifies that the sentence is colloquial. It is not reflected in the glosses.

In this paper, I will argue that sentences with RD consist, in fact, of two sentences (Kuno 1978) and that the ‘right-dislocated’ phrase is a constituent of the second sentence ((2a)). Furthermore, as will be shown in detail below, the right-dislocated phrase occupies the initial position of the second sentence as a result of scrambling (see Saito 1985 among many others), which left-adjoins a constituent to IP ((2b)). Thus, (1b), for instance, is derived in the following manner:

- (2) (a) John-ga pro yonda yo, John-ga LGB-o yonda yo.
 –scrambling →
 (b) John-ga pro yonda yo, LGB-o_i [John-ga t_i yonda yo].
 –deletion →
 (c) John-ga pro yonda yo, LGB-o_i [~~John-ga t_i yonda yo~~].

According to this simple derivation, there is no syntactic movement relation between the gap (i.e. pro) in the first clause and the right-dislocated phrase. This is independently confirmed by the fact that there need not be a gap in the first clause. The gap can be filled with the identical lexical item, as in (3a), or an NP like *the book*, as in (3b).

- (3) (a) John-ga LGB-o yonda yo, LGB-o.
 NOM ACC read ACC
 ‘John read LGB, LGB.’
 (b) John-ga ano-hon- o yonda yo, LGB-o.
 NOM the book ACC read ACC
 ‘John read the book, LGB.’

As will be shown, these ‘gapless’ RD constructions have a number of syntactic properties in common with RD sentences with a gap, like (1b). Thus, they should be treated in the same way. Since (1b) and (3) should be treated in the same way, and since (3) cannot involve syntactic movement (as the sentences contain no gap), this supports the view advocated here that there is no syntactic movement relation between the gap in RD and the right-dislocated phrase.

In what follows, section 2 summarizes Kuno (1978). Section 3 proposes an analysis of RD and section 4 points out a number of parallelisms between RD and scrambling, which follow straightforwardly from the analysis in (2). Section 5 is a summary.

2. KUNO’S (1978) ANALYSIS

Kuno (1978) argues that sentences like (1b) have the underlying structure in (4), and that subsequent stylistic/functional deletion derives (1b).⁴

[4] This analysis reflects the intuition shared by Japanese speakers that the right-dislocated phrase is added as an ‘afterthought.’ That is, it is as if the right-dislocated phrase is

- (4) John-ga pro yonda-yo, John-ga LGB-o yonda-yo.
 NOM read NOM ACC read
 ‘John read it, John read LGB.’

Evidence for this analysis seems convincing. First, Kuno (1978: 15) shows, on independent grounds, that the distribution of empty proforms is controlled by the functional principle in (5).⁵

- (5) *Principle of the Use of Empty Proforms*

Do not use empty proforms for new information, while using overt forms for old information.

(6) shows that (5) is valid.

- (6) (a) A: 1968-nen- ni umaremasita-ka?
 year in were-born Q

‘Were you born in 1968?’

B: *Hai, pro umaremasita.

yes was-born

‘Yes, I was born.’

B’: Hai, 1968-nen -ni umaremasita.

yes year in was-born

‘Yes, I was born in 1968.’

- (b) A: 1968-nen- ni mada kodomo desita-ka?
 year in still boy was Q

‘Were you still a small boy in 1968?’

B: Hai, pro mada kodomo desita.

yes still boy was

‘Yes, I was still a small boy.’

B’: Hai, 1968-nen -ni mada kodomo desita.

yes year in still boy was

‘Yes, I was still a small boy in 1968.’

(6aA) is a question about the hearer’s birth year, thus *in 1968* in (6a) is new information. (6aB) is in violation of (5), since its new information, e.g. *in 1968*, is an empty proform, but there is no empty proform for a constituent bearing old information, i.e. *was born*, which is pragmatically presupposed by the presence of the speaker B in the conversation and by the question (6aA). This accounts for the unacceptability of (6aB). In contrast, (6aB’) is acceptable, since it is a full-fledged answer to (6aA). On the other hand, both

independent from the rest of the sentence, as indicated by the comma-intonational break between them. It is assumed that the two (or three) parts of the RD structure have no hierarchical relation.

[5] (5) is slightly reformulated from Kuno’s original definition. Kuno formulates the principle as the Deletion Principle, but that can be easily confused with deletion in the second clause of (4).

(6bB) and (6bB') are acceptable, since (6bA) is a question about whether the hearer was a small boy or not. Therefore, in (6bA), *be a small boy* is newer than *in 1968*. The principle in (5) is respected in both (6bB) and (6bB'), hence the acceptability of these sentences.

Of relevance to our present discussion is the fact that new information cannot be right-dislocated to the end of the sentence. This suggests that sentences with RD involve a process similar to that involved in (6). Thus, as an answer to (6aA), (6aB'') is unacceptable, but as an answer to (6bA), (6bB'') is acceptable.

- (6) (a) B'': *Hai, pro umaremasita yo, 1968-nen -ni.
 yes was-born year in
 'Yes, I was born then, in 1968.'
- (b) B'': Hai, pro mada kodomo desita yo, 1968-nen -ni.
 yes still boy was year in
 'Yes, I was still a small boy then, in 1968.'

This result is expected if RD involves an empty proform, which is constrained by (5). That is, the first part of (6aB''), *hai umaremasita yo*, involves an empty proform, and thus is identical to (6aB) in the relevant respects, except that it is followed by the right-dislocated phrase. Thus, we can treat (6aB) and (6aB'') in the same way. On the other hand, the first part of (6bB''), *mada kodomo desita*, is new information. Thus, the acceptability of (6bB'') can be treated in the same way as the acceptability of (6bB').

That the problem with (6aB'') has to do with the empty proform, not with the right-dislocated phrase, is independently confirmed by the fact that its gapless RD counterpart is acceptable in the same context. (6aB''') is acceptable as an answer to (6aA).

- (6) (a) B''' : Hai, 1968-nen -ni umaremasita yo, 1968-nen -ni.
 yes year in was born year in
 'Yes, I was born in 1968, in 1968.'

(6aB'') and (6aB''') minimally depart from each other in that the former has an empty pronoun (which corresponds to the right-dislocated phrase) while the latter does not. Since only (6aB'') is unacceptable, the conclusion follows that the problem with (6aB'') has to do with the empty pronoun.

Kuno (1978) argues, based on this and other observations, that the clause to the left of the right-dislocated phrase in RD involves empty proform. This in turn implies that the right-dislocated phrase is not literally dislocated (i.e. moved) from the gap position. Kuno's conclusion, therefore, is that the right-dislocated phrase is independent from the clause that appears to its left. That is, RD constructions involve repeating the clause, and every phrase in the second clause except the right-dislocated phrase is deleted under identity with the first. In what follows, I assume that this account is basically correct, and

will present syntactic arguments that support it. In addition, I will bring in some new data that bear on the syntax of the second (elided) clause. It will be demonstrated that syntactic conditions, such as the Subjacency Condition, are in operation in RD. At the same time, RD fails to show some characteristic properties of rightward movement found in other languages, such as English. Hence, RD cannot be straightforwardly reduced to the general movement rule, i.e. Chomsky's (1981) Move α . I will propose a unified solution to this apparent paradox.

3. ISLANDS VS. THE RIGHT-ROOF CONSTRAINT

3.1 *Subjacency Condition*

The following sentences show that RD is subject to various island conditions, generally subsumed under the Subjacency Condition.

- (7) (a) John-ga [Mary-ga Bill-ni ageta hon -o] nusunda yo.
 NOM NOM DAT gave book ACC stole
 ‘John stole the book that Mary gave to Bill.’
 (b) ?*John-ga [Mary-ga pro_i ageta hon -o] nusunda yo, Bill-ni.
 NOM NOM gave book ACC stole DAT
 ‘John stole the book that Mary gave to him, to Bill.’
- (8) (a) John-ga [Mary-ga Bill-o nagutta toiu uwasa-o] sinziteiru yo.
 NOM NOM ACC hit that rumor ACC believes
 ‘John believes the rumor that Mary hit Bill.’
 (b) ?*John-ga [Mary-ga pro_i nagutta toiu uwasa-o]
 NOM NOM hit that rumor ACC
 sinziteiru yo, Bill-o_i.
 believes ACC
 ‘John believes the rumor that Mary hit him, Bill.’
- (9) (a) John-ga [Mary-ga LGB-o yomu mae-ni] gengogaku-de
 NOM NOM ACC read before linguistics in
 Ph.D.-o totta yo.
 ACC got
 ‘John got his Ph.D. in linguistics before Mary read LGB.’
 (b) ?*John-ga [Mary-ga pro_i yomu mae-ni] gengogaku
 NOM NOM read before linguistics
 -de Ph.D.-o. totta yo, LGB-o_i.
 in ACC got ACC
 ‘John got his Ph.D. in linguistics before Mary read it, LGB.’
- (10) (a) John-ga Mary-ga LGB-o yonda-ka siritagatteiru yo.
 NOM NOM ACC read Q want-to-know
 ‘John wants to know whether Mary read LGB.’

- (b) ?John-ga Mary-ga pro_i yonda-kadooka
 NOM NOM read whether
 siritagatteiru yo, LGB-o_i.
 want-to-know ACC
 ‘John wants to know whether Mary read it, LGB.’

(7) has a relative clause Complex NP, (8) a noun complement Complex NP, (9) an adjunct island, and (10) a *wh*-island. The (b)-sentences of each pair involve right-dislocation out of an island. For reasons discussed in detail in Tanaka (1999), *wh*-islands do not block movement in Japanese. Thus, (10b) is almost perfectly grammatical. Note that RD can take place long-distance, as shown by the examples in (11).

- (11) (a) John-ga [Mary-ga LGB-o yonda-to] itta yo.
 NOM NOM ACC read COMP said
 ‘John said that Mary read LGB.’
 (b) John-ga [Mary-ga pro_i yonda-to] itta yo, LGB-o_i
 NOM NOM read COMP said ACC
 ‘John said that Mary read it, LGB.’

Thus, (7)–(10) and (11) jointly suggest that RD can potentially be unbounded, but observes the Subjacency Condition. This suggests that RD is an instance of Move α . Given this observation, it is quite tempting to conclude that RD actually dislocates a constituent to the end of the sentence. However, the following two sections argue against the movement analysis.

3.2 Gapless Right-Dislocation and the Subjacency Condition

The first problem with the rightward movement analysis comes from gapless RDs. The problem is that they are also subject to the Subjacency Condition in spite of the fact that they contain no gap, as shown by (12).

- (12) (a) ?*John-ga [Mary-ga Bill-ni ageta hon -o]
 NOM NOM DAT gave book ACC
 nusunda yo, Bill-ni.
 stole DAT
 ‘John stole the book that Mary gave to Bill, to Bill.’
 (b) ?*John-ga [Mary-ga Bill-o nagutta toiu
 NOM NOM ACC hit that
 uwasa-o] sinziteiru yo, Bill-o.
 rumor ACC believes ACC
 ‘John believes the rumor that Mary hit Bill, Bill.’
 (c) ?*John-ga [Mary-ga LGB-o yomu mae-ni]
 NOM NOM ACC read before
 gengogaku- de Ph.D.-o totta yo, LGB-o.
 linguistics in ACC got ACC
 ‘John got his Ph.D. in linguistics before Mary read LGB, LGB.’

- (d) ?John-ga Mary-ga LGB-o yonda-
 NOM NOM ACC read
 kadooka siritagatteiru yo, LGB-o.
 whether want-to-know ACC
 ‘John wants to know whether Mary read LGB, LGB.’

The examples in (12) show that even gapless RD constructions observe island conditions. This puts us in a paradoxical situation since a movement analysis appears not viable in gapless RD constructions. Thus, the obvious conclusion about the examples in (7–8) is that they also do not contain a gap left by movement, but rather an empty proform. But then the fact that RD consistently observes the island conditions is a mystery.

3.3 *The Right-Roof Constraint*

The second problem with the movement analysis of RD comes from the Right-Roof Constraint (RRC). It is well known that rightward movement rules in English and other languages are constrained by the RRC. For example, consider (13).

- (13) (a) John said that a picture of Madonna was on sale yesterday.
 (b) John said that [a picture t_i] was on sale yesterday [_{PP} of Madonna]_i.

(13a) is ambiguous in that the temporal adverb, *yesterday*, can modify either the matrix clause or the embedded clause. (13b) is unambiguous: since the extraposed PP can only attach to the embedded clause (due to the RRC), the temporal adverb to the left of the extraposed PP may modify only the embedded clause. Since it was originally proposed in Ross (1967), the nature of the RRC, or for that matter, its status as an independent universal condition, has been controversial. Here, I adopt the descriptive statement in (14).

- (14) Rightward movement is upward bounded.

With this in mind, let us go back to (11), repeated here as (15). (15b) is derived from (15a) by right-dislocating the complement object.

- (15) (a) John-ga [Mary-ga LGB-o yonda-to] itta yo.
 NOM NOM ACC read COMP said
 ‘John said that Mary read LGB.’
 (b) John-ga [Mary-ga pro_i yonda-to] itta yo, LGB-o_i.
 NOM NOM read COMP said ACC
 ‘John said that Mary read it, LGB.’

If the RRC is operative in Japanese, (15b) should be ungrammatical, yet it is perfectly grammatical. This gives rise to two possible conclusions: either the RRC is not active in Japanese or RD in Japanese is not a rightward movement rule. Section 3.2 has concluded that RD cannot involve movement

of the right-dislocated phrase. The rest of this paper demonstrates that the second line of analysis leads to a more illuminating solution.

3.4 *A solution*

My proposal is that RD should be analyzed as involving two separate clauses. What seems to be ‘right-dislocated’ is in fact a remnant of the second clause. The proposed derivation of (1b) in (2) is reproduced here.

- (16) (a) John-ga pro yonda yo, John-ga LGB-o yonda yo.
 – scrambling →
 (b) John-ga pro yonda yo, LGB-o_i [John-ga t_i yonda yo].
 – deletion →
 (c) John-ga pro yonda yo, LGB-o_i [~~John-ga t_i yonda yo~~].

(16) assumes, with Kuno (1978), that RD sentences repeat the sentence. (16a) is the underlying structure of (1b). The first clause may or may not contain an empty pronoun (yielding a ‘gapped’ or ‘gapless’ RD, respectively).⁶ The second half of the sentence is a full-fledged clause at some underlying level of representation. Further, the right-dislocated phrase in the second clause must undergo scrambling, as shown in (16b).

Scrambling has to apply to the second clause, moving the right-dislocated phrase to the initial position of that clause. (16b) is the S-structure representation. Since this derivation involves no rightward movement, it is correctly predicted that RD does not show the effects of the RRC. Moreover, since scrambling is constrained by the Subjacency Condition, as demonstrated by Harada (1977) and Saito (1985), it is expected that RD is constrained by the Subjacency Condition. This accounts for (7)–(10) and (12). It can thus be concluded that the ill-formedness of the (b)-sentences of (7)–(10) and the sentences in (12) stems from the same condition that is responsible for the ill-formedness of (17a–d), scrambling counterparts of (7)–(10).

- (17) (a) ?*Bill-ni_i John-ga [Mary-ga t_i ageta hon -o]
 DAT NOM NOM gave book ACC
 nusunda yo.
 stole
 ‘To Bill, John stole a book that Mary gave.’
 (b) ?*Bill-o_i John-ga [Mary-ga t_i nagutta toiu uwasa-o
 ACC NOM NOM hit that rumor ACC
 sinziteiru yo.
 believe
 ‘Bill, John believes the rumor that Mary hit.’

[6] See Huang (1984) for an analysis of empty pronouns in the object position.

- (c) ?*LGB-_{o_i} John-ga [Mary-ga t_i yomu- maeni] Ph.D.-o
 ACC NOM NOM read before ACC
 totta yo.
 got
 ‘LGB, John got his Ph.D. before Mary read.’
- (d) ?LGB-_{o_i} John-ga Mary-ga t_i yonda-
 ACC NOM NOM read
 kadooka siritagatteiru yo.
 whether want-to-know
 ‘LGB, John wants to know whether Mary read.’

To my ear, (17a), (17b), (17c) and (17d) have the same status as (7b), (8b), (9b) and (10b), respectively. Since RD is taken to be scrambling (a type of leftward movement) the proposed analysis explains the Subjacency facts without posing problems for the RRC.

Notice that in order to account for (17), the (b)-sentences in (7)–(10) and (12) on a par, it is not sufficient for a given right-dislocated constituent merely to be in the leftmost linear position in the second clause. In fact, it is crucial that the right-dislocated phrase is scrambled out of various islands. To show this point more clearly, consider (18), which is derived by the scrambling of the entire complex NP. The sentence is acceptable since it is free from a Subjacency violation.

- (18) [Bill-ni_i Mary-ga t_i ageta hon- o_j John-ga t_i nusunda-yo.
 DAT NOM gave book ACC NOM stole
 ‘To Bill the book Mary gave, John stole.’

(18) cannot be the underlying structure of (7b) because (18) is grammatical. I propose that deletion in RD, like sluicing rules, can only target a constituent to which the right-dislocated phrase adjoins. Assuming, basically with Saito (1985), that a right-dislocated phrase is Chomsky-adjoined to IP, (19) is the schematic structure for the second clause in RD.⁷

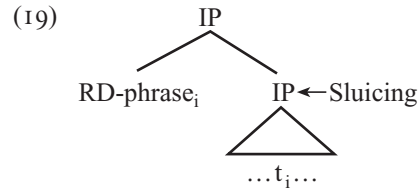
[7] The deletion process in RD does not have to be identified as sluicing, as long as it only targets a syntactic constituent. As a *Journal of Linguistics* anonymous referee suggests, the relevant deletion process might be analyzed as Reinhart’s (1991) elliptic conjunction, illustrated by examples like (i).

- (i) (a) No one kisses his mother, except (for) Felix.
 (b) The critics liked your book and the public too.
 (c) More people love Bach than Mozart.

However, the relevant phenomenon seems to be similar to sluicing since it can apply inter-sententially. Sluicing also applies inter-sententially, as shown by (ii).

- (ii) John bought something. I don’t know what ~~John bought~~.

If the deletion process in RD is identified as sluicing, the present analysis has non-trivial implications for the study of scrambling. In particular, Lobeck (1995) argues that sluicing of a constituent is possible only when the elided maximal projection is selected by a functional head which agrees with its specifier. This suggests that scrambling is a substitution to a functional specifier, and the scrambled phrase agrees with the head, which in turn means that scrambling is morphologically driven (see Deprez 1989). I will



Given that sluicing can delete only a syntactic constituent, (18) cannot be the underlying structure of (7b), since the deleted portion in (7b), struck out in (18), does not form a constituent.

To summarize, the proposed analysis builds on Kuno's (1978) analysis: RD sentences involve repeating the sentence. The first element may or may not have an empty pronoun. The second undergoes scrambling of the 'right-dislocated' phrase and sluicing of the lower IP, as in (19).

3.5 *Whitman's (1991) parenthetical movement*

Whitman (1991) argues, based on a set of data similar to those cited above, that RD in Japanese should be regarded as rightward parenthetical movement, like that observed in English:

- (20) (a) They, the cops, spoke to the janitor about that robbery yesterday.
 (b) They spoke, the cops, to the janitor about that robbery yesterday.
 (c) They spoke to the janitor, the cops, about that robbery yesterday.
 (d) They spoke to the janitor about that robbery, the cops, yesterday.
 (e) They spoke to the janitor about that robbery yesterday, the cops.

Examples like (20e) are called Right-Dislocation in English. Whitman observes that parenthetical movement in English is subject to the Subjacency Condition, just like RD in Japanese.

- (21) (a) That they t_i will leak the story to the press is terrible, the cops _{i} .
 (b) ?*I revealed my prediction that they t_i will leak the story to the press two weeks ago, the cops _{i} .
 (c) ?*I got angry when they t_i leaked the story to the press because it was a secret, the cops _{i} .

Hence, Whitman's claim is that RD in Japanese is derived by the same process that derives (20b–e) from (20a). As evidence for this analysis,

nevertheless assume that scrambling is adjunction to IP, since the choice between these possible alternatives is largely irrelevant for the present purpose.

Whitman observes that an appositive parenthetical pattern similar to (20) is also possible in Japanese.⁸

- (22) Katoo-kun-ga are, gansyo -o dasita yo.
 NOM that application ACC sent out
 ‘Katoo sent that, the application form.’

However, the ‘parenthetical movement’ in (20) is not as free in Japanese as in English. For instance, consider (23).⁹

- (23) (a) Katoo-kun-ga are, gansyo -o UBC-ni dasita yo.
 NOM that application ACC to sent-out
 ‘Katoo sent that, the application form, to UBC.’
 (b) *Katoo-kun-ga are UBC-ni, gansyo -o dasita yo.
 NOM that to application ACC sent-out
 ‘Katoo sent that to UBC, the application form.’

(23a) is identical to (22) except that it has a dative phrase. Since English parenthetical phrases can appear in a variety of positions, as shown by (20), if Japanese RD sentences are derived by a process similar to (20), it is expected that (23b), in which the parenthetical appears to the left of the dative phrase, is grammatical. However, this expectation is not fulfilled.

The next section provides a number of types of support for the analysis proposed in this paper. Evidence that RD involves scrambling, I argue, is overwhelming. In developing the argument, I will occasionally compare the proposed analysis with Whitman’s and argue for the former.

4. PROPERTIES OF RIGHT-DISLOCATED SENTENCES

4.1 *RD is not rightward scrambling*

One plausible alternative to the present approach is that RD is in fact a rightward version of scrambling. According to the proposed analysis, since RD involves scrambling, RD is expected to show properties of scrambling.

[8] (22) would be marginal if the first, non-parenthetical NP were case-marked, as noted by Whitman himself.

(i) ??Katoo-kun-ga are -o gansyo -o dasita-yo.
 NOM that ACC application ACC sent-out
 ‘Katoo sent that, the application form.’

This poses a problem for Whitman’s analysis since the corresponding NP in the gapless RD counterpart of (i) can be case marked:

(ii) Katoo-kun- ga are -o dasita yo, gansyo -o
 NOM that ACC sent-out, application ACC
 ‘Katoo sent that, the application form.’

[9] The parenthetical cannot move leftward, either.

(i) *Gansyo -o Katoo-kun-ga are(-o) dasita yo.
 application ACC NOM that ACC sent-out
 ‘The application form, Katoo sent that.’

This shows that it is in general impossible to separate a parenthetical phrase from the phrase that it modifies.

This does not mean, however, that whenever scrambling is possible, RD is also possible, nor vice versa, since the present analysis also assumes that RD, but not scrambling, repeats the sentence. Consider (24).

- (24) (a) John-ga [Mary-ga LGB-o yonda-to] itta yo.
 NOM NOM ACC read COMP said
 ‘John said that Mary read LGB.’
- (b) John-ga [LGB-o_i Mary-ga t_i yonda-to] itta yo.
 NOM ACC NOM read COMP said
 ‘John said that LGB, Mary read.’
- (c) *John-ga [Mary-ga yonda, LGB-o -to] itta.
 NOM NOM read ACC COMP said
 ‘John said that Mary read it, LGB.’

(24a) has the canonical word order. (24b) is derived from (24a) by clause-internal scrambling of the complement object. (24c) is obtained from (24a) by right-dislocating the complement object within the complement clause. Since (24b) is grammatical, nothing would rule out (24c) if RD was simply a rightward version of scrambling. But (24c) is completely ungrammatical. The proposed analysis automatically rules out (24c). Note that subordinate clauses, unlike matrix clauses, cannot be reduplicated for pragmatic effect. (25a) repeats the matrix clause without any empty pronoun or deletion. The sentence is redundant, but is acceptable under appropriate pragmatic conditions (e.g. the speaker wants to put particular emphasis on the piece of information carried by the sentence). (25b), on the other hand, is ungrammatical.¹⁰

- (25) (a) Mary-ga LGB-o yonda yo, Mary-ga LGB-o yonda yo.
 NOM ACC read NOM ACC read
 ‘Mary read LGB, John read LGB.’
- (b) *John-ga [Mary-ga LGB-o yonda, Mary-ga LGB
 NOM NOM ACC read NOM
 -o yonda-to] itta yo.
 ACC read COMP said
 ‘John said that Mary read LGB, Mary read LGB.’

The problem with (25) is that it repeats the subordinate clause WITHIN the subordinate clause, which is not possible. With this observation in mind, let

[10] A *Journal of Linguistics* referee points out that examples similar to (25b) are grammatical in English. His/her examples are in (i).

(i) (a) He said that he hated her, he hated her.
 (b) He would have done it if she had only spoken to him, if she had only spoken to him.

It is not clear why English and Japanese depart from each other in this way.

us go back to (24c). According to the analysis advanced here, (24c) would have the following underlying structure.

(26) John-ga [Mary-ga pro yonda] [Mary-ga LGB-o yonda]-to itta.

(26) is ill-formed because its subordinate clause is repeated within the subordinate clause, which results in ungrammaticality as shown independently by (25).

It is possible to repeat the subordinate clause itself, as long as the phrase appears outside of the root clause. (27) is a gapless RD construction whose complement clause is repeated at the end of the sentence.

(27) John-ga [Mary-ga LGB-o yonda-to] itta yo,
 NOM NOM ACC read COMP said
 Mary-ga LGB-o yonda-to.
 NOM ACC read COMP
 ‘John said that Mary read LGB, Mary read LGB.’

Thus, it is possible to right-dislocate the subordinate clause. (28) is grammatical.

(28) John-ga pro itta yo, Mary-ga LGB-o yonda-to.
 NOM said NOM ACC read COMP
 ‘John said it, that Mary read LGB.’

Under the proposed analysis, the derivational source of (28) is (29).

(29) John-ga pro itta yo, [[Mary-ga LGB-o yonda-to]_i
 NOM said NOM ACC read COMP
 [John-ga t_i itta yo]].
 NOM said
 ‘John said it, that Mary read LGB, John said.’

This shows that the problem with (24c) and (25b) cannot be the repetition of the subordinate clause itself, since a subordinate clause can be repeated as long as the repetition is at the root clause.

Note also that the ungrammaticality of (24c), repeated here as (30), constitutes an obstacle to Whitman’s (1991) account of RD, summarized in section 3.5 above.

(30) *John-ga [Mary-ga yonda, LGB-o -to] itta.
 NOM NOM read ACC COMP said
 ‘John said that Mary read it, LGB.’

Whitman’s proposal is that RD is derived by rightward movement of parenthetical phrases. Since the right-dislocated phrase appears to the right of the lower verb, and since post-verbal positions are generally available in RD, Whitman’s account incorrectly predicts that (30) is grammatical. Even

if his approach is somehow amended in such a way as to rule out the post-verbal position in a subordinate clause as a possible landing site for the parenthetical phrase, it is still true that his analysis, unlike the analysis in this paper, fails to give a principled explanation of (30).

4.2 *Scrambling and Right-Dislocation*

Under the proposed analysis, RD involves scrambling. Therefore, scrambling and RD should behave in the same way to a large extent. Scrambling, ever since the pioneering work by Harada (1977), has been under intense investigation. In this section, I will take up some properties of scrambling and demonstrate that RD behaves in such a way as to further support the proposed analysis.

4.2.1 *Pronominal coreference*

One of the classic arguments for scrambling as an S-structure (i.e. overt syntax) operation is based on the fact that the change in word order affects the possibility of pronominal coreference. Consider (31), cited from Saito (1987).

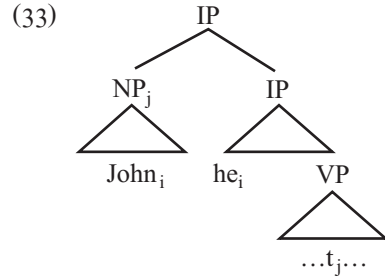
- (31) (a) *Kare-ga_i [[Mary-ga John-ni_i okutta] tegami-o]
 he NOM NOM DAT sent letter ACC
 mada yonde inai.
 yet read NEG
 ‘He_i has not read the letter Mary sent to John_i.’
- (b) [[Mary-ga John-ni_i okutta] tegami-o]_j kare-ga_i t_j
 NOM DAT sent letter ACC he NOM
 mada yonde inai.
 yet read NEG
 ‘The letter Mary sent to John_i, he_i has not read.’

The grammaticality of (31b), in contrast to the unacceptability of the canonically ordered (31a), can be explained if Condition C of the Binding Theory (given in (32)) applies at S-structure (and not before), and if scrambling does not merely involve PF-movement.¹¹

(32) R-expressions must be free.

The grammaticality of (31b) shows that when an object NP appears S-initially, it is in a position which the subject NP cannot c-command. This result is achieved if scrambling involves Chomsky-adjunction to IP, as in (33).

[11] Although the existence of S-structure is called into question, this level is assumed here to exist for the sake of the argument.



With this in mind, consider (34).

- (34) (a) Kare-ga_i mada yonde inai yo, [Mary-ga John-ni_i
 he NOM yet read NEG NOM DAT
 okutta tegami-o].
 sent letter ACC
 ‘He_i hasn’t read it, the letter that Mary sent to John_i.’
- (b) *[Mary-ga John-ni_i okutta tegami-o] mada yonde inai yo,
 NOM DAT sent letter ACC yet read NEG
 kare-ga_i.
 he NOM
 ‘He_i hasn’t read the letter that Mary sent to John, he_i.’

(34a) is derived by right-dislocating/scrambling the accusative phrase, and (34b), the nominative phrase. Under the proposed analysis, the dislocated phrases in (34a) and (34b) look like (31b) and (31a), respectively, before sluicing.¹² We thus expect that the grammatical status of (34a) and (34b) is the same as that of (31b) and (31a), respectively. This prediction is borne out, giving support to our analysis.¹³

The gapless RD counterpart of (34) would look like (35).

- (35) (a) [Mary-ga John-ni_i okutta tegami-o] kare-ga_i mada
 NOM DAT sent letter ACC he NOM yet

[12] The proposed analysis requires that (32) apply before sluicing. This result automatically follows if sluicing is a PF operation. Alternatively, one may account for (34) by claiming that sluicing leaves a layered trace, and the condition (32) applies to this layered trace. I will leave open the choice among these possibilities.

[13] The ungrammaticality of (34b) has to do with a Condition C violation in the second sentence in the RD construction, since (34b) would be grammatical without RD.

(i) Mary-ga John_i-ni okutta tegami-o pro_i mada yonde-inai.
 NOM DAT sent letter ACC still read NEG
 ‘He_i still hasn’t read the letter that Mary sent to John_i.’

The empty pronoun in examples like (i) must be in a position that cannot c-command *John*, or else the relevant interpretation should be impossible. Since (i), which is identical to the first clause in (34b), is grammatical, the problem with (34b) must be attributed to RD. This point was brought to my attention by an anonymous *Journal of Linguistics* referee.

yonde inai yo.
 read NEG
 [Mary-ga John-ni_i okutta tegami-o] kare-ga_i mada
 NOM DAT sent letter ACC he NOM yet

yonde inai yo.
 read-have NEG
 ‘The letter that Mary sent to John_i, he_i hasn’t read yet, the letter
 that Mary sent to John_i.’

- (b) *Kare-ga_i [Mary-ga John-ni_i okutta tegami-o]
 he NOM NOM DAT sent letter ACC
 mada yonde inai yo,
 yet read NEG
 kare-ga_i [~~Mary-ga~~ John-ni_i okutta tegami o]
 he NOM NOM DAT sent letter ACC
 mada yonde inai yo.
 yet read NEG
 ‘He_i hasn’t read the letter that Mary sent to John_i, he_i.’

As expected, (35a) is grammatical, since the R-expression, *John-ni_i*, is c-commanded by the co-indexed pronoun in neither the first sentence nor the deleted sentence. On the other hand, (35b) is ungrammatical, since it violates Condition C.

4.2.2 Reciprocal binding

The above section has shown that scrambling and RD bleed Condition C. This section shows that these operations can also feed Condition A: binding of reciprocal pronouns becomes possible after scrambling/RD.

The distinction between A- and A'-positions has played an important role within the Principles and Parameters approach. Chomsky (1981: 47) characterizes an A-position as ‘a potential theta-position,’ and an A'-position as ‘the complement of A-position,’ in a set-theoretic sense. More recently, however, the traditional A/A' distinction has been called into question for two reasons. First, the VP-internal subject hypothesis entails that SPEC of IP, which can never be a theta position, should count as an A'-position under Chomsky’s (1981) characterization of A/A' distinction. Secondly, scrambling had been conceived of as an A'-movement, but turned out to show a cluster of properties associated with A-movement.¹⁴ For example:

- (36) (a) ??Otagai -no sensei -ga [John-to Mary-o
 each-other GEN teacher NOM and ACC

[14] See Deprez 1989, Webelhuth 1989, Mahajan 1990 and Saito 1992, among others.

- bakani-sita.
made-fool-of
'Each other's teacher made fools of John and Mary.'
- (b) [John-to Mary-o]_i otagai_i -no sensei -ga
and ACC each-other GEN teacher NOM
t_i bakani-sita.
made-fool-of
'John and Mary, each other's teacher made fools of.'

(36a) is ungrammatical since there is no c-commanding antecedent for the reciprocal pronoun, *otagai*. When the plural object is scrambled to the S-initial position, the reciprocal pronoun may be bound by the scrambled phrase. Since Condition A of the Binding Theory states that anaphors must be A-bound, the scrambled phrase must be in an A-position, which in turn means that this instance of scrambling must be an A-movement. Interestingly, long-distance scrambling fails to remedy the principle A violation.

- (37) (a) ??Otagai -no sensei - ga [Mary-ga [John-to
each-other GEN teacher NOM NOM and
Bill-o] aseiteiru-to] itta.
and ACC love COMP said
'Each other's teacher said that Mary loved John and Bill.'
- (b) ??[John-to Bill-o]_i otagai_i -no sensei -ga
and ACC each-other GEN teacher NOM
[Mary-ga t_i aseiteiru-to] itta.
NOM love COMP said
'John and Bill, each other's teacher said that Mary loved.'

On the basis of this and other observations, several researchers have reached the conclusion in (38).¹⁵

(38) Clause-internal scrambling is ambiguous between A- and A'-movement, while long-distance scrambling is uniformly A'-movement.

(38) accounts for the contrast between (36) and (37).

Let us examine RD cases, and see if our analysis makes correct predictions.

- (39) (a) [Otagai_i -no sensei -ga] baka-ni sita yo, [John-to
each-other GEN teacher NOM made-fun-of and
Mary-o]_i.
ACC
'Each others's teachers made fun of them, John and Mary.'

[15] However, they differ as to how to derive (38). Mahajan (1990) relies on Chomsky's L-relatedness; Webelhuth (1989) argues that scrambling is a third type of movement which should be distinguished from NP-movement and *wh*-movement; Deprez (1989) contends that the relevant notion is head-relatedness; Saito (1992) argues that both Mahajan and Webelhuth are correct and proposes a theory similar to that of Deprez.

- (b) ??[Otagai_i -no sensei -ga] [Mary-ga aisiteiru-to
 each-other GEN teacher NOM NOM love COMP
 itta yo], [John-to Bill-o]_i.
 said and ACC
 ‘Each other’s teachers said that Mary loved them, John and Mary.’

The right-dislocated phrase in (39a) looks like (36a) before sluicing, and (39a) is grammatical, as expected. (39b) is the case of long-distance RD, and it sounds as ungrammatical as (37b).

Note that the set of data in this section constitutes an insurmountable obstacle to Whitman’s parenthetical movement approach. If the right-dislocated phrase was indeed a parenthetical, it would be expected that binding in (39a) was impossible, since the right-dislocated phrase is on the right, and binding of a reciprocal by a phrase which is on the right (and hence does not c-command the reciprocal) seems generally unavailable.

4.2.3 Proper Binding Condition

Consider (40), adapted from Saito (1985, 1987, 1989, 1992).

- (40) (a) John-ga [Mary-ga LGB-o yonda-to] itta.
 NOM NOM ACC read COMP said
 ‘John said that Mary read LGB.’
 (b) [Mary-ga LGB-o yonda-to]_i John-ga t_i itta.
 NOM ACC read COMP NOM said
 ‘That Mary read LGB, John said.’
 (c) LGB-o_j John-ga [Mary-ga t_j yonda-to] itta.
 ACC NOM NOM read COMP said
 ‘LGB, John said that Mary read.’
 (d) *[[Mary-ga t_j yonda-to]_i [LGB-o_j [John-ga t_i itta]]].
 NOM read COMP ACC NOM said
 ‘That Mary read it, LGB, John said.’

As (40b) shows, it is possible to scramble an embedded clause. (40c) shows that scrambling may take place across a clause boundary. Given that both (40b) and (40c) are grammatical, nothing should prevent (40d). Saito accounts for the ungrammaticality of (40d) in terms of the Proper Binding Condition (PBC) of Fiengo (1977), given in (41).

(41) Traces must be bound.

Since t_j in (40d) is not bound by its antecedent, LGB-o_j, the PBC automatically rules it out.

Now, let us consider the RD counterpart of (40d).

- (42) John-ga t_i itta yo, [Mary-ga t_j yonda-tte]_i LGB-o_j.
 NOM said NOM read COMP ACC
 ‘John said so, that Mary read it, LGB.’

At first sight, the grammaticality of (42) seems to constitute a serious problem for the present analysis, which assumes that RD involves scrambling. The putative S-structure representation of (42) might be something like (43), which is clearly ruled out by the PBC since S₂ in (43) has the same structure as (40d).

- (43) [_{S1} John-ga pro itta yo], [_{S2} [Mary-ga t_j yonda-tte]_i]
 NOM said NOM read COMP
 [LGB-o_j [~~John-ga t_i itta-ye~~]]
 ACC NOM said
 ‘John said so, that Mary read it, LGB, John said.’

(43) contains an unbound trace, t_j, in S₂. This wrongly predicts that (42) is ungrammatical. Arguably, this is not a problem for the proposed analysis, since an alternative derivation is available to (42). Specifically, I suggest that (42) has the S-structure representation in (44).

- (44) [_{S1} John-ga pro_i itta yo], [_{S2} [Mary-ga pro_j]
 NOM said NOM
 yonda-tte]_i ~~John-ga~~
 read COMP NOM NOM
 itta-ye], [_{S3} LGB-o_j] ~~John-ga~~ [~~Mary-ga t_i yonda-tte~~] itta-ye].
 said ACC NOM NOM read COMP said

The claim being made here is that (44) contains three clauses. The first clause, S₁, contains an empty pronoun, pro_i. Being an empty pronoun, this category is not subject to the PBC. Similarly, the second clause, S₂, contains an empty pronoun, pro_j, to which the PBC does not apply. Since (44) contains only one trace, in S₃, which is bound by its antecedent, (44) does not violate the PBC and hence is grammatical. This analysis is further supported by the fact that there are ‘comma’ intonational breaks between S₁ and S₂, and between S₂ and S₃, which suggests that (44) consists of three separate clauses.

4.2.4 Subject scrambling

Saito (1985) argues that Japanese subject phrases cannot be scrambled for Case reasons. He offers two pieces of empirical evidence for this view. First, scrambling of a subject phrase across a clause boundary gives rise to ungrammaticality, as shown in (45).

- (45) (a) Mary-ga [sono-okasi-ga oisii -to] itta.
 NOM the-sweet NOM tasty COMP said

- (b) ?*Sono-okasi-ga_i [Mary-ga [t_i oisii -to] itta].
 NOM NOM tasty COMP said
 ‘Mary said that the sweet is good.’

(45) clearly shows that long-distance (i.e. across a clause boundary) scrambling of a subject phrase is impossible.

Saito’s second argument against subject scrambling is based on the (im)possibility of quantifier-floating.

- (46) (a) Gakusei-ga 3-nin hon -o katta.
 student NOM people book ACC bought
 (b) *Gakusei-ga hon -o 3-nin katta.
 student NOM book ACC people bought
 ‘Three students bought a book.’

(46b) shows that a numeral quantifier fails to quantify a subject phrase when an NP-phrase intervenes between them. Saito proposes a descriptive condition in (47) on the interpretation of a floating quantifier.

(47) A floating quantifier cannot be related to an NP across another NP argument.

(47) rules out (46b), since another NP argument, *hon-o*, intervenes between *gakusei-ga* and *3-nin*. With this in mind, consider (48).

- (48) (a) Gakusei-ga 3-satu hon -o katta.
 student NOM pieces book ACC bought
 (b) Hon -o_i gakusei -ga 3-satu t_i katta.
 book ACC student NOM pieces bought
 ‘The student bought three books.’

(48a) poses no problem, since the quantifier and the quantified NP, *hon-o*, are adjacent to each other. (48b) has another argument intervening between the quantifier and the quantified NP. (47) incorrectly predicts that (48b) is not grammatical. If (48b) involves scrambling of the accusative phrase (as indicated in the example with a coindexed trace), the quantifier in (48b) can be related to the sentence-initial phrase through its trace, *t_i*. If so, (47) is not violated in (48b). Then, a question arises as to why (46b) cannot be licensed through a trace of scrambling. In particular, (46b) might have the structure in (49).

- (49) Gakusei-ga_i hon -o_j [t_i 3-nin t_j katta].
 student NOM book ACC people bought

(49) involves multiple scrambling. In (49), the quantifier, *3-nin*, and the trace of the quantified phrase, *t_j*, are adjacent to each other. Therefore, (47) incorrectly predicts that (46b)/(49) is grammatical. In order to account for the ungrammaticality of (46b), Saito proposes that a subject cannot be

scrambled in Japanese. Given that a subject cannot be scrambled, (46b) cannot have the structure in (49). Therefore, (47) rules out (46b).

Saito (1985) attributes the lack of subject scrambling to the nature of nominative Case assignment: nominative Case in this language is assigned not under government, but on contextual grounds. (50) is Saito's formulation.

(50) *[NP-ga] unless the NP is [NP, S]. (Saito 1985: 207)

The hypothesis that nominative Case is assigned contextually follows if the subject position in Japanese is not governed. Since Saito (1985) assumes that scrambling is uniformly A'-adjunction, and since A'-adjunction leaves a variable behind, the generalization that subject cannot be scrambled in Japanese can be attributed to the partial characterization of variables, given in (51).¹⁶

(51) A variable must have Case.

Saito argues that since a subject position in Japanese is ungoverned, it cannot have structural Case. Therefore, the subject trace cannot be a variable, and hence cannot be scrambled.

The combined logic of Saito's analysis and the recent developments in the study of scrambling implies that clause-internal subject scrambling, but not long-distance subject scrambling, is available. Clause-internal scrambling shows a clustering of properties associated with A-movement (see 4.2.2). If so, clause-internal scrambling does not have to leave a variable trace behind, since it can be an A-movement. Thus, Saito's account of the lack of subject scrambling does not apply to clause-internal scrambling. It follows that clause-internal subject scrambling is available.

RD facts also show that clause-internal scrambling, but not long-distance scrambling, is available. Consider (52).

(52) ?*Mary-ga [oisii -to] itta yo, sono-okasi-ga.
 NOM tasty COMP said the-sweet NOM
 'Mary said that the sweet is good.'

(52) is the RD counterpart of (45). The S-structure representation of (52) is something like (53) under our assumptions.

(53) Mary-ga [pro oisii -to] itta yo, sono-okasi-ga_i
 NOM good COMP said the-sweet NOM
 Mary ga — [t_i oisii -to] — itta yo.
 NOM tasty COMP said

[16] (51) is due to Chomsky (1981). Of course, it is not without problems. According to this characterization, a trace of adjunct *wh*, such as that of *why*, is not a variable. It seems that the class of elements referred to as variable does not make up a natural class. For the present purpose, however, (51) is adopted.

Since the second clause in (53) is identical to that in (45b), the ungrammaticality of (52) is readily explained. This supports the hypothesis that scrambling of a subject phrase is not available in Japanese, as far as long-distance scrambling is concerned. Consider, however, (54).

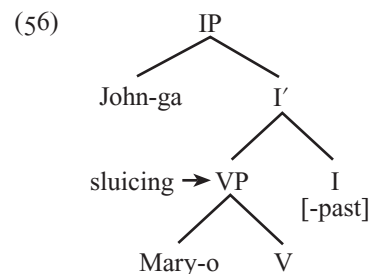
- (54) Mary-o aisiteiru yo, John-ga.
 ACC love NOM
 ‘John loves Mary.’

Our assumptions give (54) the following S-structure.

- (55) pro Mary-o aisiteiru yo, John-ga_i [_i ~~Mary-o aisiteiru yo~~].

Since the constituent being sluiced must be the lower segment of IP, our analysis implies that the subject in the second half of (55) is adjoined to IP. This means that local scrambling of a subject phrase is available, contrary to Saito’s (1985) claim.

It might be argued that (54) does not constitute a problem for Saito’s analysis if VP-slueicing was possible, and if scrambling was not crucially involved in RD, as in (56).



This analysis has a problem. If sluicing deletes VP, tense should be left behind, which is clearly not true in (54). The claim that I' is the target of deletion is also questionable. Apart from the conceptual problem with the non-maximal phrase deletion, such an analysis does not provide a uniform solution to the cases that we have examined above. In particular, the Subadjacency facts imply that movement, i.e. scrambling, is involved in RD (see section 3.4. above), but the I' deletion analysis does not involve scrambling. It is therefore reasonable to conclude that Japanese does allow clause-internal subject scrambling. Then, a question arises as to why (49), repeated below as (57), is not a legitimate representation for (46b).

- (57) Gakusei-ga_i hon -o_j [t_i 3-nin t_j katta].
 student NOM book ACC people bought
 ‘Three students bought a book.’

I would like to argue that Saito’s (1985) generalization in (47) is spurious. Consider (58).

- (58) (a) Gakusei-ga kinoo 3-nin hon -o katta.
 student NOM yesterday people book ACC bought
 ‘Three students bought a book yesterday.’
 (b) ??Gakusei-ga tegiwayoku 3-nin hon -o katta.
 student NOM efficiently people book ACC bought
 ‘Three students bought a book efficiently.’

In (58a), a temporal adverb intervenes between the subject and the quantifier. The sentence is grammatical, as predicted by Saito’s generalization, since the intervening item is not an NP argument but an adverb. By contrast, in (58b), the intervening element is a manner adverb, and the sentence is marginal. Saito’s generalization fails to account for the contrast between (58a) and (58b). The configurations at issue are summarized in (59), where Soq and Ooq stand for subject oriented quantifier and object oriented quantifier, respectively.

- (59) (a) S Soq O V
 (b) *S O Soq V
 (c) S O Ooq V
 (d) O S Ooq V
 (e) S yesterday Soq O V
 (f) ?*S efficiently Soq O V

Assume, essentially following Jackendoff (1972), that a temporal adverb is dominated by the S(= IP) node and a manner adverb is dominated by the VP node. Then, the contrast observed in (58) can be captured by (60).¹⁷

- (60) A subject-oriented floating quantifier cannot be related to an NP across a constituent originating in VP.

‘A constituent originating in VP’ does not have to be dominated by VP, since scrambling may apply to dislocate ‘a constituent in VP’ outside of VP. Since a constituent in VP intervenes between the subject-oriented quantifier and the quantified subject in (59b) and (59f), sentences of this form are ungrammatical.

This section has shown that the proposed analysis of RD entails that subjects in Japanese can undergo clause-internal scrambling.

4.2.5 *Adverbials*

Thanks to the relative freedom of word order, the distribution of adverbials in Japanese is also relatively free. However, it is not the case that their distribution is totally unconstrained. In particular, preposing an ‘S-adverb’ across a CP boundary results in marginality.

[17] (60), as it stands, is nothing more than a stipulation, and it is hoped that it follows from deeper principles.

- (61) (a) John-ga [Mary-ga osoraku mado -o aketa
 NOM NOM probably window ACC opened
 -to] itta.
 COMP said
 ‘John said that Mary probably opened the window.’
- (b) John-ga [osoraku Mary-ga mado -o aketa
 NOM probably NOM window ACC opened
 -to] itta.
 COMP said
 ‘John said that, probably, Mary opened the window.’
- (c) (?)?Osoraku_i John-ga [Mary-ga t_i mado -o aketa
 probably NOM NOM window ACC opened
 -to] itta.
 COMP said
 ‘Probably, John said that Mary opened the window.’

Both (61a) and (61b) are grammatical; within a complement clause, an S-adverb can appear in a variety of positions, such as in the post-subject position or the pre-subject position. However, (61c) is marginal in the intended reading. Let us assume the descriptive statement in (62) to account for (61).

(62) Preposing an S-adverb across a CP boundary results in marginality.

With (62) in mind, consider (63).

- (63) (a) Mary-ga mado -o aketa yo, osoraku.
 NOM window ACC opened probably
 ‘Mary opened the window probably.’
- (b) (?)?John-ga [Mary-ga t_i mado -o aketa -to] itta yo,
 NOM NOM window ACC opened COMP said
 osoraku_i,
 probably
 ‘John said [that Mary opened the window t_i], probably_i.’

The proposed analysis readily accounts for the marginality of (63b), since (61c), the putative source of the RD portion of (63b), is also marginal in the intended interpretation, where the S-adverb modifies the complement clause. The grammaticality of (63a) is also expected, since (64), which is assumed to be identical to the second clause of (63b), is grammatical, on a par with (61b).

- (64) Osoraku Mary-ga mado -o aketa.
 probably NOM window ACC opened
 ‘Probably, Mary opened the window.’

Thus, the distributional facts about S-adverbs also support our analysis.

4.2.6 *Idiom chunks*

Certain idiom chunks permit scrambling but not RD. (65a) contains an idiomatic expression, *hara-o tateta* (lit. set up stomach, or get upset). The scrambled counterpart in (65b) has the idiomatic interpretation, while the RD counterpart does not.

- (65) (a) John-ga hara -o tateta.
 NOM stomach ACC set up
 (b) Hara-o_i John-ga t_i tateta.
 (c) ??John-ga pro tateta yo, hara-o.
 ‘John got upset.’

This is expected under the present account. (65b) is acceptable in the idiomatic interpretation since scrambling can be undone, as argued in detail by Saito (1992).¹⁸ (65c) has the structure shown in (66).

- (66) [_{S1} John-ga pro_i tateta yo], [_{S2} hara-o John-ga t_i tateta yo].

Notice that the first sentence in (66) contains an incomplete idiom; it contains an empty pronoun, which is not appropriate as an idiom chunk. This point is independently confirmed by the availability of the idiomatic interpretation with a gapless RD in (67).

- (67) [_{S1} John-ga hara -o tateta-yo], [_{S2} hara -o_i
 NOM stomach ACC set up stomach ACC
 [John ga t_i tateta-yo].
 NOM set-up
 ‘John got upset.’

S₁ and S₂ in (67) are identical to (65a) and (65b), respectively. Thus, (67) is free from the problem in (66) since neither of the clauses in (67) has any pronouns.

4.2.7 *Wh-questions*

Takahashi (1993) argues that long-distance scrambling of a *wh*-phrase to a clause headed by [+wh] C(omp) counts as *wh*-movement. For instance, (68) has a *wh*-phrase in the embedded clause. Both the matrix clause and the embedded clause are marked with a [+wh] C.

[18] As noted by an anonymous *Journal of Linguistics* referee, the present account of (65c) predicts that (65c) would be ungrammatical without RD. This prediction is borne out in an exchange like the following.

- (i) A: Mary-ga hara -o tateta-no?
 NOM stomach ACC set-up-Q
 ‘Did Mary get angry?’
 B: *Iie, John-ga pro tateta yo.
 no NOM set-up
 ‘No, John did.’

- (68) John-ga [Mary-ga nani -o tabeta-ka] oboete-iru-no?
 NOM NOM what ACC ate Q remember is Q
 ‘Does John remember what Mary ate?’

The *wh*-phrase in (68) takes the embedded scope. The matrix [+wh] C is understood as a Yes–No question marker¹⁹ (see Nishigauchi (1990) and Tanaka (1999) for discussion). Takahashi’s point is that (69), in which the *wh*-phrase is scrambled to the initial position, has an interpretation different from (68).

- (69) Nani-o_i John-ga [Mary-ga t_i tabeta-ka] oboete-iru-no?
 what ACC NOM NOM ate Q remember-is-Q
 ‘What does John remember whether Mary ate?’

The details of Takahashi’s analysis are not crucial for the purpose here. However, the semantic contrast between (68) and its scrambled counterpart (69) leads us to expect that RD display the same contrast. Unfortunately, the relevant RD example is ungrammatical for an independent reason. Since a *wh*-phrase in a question is inherently focused, i.e. bears new information, it cannot be an empty proform in S1 and, hence, cannot be right-dislocated (see section 2 above).

- (70) *[_{S1} Mary-ga pro tabeta-no], [_{S2} nani -o_i [Mary-ga t_i tabeta-no]]?
 NOM ate Q what-ACC NOM ate Q
 ‘Mary ate it, what?’

Thus, (71), the RD counterpart of (68), is ungrammatical for the same reason as (70).

- (71) *John-ga [Mary-ga pro tabeta-ka] oboete-iru-no, nani -o?
 NOM NOM ate Q remember is Q what ACC
 ‘Does John remember whether Mary ate it, what?’

The problem with (71) is that the sentence has an empty pronoun in place of the *wh*-phrase. Thus, the prediction cannot be tested with RD constructions. However, note that the gapless counterpart of (70) in (72) is, in fact, grammatical.

- (72) Mary-ga nani -o tabeta-no, nani -o?
 NOM what ACC ate Q what -ACC
 ‘What did Mary eat, what?’

(72) is free from the problem in (70) since it contains no empty pronoun. Given the grammaticality of the gapless RD sentence in (72), it is possible to

[19] A [+wh] C, phonetically realized as *-ka* or *-no*, is understood as a Yes–No question marker when it fails to be associated with a *wh*-phrase. *-ka* attaches to an embedded question or the matrix question in a non-colloquial style. *-no* is allowed only in colloquial matrix questions.

see whether or not RD displays a contrast similar to (68) and (69). (73) is a relevant example.

- (73) *John-ga [Mary-ga nani -o tabeta-ka] oboete-iru-no,
 NOM NOM what ACC ate Q remember-is-Q
 nani -o
 what ACC
 ‘Does John remember what Mary ate, what?’

The sentence is ungrammatical. The putative S-structure of this example is (74).

- (74) [_{S1} John-ga [Mary-ga nani -o tabeta -ka] oboete-iru-no],
 NOM NOM what ACC ate Q remember-is-Q
 [_{S2} nani -o_i John-ga [Mary-ga t_i tabeta ka]
 what ACC NOM NOM ate Q
 ~~oboete-iru-no~~?
 remember-is-Q

The problem with (73)/(74), it seems, is that the *wh*-phrase in S₁ is understood as having the embedded scope (see (68)), and the one in S₂ is understood as having the higher scope ((69)), since it is scrambled. Thus, there is a semantic mismatch between S₁ and S₂. If this is the source of the problem in (74), then (75), in which the *wh*-phrase in S₁ is scrambled to the initial position and hence understood as having the matrix scope, is expected to be grammatical.

- (75) Nani-o_i John-ga [Mary-ga t_i tabeta-ka] oboete-iru-no,
 what ACC NOM NOM ate Q remember-is-Q
 nani -o
 what ACC
 ‘What does John remember whether Mary ate, what?’

The grammaticality of (75) shows that this prediction is borne out, which lends further support to the proposed analysis.

When the embedded clause is [–wh], a *wh*-phrase that originates in the embedded clause is understood as having the matrix scope, irrespective of scrambling. Thus, (76a) is synonymous with (76b).

- (76) (a) John-ga [Mary-ga nani -o tabeta -to] itte-iru-no?
 NOM NOM what ACC ate COMP say-is-Q
 ‘What does John say that Mary ate?’
 (b) Nani-o_i John-ga [Mary-ga t_i tabeta -to] itte-iru-no?
 what ACC NOM NOM ate COMP say-is-Q
 ‘What does John say that Mary ate?’

Then, the gapless RD counterpart of (76) should be grammatical, since the sentence is free from the semantic incompatibility problem with (73)/(74). This prediction is also borne out, by (77).

- (77) John-ga [Mary-ga nani -o tabeta-to] itte-iru-no, nani -o?
 NOM NOM what ACC ate COMP say-is-Q what ACC
 ‘What does John say that Mary ate, what?’

The suggested S-structure representation of this sentence is (78).

- (78) [_{S1} John-ga [Mary-ga nani -o tabeta -to] itte-iru-no],
 NOM NOM what ACC ate COMP say-is-Q
 (78) [_{S2} nani -o_i [~~John-ga~~ [~~Mary-ga~~ ~~t_i~~ tabeta to] ~~itteiru-no~~]]?
 what ACC NOM NOM ate COMP say-is-Q

Since (76a) and (76b) are synonymous, S1 and S2 in (78) are also synonymous. Thus, unlike (73), (77) is free from the semantic incompatibility problem.

5. SUMMARY

This paper has shown that right-dislocated sentences contain two clauses with scrambling applying in the second. The lower segment of IP created by scrambling is then sluiced. This analysis correctly predicts that RD shows the properties of scrambling. When RD fails to share properties of scrambling, an alternative derivation is available. The analysis provided in this paper is consistent with Kayne’s (1994) view that there are no rightward movement rules.

REFERENCES

- Chomsky, Noam (1981). *Lectures on government and binding*. Dordrecht: Foris.
 Deprez, Viviane (1989). *On the typology of syntactic positions and the nature of chains; move- α to the specifier of functional projections*. Ph.D. dissertation, MIT.
 Fiengo, Robert (1977). On trace theory. *Linguistic Inquiry* 8, 35–61.
 Harada, Shin-ichi (1977). Nihongo-ni henkei-wa hituyouda (Japanese needs transformations). *Gengo* 6, 11–12.
 Huang, James (1984). On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15, 531–574.
 Jackendoff, Ray (1972). *Semantic interpretation in generative grammar*. Cambridge, MA: MIT Press.
 Kayne, Richard (1994). *Antisymmetry in syntax*. Cambridge, MA: MIT Press.
 Kuno, Susumu (1978). *Danwa-no bunpoo* [Grammar of discourse]. Tokyo: Taishuukan-shoten.
 Kural, Murat (1997). Postverbal constituents in Turkish and the linear correspondence axiom. *Linguistic Inquiry* 28, 498–519.
 Lobeck, Anne (1995). *Ellipsis: functional heads, licensing, and identification*. New York: Oxford University Press.
 Mahajan, Anoop (1990). *The A/A' distinction and movement theory*. Ph.D. dissertation, MIT.
 Nishigauchi, Taisuke (1990). *Quantification in the theory of grammar*. Dordrecht: Kluwer Academic Publishers.
 Reinhart, Tanya (1991). Elliptic conjunctions: non-quantificational LF. In Kasher, Asa (ed.), *The Chomskyan turn*. Oxford: Basil Blackwell, 360–395.
 Ross, John Robert (1967). *Constraints on variables in syntax*. Ph.D. dissertation, MIT.
 Saito, Mamoru (1985). *Some asymmetries in Japanese and their theoretical implications*. Ph.D. dissertation, MIT.
 Saito, Mamoru (1987). LF effects of scrambling. Paper presented at Princeton Workshop on Comparative Grammar, Princeton University, NJ, in May.

RIGHT-DISLOCATION AS SCRAMBLING

- Saito, Mamoru (1989). Scrambling as semantically vacuous A'-movement. In Baltin, Mark & Kroch, Anthony (eds.), *Alternative conceptions of phrase structure*. Chicago: University of Chicago Press. 182–200.
- Saito, Mamoru (1992). Long distance scrambling in Japanese. *Journal of East Asian Linguistics* **1**. 69–118.
- Takahashi, Daiko (1993). Movement of *wh*-phrases in Japanese. *Natural Language and Linguistic Theory* **11**. 655–678.
- Tanaka, Hidekazu (1996). Right-dislocation in Japanese. In Kessler, Robb, Martine, Montrul, Silvina & Ileana, Paul (eds.), *McGill Working Papers in Linguistics* **11**. Montreal: Department of Linguistics, McGill University. 105–124.
- Tanaka, Hidekazu (1999). LF *wh*-island and the minimal scope principle. *Natural Language and Linguistic Theory* **17**. 371–402.
- Webelhuth, Gert (1989). *Syntactic saturation phenomena and the modern Germanic languages*. Ph.D. dissertation, MIT.
- Whitman, John (1991). Rightward movement in verb final languages. Paper presented at Dokkyo International Symposium on Functional Linguistics, Dokkyo University, Saitama, Japan, in October.

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