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Author(s): Shigeru Miyagawa

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Against Optional Scrambling

Shigeru Miyagawa

I argue that the apparent “free word order” in languages like Japanese is not really free; instead, each word order is distinct and motivated by some syntactic or semantic consideration. The “free-word-order” view is, to some extent, a carryover from the nonconfigurational conception of such languages. For VP-internal word order permutation, the two word orders IO-DO and DO-IO are best viewed as being base-generated instead of as being derived one from the other. For IP-adjunction scrambling, A-scrambling is driven by a Case agreement feature, whereas \bar{A} -scrambling is motivated by something like focus. These findings cast doubt on the widely held view that scrambling constitutes a strictly optional movement.

Keywords: scrambling, Japanese, word order, agreement, Case, optionality

1 Introduction

As shown in (1)–(2), languages such as Japanese have a flexible word order. (1) shows that the object may occur after or before the goal phrase.

- (1) a. John-ga Mary-ni *piza-o* ageta.
John-NOM Mary-DAT *pizza-ACC* gave
‘John gave Mary pizza.’
b. John-ga *piza-o* Mary-ni ageta.
John-NOM *pizza-ACC* Mary-DAT gave

The same object may occur before the subject, as shown in (2).

- (2) *Piza-o* John-ga Mary-ni ageta.
pizza-ACC John-NOM Mary-DAT gave

In the first systematic attempt to address this type of word order flexibility, Hale (1980) suggested that languages such as Japanese are nonconfigurational, which means that they are associated with a flat phrase structure, as shown in (3).

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(8) *The parameter value preservation measure* (Fukui 1993)

A grammatical operation (Move α , in particular) that creates a structure that is inconsistent with the value of a given parameter in a language is costly in the language, whereas one that produces a structure consistent with the parameter value is costless.

According to this measure, the leftward movement associated with scrambling is costless, hence strictly optional, because Japanese is head-final throughout, and this movement preserves the head-final parameter setting of the language.²

The issue at hand is, is there such a thing as a strictly optional movement in Universal Grammar?³ Scrambling as formulated by Fukui, Saito, and others does not fall under the three familiar types of movement well attested crosslinguistically.

(9) A-movement, \bar{A} -movement, head movement

All three are obligatory movements motivated by some feature element, such as Case (e.g., Chomsky 1993). Everything else being equal, it would be desirable to collapse all forms of movement in UG into one of these three, and exclude the more exotic optional movement of scrambling from UG. This is ultimately an empirical issue. In this article I will give evidence for an alternative analysis of the apparent flexible word order that does not make recourse to optional scrambling. Instead of accounting for the accusative-dative and dative-accusative orders in (1) by “VP-adjunction scrambling,” I will propose that both of these word orders are base-generated, thus resurrecting the first component of Hale’s original theory. In addition, movement that appears at first sight to resemble VP-adjunction scrambling will be shown to be motivated by focus.⁴ For IP-adjunction scrambling, which has been shown to have both A and \bar{A} properties (Saito 1992, Tada 1989), I will argue that the A-movement is motivated by some sort of agreement feature and the \bar{A} -movement by focus.

² Saito (1994) presents a different approach to optionality. Following the Bare Phrase Structure conception (Chomsky 1994), he suggests that scrambling is a substitution operation, not adjunction, as he originally proposed in his highly influential work on scrambling (Saito 1985). On the basis of this “substitution” assumption, he proposes that scrambling is equivalent to a “‘simple case’ of Merge,” which would make it similar to a “‘simple case’ of phrase structure construction.” The difference between “simple” phrase-structural building via Merge and scrambling is that the latter involves two elements, one of which (the scrambled phrase) originates from the other. Under this view optionality is delegated to the nature of phrase structure building. In the simple cases of phrase structure building, Merge is licensed by projection of the target phrase structure. Saito suggests that this same mechanism of licensing makes scrambling possible. Since there is no feature involved in Merge, it can be viewed in effect as strictly optional. One advantage noted by Saito is that this approach correctly predicts that scrambling can only occur before Spell-Out. There are no attested cases of LF scrambling, which is expected if scrambling is an instance of Merge. Phrase structure building via Merge only occurs prior to LF.

However, Saito’s proposal raises the problem inherent in most other studies of scrambling: it is unable to predict when a language allows scrambling. What is it about a particular language that freely licenses Merge that results in scrambling?

³ There are some empirical problems with Fukui’s parameter value preservation measure. Günther Grewendorf (personal communication) notes, for example, that languages such as Polish and Russian, which are SVO, nevertheless allow free scrambling.

⁴ I will use the term *focus* somewhat loosely to denote a phrase that requires some sort of emphasis. In certain cases the emphasis may presuppose a previous utterance of the phrase in the conversation, or something comparable. In these cases it may be more accurate to use the term *topic*, although in this article I will use *focus* throughout.

2 Against Optional VP-Adjunction Scrambling

So-called VP-adjunction scrambling is claimed to be solely associated with A-properties (Saito 1992, Tada 1989). Thus, it does not allow reconstruction, the movement may suppress weak crossover violation, and the moved element may function as a binder of an anaphor.⁵ The first of these, impossibility of reconstruction, is illustrated here (later, I will show that this reconstruction is in fact possible with the correct structure).

- (10) ???John-ga [otagai_i-no tomodati_j]-o_j Hanako-to Mary_i-ni t_j syookaisita.
 John-NOM [each other_i-GEN friends]-ACC_j Hanako-and Mary_i-DAT t_j introduced
 ‘John introduced each other’s friends to Hanako and Mary.’

Given the A nature of this “movement,” an alternative immediately comes to mind, in which the accusative-dative word order (as well as the dative-accusative order) is base-generated. We would expect the accusative phrase in (10) to be associated only with A properties if it is base-generated in its position. This alternative, if correct, would have the effect of resurrecting the *base generation* component of Hale’s original theory.⁶

2.1 Chain Condition

I will show that base generation is more likely the correct analysis for the apparent VP-internal flexible word order than VP-adjunction scrambling. As a starting point, (11) shows that Japanese observes Rizzi’s (1986) Chain Condition.⁷

- (11) ???[John-to Mary]-o_i otagai_i-ga t_j mita.
 [John-and Mary]-ACC_i each other_i-NOM t_j saw
 ‘John and Mary, each other saw.’

The object ‘John and Mary’, which is the intended antecedent of the reciprocal ‘each other’, has been moved to the front of the sentence. The problem here is that the reciprocal anaphor locally c-commands the trace of its antecedent, thereby violating the Chain Condition. This is evidence that the object begins in the position adjacent to the verb and leaves a trace as a result of this movement. This example is ruled out on either of two grounds. If the scrambling is A-movement, it violates the Chain Condition, as we just saw. If it is \bar{A} -movement (Saito 1992, Tada 1989), the

⁵ Weibelhuth (1989) and Mahajan (1990) originally proposed these types of tests for A- and \bar{A} -scrambling.

⁶ In addition to the VP-adjunction scrambling responsible for VP-internal word permutation, there is long-distance VP-adjunction scrambling, in which a VP-internal element in an infinitive clause moves to adjoin to the VP of the matrix, tensed clause (Murasugi and Saito 1994, Nemoto 1993, Saito 1985). This movement is considered strictly an A-movement. In this article I am concerned with word permutation within a clause and therefore will not deal with this long-distance movement.

⁷ This is an instance of IP-adjunction scrambling. Later I will analyze this phenomenon as movement motivated by either Case (A) or focus (\bar{A}).

antecedent, ‘John and Mary’, cannot bind the reciprocal anaphor because the intended antecedent is in an \bar{A} -position. The following example indicates that A-movement is possible:

- (12) [John-to Mary]_i otagai_i-no sensei-ga t_i mita.
 [John-and Mary]_i-ACC_i each other_i-GEN teachers-NOM t_i saw
 ‘John and Mary, each other’s teachers saw.’

By embedding the reciprocal anaphor in a larger DP, ‘each other’s teachers’, this example avoids violating the Chain Condition. The fact that the antecedent, ‘John and Mary’, can bind this reciprocal indicates that it is occupying an A-position.

Now, if VP-adjunction scrambling were the correct analysis for the VP-internal word order permutation, we would expect the same Chain Condition violation to arise in such cases. However, it does not.

- (13) (?)John-ga [Hanako-to Mary]_i-o (paatii-de) otagai_i-ni (t_i) syookaisita.
 John-NOM [Hanako-and Mary]_i-ACC (party-at) each other_i-DAT (t_i) introduced
 ‘John introduced Hanako and Mary to each other at the party.’

This suggests that there is no trace, hence no movement. Thus, both word orders, dative-accusative and accusative-dative, are best viewed as being base-generated. By contrast, in the biclausal adversity passive, which also has the dative-accusative/accusative-dative word order possibilities, the Chain Condition is clearly violated.

- (14) *John-ga [musume-to musuko]_i-o otagai_i-ni t_i hihans-are-ta.
 John-NOM [daughter-and son]_i-ACC_i each other_i-DAT t_i criticize-PASS-PAST
 ‘John was affected by daughter and son, each other criticizing.’

This is not surprising because the accusative-dative word order in this example could only have been derived by movement.⁸ If we embed the reciprocal in a larger noun phrase, as shown in (15), the violation disappears, as expected, because the reciprocal no longer c-commands the trace of its intended antecedent, ‘daughter and son’.

- (15) John-ga [musume-to musuko]_i-o [otagai_i-no sensei]-ni t_i
 John-NOM [daughter-and son]_i-ACC_i [each other_i-GEN teachers]-DAT t_i
 hihans-are-ta.
 criticize-PASS-PAST
 ‘John was affected by daughter and son, each other’s teachers criticizing.’

⁸ The “classic” analysis of the adversity passive (e.g., Kuno 1973, Kuroda 1965) postulates a biclausal structure, in which the passive morpheme *-(r)are* occupies the matrix verb position, and it takes a subordinate clause whose subject is “raised” to the matrix clause to acquire dative marking. If there is an object corresponding to the lower verb, as in (14), the base order must be dative subject–accusative object. In order for the accusative object to precede the subject, it must undergo movement, which leads to the Chain Condition violation as in (14).

'John was introduced to Hanako by Mary.'

no

'John and Bill were introduced to each other by Mary.'

'John and Bill were kicked by each other.'

'John was hit by Mary.'

The anonymous reviewer suggests that there may be an independent confounding factor in the unacceptability of (18): there is apparently a restriction on the *by*-phrase in the passive, which requires that it refer to new information.

Later in this section I will give evidence for movement within the VP that at first sight resembles optional VP-adjunction scrambling. However, I will show that this movement is motivated by something like focus. One way to force this option, as opposed to the base-generation option, is by using the numeral quantifier. As shown in (19), the object-oriented numeral quantifier (2-CL(assifier)) indicates the presence of an object trace (Koizumi 1995, Miyagawa 1989).

- (19) John-ga pen-o_i Mary-ni t_i ni-hon ageta.
 John-NOM pen-ACC_i Mary-DAT t_i 2-CL gave
 'John gave two pens to Mary.'

Using this movement, we can further see the effect of the Chain Condition.¹¹

- (20) a. John-ga gakusei-tati_i-o otagai_i-ni syookaisita.
 John-NOM students_i-ACC each other_i-DAT introduced
 'John introduced the students to each other.'
 b. *John-ga gakusei-tati_i-o otagai_i-ni t_i futa-ri syookaisita.
 John-NOM students_i-ACC each other_i-DAT t_i 2-CL introduced
 'John introduced two students to each other.'
 c. John-ga gakusei-tati_i-o futa-ri otagai_i-ni syookaisita.
 John-NOM students_i-ACC 2-CL each other_i-DAT introduced
 'John introduced two students to each other.'

(20a) indicates that the accusative object that precedes the dative goal phrase may bind an anaphor in the dative position. In (20b), the presence of the object-oriented numeral quantifier adjacent to the verb forces a movement analysis of the object. This movement leads to a Chain Condition violation, as expected. (20c) shows that the sentence is acceptable with the numeral quantifier as

Thus, according to the reviewer, the following example, which does not violate the Chain Condition, is nevertheless marginal because the *by*-phrase, *each other*, is anaphoric, thus "old information":

- (ii) ??The books were given to John and Bill_i by each other_i.

In Japanese it is not possible to construct a direct passive example in which there is no Chain Condition violation if the reciprocal is the *by*-phrase; thus, there is no way to test the reviewer's supposition. However, the marginality of (iii), which is an indirect passive, may be due to this "new information" requirement.

- (iii) ??[John-to Mary]_i-ga otagai_i-ni ronbun-o hihans-are-ta.
 [John-and Mary]_i-NOM each other_i-DAT article-ACC criticize-PASS-PAST
 'John and Mary were adversely affected by each other criticizing their articles.'

Unlike the direct passive, an indirect passive ostensibly does not involve movement; thus, the marginality of (iii) is possibly due to the restriction noted by the reviewer. It is therefore possible that this same factor of "new/old information" is contributing to the marginality of the direct passive in (18). However, (18) is considerably worse than (iii), indicating that it involves a more serious violation—according to the analysis in the text, a violation of the Chain Condition.

The one remaining problem, noted by the reviewer, is why the Chain Condition apparently is not violated in well-known English examples such as (iv).

- (iv) The boys_i seem to each other_i [t_i to have both been mistreated].

I have no explanation for this.

¹¹ I thank Mamoru Saito for these examples.

long as it is adjacent to the object, thereby not forcing a movement analysis. As shown in (21), if the reciprocal is embedded in a larger phrase, the counterpart of (20b) improves markedly.

- (21) (?)John-ga gakusei-tati_i-o [otagai_i-no sensei]_i-ni t_i futa-ri syookaisita.
 John-NOM students_i-ACC [each other_i-GEN teachers]_i-DAT t_i 2-CL introduced
 ‘John introduced two students to each other’s teachers.’

The slight awkwardness of this sentence, indicated by the parenthesized question mark, seems to stem from the order “reciprocal–numeral quantifier,” a problem I do not understand. If, instead of the reciprocal, the sentence contains the local anaphor *karera-zisin* ‘they-self’, an even clearer distinction emerges.

- (22) a. *John-ga gakusei-tati_i-o karera-zisini_i-ni t_i futa-ri miseta.
 John-NOM students_i-ACC they-self_i-DAT t_i 2-CL showed
 ‘John showed two students to themselves.’
 b. John-ga gakusei-tati_i-o [karera-zisini_i-no sensei]_i-ni t_i futa-ri syookaisita.
 John-NOM students_i-ACC [they-self_i-GEN teachers]_i-DAT t_i 2-CL introduced
 ‘John introduced two students to their own teachers.’¹²

2.2 Are the Dative-Accusative and Accusative-Dative Word Orders Equivalent?

Based on the Chain Condition, we have seen that under normal circumstances, dative-accusative and accusative-dative word orders are both base-generated. The question that arises is, are these two word orders equivalent in structure? There is evidence, based on the numeral quantifier, that in fact what we have been calling “dative *ni*” is a Case marker in the dative-accusative order but a postposition in the accusative-dative order. This mirrors the dative-shifted and non-dative-shifted orders in languages such as English.

A “floating” numeral quantifier is possible if the associated NP has Case marking, but not if the NP has a postposition (e.g., Miyagawa 1989). Haig (1980) observes that the grammaticality of “floating” the numeral quantifier off the dative phrase differs depending on the position of the dative phrase relative to the accusative object (see also Miyagawa 1988). If the dative phrase precedes the accusative, it is acceptable to float the numeral quantifier construed with the dative phrase, but if the dative phrase follows the accusative phrase, the floating numeral quantifier construed with the dative phrase is marginal for many speakers. I have put this marginal judgment in parentheses because there is one reading on which the sentence is fine, as I will show later.

¹² A similar effect can be seen in the direct passive.

- (i) a. Gakusei-tati_i-ga Mary-ni t_i futa-ri otagai_i-ni syookais-are-ta.
 students_i-NOM Mary-by t_i 2-CL each other_i-DAT introduce-PASS-PAST
 ‘Two students were introduced by Mary to each other.’
 b. *Gakusei-tati_i-ga Mary-ni otagai_i-ni t_i futa-ri syookais-are-ta.
 students_i-NOM Mary-by each other_i-DAT t_i 2-CL introduce-PASS-PAST

In (ia) the location of the numeral quantifier indicates that the logical object, which is passivized, started out to the left of the reciprocal goal phrase. This avoids a Chain Condition violation. However, in (ib) it indicates that the logical object was originally to the right of the reciprocal goal phrase, thus leading to a Chain Condition violation.

- (23) a. Mary-ga *tomodati-ni futa-ri* CD-o okutta. (IO-DO)
 Mary-NOM *friends-DAT 2-CL* CD-ACC sent
 'Mary sent two friends a CD.'
 b. (???)Mary-ga CD-o *tomodati-ni futa-ri* okutta. (DO-IO)
 Mary-NOM CD-ACC *friends-DAT 2-CL* sent

This difference disappears if the accusative object is scrambled out of the VP, to the front of IP (Miyagawa 1988).

- (24) (?)CD-o Mary-ga *tomodati-ni futa-ri* okutta.
 CD-ACC Mary-NOM *friends-DAT 2-CL* sent

This indicates that the difference in grammaticality observed in (23) is a VP-internal word order phenomenon. We can capture this difference by analyzing the dative in (23a) as a Case marker and the dative in (23b) as a postposition, as schematized in (25).

- (25) a. ...[DP[NP ...] *ni*] [DP[NP ...] *o*] *ni*: Case marker
 b. ...[DP[NP ...] *o*] [PP[DP ...] *ni*] *ni*: postposition

This is further evidence that both word orders are base-generated.^{13,14}

2.3 Focus Movement

Finally, let us return briefly to the numeral quantifier data noted originally by Haig (1980). As we saw in (23b), if the order is accusative-dative, the floating numeral quantifier associated with the dative is marginal. However, as shown in (26), if the accusative phrase is to the left of a manner adverbial, the marginality disappears.¹⁵

- (26) (?)Mary-ga CD-o_i *isoide tomodati-ni futa-ri* t_i okutta.
 Mary-NOM CD-ACC_i quickly *friends-DAT 2-CL* t_i sent
 'Mary sent a CD to two friends quickly.'

¹³ It is beyond the scope of this article to provide an analysis of the double object construction in Japanese. If a VP-shell type of analysis (Larson 1988) is adopted, it is possible that some sort of obligatory movement may be postulated to derive one or both of the word orders from a common underlying representation, the Case/postposition difference arising from the structural position in which the dative ultimately ends up. Even under such an approach, however, the hypothesized movement must be considered obligatory, not optional. See Koizumi 1995 for a movement analysis of the double object construction in Japanese and English.

¹⁴ Kitagawa (1990, 1994) suggests that the different word orders in Japanese reflect base word orders. His approach differs from mine in that he claims that permutations involving the subject, as well as the indirect object and direct object, are base-generated.

Watanabe (1995) independently reaches the same conclusion about the two kinds of *ni* in the double object construction based on facts similar to the ones noted here.

¹⁵ The sentence sounds best if there is a pause after the manner adverbial. The pause presumably helps to clearly mark the left edge of the VP. The adverbial phrase also functions to mark the left edge; with an appropriate pause, it is possible to leave out the adverb and still get the pertinent judgment, but it is easier with the adverb.

This suggests that the dative is a Case marker as opposed to a postposition. Because this Case marking is only possible if the original word order is dative-accusative, the grammaticality of this example indicates that a real movement has occurred: the accusative object has moved from its original position next to the verb to a position that appears to be a VP-adjunction site. The question here is, is this movement strictly optional? I will give evidence that it is motivated by something like focus. Note the contrast in (27).¹⁶

- (27) a. ??John-ga isoide hon-wa katta.
 John-NOM quickly book-CONTRAST bought
 ‘John quickly bought A BOOK.’
 b. John-ga hon-wa_i isoide t_i katta.
 John-NOM book-CONTRAST_i quickly t_i bought

The contrastive marker *wa* on the object ‘book’ in these two examples forces a contrastive focus interpretation of the object ‘book’. If this focused object occurs within the VP, after the manner adverbial, as in (27a), the sentence is marginal. However, if it has moved from its original position, as in (27b), the sentence is perfect. This suggests that there is a focus position between the subject and the VP, a position that is similar to the “specificity/topic” position in German (Diesing 1992). If a phrase moves into this position, it does so because of the requirement that a focused element must move to a position where the focus feature can be appropriately licensed.¹⁷

A similar phenomenon is found with the contrastive focus *wa* marking on the dative phrase.

- (28) a. ??John-ga isoide Hanako-ni-wa hon-o ageta.
 John-NOM quickly Hanako-DAT-CONTRAST book-ACC gave
 ‘John quickly gave HANAKO a book.’
 b. John-ga Hanako-ni-wa_i isoide t_i hon-o ageta.
 John-NOM Hanako-DAT-CONTRAST_i quickly t_i book-ACC gave
 ‘John quickly gave HANAKO a book.’¹⁸

¹⁶ This distinction was pointed out to me by Hiroaki Tada.

¹⁷ The referent of the phrase with contrastive *wa* must be linked to something already in the conversation; for example, it might be contrasted with something already mentioned in the discourse (‘I bought a BOOK, not pizza’, where ‘pizza’ was already mentioned in the discourse, and ‘BOOK’ is introduced as a contrastive topic). This use of the contrastive *wa* may more accurately be referred to as *contrastive topic* instead of *focus* since a presupposition is inherent in its usage.

¹⁸ The examples in (27) and (28) with the contrastive particle *wa* clearly indicate that there is a focus position to which a presupposed element moves. One question, raised by the reviewer, is whether a presupposition of the type found in these examples also arises with moved phrases that are not marked with *wa*. Although the data are not as clear-cut, I believe that the presuppositions for accusatively marked objects in original position and in focused position differ.

- (i) a. John-ga isoide Mary-ni hon-o watasita.
 John-NOM quickly Mary-DAT book-ACC handed
 ‘John gave Mary a book.’
 b. John-ga hon-o_i isoide Mary-ni t_i watasita.
 John-NOM book-ACC_i quickly Mary-DAT t_i handed

In (ia) there is no presupposition that John handed something to Mary. Thus, this sentence could be a felicitous answer to the question, ‘‘What did John do?’’ In (ib) the most natural interpretation is that there is a presupposition that John handed Mary something. Admittedly, this contrast is not as clear-cut as the contrast in sentences with *wa*, but it is consistent with the analysis that when movement occurs, there is a tendency for the moved element to reflect a presupposition in the discourse.

If this focus movement belongs to the class of \bar{A} -movements, we would predict that reconstruction should be possible, contrary to what has been reported (e.g., Saito 1992, Tada 1989). It is in fact possible for the accusative object in the accusative-dative order to undergo reconstruction, particularly if it has focus stress.^{19,20}

- (29) (?)John-ga [otagai_i-no tomodati]_{-o_j} isoide Hanako-to Mary_i-ni t_j
 John-NOM [each other_i-GEN friends]-ACC_j quickly Hanako-and Mary_i-DAT t_j
 syookaisita.
 introduced
 'John introduced each other's friends to Hanako and Mary quickly.'

2.4 Quantifier Scope

A possible problem with the proposed analysis is that the accusative-dative order gives rise to quantifier scope ambiguity. As noted by Kuroda (1971), Huang (1982), and others, scope interpretation in Japanese reflects the surface c-command relationship. Hence, the example in (30) is unambiguous, in contrast to its English counterpart.

- (30) Dareka-ga daremo-o mita.
 someone-NOM everyone-ACC saw
 'Someone saw everyone.' $\exists > \forall$; $*\forall > \exists$

Ambiguity arises if movement takes place, as in (31) (Kuroda 1971).

- (31) Dareka-o_i daremo-ga t_i mita.
 someone-ACC_i everyone-NOM t_i saw
 'Someone, everyone saw.' $\exists > \forall$; $\forall > \exists$

¹⁹ Thanks to Masa Koizumi for this point.

It is uncontroversial that IP adjunction scrambling may undergo reconstruction (Saito 1992, Tada 1989), thus indicating that it may be \bar{A} -scrambling.

(i) [Otagai_i-no tomodati]_{-o_j} John-ga isoide Hanako-to Mary_i-ni t_j syookaisita.
 [each other_i-GEN friends]-ACC_j John-NOM quickly Hanako-and Mary_i-DAT t_j introduced
 'John introduced each other's friends to Hanako and Mary quickly.'

See section 3 for evidence that this scrambling may also be A-movement.

²⁰ Contrary to what has been reported in the literature, the fact that an instance of VP-internal scrambling may undergo reconstruction indicates that this focus position is an \bar{A} -position. However, as already shown by examples like (22), the same movement is subject to the Chain Condition, indicating that this is A-movement. This is similar to IP-adjunction scrambling, which may be either A- or \bar{A} -movement. This is not at all surprising. In German, for example, focus (or topic) movement (see Diesing 1992) is apparently either A- or \bar{A} -movement as well. (The following example was constructed with help from Kai von Fintel.)

(i) weil Hans die Lehrer_i gestern einander_i t_i vorgestellt hat
 because Hans the teachers(ACC)_i yesterday each other_i t_i introduced has
 'because the teachers, Hans yesterday introduced to each other'

The fact that the focused (or topicalized) element, *Lehrer*, can antecede the reciprocal indicates that this is an instance of A-movement. However, the fact that this movement is not ruled out by the Chain Condition suggests that it is \bar{A} -movement. The interesting point about German is that, according to this example, the focus (or topic) position may function simultaneously as an A- and an \bar{A} -position, a point suggested originally by Webelhuth's (1989) study of scrambling in German.

Example (32), which has accusative-dative order, exhibits scope ambiguity. This can potentially undermine the base generation analysis in favor of the scrambling analysis that leaves a trace in the position indicated in parentheses.

- (32) Hanako-ga dareka-o_i daremo-ni (t_i) syookaisita.
 Hanako-NOM someone-ACC_i everyone-DAT (t_i) introduced
 ‘Hanako introduced someone to everyone.’ $\exists > \forall$; $\forall > \exists$

However, it turns out that the other order, dative-accusative, is also ambiguous.

- (33) Hanako-ga dareka-ni daremo-o syookaisita.
 Hanako-NOM someone-DAT everyone-ACC introduced
 ‘Hanako introduced everyone to someone.’ $\exists > \forall$; (?) $\forall > \exists$

Consequently, the two internal arguments of a ditransitive verb give rise to scope ambiguity regardless of their order.

The hypothesis that the two word orders are base-generated, coupled with sentence-internal focus movement motivated in section 2.3, makes it possible to account for this ambiguity. Along with the base generation structure, focus movement gives rise to the following structures for the surface dative-accusative and accusative-dative orders.

- (34) a. Subject-ga QP-ni_i QP-o t_i V QP-ni > QP-o; QP-o > QP-ni
 b. Subject-ga QP-o_i QP-ni t_i V QP-o > QP-ni; QP-ni > QP-o

Of course, the wide scope reading of the first QP can also arise from the base generation structure.

- (35) a. Subject-ga QP-ni QP-o V QP-ni > QP-o
 b. Subject-ga QP-o QP-ni V QP-o > QP-ni

In fact, this wide scope reading of the first QP is preferred in both word orders. The wide scope reading of the second QP is most easily obtained if the first QP receives focus stress, giving rise to the two structures in (34) instead of the base generation structure in (35), which allows the second QP to take wide scope over the first QP.²¹

²¹ The problem that remains for any analysis that adopts the VP-internal subject hypothesis is why the object QP cannot take scope over the subject QP in the unscrambled order, subject-object. At LF the object ostensibly moves into [Spec, Agr_{OP}]. From this position, the object c-commands the VP-internal trace of the subject. There are a number of ways to account for this phenomenon, and I will simply list them. (a) The types of movement that influence scope in Japanese all take place in overt syntax. Following Huang’s (1982) original insight, we might postulate that scope in Japanese (and Chinese) is read off the structure in overt syntax. (b) It is possible that LF movement of the accusative object simply does not take place. For this to be the case, we would have to take the position that what has been called “weak” agreement, in which the feature is checked at LF, does not exist, at least in a way to force movement at LF. (c) In the multiple-VP architecture proposed by Koizumi (1995), the subject is generated in its own VP, distinct from the VP that contains the internal arguments. Agr_{OP} occurs between the two VPs. In such a structure, the subject chain and the object chain would never cross.

3 Against Optional IP-Adjunction Scrambling

The second type of so-called scrambling is IP-adjunction scrambling, in which VP-internal material such as the object appears to the left of the subject (see Saito 1985, 1992).

- (36) Piza-o_i John-ga t_i tabeta.
 pizza-ACC_i John-NOM t_i ate
 ‘John ate pizza.’

This movement is associated with both A and \bar{A} properties (Saito 1992, Tada 1989). I will show that the “A-scrambling” is motivated by something like Case agreement. The \bar{A} -scrambling is motivated by focus; it will be discussed in conjunction with long-distance scrambling in section 4.

3.1 Scrambling as A-Movement

I will give two pieces of evidence that IP-scrambling may be A-movement (see Saito 1992, among others, for other arguments).

3.1.1 Idiom Chunks A stereotypical test for A-movement involves idiom chunks. It is possible for a chunk of an idiom like the one in (37) to undergo movement, as shown in (38).²²

- (37) te-o nobasu
 hand-ACC extend
 ‘become involved’
- (38) Te-o_i John-ga hoteru-gyoo-ni t_i nobasita.
 hand-ACC_i John-NOM hotel-business-to t_i extended
 ‘John became involved in the hotel business.’

This indicates that this scrambling is A-movement. As further evidence, when an idiom chunk undergoes long-distance scrambling, which is typically viewed solely as \bar{A} -movement (Mahajan 1990; also Saito 1992, Tada 1989), it loses its idiomatic meaning.

- (39) ???Te-o_i [_{IP} Mary-ga [_{IP} John-ga hoteru-gyoo-ni t_i nobasita] to]
 hand-ACC_i [_{IP} Mary-NOM [_{IP} John-NOM hotel-business-to t_i extended to]
 hookokusita.
 reported
 ‘Mary reported that John became involved in the hotel business.’

3.1.2 Reciprocals Reciprocals provide further evidence that IP-adjunction scrambling is A-movement. As noted by Ueda (1986), the reciprocal *otagai* ‘each other’ is a local anaphor subject to Condition A of the binding theory. Note that a scrambled DP may function as the antecedent of the reciprocal.²³

²² Natsuko Tsujimura (personal communication) suggested this idiom for the test.

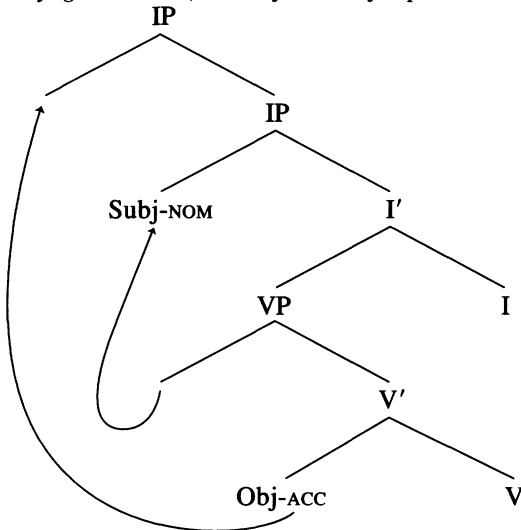
²³ Tada (1989) marks the sentence as slightly less acceptable.

- (40) ?[John-to Bob]_i-o otagai_i-no kodoma-ga t_i mita.
 [John-and Bob]_i-ACC each other_i-GEN children-NOM t_i saw
 'John and Bob, each other's children saw.'

3.2 IP-Adjunction A-Scrambling Is Driven by Case Agreement

In an earlier version of this article, I suggested that the object moves and adjoins to the IP for Case reasons. In that position, the accusative Case is licensed by the same functional category, which I simply labeled "I," as the nominative Case.

- (41) Miyagawa 1990 (with adjustment for predicate-internal subject)



In Miyagawa 1994, I suggested that this "I" must be unpacked into a more articulated set of functional heads. I gave them the "minimalist" labels *subject agreement* (Agr_S) for nominative Case checking, and *object agreement* (Agr_O) for accusative Case checking.²⁴

In order to implement the original idea given in (41), three additional assumptions are necessary.

Multiple specifier positions. This assumption, taken from Kuroda 1988 and Ura 1994, explains why IP-adjunction A-scrambling is found in languages such as Japanese but not in, for example, English. As argued originally by Kuroda, Japanese allows multiple specifier positions for a single head. A test for whether a language has multiple-specifier structure is to see whether it allows the multiple-"subject" construction. Japanese does allow this construction (see Kuno 1973).

²⁴ Since Japanese does not have overt agreement morphology, it may be more appropriate to call the "agreement" heads something else. One possibility is that Agr_S is some subset of the features associated with Tense (see Takezawa 1987 for such an analysis). Agr_O may be a label for something akin to Aspect. For this article, I will continue to use Agr_S and Agr_O .

- (42) *Taroo-ga musume-ga isya-ni natta.*
Taro-NOM daughter-NOM doctor-DAT became
 Lit. 'Taro, his daughter became a doctor.'

For our purposes, this means that the two positions directly dominated by the IP nodes in (41) are specifiers of the same functional head.

- (43) $[_{IP} X \ [_{IP} Y \dots I]]$
 $\uparrow \quad \uparrow \quad \uparrow$
 specifiers head

The same head "I" may check the relevant features residing in the specifier positions (Ura 1994).

Fused functional heads. Agr_O incorporates into Agr_S and fuses into a unitary functional head. As illustrated in (44), this Agr_O - Agr_S fused head then checks the nominative subject in the lower IP and the accusative object in the higher IP node created by adjunction.

- (44) $[_{IP} \text{Obj-ACC} [_{IP} \text{Subj-NOM} \dots \text{Agr}_O\text{-Agr}_S]]$
 $\uparrow \quad \uparrow \quad \text{check acc. Case } ______$
 $\quad \quad \text{check nom. Case } ______$

The fused Agr_O - Agr_S head corresponds to I in the original proposal in Miyagawa 1990 schematized in (41).

Nature of Agr_S and Agr_O . In Japanese, Agr_O is inherently weak (see Tada 1992, Ura 1994), but Agr_S is strong. If Agr_O fuses with Agr_S , the fused head takes on the strong feature of Agr_S , which is the "head" of this newly created category. Hence, accusative Case may be checked in the IP-adjoined position at overt syntax. However, if Agr_O does not fuse with Agr_S , then, given the inherently weak nature of Agr_O (Miyagawa 1994), the accusative Case on the object is not checked until LF (in the specifier position of the Agr_O to the right of the subject).²⁵

- (45) $[_{IP} \text{Subj-NOM} \text{Obj-ACC} \dots \text{Agr}_O \text{Agr}_S]$
 $\uparrow \quad \uparrow \quad \text{check acc. Case } ______$
 $\quad \quad \text{check nom. Case } ______$

3.2 Prediction and Evidence

The analysis outlined above predicts that Case-driven scrambling of the accusative object is possible only if Agr_S is present. By fusing with Agr_S , Agr_O becomes part of a functional head with a strong feature, thereby making it possible for Agr_O to check the accusative Case at overt syntax. If Agr_S is not present, Agr_O retains its "weak" feature, and this feature is checked at LF.

²⁵ Another possibility, suggested to me by Hiro Ura, is that when the object occurs in the IP-adjoined position, Agr_O does not occur, and the accusative Case is checked by the same "strong" functional head that checks the nominative Case. If this turns out to be correct, it will essentially be identical to the original proposal for Case checking made in Miyagawa 1990.

3.2.1 *Nominative/Genitive Conversion* There is a construction in Japanese that allows us to confirm this prediction. In Miyagawa 1993a,b, I argued that in the so-called *nominative/genitive conversion* construction, which occurs in relative clauses and complex NPs, Agr_S is absent if genitive Case appears on the subject instead of nominative Case.

- (46) [DP[IP John-*no*/-*ga* katta] hon]
 [DP[IP John-*GEN*/-*NOM* bought] book]
 ‘the book that John bought’

On this analysis, if the subject bears nominative Case, it is checked in [Spec, Agr_SP] within the “IP.” However, if the subject bears genitive Case, it moves into [Spec, DP] and is checked by D, as shown in (47).

- (47) [DP John-*no*_i [IP t_i katta] hon D]
 [DP John-*GEN*_i [IP t_i bought] book D]
 ‘the book that John bought’

In Miyagawa 1993a,b, I argued that this movement occurs at LF. I will summarize one argument below.

The argument is based on the behavior of scope-bearing elements in a complex NP headed by such “adjunct” heads as ‘reason’. If the nominative Case occurs on a scope-bearing subject, the subject cannot take scope over the head noun ‘reason’.

- (48) [DP[IP[John-*ka* Mary]-*ga* itta] riyuu]-o osiete.
 [DP[IP[John-*or* Mary]-*NOM* went] reason]-ACC tell me
 ‘Tell me the reason why John or Mary went.’
 reason > John or Mary; *John or Mary > reason

The interpretation of this sentence is that the speaker knows that either John or Mary went, and the speaker wants to know why this happened. Note that the English equivalent of this sentence is ambiguous (*Tell me the reason why John or Mary went*). It could mean the same thing, or it could mean ‘Tell me the reason why John went, or why Mary went’. In the latter case *John or Mary* has scope over *why*. We can attribute this difference between English and Japanese to the presence or absence of operator movement. In English the presence of *why* makes the ambiguity possible, since its trace in IP is c-commanded by the subject *John or Mary*. In contrast, Japanese has no relative pronoun, and the adjunct nature of ‘reason’ apparently excludes the possibility of empty operator movement. If the head is an argument, on the other hand, the ambiguity found in English is also observed in Japanese.

- (49) [DP[CP Op_i [IP[John-*ka* Mary]-*ga* t_i katta]] hon_i]-o misete.
 [DP[CP Op_i [IP[John-*or* Mary]-*NOM* t_i bought]] book_i]-ACC show me
 ‘Show me the book that John or Mary bought.’
 book > John or Mary; John or Mary > book

The trace of the empty operator, which is c-commanded by ‘John or Mary’, makes it possible

for the scope-bearing subject to take wide scope over the relative head ‘book’.²⁶ Contrary to what we saw in (48), in which the nominative scope-bearing subject can only take narrow scope relative to the head ‘reason’, if the subject bears genitive Case, it can take scope over ‘reason’ (Miyagawa 1993a,b).

(50) *Genitive subject*

[_{DP}[_{IP}[John-ka Mary]-*no* kita] riyuu-o osiete.
 [_{DP}[_{IP}[John-or Mary]-*GEN* came] reason]-ACC tell me
 ‘Tell me the reason why John or Mary came.’
 reason > [John or Mary]; [John or Mary] > reason

Since we already know that no operator movement takes place in this complex NP, the reason for the wide scope reading of ‘John or Mary’ must be that this scope-bearing phrase c-commands the head ‘reason’ at some level of representation. This is possible if the subject moves into the specifier of the higher DP. The argument that this movement occurs at LF (Miyagawa 1993b) comes from the observation that at overt syntax, it is possible for an element of the lower IP such as a sentential adverb to occur to the left of the genitive subject (Nakai 1980).

(51) [_{DP}[_{IP} kinoo Hanako-*no* itta] riyuu]
 [_{DP}[_{IP} yesterday Hanako-*GEN* went] reason]
 ‘the reason why Hanako went yesterday’

Nakai (1980) correctly notes that a sentential adverb such as ‘yesterday’ in this example is associated with the IP; hence, at overt syntax, the genitive subject must also reside in the IP. The genitive Case must therefore wait until LF to be checked by D.²⁷

3.2.2 Evidence that A-Scrambling Is Case-Driven The nominative/genitive conversion construction allows us to test the prediction that A-scrambling is Case-driven. A-scrambling of the accusative object should be possible only if Agr_S is present. In nominative/genitive conversion, this movement should be possible only if the subject bears nominative Case, which is checked by Agr_S; hence, Agr_S must be present. On the other hand, if the subject bears genitive Case, Agr_S is not present; hence, A-scrambling of the accusative object is predicted to be impossible.

²⁶ As further confirmation that it is the presence or absence of an operator chain that bears on scope interpretation, note that if *why* is dropped in English, the ambiguity disappears for most speakers.

(i) a. Tell me the reason why everyone left.
 b. Tell me the reason everyone left.

As noted by Colin Phillips, (ia), with *why*, is ambiguous, but the absence of *why* in (ib) precludes *everyone* from taking wide scope over *reason*. The majority of the speakers I consulted share this distinction without any hesitation. However, there are a few speakers, including the anonymous reviewer, who also find (ib) ambiguous. I have no explanation for this apparent idiolectal difference.

²⁷ If the sentential adverb were to be associated with the DP above the IP, it would have to bear genitive Case, in accordance with the across-the-board requirement in Japanese that all elements directly dominated by a projection of D/N must bear genitive Case.

Idiom chunks. The first piece of evidence involves idiom chunks. We saw earlier that the possibility of moving an idiom chunk is evidence for A-movement. Note that (52), which contains the idiom *te-o nobasu* ‘lit. extend hand; “become involved”’, is acceptable.²⁸

- (52) [DP[IP Tanaka-*ga/no* hoteru-gyoo-ni te-o nobasita] uwasa]
 [DP[IP Tanaka-NOM/GEN hotel-business-to hand-ACC extended] rumor]
 ‘the rumor that Tanaka became involved in the hotel business’

Next, note the distinction in grammaticality between the nominative subject and the genitive subject if a chunk of the idiom is scrambled.

- (53) a. [DP[IP te-*o_i* [IP Tanaka-*ga* hoteru-gyoo-ni t_i nobasita]] uwasa]
 [DP[IP hand-ACC_i [IP Tanaka-NOM hotel-business-to t_i extended]] rumor]
 ‘the rumor that Tanaka became involved in the hotel business’
 b. *[DP[IP te-*o_i* [IP Tanaka-*no* hoteru-gyoo-ni t_i nobasita]] uwasa]
 [DP[IP hand-ACC_i [IP Tanaka-GEN hotel-business-to t_i extended]] rumor]

This indicates that A-scrambling is impossible if Agr_S is not present.

Reciprocal anaphor binding. The same point is illustrated by the reciprocal anaphor *otagai*. As shown in (54), if the subject is nominative, it is possible for the scrambled element ‘they’ to bind the reciprocal anaphor, but if the subject is genitive, such binding is not possible.

- (54) a. [DP[IP karera-*o_i* [IP otagai-*no* sensei-*ga* t_i kiratteiru]] riyuu]
 [DP[IP they-ACC_i [IP each other_i-GEN teachers-NOM t_i hate]] reason]
 ‘the reason that them, each others’ teachers hate’
 b. ???/*[DP[IP karera-*o_i* [IP otagai-*no* sensei-*no* t_i kiratteiru]] riyuu]
 [DP[IP they-ACC_i [IP each other_i-GEN teachers-GEN t_i hate]] reason]

3.3 Further Evidence: Subject Honorification

If the proposed analysis is correct, we would predict that if, despite the presence of genitive Case, something else contributes a strong Agr_S to the clause, A-scrambling of the accusative object should be possible. A potential candidate is subject honorification (Harada 1976, Toribio 1990), which is a form of subject-verb agreement. This form, which consists of adding the prefix *o-* and the suffix *-ni naru* to the verb stem, is optionally used if the referent of the subject is understood to be superior in social standing to the speaker. As illustration, (55a) is a nonhonorific sentence, and (55b) is its subject honorification counterpart.

²⁸ In the first important study of nominative/genitive conversion, Harada (1971) noted that some speakers find the occurrence of the accusative object with the genitive subject marginal (see also Watanabe 1994). I have checked the data presented in this article with both types of speakers, those for whom the genitive-accusative combination is acceptable and those for whom it is somewhat marginal. Importantly, both types of speakers have the grammatical distinction crucial to the argument I am making.

- (55) a. John-ga hon-o yonda.
 John-NOM book-ACC read
 'John read a book.'
- b. Tanaka-kyoozyu-ga hon-o o-yomi-ni natta.
 Prof.-Tanaka-NOM book-ACC read(SH)
 'Prof. Tanaka read a book.'

As Toribio (1990) has argued, subject honorification is an instance of specifier-head agreement, whereby the specifier corresponds to the specifier of Agr_SP. If this is the case, we expect A-scrambling to be possible in the genitive-subject construction. This is borne out for both idiom chunks and reciprocal anaphor binding.

(56) *Idiom chunk*

- a. *[_{DP}[_{IP} te-o_i [_{IP} Tanaka-*no* hoteru-gyoo-ni t_i nobasita]] uwasa]
 [_{DP}[_{IP} hand-ACC_i [_{IP} Tanaka-*GEN* hotel-business-to t_i extended]] rumor]
 'the rumor that Tanaka became involved in the hotel business'
- b. ?[_{DP}[_{IP} te-o_i [_{IP} Tanaka-kyoozyu-*no* hoteru-gyoo-ni t_i o-nobasi-ni natta]]
 [_{DP}[_{IP} hand-ACC_i [_{IP} Prof.-Tanaka-*GEN* hotel-business-to t_i extended(SH)]]
 uwasa]²⁹
 rumor]

(57) *Anaphor binding*

- a. *[_{DP}[_{IP} karera-o_i [_{IP} otagai-*no* sensei-*no* t_i hometa]] riyuu]
 [_{DP}[_{IP} they-ACC_i [_{IP} each other_i-*GEN* teachers-*GEN* t_i praised]] reason]
 'the reason that them, each others' teachers praised'
- b. ?[_{DP}[_{IP} karera-o_i [_{IP} otagai-*no* sensei-*no* t_i o-home-ni natta]] riyuu]
 [_{DP}[_{IP} they-ACC_i [_{IP} each other_i-*GEN* teachers-*GEN* t_i praised(SH)]] reason]

3.4 Interaction of Agr_O-Agr_S Fusion and Multiple-Specifier Structure

The analysis I have presented crucially depends on the process of Agr_O-Agr_S fusion *and* the possibility of multiple-specifier structure. The evidence I have given so far demonstrates the workings of Agr_O-Agr_S fusion; if Agr_S is not present, fusion does not take place, thereby excluding A-scrambling of the accusative object. Let us now look at evidence that multiple-specifier structure is also necessary. We again turn to the nominative-genitive conversion construction.

(58) is a typical multiple-subject sentence.

²⁹ A similar effect is found with the other form of subject honorification, in which the passive morpheme *-(r)are* is attached to the verb (see Hasegawa 1988). This was pointed out to me by Mamoru Saito.

(i) ?[_{DP}[_{IP} te-o_i [_{IP} Tanaka-kyoozyu-*no* hoteru-gyoo-ni t_i nobas-areta]] uwasa]
 [_{DP}[_{IP} hand-ACC_i [_{IP} Prof.-Tanaka-*GEN* hotel-business-to t_i extended(SH)]] rumor]
 'the rumor that Prof. Tanaka became involved in the hotel business'

This form of honorification also crucially forms a type of agreement between the subject and the verb.

- (58) Tanaka-ga musume-ga daigaku-ni haitta.
 Tanaka-NOM daughter-NOM university-to entered
 'Tanaka, his daughter entered a university.'

If this example is embedded in a relative clause, with 'Tanaka' marked by the genitive Case, the structure is ambiguous. In (59a) 'Tanaka' is a "subject," and, since this is a multiple-subject construction, it is adjoined to IP (see Kuroda 1988). In (59b) 'Tanaka' is in the same DP as 'daughter', being simply the possessor in this phrase.

- (59) a. [DP_{IP} Tanaka-no [IP musume-ga haitta]] daigaku]
 [DP_{IP} Tanaka-GEN [IP daughter-NOM entered]] university]
 'the university that Tanaka, his daughter entered'
 b. [DP_{IP}[Tanaka-no musume]-ga haitta] daigaku]
 [DP_{IP}[Tanaka-GEN daughter]-NOM entered] university]
 'the university that Tanaka's daughter entered'

We can disambiguate this structure by placing a sentential adverb such as 'last year' between 'Tanaka' and 'daughter'. This forces the structure in (59a) because, not bearing genitive Case, the adverb is directly dominated by a projection of I instead of D/N.

- (60) [DP_{IP} Tanaka-no [IP kyonen musume-ga haitta]] daigaku]
 [DP_{IP} Tanaka-GEN [IP last year daughter-NOM entered]] university]
 'the university that Tanaka, his daughter entered last year'

Let us make the reasonable assumption that specifiers count as multiple specifiers if and only if the elements in these specifiers are checked by the same head. In (60) 'Tanaka' and 'daughter' are dominated by the segments of the same IP, but their Case features are not checked by the same head. 'Tanaka', being genitive, is checked at LF by D, whereas the nominative Case of 'daughter' is checked by Agr_S at overt syntax. The intervention of the D-checked phrase predicts that A-scrambling of the object is impossible in this type of example even though Agr_S apparently is present. It is impossible because the multiple-specifier structure is not allowed. The prediction is borne out in the following idiom chunk example:

- (61) *[DP_{IP} te-o_i [IP Tanaka-no [IP kyonen musuko-ga hoteru-gyoo-ni
 [DP_{IP} hand-ACC_i [IP Tanaka-GEN [IP last year son-NOM hotel-business-to
 t_i nobasita]]]] uwasa]
 t_i extended]]] rumor]
 'the rumor that Tanaka, his son became involved in the hotel business last year'

If the sentential adverb 'last year' is omitted, the sentence is perfect, because it allows the structure in (59b) in which 'Tanaka' is within the same DP as 'son'.

- (62) [DP_{IP} te-o_i [IP[Tanaka-no musuko]-ga hoteru-gyoo-ni t_i nobasita]] uwasa]
 [DP_{IP} hand-ACC_i [IP[Tanaka-GEN son]-NOM hotel-business-to t_i extended]] rumor]
 'the rumor that Tanaka's son became involved in the hotel business last year'

The sentence is fine even with ‘last year’ between ‘Tanaka’ and ‘son’ even if ‘Tanaka’ is nominative.

- (63) [DP[_{IP} Te-_{o_i} [_{IP} Tanaka-ga [_{IP} kyonen musuko-ga hoteru-gyoo-ni _{t_i} [_{DP}[_{IP} hand-ACC_i [_{IP} Tanaka-NOM [_{IP} last year son-NOM hotel-business-to _{t_i} nobasita]]]] uwasa]-o minna-ga kiita.
extended]]] rumor]-ACC everyone-NOM heard
‘Everyone heard the rumor that Tanaka, his son became involved in the hotel business last year.’

This indicates that the occurrence of adjuncts such as sentential adverbs between specifiers does not prevent the specifiers from occurring in a multiple-specifier structure. This makes sense because adjuncts by nature are not Case-checked and hence are irrelevant to the head that would check this feature.

4 A Note on \bar{A} -Scrambling

In this final section I will address the phenomenon of \bar{A} -scrambling. As we have seen, long-distance scrambling is strictly \bar{A} -movement. Local IP-adjunction scrambling may also be \bar{A} -movement as well as A-movement. The latter, I have argued, is driven by Case agreement. What is the motivation for \bar{A} -scrambling? Two pieces of evidence suggest that it is motivated by something like focus.³⁰

We have seen that if the genitive Case occurs on the subject in a nominative/genitive conversion construction, the object cannot scramble by A-movement to the left of the subject. In cases

³⁰ One remaining problem is the issue of “undoing” scrambling. Saito (1989) has argued that \bar{A} -scrambling may be completely undone at LF. His argument is based on data such as the following:

- (i) [_{CP} Dare-ga kita to]_i John-ga [_{CP} Hanako-ga _{t_i} itta ka] siranai.
[_{CP} who-NOM came Comp]_i John-NOM [_{CP} Hanako-NOM _{t_i} said Q] doesn’t know
‘John doesn’t know who Hanako said came.’

The embedded indirect question requires a *wh*-phrase in the specifier of the CP headed by the question marker *ka*. The *wh*-phrase is ‘who’ in the lowest clause. The problem here is that this lowest clause containing the *wh*-phrase has been scrambled to the front of the sentence. In order for this *wh*-phrase to appropriately end up in the specifier of the CP headed by the question marker *ka*, it must lower to the *wh*-specifier. But this lowering of the *wh*-phrase at LF would violate the Proper Binding Condition. Consequently, Saito (1989) argues that at LF this scrambling, which is long-distance, may be completely undone, and then the *wh*-phrase undergoes LF movement, so that no trace is left that would violate the Proper Binding Condition.

If this process of “undoing” is indeed correct, this type of scrambling is potentially devoid of any function and hence is strictly an optional rule. I do not have a counterargument, and more study is needed to see if Saito’s claim withstands alternative analyses. One possible alternative is a proposal by Watanabe (1992). Watanabe argues that in a Japanese *wh*-question, a *wh*-feature that is not pronounced moves at overt syntax into the *wh*-specifier, leaving behind the phonologically specified *wh*-word that, in his analysis, corresponds to an indefinite pronoun. The *wh*-word itself need not undergo movement at LF because the *wh*-feature has already satisfied the *wh*-requirement at overt syntax. If this account is correct, the question that arises is, does Proper Binding apply to the trace of a feature, in the same way that it seems to apply to the trace of an XP? If the answer is no, then Saito’s data need not lead to the conclusion that scrambling is undone at LF. Instead, the scrambled element in (i) can stay in the higher sentence because the *wh*-requirement is met at overt syntax by movement of the *wh*-feature. I leave this question open.

where A-movement is not required (i.e., the moved element is not an idiom chunk, or the moved element does not function as the binder of an anaphor), \bar{A} -scrambling is possible. In such an instance, the construction sounds best if the \bar{A} -moved element receives heavy focus stress.

- (64) a. ??[_{DP}[_{IP} piza-o_i [_{IP} Tanaka-*no* t_i tabeta]] mise]
 [_{DP}[_{IP} pizza-ACC_i [_{IP} Tanaka-*GEN* t_i ate]] restaurant]
 ‘the restaurant where Tanaka had pizza’
 b. [_{DP}[_{IP} **piza-o_i** [_{IP} Tanaka-*no* t_i tabeta]] mise]
 [_{DP}[_{IP} pizza-ACC_i [_{IP} Tanaka-*GEN* t_i ate]] restaurant]
 ‘the restaurant where Tanaka had pizza’

Second, recall the earlier discussion of the contrastive focus particle *wa*. As noted with respect to (27a), repeated here, the contrastive focus phrase with *wa* is marginal if it remains in the VP.

- (65) ??John-ga isoide hon-wa katta.
 John-NOM quickly book-CONTRAST bought
 ‘John quickly bought A BOOK.’

The sentence becomes perfect if the *wa*-phrase moves into the focus position just above the VP.

- (66) John-ga hon-wa_i isoide t_i katta.
 John-NOM book-CONTRAST_i quickly t_i bought

Note that there are two other positions to which this phrase can move: (a) to local IP-adjunction position and (b) to the higher clause (by long-distance scrambling).

- (67) Hon-wa_i John-ga isoide t_i katta.
 book-CONTRAST_i John-NOM quickly t_i bought
 (68) [_{IP} Hon-wa_i [_{IP} Mary-ga [_{IP} John-ga isoide t_i katta to]]] itta.
 [_{IP} book-CONTRAST_i [_{IP} Mary-NOM [_{IP} John-NOM quickly t_i bought Comp]]] said
 ‘THE BOOK, Mary said that John bought quickly.’

This suggests that these \bar{A} landing sites are focus positions.

5 Summary

I have argued that the apparent “free word order” in languages like Japanese is not really free; instead, each word order is distinct and motivated by some syntactic or semantic consideration. The “free-word-order” view is, to some extent, a carryover from the nonconfigurational conception of such languages. Although the nonconfigurational structure was effectively rejected in the 1980s, one of its core notions—completely optional word order—was reincarnated as the optional operation of scrambling. For VP-internal word order permutation, I showed that the two word orders IO-DO and DO-IO are best viewed as being base-generated instead of as being derived one from the other. For IP-adjunction scrambling, I gave a number of arguments that A-scrambling is driven by a Case agreement feature, and \bar{A} -scrambling is motivated by something like focus. The findings

in this article cast doubt on the widely held view that scrambling constitutes a strictly optional movement.

References

- Baker, Mark, Kyle Johnson, and Ian Roberts. 1989. Passive arguments raised. *Linguistic Inquiry* 20:219–251.
- Chomsky, Noam. 1993. A minimalist program for linguistic theory. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Kenneth Hale and Samuel Jay Keyser, 1–52. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1994. Bare phrase structure. MIT Occasional Papers in Linguistics 5. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass. [Published in *Government and Binding Theory and the Minimalist Program*, ed. Gert Webelhuth, 383–439. Oxford: Blackwell (1995).]
- Diesing, Molly. 1992. *Indefinites*. Cambridge, Mass.: MIT Press.
- Fukui, Naoki. 1993. Parameters and optionality. *Linguistic Inquiry* 24:399–420.
- Haig, John. 1980. Some observations on quantifier float in Japanese. *Linguistics* 18:1065–1083.
- Hale, Ken. 1980. Remarks on Japanese phrase structure: Comments on the papers on Japanese syntax. In *MIT working papers in linguistics 2: Theoretical issues in Japanese linguistics*, 185–203. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Harada, S.-I. 1971. *Ga-no* conversion and idiolectal variations in Japanese. *Gengo Kenkyuu* 60:25–38.
- Harada, S.-I. 1976. Honorifics. In *Japanese generative grammar: Syntax and semantics 5*, ed. Masayoshi Shibatani, 499–561. New York: Academic Press.
- Hasegawa, Nobuko. 1988. Passives, verb raising, and the Affectedness Condition. In *Proceedings of the Seventh West Coast Conference on Formal Linguistics*, 99–114. Stanford, Calif.: CSLI Publications. [Distributed by Cambridge University Press.]
- Hoji, Hajime. 1985. Logical Form constraints and configurational structures in Japanese. Doctoral dissertation, University of Washington, Seattle.
- Huang, C.-T. James. 1982. Logical relations in Chinese and the theory of grammar. Doctoral dissertation, MIT, Cambridge, Mass.
- Jaeggli, Osvaldo. 1986. Passive. *Linguistic Inquiry* 17:587–622.
- Kitagawa, Yoshihisa. 1990. Anti-scrambling. Ms., University of Rochester, Rochester, N.Y.
- Kitagawa, Yoshihisa. 1994. Shells, yolks, and scrambled e.g.'s. In *NELS 24*, 221–239. GLSA, University of Massachusetts, Amherst.
- Koizumi, Masatoshi. 1995. Phrase structure in minimalist syntax. Doctoral dissertation, MIT, Cambridge, Mass.
- Kuno, Susumu. 1973. *The structure of the Japanese language*. Cambridge, Mass.: MIT Press.
- Kuroda, S.-Y. 1965. Generative grammatical studies in the Japanese language. Doctoral dissertation, MIT, Cambridge, Mass.
- Kuroda, S.-Y. 1971. Remarks on the notion of subject with reference to words like *also*, *even*, or *only*: Part II. In *Annual Bulletin 4*, 127–152. Logopedics and Phoniatrics Research Institute, University of Tokyo. [Reprinted in *Papers in Japanese Linguistics* 11:157–202.]
- Kuroda, S.-Y. 1988. Whether we agree or not: A comparative syntax of English and Japanese. *Lingvisticae Investigationes* 12:1–47.
- Larson, Richard. 1988. On the double object construction. *Linguistic Inquiry* 19:335–392.
- Mahajan, Anoop. 1990. The A/A-bar distinction and movement theory. Doctoral dissertation, MIT, Cambridge, Mass.
- Miyagawa, Shigeru. 1986. Syntactic movement, semantic roles, and predication. Ms., Ohio State University, Columbus. Paper presented at the Japanese Syntax Workshop, Center for the Study of Language and Information, Stanford University, March 1986. [Appeared as Miyagawa 1988.]

- Miyagawa, Shigeru. 1988. Predication and numeral quantifier. In *Papers from the Second International Workshop on Japanese Syntax*, 157–192. Stanford, Calif.: CSLI Publications. [Distributed by Cambridge University Press.]
- Miyagawa, Shigeru. 1989. *Structure and Case marking in Japanese: Syntax and semantics* 22. San Diego, Calif.: Academic Press.
- Miyagawa, Shigeru. 1990. Functional category and case realization. Ms., Ohio State University, Columbus.
- Miyagawa, Shigeru. 1993a. Case, agreement, and *ga/no* conversion in Japanese. In *Proceedings of the Third Southern California Japanese/Korean Linguistics Conference*, 221–235. Stanford, Calif.: CSLI Publications. [Distributed by Cambridge University Press.]
- Miyagawa, Shigeru. 1993b. LF Case-checking and Minimal Link Condition. In *MIT working papers in linguistics 19: Papers on Case and agreement II*, 213–254. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Miyagawa, Shigeru. 1994. Scrambling as an obligatory movement. In *Proceedings of the Nanzan University International Symposium on Japanese Language Education and Japanese Language Studies*, 81–92. Nanzan University, Nagoya.
- Murasugi, Keiko, and Mamoru Saito. 1994. Adjunction and cyclicity. In *Proceedings of the Thirteenth West Coast Conference on Formal Linguistics*, 302–317. Stanford, Calif.: CSLI Publications. [Distributed by Cambridge University Press.]
- Nakai, Satoru. 1980. A reconsideration of *ga-no* conversion in Japanese. *Papers in Linguistics* 13:279–320.
- Nemoto, Naoko. 1993. Chains and Case positions: A study from scrambling in Japanese. Doctoral dissertation, University of Connecticut, Storrs.
- Rizzi, Luigi. 1986. On chain formation. In *Syntax and semantics 19: The syntax of pronominal clitics*, ed. Hagit Borer. New York: Academic Press.
- Roberts, Ian. 1987. *The representation of implicit and dethematized subjects*. Dordrecht: Foris.
- Saito, Mamoru. 1982. Case marking in Japanese: A preliminary study. Ms., MIT, Cambridge, Mass.
- Saito, Mamoru. 1985. Some asymmetries in Japanese and their theoretical implications. Doctoral dissertation, MIT, Cambridge, Mass.
- Saito, Mamoru. 1989. Scrambling as semantically vacuous A'-movement. In *Alternative conceptions of phrase structure*, ed. Mark Baltin and Anthony Kroch, 182–200. Chicago: University of Chicago Press.
- Saito, Mamoru. 1992. Long distance scrambling in Japanese. *Journal of East Asian Linguistics* 1:69–118.
- Saito, Mamoru. 1994. Improper adjunction. In *MIT working papers in linguistics 24: Formal approaches to Japanese linguistics I*, 263–294. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Saito, Mamoru, and Hajime Hoji. 1983. Weak crossover and Move α in Japanese. *Natural Language & Linguistic Theory* 1:245–259.
- Tada, Hiroaki. 1989. Scramblings. Ms., MIT, Cambridge, Mass. [Presented at the Workshop on Universal Grammar and Japanese Syntax, Ohio State University, April 1990.]
- Tada, Hiroaki. 1993. A/A' partition in derivation. Doctoral dissertation, MIT, Cambridge, Mass.
- Takezawa, Koichi. 1987. A configurational approach to Case marking in Japanese. Doctoral dissertation, University of Washington, Seattle.
- Toribio, Almeida Jacqueline. 1990. Specifier-head agreement in Japanese. In *Proceedings of the Ninth West Coast Conference on Formal Linguistics*, 535–548. Stanford, Calif.: CSLI Publications. [Distributed by Cambridge University Press.]
- Ueda, Masanobu. 1986. On quantifier float in Japanese. In *University of Massachusetts occasional papers in linguistics 11: Oriental linguistics*, 263–310. GLSA, University of Massachusetts, Amherst.
- Ura, Hiroyuki. 1994. Varieties of raising and the feature-based bare phrase structure theory. MIT Occasional Papers in Linguistics 7. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.

- Watanabe, Akira. 1992. Subjacency and S-Structure movement of *wh*-in-situ. *Journal of East Asian Linguistics* 1:255–291.
- Watanabe, Akira. 1994. A crosslinguistic perspective on Japanese nominative-genitive conversion and its implications for Japanese syntax. In *Current topics in English and Japanese*, ed. Masaru Nakamura, 341–369. Tokyo: Hituzi Syobo.
- Watanabe, Akira. 1995. Nominative-genitive conversion and Agr in Japanese: A crosslinguistic perspective. Ms., Kanda University of International Studies, Chiba.
- Webelhuth, Gert. 1989. Syntactic saturation phenomena and the modern Germanic languages. Doctoral dissertation, University of Massachusetts, Amherst.

Department of Linguistics and Philosophy
20D-213
MIT
Cambridge, Massachusetts 02139
miyagawa@mit.edu