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WORD ORDER RESTRICTIONS AND NONCONFIGURATIONALITY

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0. Introduction

In the late 1970's, Ken Hale (1980) proposed the configurationality parameter based in part on observations such as (1).

(1) Some languages have a rigid word order, while others have a flexible word order.

This led Hale and others to suggest the configurationality parameter, which associated a flat, non-configurational structure to a language such as Japanese that has flexible word order. However, in the early 1980's, important works such Saito and Hoji (1983) showed convincingly that the Japanese phrase structure is configurational. By using what are now familiar arguments such as those based on Weak Crossover, Condition C and quantifier scope, they showed that the empirical evidence all point to a hierarchical structure. I believe that this important insight addressed two related issues, as indicated in (2).

(2) Analysis: Japanese phrase structure is hierarchical

Theoretical Intuition: Human languages should not vary at such a fundamental level (as structural relationship of arguments to their heads).

By demonstrating that Japanese -- and by implication other so-called non-configurational languages -- is identical in its base structure to the configurational languages, Saito /Hoji and others cleared the way for a unifying view of human language within the context of UG.

Having successfully argued against the configurationality parameter, Saito (1985, 1992) proposed the rule of scrambling to attempt to account for the apparent parametric difference observed in (1). This is a strictly optional rule that adjoins a phrase to a variety of XPs such as IP and VP (e.g., Fukui 1993; Hoji 1985; Saito 1985, 1992; Tada 1989, 1993; Takano 1996). Although this rule functions to achieve the word-order flexibility noted in (1) without resorting to the non-configurational structure, we must ask the question: is the rule of scrambling consistent with what we know about universal grammar and movement? The problem with the rule of scrambling as formulated is that it is difficult to constrain. As listed in (3), cross-linguistically three types of movement have been postulated.

(3) A-movement, A'-movement, head-movement -- all must be motivated

A property common to all of these movements is that they are motivated, by Case, Wh-scope taking, and so forth. In contrast, by definition, scrambling as commonly formulated does not properly fall into any of these categories of motivated rules because it is cast as a strictly optional rule of movement.

Contrary to the standard "scrambling" analysis, I will assume that all instances of movement within the core grammar must be motivated (Chomsky 1993, 1995; Miyagawa 1994, in press). As stated below, this motivation takes a particular form: the feature that drives an XP movement is associated with a functional head, such as Infl, C.

- (4) XP movement must be licensed by a feature of a functional head. Consequently, VP-adjunction is not a possible landing site for movement. By elimination, only IP-adjunction site is legitimate for “scrambling.” (cf. Koizumi 1995; Ueda 1993; Miyagawa, 1990, 1994 in press)

In Miyagawa (in press) it is argued that IP-adjunction is for Case (A-movement) or topic-focus (A'-movement).

I will in particular focus on the VP-internal word-order permutations. I will show that this permutation arises from base-generation, not scrambling. This resurrects Hale's (1980) notion that the different word orders are all base generated. What I will propose is that the VP-internal word-order options are of the “Hale” type, because VP-adjunction is not allowed. On the other hand, the word-order permutation that places a VP-internal material, such as the direct object, to the left of the subject, is movement, as argued by Saito (1985, 1992) and others. That this movement is restricted to the IP-adjunction site, and not also to the VP-adjunction site, is indication that this movement is licensed by the feature of the functional head Infl. This, in turn, suggests that this movement is driven, not optional.

1. Double-object Construction

As shown in (5), the internal arguments of a ditransitive verb may freely alternate: the theme accusative phrase may occur after or before the goal dative phrase.

- (5) a. John-ga Mary-ni pizza-o ageta.
 John-NOM Mary-DAT pizza-ACC gave
 ‘John gave Mary pizza.’

Japanese observes this Condition.

- (7) ?* [John-to Mary]-o_i otagai_i-ga t_i mita.
[John-and Mary]-ACC_i each other_i-NOM t_i saw
'John and Mary, each other saw.'

The object, 'John and Mary,' has moved to the head of the sentence, where it is presumably IP-adjoined. 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.

Now, if the VP-adjunction scrambling is the correct analysis for the word-order permutation in the double-object construction, we would expect to find the same Chain Condition violation.

However, as shown in (8), the expected violation does not arise.

- (8)(?) 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.'

The antecedent, "Hanako and Mary," has accusative case marking and occurs to the left of the dative goal phrase "each other." This is precisely the surface order that the scrambling analysis predicts to have been derived by the VP-adjunction scrambling. However, the fact that this example fails to violate the Chain Condition suggests that there is no trace, hence no movement has taken place. Thus, both word orders, dative-accusative and accusative-dative, are best viewed as being base-generated.

Additional evidence comes from the direct passive. As shown in (9), it is possible to passivize the

theme object of a ditransitive verb.

(9) John-ga Mary-ni (yotte) Hanako-ni syookais-are-ta.

John-NOM Mary-by Hanako-DAT introduce-PASS-PAST

‘John was introduced to Hanako by Mary.’

As we see in (10), Chain Condition violation fails to occur, suggesting that the base-generated position of the passivized theme phrase may be to the left of and above the dative goal phrase.

(10) [John-to Bill]_i-ga Mary-ni (yotte) t_i otagai_i-ni t_i syookais-are-ta.

[John-and Bill]_i-NOM Mary-by t_i each other_i-DAT t_i introduce-PASS-PAST

yes

no

‘John and Bill were introduced to each other by Mary.’

In contrast, if we passivize the object of a transitive verb, Chain Condition violation clearly shows up, as noted in Koizumi (1995).

(11) ?*[John-to Bill]_i-ga otagai_i-ni t_i ker-are-ta.

[John-and Bill]_i-NOM each other_i-by t_i kick-PASS-PAST

‘John and Bill were kicked by each other.’

The contrast between (10) and (11) provides further evidence that the direct passive in Japanese involves movement, as argued, for example, by Miyagawa (1986, 1989), Saito (1982), and Ueda (1986).

1.1.2. Are the two word orders, dative-accusative and accusative-dative, equivalent?

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

A “floated” 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, as in (12)a, it is fine to float the numeral quantifier construed with the dative phrase, but if the dative phrase follows the accusative phrase, as in (12)b, the floated 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 in which the sentence is fine, as I will show later.

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

We can capture this difference if we analyze the dative in (a) as case marking and the dative in (b) as postposition, as schematized below.

(13) a. ..._{[DP [NP...] ni]} _{[DP [NP...] o]} ni: Reflection of Case Marker

b. ..._{[DP [NP...] o]} _{[PP [DP...] ni]} ni: Postposition

This is further evidence that both word orders are base generated.

2. New Evidence and Further Analysis

What we have seen based on Chain Condition indicates that the double-object construction has rigid word order, simply as a consequence that VP-adjunction scrambling is prohibited. The two word orders, dative-accusative and accusative-dative, do not freely alternate.

Sadakane and Koizumi (1995) look extensively at the occurrence of the particle *ni*, and conclude that of the twenty categories of *ni* in their data, only two qualify as case markers, the rest being postpositions. As indicated in (14), the two instances of case-marker *ni* are the goal indirect object in a double object construction, which we saw earlier, and change of position intransitive verb.

(14) Case markers (Sadakane and Koizumi 1995)

(a) Goal indirect object (*ageru* ‘give’, *siraseru* ‘report’, etc.)

Emi-wa tomodati-ni san-nin bara-no hanataba-o ageta.

Emi-TOP friends-DAT3-CL rose-GEN bouquet-ACC gave

‘Emi gave a bouquet of roses to three of her friends.’

(b) Change of position with an intransitive verb (*noru* ‘ride’, *kaeru* ‘change’, etc.)

Kanta-wa yuuenti-de uma-ni ni-too notta.

Kanta-TOP amusement park-at horse-DAT 2-CL rode

‘Kanta rode three horses at the amusement park.’

As shown in these examples, one operational test for case-markerhood is whether a floated numeral quantifier may be construed with the associated phrase (Miyagawa 1989). According to Sadakane and Koizumi, these, but not other instances of *ni*, pass this operational test.

These two instances of *ni* are the same in allowing a floated numeral quantifier. However, they differ in an important way. A goal indirect object in the double-object construction can passivized, but the dative phrase of a verb of change of position may not.

(15) a. Boku-no gakusei_i-ga John-ni t_i ii sigoto-o atae-rare-ta.

me-GEN students_i-NOM John-by t_i good job-ACC give-passive-PAST

‘My students were given a good job by John.’

b. ?* Uma_i-ga Kanta-ni t_i nor-are-ta.

horse_i-NOM Kanta-by t_i ride-passive-PAST

‘The horse was ridden by Kanta.’

It is possible to passive the goal phrase and strand a goal-oriented numeral quantifier, indicating it is indeed NP movement that is responsible for moving the goal phrase to the subject position.

- (16) ?Boku-no gakusei_i-ga John-ni t_i futa-ri ii sigoto-o atae-rare-ta.
 me-GEN students_i-NOM John-by t_i 2-CL good job-ACC give-passive-PAST
 ‘Two of my students were given a good job by John.’

We can in fact use this example to again illustrate that there is no VP-adjunction scrambling. As we can see in (17), if the accusative theme object is scrambled to a position that corresponds to the VP-adjunction position, in front of the stranded goal-oriented numeral quantifier, the sentence becomes highly marginal.

- (17) ?* Boku-no gakusei_i-ga John-ni ii sigoto-o_j t_i futa-ri t_j atae-rare-ta.
 me-GEN students_i-NOM John-by good job-ACC_j t_i 2-CL t_j give-passive-PAST
 ‘Two of my students were given a good job by John.’

Let us now look more closely at the double-object construction. In this construction, either the original dative or the accusative phrase may be passivized. As I indicate in (18), on the standard view about passivization and Case Absorption, it is reasonable to assume that what we have are two occurrences of Structural Case.

- (18) Emi-wa tomodati-ni hanataba-o ageta.
 Emi-TOP friends-DAT bouquet of flowers-ACC gave

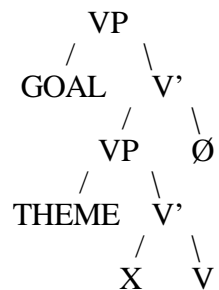
may be passivized may be passivized
 Structural Case Structural Case

‘Emi gave a bouquet of flowers to her friends.’

This is what distinguishes the dative goal phrase from the dative phrase of the verb of change of position we saw earlier in (15)b. For the verb of change of position, the particle *ni* is an inherent Case marker, thus it is able to allow a floated numeral quantifier, but it cannot be absorbed, so that passivization is impossible, as we saw.

The particular positions to which the Structural Cases get assigned depend on the syntactic analysis of double-object construction one adopts. One might adopt the layered-VP analysis as in (19), in which the goal phrase and the theme phrase appear in the Specifier of their respective VPs for example, as in Marantz (1993).

(19)



Recall that Sadakane and Koizumi (1995) partitioned the various occurrences of *ni* into case markers and postpositions. I further divided the case-marking *ni* into Structural Case, which is associated with the indirect object in a double-object construction, and inherent Case, which is associated with the internal argument of verbs of change of position. Let us further consider the status of the Structural-Case *ni*. When we look at the occurrences of Structural Case for internal arguments in Japanese, there is virtually a one-to-one correspondence. Structural Case for an internal argument is Objective Case, and Objective Case is phonetically realized as the particle *o*.

The Structural Case on the goal phrase of the double-object construction would be the one glaring exception to this otherwise straightforward generalization. Let us consider the possibility that even the goal phrase Structural Case is in fact Objective Case, as indicated in (20).

- (20) GOAL THEME V
- Objective Objective
 Case Case

This unifies all Structural Case in Japanese for internal arguments as Objective Case. To account for why the first Objective Case does not arise as *o*, we need only to appeal to Harada's (1973) Double-*o* constraint.

- (21) Double-*o* Constraint (Harada 1973): more than one occurrence of *o* in a simplex clause is prohibited.

On this account, *ni* is inserted as a substitute case particle in order to avoid violating the Double-*o* Constraint. This is a strictly surface, and language-specific, constraint.¹ As we saw earlier, if the two phrases are reversed in order, as indicated in (22), the theme argument receives the Objective Case, but the goal phrase is contained in a postpositional phrase.

- (22) THEME GOAL V
- Objective Postposition
 Case *ni* 'to'

This is not a matter of word-order flexibility. Word order is rigid, as indicated by the fact that a

¹I thank David Pesetsky for first suggesting this line of analysis based on the Double-*o* Constraint.

change in word order fundamentally alters the nature of case assignment.

Returning to the double-object construction, what I have suggested is by no means out of step with what has been observed for the double-object construction in other languages. For example, there is at least one difference between Japanese and English double-object construction. It has to do with the nature of Case marking on the theme object. As shown in (23)a, it is possible to absorb the Case in Japanese. The presence of the numeral quantifier associated with the goal phrase ensures that we are dealing with a true double-object construction. On the other hand, as shown in (b), in English, passivizing the theme object leads to marginality.

(23) a. Kunsyoo-ga seihu-ni(yotte) gakusei-ni san-nin zyuyo-sareta.
award-NOM government-by students-DAT 3-CL give-passive-PAST
'Three students were given awards by the government.'

- b. ???An award was given the student.
- c. An award was given to the student
- d. The student was given an award.

Hale and Keyser (1996) suggest that in English, the theme object receives an inherent Case, so that it cannot be absorbed. As shown in (c), it is fine to absorb the the Case assigned to the theme object in the non-dative shifted construction, in which the goal is marked with the preposition *to*. (d) shows that it is possible to absorb the Case assigned to the goal phrase in the double-object construction, just as we saw for the Japanese counterpart. Thus, as indicated in (24), Japanese and English double-object constructions differ in the type of Case assigned to the theme object.

(24)a. Japanese

.....	GOAL	THEME	V
	Objective Case	Objective Case	

b. English

.....	GOAL	THEME	V
	Objective Case	Inherent Case	

This type of cross-linguistic variation is not uncommon. For example, according to Bresnan and Moshi (199) and Marantz (1993), among the Bantu languages, Chaga allows either of the internal arguments in the double-object construction to passive, just as in Japanese, but Chichewa does not allow the theme object to passive, just as in the case of English. For the non-dative shifted construction, which in Japanese has the postposition *ni* on the goal and in English the postposition *to*, the Case array appears to be identical, with Structural Case assigned to the theme object, as was shown above in (22). One striking property of these comparisons between Japanese and English is that the word order is identical: in the double-object construction, it is the goal phrase followed by the theme object. In the non-dative shifted construction, it is the theme object followed by the goal phrase contained in a PP. This may simply be a coincidence, or it may point to an underlying universal word order that is unvarying for this type of construction.

2. Generalization on the Highest Argument

Let us again consider the two possible structures for the goal-theme arguments. The two structures are repeated below.

- (25) a. GOAL THEME V
 Objective Objective
 Case Case
- b. THEME GOAL V
 Objective Postposition
 Case *ni* 'to'

Although the two structures clearly differ, there is a generalization about both, which was pointed out to me by Alec Marantz and given in (26).

(26) Generalization on the Highest Argument

The highest argument in the VP of a double-argument construction must have Structural Case.

In (25), the “highest” argument in the VP is the GOAL phrase in (a) and the THEME phrase in (b), both of which have Structural Case. As it turns out, this Generalization makes a prediction of an existence of yet another structure. Suppose, as given in (27)a, that a base is generated in the goal-theme order, just as in (25)a, except that the goal phrase is contained in a postpositional phrase. At this point, this structure violates the Generalization on the Highest Argument, since the higher argument, the GOAL, is in a PP and fails to receive Structural Case. As a consequence, we predict that NP movement must apply to move the THEME to the highest position, possibly to the Spec of VP, as shown in (b).

- (27) a. ... [_{VP} ...[_{PP} [GOAL] *ni*] THEME V] ...
- b. ... [_{VP} THEME_i ...[_{PP} [GOAL] *ni*] t_i V] ...

This is a forced movement. Presumably, the THEME phrase receives Structural Case at this moved position, which gets phonetically realized as *o*. The Generalization predicts this, but does the structure actually exist? In fact, a number of people have pointed out that it is possible for an object-oriented numeral quantifier to be stranded precisely in the position of the trace in (b). This is given in (28).

- (28) John-ga hon-o_i Hanako-ni t_i ni-satu watasita.
 John-NOM book-ACC_i Hanako-DAT t_i 2-CL gave
 ‘John gave two books to Hanako.’ (Koizumi 1995, Ura 1996)

Our analysis also predicts that in the THEME-GOAL order, there are two structures, one with a trace of the THEME adjacent to the verb, as we just saw, and one without, which is what we saw in the section on Chain Condition. Recall, as shown in (29), that there is no Chain Condition violation in the theme-goal order, which led us to conclude that there is no VP-adjunction scrambling.

- (29) John-ga gakusei-tati-o otagai-ni syookaisita.
 John-NOM students-ACC each other-DAT introduced
 ‘John introduced the students to each other.’

However, as noted in Miyagawa, in press, and shown in (30), if we put a theme-oriented numeral quantifier, we get a Chain Condition violation.

- (30) ?*John-ga gakusei-tati-o_i otagai-ni t_i futa-ri syookaisita.
 John-NOM students-ACC_i each other-DAT t_i 2-CL introduced
 ‘John introduced two students to each other.’

The Generalization on the Highest Argument has provided an unexpected empirical discovery. Of course, we must somehow explain the fact that in (30), the reciprocal within a postpositional phrase is able to c-command the trace, but this is a common phenomenon among PP’s. The important point to stress is that the movement of the THEME is forced for Case reason, by the requirement imposed by the Generalization on the Highest Argument. Finally, in either structure that has the THEME-GOAL order, we predict that floating a goal-oriented numeral quantifier is not possible. We have seen this already.

3. Extraction out of the Double-Object VP

We have looked at constructions where the dative and the accusative phrases permute within the VP. What about those cases in which one of these arguments is extracted completely out of the VP, to the left of the subject? If we extract the direct object in this way, is the dative Case or postposition? Recall that one test for distinguishing between these two is the numeral quantifier. As repeated below, in the accusative-dative order, the dative is a postposition, as indicated by the marginality of the floated quantifier associated with the dative phrase.

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

The question is, what happens if the direct object, *CD-o*, occurs to the left of the verb.

(32) ??? CD-o Mary-ga tomodati-ni futa-ri okutta.
 CD-ACC Mary-NOM friends-DAT 2-CL sent
 ‘Mary sent two friends a CD.’

In Miyagawa (1988, in press), I marked this type of sentence as acceptable (In Miyagawa, in press, I put a question mark in parentheses). However, a number of people have noted that this sentence is just as marginal as (31)b, as I indicate with three question marks. There is, in fact, an independent way to see if this judgment is correct. Recall that it is possible to passivize the dative phrase, and strand its numeral quantifier.

(33) ?Boku-no gakusei_i-ga John-ni t_i futa-ri ii sigoto-o atae-rare-ta.
 me-GEN students_i-NOM John-by t_i 2-CL good job-ACC give-passive-PAST
 ‘Two of my students were given a good job by John.’

This passivization, and the stranded numeral quantifier, indicates that the original position of the subject is a Case position. If we move the direct object to the head of the sentence, it leads to ungrammaticality.

- (34) ?*Ii sigoto-o_i boku-no gakusei_i-ga John-ni t_i futa-ri atae-rare-ta.
 good job-ACC_i me-GEN students_i-NOM John-by t_i 2-CL give-passive-PAST
 ‘Two of my students were given a good job by John.’

This is another indication that moving the direct object across the subject forces the dative position to be a non-Case position.²

What does this set of data tell us about movement of the direct object from a double-object VP to the IP-adjunction site? What we have seen is that the dative is a postposition. The only construction where this is true is if the direct object occurs to the left of the dative PP. In other words, the direct object cannot be extracted when it is to the right of the dative phrase. Rather, the extraction must take place from the position to the left of the dative phrase.

- (35) a. * DO_i SUB-NOM [_{VP} IO-DAT t_i V]
 b. DO_i SUB-NOM [_{VP} t_i GOAL-*NI* V]

This is yet another instance of word-order rigidity. The most natural way to interpret this data is to view the direct object as being attracted to the position, by a feature such as topic-focus. Attraction of this sort is limited to the closest candidate (Chomsky 1995). In the (a) example, which is ungrammatical, the phrase further away has been chosen. If this analysis is correct, this is yet

²If the sentence does not contain a stranded numeral quantifier, it is fine.

- (i) Ii sigoto-o_i boku-no gakusei_i-ga John-ni e_i atae-rare-ta.
 good job-ACC_i me-GEN students_i-NOM John-by e_i give-passive-PAST
 ‘My students were given a good job by John.’

This suggests that the empty category here is not a trace, but possibly a small pro. It need not be a trace because there is no numeral quantifier that would force a trace.

another indication that this “scrambling” movement is feature-driven, not optional.

As a final note, recall that it is possible for the direct object to originate adjacent to the verb, and move to the Spec of the higher VP for Case reason. On this account, the direct object at the head of the sentence may have two traces:

(36) DO_i SUB-NOM [_{VP} t_i GOAL-NI t_i V]

The first chain ($[t_i \dots t_i]$) is an A-chain, while the second may be A'- or A-chain.

Takano (1996), who adopts a “scrambling” analysis to word-order permutation, notes that A-movement of a phrase containing a pronoun across its antecedent leads to marginality (cf. also Hoji 1985).

(37) ? Mary-ga [soitu₁-no sensei]_j-o [subete-no gakusei]_i-ni t_j
Mary-NOM [he₁-GEN teacher]_j-ACC [all-GEN students]_i-DAT t_j
syookaisita.
introduced
'Mary introduced his teacher to every student.'

On the other hand, if the movement is to the head of the sentence, the interpretation is perfect.

- (38) [soitu_i-no sensei]_j-o [subete-no gakusei]_i-ga Mary-ni t_j
 [he_i-GEN teacher]_j-ACC [all-GEN students]_i-NOM Mary-DAT t_j
 syookaisita.
 introduced
 ‘His teacher, every student introduced to Mary.’

Takano suggests that this difference arises from two different types of Connectivity: A'-movement introduces a strong effect of Connectivity, whereas A-movement introduces a weak effect of Connectivity (Burzio 1986, Kitagawa 1994). The strong connectivity arising from A'-movement allows the construal above, whereas the A-movement in (37) only allows a weak Connectivity, leading to marginality.

Now, note that the following is also marginal.

- (39) ? [soitu_i-no sensei]_j-o Mary-ga (t_j) [subete-no gakusei]_i-ni t_j
 [he_i-GEN teacher]_j-ACC Mary-NOM (t_j) [all-GEN students]_i-DAT t_j
 syookaisita.
 introduced
 ‘Mary introduced his teacher to every student.’

Because this is a movement to the head of the sentence, it should have the A'-movement option, but the fact that it doesn't indicates that there is also A-movement involved. Our analysis would postulate the trace in the position indicated by the parentheses. This is the only position from which the direct object may be extracted out of the VP. In addition, there is an A-chain down to

the original position of the direct object, which is responsible for the weak Connectivity effect.

4. Causative Construction

I suggested that the double-object construction in Japanese involves two instances of Objective Case. The reasons why only one gets realized as *o* is due to the Double-*o* constraint. The Double-*o* constraint was originally formulated by Harada in his 1973 paper essentially to deal with a fact about case marking in causative construction. As shown in (40), if the verb stem is intransitive, the phrase corresponding to the embedded subject may be marked with the dative *ni* or the accusative *o*. With *ni*, there is a sense that Taro was allowed to go -- this interpretation is what is sometimes referred to as “let” causative. With the accusative *o*, there is a sense that Taro was made to go, hence the name “make” causative.

- (40) Hanako-ga Taro-ni/-o ik-ase-ta.
Hanako-NOM Taro-DAT/-ACC go-cause-PAST
'Hanako let/made Taro go.'

However, as shown in (41), if the causative verb contains a transitive verb stem, the phrase corresponding to the embedded subject may only be marked by the dative *ni*, due to the Double-*o* constraint.

- (41) Hanako-ga Taro-ni/*-o hon-o yom-ase-ta.
Hanako-NOM Taro-DAT/*-ACC book-ACC read-cause-PAST
'Hanako let/made Taro read a book.'

Although the case marking fails to alternate between the dative and the accusative, being only

limited to the dative case marker, this sentence is ambiguous between the let- and make-causatives.

Let us apply the analysis we developed for the double-object construction to the causative construction. First of, note, as shown in (42)a, that a floated numeral quantifier is unacceptable with the intransitive-verb stem let-causative. The floated numeral quantifier is fine in the make-causative, as shown in (b).

(42) a. ?* Hanako-ga gakusei-ni san-nin kaer-ase-ta.
Hanako-NOM students-DAT 3-CL return home-cause-PAST
'Hanako let three students go home.' (cf. Sadakane and Koizumi 1995)

a. Hanako-ga gakusei-o san-nin kaer-ase-ta.
Hanako-NOM students-ACC 3-CL return home-cause-PAST
'Hanako made three students go home.'

The ungrammaticality in (a) is expected since this dative marking alternates with the accusative case, as shown (b), so this dative marker is not the phantom marking that functions to avoid violation of the Double-*o* constraint. In contrast, as we can see in (43), it is possible for a floated numeral quantifier to be associated with the dative phrase in a transitive-stem causative construction.

(43) Hanako-ga kodomo-ni san-nin hon-o yom-ase-ta.
Hanako-NOM kids-DAT 3-CL book-ACC read-cause-PAST
'Hanako made three kids read a book.' (Hurley 1995)

As Hurley 1995 notes, this construal is possible so long as we interpret the example as a make-

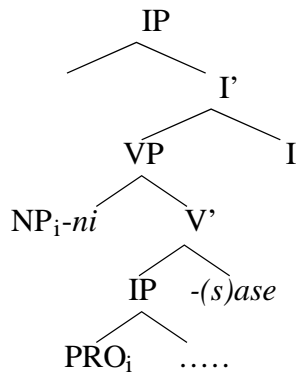
causative. And, as shown in (44), it is possible to passivize the causee, again, as long as this is a make-causative, as originally noted by Kuroda 1965. This points to the existence of Structural Case.

- (44) Kodomo_i-ga Hanako-ni t_i san-nin hon-o yom-ase-rare-ta.
kids_i-NOM Hanako-by t_i 3-CL book-ACC read-cause-passive-PAST
'Three kids were made to read a book.'

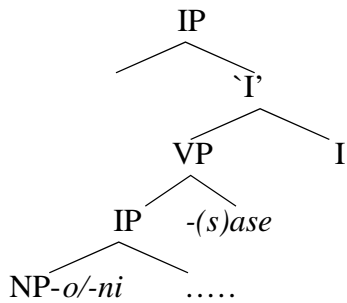
What we have seen is consistent with the analysis of the Japanese causative by Hurley 1995 and Terada 1990. According to them, the let-causative involves a control structure, and the dative marking is a postposition that marks the controller in the matrix clause, as shown in (45)a. On the other hand, in the make-causative, the embedded subject -- the causee -- is directly marked, by *o* if the stem is intransitive and by *ni* if the stem is transitive. This is shown in (45)b.

(45) Hurley 1995, Terada 1990

a. let causative



b. make causative



According to the analysis we are pursuing, for the make-causative, Objective Case is assigned to the causee regardless of the transitivity of the verb stem. *Ni* shows up to keep this Objective Case from phonetically realizing as the accusative *o* if there is another accusative case marking in the structure. This, of course, assumes that the verb stem and the causative verb form a verbal complex at some relevant level of representation. What we have for the make-causative with a transitive stem is indicated in (46).

(46) make causative

.....CAUSEE THEME $V_{tr}-(s)ase$

Objective Objective

Case Case

If we look only at the linear order, the make-causative is identical to the double-object construction. However, there is one crucial difference. Unlike the double-object construction, in the make-causative, there is an IP node, a legitimate site for adjunction. In (47)a, which is a causee-passivized sentence, the theme object has been moved to the left of the original position of the causee. It is fine. Compare this to the comparable double-object construction, in (b). The sentence is quite marginal, as we've already noted earlier. As we can see in (47)a and b, this word order is just as rigid in the causative construction as we saw for the double-object construction. In both of these examples, the theme object occurs to the left of the causee, and the examples are unacceptable. As we can see in (c), it is fine for the theme object to occur in the IP-adjoined position, which is precisely what we saw for the double-object construction as well. This suggests that the word order in (46) above may only be altered with a legitimate movement. IP-adjunction movement is clearly legitimate, but VP-adjunction is not, a point I'll return to at the end of the presentation.

(47) a. Kodomo_i-ga Hanako-ni [_{IP} hon-o_j [_{IP} t_i san-nin t_j yom-ase-rare-ta]].
 kids_i-NOM Hanako-by [_{IP} book-ACC_j [_{IP} t_i 3-CL t_j read-cause-passive-PAST]]
 ‘Three kids were made to read a book.’

b.?* Gakusei_i-ga John-ni [_{VP} ii sigoto-o_j [_{VP} t_i futa-ri t_j atae-rare-ta]].
 students_i-NOM John-by [_{VP} good job-ACC_j [_{VP} t_i 2-CL t_j give-passive]]
 ‘Two students were given a good job by John.’

Likewise, in (48), the (a) example is of the make-causative, with the theme object having been moved, presumably to the embedded IP-adjunction position. The (b) example repeats the example from earlier that shows that in the double-object construction, this permutation of the dative and the accusative phrases is not possible if both have Objective Case.

(48) a. Hanako-ga [_{IP} hon-o_j [_{IP} kodomo-ni san-nin t_j yom-ase-ta]].
 Hanako-NOM [_{IP} book-ACC_j [_{IP} kids-DAT 3-CL t_j read-cause-PAST]]
 ‘Hanako made three kids read a book.’

b. ??? Mary-ga [_{VP} CD-o [_{VP} tomodati-ni futa-ri okut]]-ta.
 Mary-NOM [_{VP} CD-ACC [_{VP} friends-DAT 2-CL send]]-PAST
 ‘Mary sent two friends a CD.’

This contrast between (a) and (b) examples in (47) and (48) provides further evidence that while the IP node is a legitimate node for adjunction, the VP node is not.

(49) ?? [_{IP} John-ga [_{VP} sono hon-o_i [_{VP} Bill-ni [_{CP} Mary-ga t_i motteiru to]
 [_{IP} John-NOM [_{VP} that book-ACC_i [_{VP} Bill-to [_{CP} Mary-NOM t_i have that]
 itta]]]
 said]]]

‘John said to Bill that Mary has that book.’

However, speakers split on how bad this sentence is. In terms of processing, there is a burden on the parser at the fourth phrase, *Mary-ga*, since no verb has appeared at this point, and clearly the first four phrases don’t belong to the same clause. Setting this aside, I believe that the sentence improves somewhat if the matrix subject is stressed, as indicated in ?.

5. Conclusion

In this article I argued that the word-order permutation we see in Japanese is not a result of the application of optional scrambling. I argued that there is no such an operation, but rather that all movement must be motivated by features on functional heads. Accordingly, there is no VP-adjunction movement, but, in the case of “scrambling,” only IP-adjunction movement, either for Case (A-movement) or topic-focus (A’-movement). The prohibition against VP-adjunction movement straightforwardly accounts for the fact that long-distance VP-adjunction is not possible (Saito 1994).

(50) ?? [_{IP} John-ga sono hon-o_i [_{VP} Bill-ni [_{CP} Mary-ga t_i motteiru to]
 [_{IP} John-NOM that book-ACC_i [_{VP} Bill-to [_{CP} Mary-NOM t_i have that]
 itta]]]
 said]]]
 ‘John said to Bill that Mary has that book.’

This prohibition against VP-adjunction movement forces us to come up with an analysis of the VP-internal word-order permutation other than by application of scrambling. For this, I argued that Hale (1980) was essentially correct in postulating different underlying structures for the different word orders.

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