Antisymmetry and the Licensing of Negative Polarity Items in Japanese

—— A Preliminary Study * ——

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反対称性と日本語の否定極性表現について

—— 予備的考察 ——

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1. Introduction

Languages differ. English, for example, has Subject-Verb-Object (SVO) as a basic order, whereas Japanese has a basic SOV order. Nonetheless children can relatively easily and quickly acquire whichever language they face. Questions like (1) naturally occur:

(1) Why can children acquire the basic word order of their first language relatively easily and quickly despite the diversity of language?

Kayne (1994) proposes that word order of human language is regulated by an axiom called the *Linear Correspondence Axiom* (LCA).[1] It limits possible word order in a strict way: the Specifier-Head-Complement order, or SVO, is exclusively allowed as phrase structure. If this theory is proven to be valid, an answer to (1) can be automatically given as its consequence.

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While I was writing the present paper, my first baby was born. I would like to dedicate this paper to my son, Shunsuke.

[1]The LCA is defined as in (i):

(i) Linear Correspondence Axiom (LCA)
d(A) is a linear ordering of T.

d(A) is the set of terminals that A dominates. A is the maximal set, which contains all pairs of nonterminals such that the first asymmetrically c-commands the second. And T is the set of terminals. (i) means that asymmetric c-command invariably maps into linear order: a given hierarchical representation must be associated with one linear order. See Kayne (1994) for further discussion.

Under Kayne's theory, while the surface structure of SVO languages is almost equivalent to their underlying structure, that of SOV languages such as Japanese is very different from their underlying structure. In order to decide whether or not the theory in question is valid, the study of the syntactic structures of SOV languages is needed.

Given Kayne's LCA, there have been at least two ways of derivations of the SOV order proposed in the literature. One involves object-shift movement. The other involves remnant movement. The present paper argues that the latter analysis but not the former accounts for interesting phenomena in Japanese and shows that Kayne's LCA equipped with remnant movement gives some interesting implications to Japanese syntax.

The paper is organized as follows. Section 2 introduces two ways of deriving SOV order under Kayne's theory and argues that the remnant movement analysis is superior to the object-shift one. Section 3 shows that the proposed analysis can account for not only long-distance scrambling of NPIs in Japanese but also some peculiar properties of long-distance scrambling itself in this language. Section 4 concludes the paper.

2. Two Ways of Deriving SOV Order

Kayne's (1994) LCA allows at least the following two ways of deriving SOV order. One involves the object-shift type of movement. As Kayne (1994) himself suggests, OV languages are derived by leftward movement of the object to the specifier position of a functional projection (FP) above VP[2].

(2) $[_{TP}$ SUB(ject) $[_{FP}$ OBJ(ect) $[_{VP}$ t_{SUB} V t_{OBJ}]]]

For ease of reference, this analysis will be called *The Object Shift Analysis*, or the OS analysis, for short.

The other analysis involves remnant movement, which Honda (1997, 1999, 2002a, b), Haegeman (2000), Pearson (2000), among others convincingly argue for. It suggests that remnant VP, out of which the verb has already moved to the higher head T, moves to the Spec(ifier) of TP.

(3) $[_{TP}$ $[_{VP}$ SUB t_V OBJ] $[_{T'}$ V-T t_{VP}]]]

Let us call this analysis *The Remnant Movement Analysis*, or the RM analysis.

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[2]For the sake of convenience, this paper assumes that verb phrases have the basic architecture shown in (i), instead of (ii):

(i) $[_{VP}$ External argument $[_{V'}$ V Internal argument]]

(ii) $[_{vP}$ External argument $[_{v'}$ v $[_{VP}$ V Internal argument]]] (cf. Chomsky 1995)

Whether we regard (i) or (ii) as an internal structure of verb phrases does not matter in the present discussion.

The present paper will claim that the RM analysis is more plausible than the OS one at least in Japanese, which is one of the typical "OV-languages".[3] In order to prove this to be true, the remainder of this section considers some basic properties of Negative Polarity Items (NPIs) in Japanese and shows that only the RM analysis can give some appropriate explanation to them.

2.1 Some Properties of NPIs

Before we discuss Japanese NPIs in detail, let us consider English ones first. As is well known, while NPIs in English can appear in the object position (4b), they are usually disallowed in the subject position (4a) or the topicalized position (4c). (4a), (4b) and (4c) have syntactic structures in (4'a), (4'b) and (4'c), respectively.

(4) a.*Anyone did not eat apples. **[Subject NPI]**

b. John did not eat anything. **[Object NPI]**

c.*Anything, John did not eat. **[Topicalized object NPI]**

(4') a. [$_{TP}$ ***Anyone*** [did **not** eat apples]]

b. John did **not** [$_{VP}$ eat ***anything***]

c. [$_{TP}$ ***Anything*** [$_{TP}$ John did **not** eat]]

A condition like (5) appears to account for the above data correctly.

(5) An NPI is licensed, iff it is c-commanded by Neg in the surface structure.

In (4'b) a negative *not* c-commands an NPI *anything*, which meets the condition (5), so that it is grammatical. In (4'a) and (4'c), on the other hand, the situation is reverse, that is, the NPIs *anyone/anything* c-command *not*. This is why they are ungrammatical.

Now let us turn to the Japanese NPIs. It is well known that Japanese NPIs do not show the so-called subject-object asymmetry, which English counterparts have. [4,5]

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[3]Kayne (2003, note 8) suggests:

(i) The question whether the object in OV sentences moves out of complement position by itself or is carried along as part of a larger phrase arises in all the cases discussed.

The present paper argues, on the basis of the data on NPIs in Japanese, that the structure of Japanese, an SOV language, involves the latter derivation.

[4]The abbreviations used in the gloss are as follows: TOP: topic marker NOM: nominative marker, ACC: Accusative marker, DAT: dative marker, NEG: negation marker, PAST: past tense, PRES: present tense, COMP: complementizer, COP: copula.

[5]Following Nishiyama (1999), we assume that *nakatta* in Japanese consists of 4 morphemes: *na* 'not', *k* the predicative copula, *ar* the dummy copula and *ta* the past tense. As a matter of convenience, however, we put these two kinds of copulas together and gloss it as COP.

(6) a. dare-mo ringo-o tabe-na-kat-ta (koto)[6] **[Subject NPI]**
anyone apples-ACC eat-NEG-COP-PAST fact
'*Anyone didn't eat apples. (=4a)'

b. John-ga nani-mo tabe-na-kat-ta (koto) **[Object NPI]**
John-NOM anything eat-NEG-COP-PAST fact
'John didn't eat anything. (=4b)'

2.2 The Object Shift Analysis

Let us consider whether the OS analysis can account for examples involving object NPIs such as (6b). Two positions seem to be available for Neg. Suppose first that Neg occurs in the structure above VP and below FP, and the NPI moves only by itself out of VP to the Spec of FP, as shown in (7):

(7) $[_{FP}$ ***nani-mo*** $[_{NegP}$ tabe-***na*** $[_{VP}$ $(t_{John\text{-}ga})$ t_{tabe} $t_{nani\text{-}mo}$]]]
anything eat-NEG

An NPI *nani-mo* 'anything' c-commands Neg *na* 'not', which violates (5). This leads us to a wrong prediction: (6b) is ungrammatical.

Next suppose that Neg occurs in the structure above FP.

(8) $[_{NegP}$ ***na*** $[_{FP}$ ***nani-mo*** $[_{VP}$ $(t_{John\text{-}ga})$ tabe $t_{nani\text{-}mo}$]]]
NEG anything eat

In (8) Neg c-commands *nani-mo*, so that (5) expects the NPI of (8) is properly licensed to be grammatical. One of the drawbacks of this analysis is that the correct linear order cannot be obtained. That is, movement of V *tabe* 'eat' to Neg *na* 'not' results in the wrong order *tabe-na nani-mo* 'eat-not anything'. To order correctly, Neg *na* must move downward, which has been regarded as an undesirable operation under generative grammar. Thus, neither position of Neg provided gives a correct prediction to examples involving object NPIs.

Furthermore, irrespectively of the hierarchical position of Neg, we cannot account for SUB-NPI such as (6a). Assume, following Miyagawa (2001), that T has an EPP-feature, which attracts subject, object or other constituents within VP.

(9) $[_{TP}$ ***SUB-NPI*** $[_{NegP}$ **Neg** $[_{FP}$ OBJ $[_{VP}$ $t_{SUB\text{-}NPI}$ V t_{OBJ}]]]]

As shown in (9), a subject NPI c-commands Neg, which violates the condition (5), so that it cannot be licensed, contrary to fact. Moreover, we expect that OBJ-NPI which undergoes scrambling cannot be licensed under this approach. Consider (10):

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[6]In what follows, we add *koto* 'the fact that' to the end of some example sentences in Japanese, in order to avoid the unnaturalness resulting from the lack of a topic in a matrix sentence. It does not affect the content of this paper, however.

(10) [$_{TP}$ ***OBJ-NPI*** [$_{NegP}$ **Neg** [$_{FP}$ ($t_{OBJ\text{-}NPI}$) [$_{VP}$ SUB V $t_{OBJ\text{-}NPI}$]]]]

In (10), an object NPI c-commands Neg, which violates the condition (5), so that it should not be licensed. This expectation is not borne out as shown in (11):

(11) nani-mo John-ga tabe-na-kat-ta (koto) **[Scrambled object NPI]**
anything John-NOM eat-NEG-COP-PAST fact
'*Anything, John didn't eat.'

To conclude so far, the OS analysis considered in this section is not valid, because the basic data of NPIs in Japanese cannot be accounted for. It seems that two independent factors are involved in the above analysis: (i) the validity of the licensing condition on NPI in (5) and (ii) the derivation of SOV order, which the present paper mainly focuses on.

Let us examine (i) first. Changing the condition (5) into (5') below appears to help the basic data in Japanese to be explained.

(5') An NPI is licensed, iff it is c-commanded by Neg in *the underlying structure.*

Given the VP internal subject hypothesis (cf. Fukui and Speas (1986), Kuroda (1988), Koopman and Sportiche (1991) among others), the underlying structure of (6a) and (6b) has the following schematic structure:

(12) [Neg [$_{VP}$ SUB V OBJ]]

In (12) Neg c-commands both SUB and OBJ, so that they are properly licensed when they involve NPIs. The revised condition (5'), however, gives a wrong prediction to subject-NPI examples in English as in (4a):

(4a) *Anyone did not eat apples.

(4a')[not [$_{VP}$ anyone eat apples]]

Let us suppose that (4a) has (4a') as its underlying structure. In (4a') *not* c-commands *anyone*, which meets the condition (5'), so that the NPI should be properly licensed by Neg. This is not the case, however.

In order to elaborate the condition on NPIs, let us consider other data such as (13):

(13) a. A doctor who knew anything about acupuncture was not available.

b. A solution that is any better, I have not been able to find.

(Linebarger 1980, Hoeksema 2000, cited in Kato 2002)

Interestingly enough, when NPIs are deeply embedded in complex phrases such as relative clauses, they can be properly licensed even in such "disallowed" positions as the subject position or the topicalized position. In order to account for the data in question, Kato (2002) proposes the following conditions:

(14) *Derivational Licensing Condition on NPIs* (slightly modified by KH)

An NPI is licensed, iff it is c-commanded by Neg in the course of the derivation.

(15) *Asymmetric Licensing Condition*[7]

X and Y may not be reversed in derivation with respect to c-command relation, where X is a licenser (negative), Y a licensee (NPI).

Let us illustrate how these conditions work by examining the derivation of (13a). Movement of DP leaves behind its copy indicated by underlines, as shown in (13'c).

(13') a [$_{VP}$ [$_{DP}$ a doctor who knew anything about acupuncture] was available]

b **not** [$_{VP}$ [$_{DP}$ a doctor who knew ***anything*** about acupuncture] was available]

c [$_{TP}$ [$_{DP}$ a doctor who knew ***anything*** about acupuncture] [$_{T'}$ was [**not** [$_{VP}$ [$_{DP}$ a doctor who knew ***anything*** about acupuncture] t_{was} available]]]]

As shown in (13'b) and (13'c), Neg c-commands *anything* and the copy of it, respectively. This satisfies the condition (14). In addition, (13'c) does not change the hierarchical relations between Neg and *anything*, since *anything* does not c-command Neg in (13'c). This derivation meets the condition (15). Since this derivation does not violate either condition, it is grammatical. The same explanation applies to (13b), too.

Next consider ungrammatical examples such as (4a) and (4c) repeated below as (16a, b), respectively.

(16) a. *Anyone did not eat apples.

b. *Anything, John did not eat.

(17) a. **not** [***anyone*** eat apples] (*Not* c-commands *anyone*.)

b. **not** [John eat ***anything***] (*Not* c-commands *anything*.)

(18) a. ***Anyone*** [did **not** *anyone* eat apples] (*Anyone* c-commands *not*.)

b. ***Anything*** [John did **not** eat *anything*] (*Anything* c-commands *not*.)

Neg in (17a) and (17b), which are at some point of the derivation of (16a) and (16b), respectively, c-commands *anyone/anything* and continues to c-command the copy of them in (18a, b), so that the condition (14) is satisfied. Movement of the NPIs in (18a, b), however, yields the c-command reversal between Neg and NPIs, that is, *anyone/anything* c-command Neg, which violates the condition (15). Therefore (16a, b) are ungrammatical.

Since the conditions (14) and (15) can account for a wider range of data in English as shown above, let us assume that they apply to Japanese NPIs as well. Now, consider again an object NPI example in (6b) and its derivation under the OS analysis in (7):

(6b) John-ga nani-mo tabe-na-kat-ta (koto)
John-NOM anything eat-NEG-COP-PAST fact
'John didn't eat anything.'

[7]Kato (2002: 5-6) suggests that condition (15) can be deduced from some more elementary principles or operations such as ones in the interpretation system.

(7) [$_{FP}$ ***nani-mo*** [$_{NegP}$ tabe-**na** [$_{VP}$ (John-ga) tabe *nani-mo*]]]
anything eat-NEG

In (7), the copy of the object NPI *nani-mo* 'anything' is c-commanded by Neg *na*, which satisfies the condition (14). Movement of *nani-mo*, however, changes its hierarchical relations with Neg, violating the condition (15). (7) is, therefore, expected to be ungrammatical: a wrong prediction again.

In the same way, the OS analysis gives another wrong prediction to subject NPIs *dare-mo* 'anyone' in (6a), which involves the following derivation.

(6a) dare-mo ringo-o tabe-na-kat-ta (koto)
anyone apples-ACC eat-NEG-COP-PAST fact
'*Anyone didn't eat apples.'

(19) a. [$_{NegP}$ **na** [$_{VP}$ ***dare-mo*** tabe ringo-o]]
NEG SUB-NPI eat apples-ACC

b. [$_{TP}$ ***dare-mo*** [ringo-o [$_{NegP}$ **na** [*daremo* tabe $t_{ringo-o}$]]]]
SUB-NPI apples-ACC NEG eat

In (19a) the subject NPI is c-commanded by Neg. Movement of the subject NPI in (19b), however, yields the c-command reversal between Neg and NPI, violating (15). This leads us to a wrong prediction just as the cases involving the object NPI.

2.3 The Remnant Movement Analysis

If movement of the subject NPI in (6a) and the object NPI in (6b) does not change their underlying hierarchical (c-command) relations with Neg, the condition (15) can be satisfied, which leads to a correct predication.[8] A plausible explanation with these examples can be provided by the Remnant Movement (RM) analysis, which is independently proposed in Honda (1997, 1999, 2002a, b) (see also Haegeman (2000), Pearson (2000), among others), coupled with the analysis of NegP in Japanese proposed by Whitman (2002). Let us consider again the derivation of (6b) repeated below.

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[8]Kato (2002) argues that failure of c-commanding Neg by NPIs in Japanese is due to the internal structure of its NPIs. According to Kato, while NPIs in English like *anyone* are single lexical items, those in Japanese like *dare-mo* 'anyone' have internal branching structures as in (i). However, it seems natural that the structure of English NPIs and that of Japanese NPIs are similar to each other.

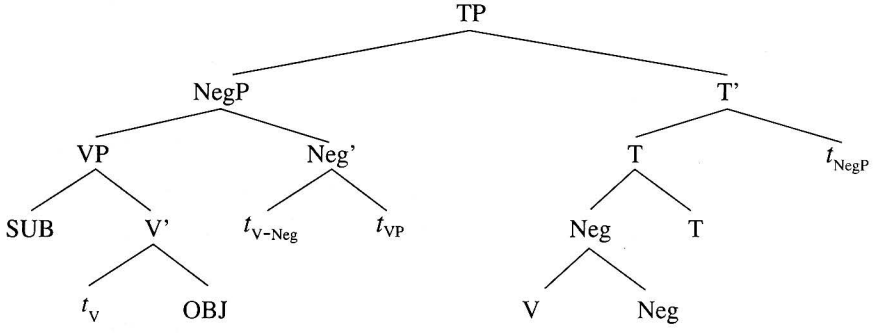
(i) [[dare] mo] (ii) [any [one]]

Given Abney's (1987) DP hypothesis, *mo* in (i) and *any* in (ii) are both considered to be the head of DP, which specifies properties of the entire phrase. Therefore, there does not seem to be a salient difference between the two languages, with respect to their internal structure of NPIs .

(6b) John-ga nani-mo tabe-na-kat-ta (koto)
John-NOM anything eat-NEG-COP-PAST fact
'John didn't eat anything.'

(20) a. [$_{VP}$ John-ga [$_{V'}$ tabe ***nani-mo***]]
↓ *Neg* na *merges with VP*
b. [$_{NegP}$ **na** [$_{VP}$ John-ga [$_{V'}$ tabe ***nani-mo***]]]
↓ *V* tabe *moves to Neg*
c. [$_{NegP}$ tabe-**na** [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]]]
↓ *VP moves to the Spec of NegP*
d. [$_{NegP}$ [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]][$_{Neg'}$ tabe-**na** [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]]]]
↓ *T* ta *merges with NegP*
e. [$_{TP}$ ta [$_{NegP}$ [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]][$_{Neg'}$ tabe-**na** t_{VP}]]]
↓ *The V-Neg complex head moves to T*
f. [$_{TP}$ tabe-**na**(-kat)-ta [$_{NegP}$ [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]][$_{Neg'}$ $t_{tabe\text{-}na}$ t_{VP}]]][9]
↓ *NegP moves to the Spec of TP*
g. [$_{TP}$ [$_{NegP}$ [$_{VP}$ John-ga [$_{V'}$ t_{tabe} ***nani-mo***]][$_{Neg'}$ $t_{tabe\text{-}nak}$ t_{VP}]][$_{T'}$ tabe-**na**(-kat)-atta t_{NegP}]]

(21)(cf. 20g)



An NPI *nani-mo* 'anything' is c-commanded by Neg in (20b). After the movement of the NPI as part of a larger phrase, Neg continues to c-command the copy of it as indicated in (20d), so that the condition (14) is satisfied. In addition, there is no reversal of the c-command relations between Neg and *nani-mo*, since the NPI cannot c-command Neg throughout the derivation. Hence no violation of (15). Without any violation, (6b) is correctly predicted as grammatical.

The same explanation applies to the subject NPIs in (6a) as well. Note that the structure (21) shows that the subject and the object in Japanese have the same property in that they are

[9](*-kat*) is a morphologically realized copula, which is put between *na*, Neg and *ta*, the past tense. The parentheses mean that it is irrelevant here and does not affect anything in the present discussions. See also footnote 5.

both within a VP and thus do not c-command outside the VP. More specifically, the subject NPI does not c-command Neg, so that there occurs no reversal of the c-command relations between Neg and NPI. It is very important to note that the cases where the subject and the object NPIs in Japanese are licensed are very much like cases where deeply embedded subject NPIs in English such as (13) are licensed. [10]

3. Some Implications of the Present Analysis

Richard Kayne (personal communication) gave me such a suggestion as (22):

(22) The core idea of the analysis advanced in the previous section looks right. Especially if Japanese allows the equivalent of (23b), which is impossible in English, and if it is argued that that is remnant movement, too.

(23) a. John said that Bill hadn't done anything wrong.

b.*Anything wrong, John said that Bill hadn't done.

Japanese actually allows long-distance scrambling of NPIs, as shown in (24b):

(24) a. John-wa Mary-ga nani-mo tabe-na-i to omotteiru.
John-TOP Mary-NOM anything eat-NEG-PRES COMP think
'(lit.) John thinks that Mary does not eat anything.'

b. nani-mo John-wa Mary-ga tabe-nai to omotteiru.
'(lit.) *Anything, John thinks that Mary does not eat.'

Note first that the OS analysis cannot account for the acceptability of (24b), since the NPI *nani-mo* 'anything' at the scrambled position c-commands Neg, yielding the violation of (15). The RM analysis may, however, pave the way for explanation of scrambling cases like (24b).

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[10]Interestingly the same explanation can apply to the NPI licensing in Thai.

(i) [khaw phuut arai] mai dii
he say ARAI NEG good 'What thing X is it good that he doesn't say X?'

(ii) khaw [$_{VP}$ (*pro*) phuut arai]$_i$ mai dai t_i
he say ARAI NEG can 'He can't say anything.'

(Simson 2001: 101, Examples and glosses are partially modified by KH.)

According to Simpson (2001), NPIs in Thai share their forms with *wh*-question words. The word *arai*, for example, has (at least) dual interpretations: an NPI or a *wh*-question word. As their translations suggest, while *arai* in (i) has a *wh*-question interpretation, that in (ii) is regarded as an NPI. Simpson claims that a crucial difference between them is that movement of the VP past NEG is involved in (ii) but not in (i). If his analysis is on the right track, we can say that the NPI licensing in Thai can be accounted for by the same procedure as that in Japanese as mentioned in the text. In (ii), the VP containing *arai* can be c-commanded by NEG at an earlier stage of the derivation, and then moves to a higher specifier, where *arai* cannot c-command NEG because of the presence of a VP node. This is why (ii) has such an interpretation. In (i), on the other hand, *arai* cannot be regarded as an NPI, since it has never been c-commanded by Neg.

Let us propose that two operations below should be involved during the derivation of (24), which is illustrated in (25):

(25) ***(Remnant) Movement & Copy***

a.[$_{VP}$ Mary-ga t_V nani-mo] [John-wa [[$_{VP}$ Mary-ga t_V nani-mo] tabe-na-i to] omotteiru]

Mary-NOM anything John-TOP Mary-NOM anything eat-NEG-PRES COMP think

Complementary Deletion[11]

b.[$_{VP}$ ~~Mary-ga~~ t_V nani-mo] [John-wa [[$_{VP}$ Mary-ga t_V ~~nani-mo~~] tabe-na-i to] omotteiru]

The derivation of long-distance scrambling proceeds like the following. First, a remnant VP but not a single DP actually moves leaving its copy at the base position as shown in (25a). Second, the operation called *Complementary Deletion* applies in (25b): *Mary-ga* 'Mary-NOM' in the moved VP is deleted and *nani-mo* 'anything' in the copied VP is deleted. In the resultant structure, the NPI cannot c-command Neg, so that there is no reversal of the c-command relations between the NPI and Neg, which satisfies (15). To conclude, the RM analysis of scrambling, with the assumptions above, can account for the grammaticality of (24b).

3.1 Related Phenomena

One may wonder if the proposed structure of scrambling sentences like (25b) gives wrong predictions to other scrambling-related phenomena such as scope-taking or binding phenomena. Interestingly, however, it provides a good explanation to them as well. Let us observe the following sentences.

(26) Dare-mo-ni dare-ka-ga [Mary-ga $t_{dare\text{-}mo\text{-}ni}$ at-ta to] omotteiru.[12]

everyone-DAT someone-NOM Mary-NOM meet-PAST COMP thinks

'(lit.) Everyone, someone thinks that Mary met $t_{everyone}$.' (^{OK}Some>Every; *Every>Some)

(27) *[Mary to Pam]-ni [otagai-no hahaoya]-ga [John-ga t at-ta to] omotteiru.

Mary and Pam-DAT each other-GEN mother-NOM John-NOM meet-PAST COMP think

'Mary and Pam, each other's mothers think that John met.'

(Bošković and Takahashi 1998: 354-355)

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[11] *Complementary Deletion* is an independently motivated operation. Chomsky (1995: 202-204) argues that (i) has an LF structure as in (ii) and that after Complementary Deletion applies to (ii), (iii) results.

(i) (guess)[$_{wh}$ in which house] John lived [$_{wh}$ in which house]

(ii) [which][$_{wh}$ in [t_{which} house]] John lived [which][$_{wh}$ in [t_{which} house]]

(iii) [which x] John lived [$_{wh}$ in [x house]]

Though the operation above is undergone at LF, it does not seem too strange to assume that its application can be extended to the PF side.

[12] In Japanese, *dare-mo* is two-way ambiguous in its interpretation. They can be distinguished with the different pitch-accent patterns. When the first mora *da* is associated with high pitch, *dare-mo* stands for a universal quantifier 'everyone'. On the other hand, when the last two morae *re-mo* have high pitch, *dare-mo* means an NPI 'anyone'. Except for (26) glossed as 'everyone', *dare-mo* plays an NPI role throughout this paper.

According to Bošković and Takahashi (1998), (26) has no scopal ambiguity, that is, the scrambled QP *daremo* 'everyone' cannot take scope over the matrix QP subject *dareka* 'someone'. Given that scope relations depend on c-command relations, the situation where *daremo* 'everyone' c-commands *dareka* 'someone' leads us to the interpretation where *daremo* 'everyone' does take scope over *dareka* 'someone', contrary to fact. With the RM analysis discussed above, on the other hand, the desirable result immediately follows, since *daremo* 'everyone' does NOT c-command *dareka* 'someone'.

The same explanation can also apply to binding phenomena such as (27), where the scrambled DP *Mary and Pam* cannot antecede the anaphor *otagai* 'each other'. If the binding relations also crucially depend on c-command relations and the scrambled DP c-commands the anaphor in (27), then it is wrongly expected to be grammatical. The RM analysis gives a correct prediction to this kind of examples as well: the scrambled DP does NOT c-command the anaphor in (27).

To sum up, long-distance scrambling involves remnant movement of a larger phrase, so that a scrambled QP and DP themselves cannot c-command another QP and an anaphor which follow them, respectively. In passing, the present approach may be much superior to other analyses of scrambling based on A/A' distinction, since it can account for the data without appealing to such a distinction, which is considered to be unnecessary or what to be dispensed with, if possible.

3.2 Motivation for Remnant Movement

Before concluding this paper, we would like to touch upon some questions likely to arise from our proposal, namely:

(28) a. Where does a remnant VP move to?

b. Why does a remnant VP but not a single DP move?

As for (28a), we propose that a remnant VP moves to some focus position. Miyagawa (1997) independently proposes that (long-distance) A'-scrambling is motivated by focus. It might imply that sentences involving scrambling are considered to be natural with respect to their interpretation, only if the focal stress is put on the scrambled DP. Technically speaking, we would like to propose that Foc(ous), the head of the focus projection Foc(ous)P, merges with TP. Then Foc attracts a remnant VP to its Spec. (30a-c) shows the detailed derivation of (29b) from (29a).

(29) a. John-ga [Mary-ga ringo-o tabe-ta to] omotteiru (koto)
John-NOM Mary-NOM apple-ACC eat-PAST COMP think (fact)
'John thinks that Mary ate apples.'

b. ringo-o [John-ga [Mary-ga tabe-ta to] omotteiru] (koto)
'Apples, John thinks that Mary ate.'

(30) a. John-ga $[_{CP}$ $[_{TP}$ $[_{VP}$ Mary-ga t_V ringo-o] tabe-ta] to] omotteiru.

Remnant VP moves to the Spec of FocP, leaving its copy behind.

b. [$_{FocP}$ [$_{VP}$ Mary-ga t_V ringo-o] Foc [$_{TP}$ John-ga [$_{CP}$ [$_{TP}$ [$_{VP}$ Mary-ga t_V ringo-o] tabe-ta] to] omotteiru]]

Complementary Deletion applies.

c. [$_{FocP}$ [$_{VP}$ ~~Mary-ga~~ t_V ringo-o] Foc [$_{TP}$ John-ga [$_{CP}$ [$_{TP}$ [$_{VP}$ Mary-ga t_V ~~ringo-o~~] tabe-ta] to] omotteiru]]

As for (28b), the answer seems to lie in the nature of the EPP which SOV languages, including Japanese, have. Honda (2002a) claims that VP movement to the Spec of TP is motivated by a type of EPP, which is called EPP(II). It has some properties different from another type of EPP relevant to English, which is called EPP(I).[13] Suppose that EPP(II) works at all the functional heads of SOV languages. Let us observe, for example, the internal structure of CP in SOV languages, where TP containing a *wh*-phrase moves to the Spec of CP due to the EPP(II) of C:

(31) a. John-wa *nani-o* tabemasita ka
John-TOP what-ACC ate [+wh] COMP
'What did John eat?'

b. [$_{CP}$ [$_{TP}$ John-wa *nani*-o tabemasita] [$C_{[EPP(II)]}$ $ka_{[+wh]}$] t_{TP}]

Thus, EPP(II) does not require movement of a *wh*-phrase by itself but a larger projection including it.[14] Since Foc is a member of the functional heads, EPP(II) forces it to trigger movement of a larger projection, namely VP. This is an answer to (28b).

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[13]EPP(I), unlike EPP(II), requires movement of a minimum phrase. For example, functional categories C and T in EPP(I) languages attract only a *wh*-phrase and a subject DP by themselves, respectively, but cannot attract larger phrases as shown in (i-b, c) and (ii-b, c):

(i) a. What did you eat?
b. [$_{CP}$ What [$_{C}$ did] [$_{TP}$ you eat t_{what}]]?
c. *[$_{CP}$ [$_{TP}$ You eat what] [$_{C}$ did] t_{TP}]?

(ii) a. John hits Mary.
b. [$_{TP}$ John [$_{T'}$ [$_{VP}$ t_{John} hits Mary]]].
c. *[$_{TP}$ [$_{VP}$ John t_{hits} Mary] [$_{T}$ hits] t_{VP}].

Even if the data above might be accounted for in terms of Case and/or theta-role, it cannot give us any convincing answer to the question: why does Japanese allow the equivalent of (i-c) and (ii-c)? Distinction between EPP(I) and (II), however, enables us to explain some interesting asymmetries between English and Japanese including the data in question.

Much more discussions are of course needed, but this is far beyond the scope of this paper. See Honda (2002a), which discusses the validity of EPP(II) intensively.

[14]EPP(II) also works inside NegP, a functional projection. Namely, movement of VP to the Spec of NegP, as illustrated in (20c, d), is motivated by EPP(II).

4. Conclusion

This paper has argued, on the basis of the data on NPIs in Japanese, that derivation of OV order in Japanese by movement of a remnant VP is much more plausible than by movement of the object by itself. Moreover, it has also argued that long-distance scrambling in Japanese involves remnant VP movement, which provides a plausible explanation not only to the NPI licensing of such long-distance cases, but also to scope-taking and binding phenomena in Japanese, all of which the OS analysis fails to account for.

References

Abney, Steven. 1987. *The English Noun Phrase in Its Sentential Aspect.* Doctoral dissertation, MIT, Cambridge, Mass.

Bošković, Željko and Daiko Takahashi. 1998. Scrambling and Last Resort. *Linguistic Inquiry* 29: 347-366.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Fukui, Naoki and Margaret Speas. 1986. Specifiers and Projection. In *MIT Working Papers in Linguistics 8: Papers in Theoretical Linguistics*, 128-172. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.

Haegeman, Lilian. 2000. Remnant Movement and OV order. In *The Derivation of VO and OV* ed. by Peter Svenonius, 69-96, Amsterdam/Phiradelphia: John Benjamins.

Hoeksema, Jack. 2000. Negative Polarity Items: Triggering, Scope, and C-Command. In *Negation and Polarity: Syntactic and Semantic Perspectives* ed. by Laurence Horn and Yasuhiko Kato, 115-146, Oxford: Oxford University Press.

Honda, Kensuke. 1997. The 'VP'-Constituent in Japanese and Its Theoretical Implications. *Dokkyo Working Papers in Linguistics* 14, 5-40. Dokkyo University.

Honda, Kensuke. 1999. *Universal Word Order and Language Variation: A Case Study in Comparative Syntax.* Doctoral dissertation, Dokkyo University.

Honda, Kensuke. 2002a. Hantaishouseikasetu kara mita Nihongotougoron (An Antisymmetric Approach to Japanese Syntax). In *Zisedai no Gengogaku I* ed. by Tsukuba Daigaku Gendaigengogaku Kenkyukai, 175-224.

Honda, Kensuke. 2002b. Shuyoubu Parameta to sono Shuhen (The Head Parameter and Related Matters). *Kogakuin Daigaku Kenkyuronso* (*Kogakuin University Bulletin: General Education*) 40-1: 109-122.

Kato, Yasuhiko. 2002. Negation in English and Japanese: Some (A)symmetries and Their Theoretical Implications. In *Proceedings of the Sophia Symposium on Negation* ed. by Yasuhiko Kato, 1-21. Sophia University, Tokyo.

Kayne, Richard. 1994. *The Antisymmetry of Syntax.* Cambridge, Mass.: MIT Press.

Kayne, Richard. 2003. Antisymmetry and Japanese. Ms., New York University.

Koopman, Hilda and Dominique Sportiche. 1991. The Position of Subjects. *Lingua* 85: 211-258.

Kuroda, S.-Y. 1988. Whether We Agree or Not: A Comparative Syntax of English and Japanese. In *Papers from the Second International Workshop on Japanese Syntax*, 103-143. Stanford, Calif.: CSLI Publications [Distributed by Cambridge University Press.]

Linebarger, Marcia. 1980. *The Grammar of Negative Polarity.* Doctoral dissertation, MIT, Cambridge, Mass.

Miyagawa, Shigeru. 1997. Against Optional Scrambling. *Linguistic Inquiry* 28: 1-26.

Miyagawa, Shigeru. 2001. The EPP, Scrambling, and *Wh*-in-situ in *Ken Hale: A Life in Language*, ed. by Michael Kenstowicz, 293-338. Cambridge, Mass.: MIT Press.

Nishiyama, Kunio. 1999. Adjectives and the Copulas in Japanese. *Journal of East Asian Linguistics* 8: 183-222.

Pearson, Matthew. 2000. Two Types of VO Languages. In *The Derivation of VO and OV* ed. by Peter Svenonius, 327-363, Amsterdam/Phiradelphia: John Benjamins.

Simpson, Andrew. 2001. Focus, Presupposition and Light Predicate Raising in East and Southeast Asia. *Journal of East Asian Linguistics* 10: 89-128.

Whitman, John. 2002. Preverbal Elements in Korean and Japanese. Paper presented at the 20th Anniversary Meeting of the English Linguistic Society of Japan.

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