

On Verb Movement in Japanese:*

From the Viewpoint of NPI Licensing in Coordination

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1. Introduction

It has been one of the fundamental premises of Generative Syntax that morphological properties of lexical items are independent of syntax. In Japanese, however, in which the T(ense) morphemes are affixes, it apparently has not been clear at which level a verbal complex such as *tabe-ta* 'eat(V)-PAST(T)' is formed. It has been one of the most controversial issues in Japanese syntax whether verb movement to T occurs in syntax or not. Concerning this problem, at least two analyses have been proposed so far: first, verbal complexes are formed by morphological merger at PF (Phonetic Form) (Sakai (2000), Takano (2002, 2004), Fukui and Sakai (2003), etc.), and second, formation must be done by verb movement in syntax (Otani and Whitman (1991) assumes the movement to be covert and Koizumi (2000) assumes it to be overt, among others).

In this paper I show empirical data which supports the verb movement approach rather than the morphological merger approach. The data are found from the observation of licensing of the negative polarity item (henceforth: NPI) *'sika* 'only' in coordinate structure. In Japanese, it is well known that the NPI occurrence depends on a particular structural relation with its licenser NEG(ation) *'nai* 'not', which always occurs in a final verbal complex, e.g. *tabe-nakkat-ta* 'eat(V)-NEG-PAST(T)'. Therefore, the observations on NPI occurrence can provide beneficial clues to the issue mentioned above.

In section 2, two approaches for and against verb movement will be reviewed, especially focusing on their prediction about coordinate structure in Japanese. The verb movement approach will be presented in 2.1, and the morphological merger approach in 2.2. In section 3, I will demonstrate that verb movement should be

* This paper is a modified version of a part of my M.A. thesis, Matsui (2003). Some cited examples presented in this paper are slightly changed from its original notation, just to keep consistency.

Abbreviations: ACC = accusative Case, CL = classifier, CONJ = conjunction, GEN = genitive Case, NOM = nominative Case, PAST = past tense, PRES = present tense, Q = question marker, TOP = topic marker.

assumed based on NPI licensing in coordination. Finally, in section 4, I will conclude and discuss problems that may be left for further research.

2. Coordination

In this section, arguments for and against verb movement in Japanese will be shown, referring specifically to coordination.

2.1 The Verb Movement Approach

It is generally assumed that only syntactic constituents can be applied to syntactic operations. Using coordinate structure for a diagnosis of verb movement is based on the common assumption that each conjunct of a coordinate structure forms a syntactic constituent.

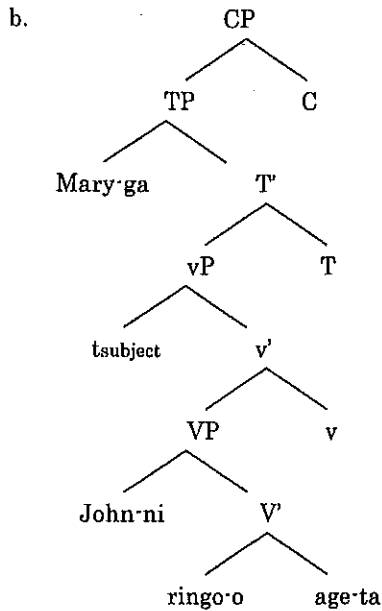
Consider first the English examples in (1):

- (1) a. John hit the table and Bill did [hit the table], too.
b.* John hit the table and [John hit] did the chairs.

The bracketed elements in (1a) consists of “Verb+Object” and those in (1b) “Subject+Verb”. The contrast of these examples shows that the portion of “Verb+Object” can be deleted in (1a) but “Subject+Verb” cannot in (1b), in other words, the former can be applied to the operation deletion, while the latter cannot. The fact clearly demonstrates that a Subject in Spec of TP (or IP) and a verb in V^0 cannot form a constituent, while a verb in V^0 and an object in the complement position of V^0 can form a constituent, namely VP in this case. Consequently, in English the main verb is still located in V^0 without moving out of VP.

Based on this assumption, Koizumi (2000) claims that verb movement should take place in the overt syntax in Japanese from the observation of three kinds of sentence structure: coordination, clefting and scrambling. To show his arguments clearly, first of all, let us first confirm the clause structure he assumes in Japanese. Refer to (2):

- (2) a. Mary-ga John-ni ringo-o age-ta.
Mary-NOM John-to apple-ACC give-PAST
'Mary gave an apple to John.'



(Koizumi 2000: 228)

Comparing Japanese with English in respect of coordination, “Direct Object+Indirect Object” can be coordinated in the former, whereas in the latter it is ungrammatical (cf. Jackendoff 1971).

- (3) Mary-ga [[John-ni ringo-o 2-tu] to [Bob-ni banana-o
Mary-NOM [[John-to apple-ACC 2-CL] and [Bob-to banana-ACC
3-bon]] age-ta (koto).
3-CL]] give-PAST (fact)
'Mary gave two apples to John, and three bananas to Bob.'

(Koizumi 2000: 228)

- (4) a. Becky sent this book to Bob, and Joni Marty, too.
b.* Becky sent this book to Bob, and Joni that article to Marty.

These examples demonstrate that in Japanese a direct object and an indirect object can form a syntactic constituent, whereas in English they cannot. Given the clause structure shown in (2), the constituents coordinated in (3) should be either vP or VP, therefore, unlike English it must be assumed that the main verb in coordinate structure raises out of VP, which results in making the remnant form a syntactic constituent. Moreover, in Japanese the sentences as in (5) are also grammatical.

- (5) a. Mary-ga [[suupaa-de piza-o 2-mai] to
 Mary-NOM [[supermarket-at pizza-ACC 2-CL] and
 [sakaya-de wain-o 3-bon]] katta (koto).
 [liquor.store-at wine-ACC 3-CL]] boutht (fact)
 'Mary bought two pizzas at a supermarket, and three bottles of wine at a
 liquor store.'
- b. [[Mary-ga ringo-o 2-tu] to [Nancy-ga banana-o
 [[Mary-NOM apple-ACC 2-CL] and [Nancy-NOM banana-ACC
 3-bon]] tabe-ta (koto).
 3-CL]] ate (fact)
 Lit. '[Mary two apples] and [Nancy three bananas] ate.'
 (Mary ate two apples, and Nancy three bananas.)
- c. [[Mary-ga John-ni ringo-o 2-tu] to [Nancy-ga
 [[Mary-NOM John-to apple-ACC 2-CL] and [Nancy-NOM
 Bob-ni banana-o 3-bon]] ageta (koto).
 Bob-to banana-ACC 3-CL]] gave (fact)
 Lit. '[Mary two apples to John] and [Nancy three bananas to Bob] gave.'
 (Mary gave two apples to John, and Nancy gave three bananas to Bob.)

(Koizumi 2000: 229-230)

In (5a), the coordinated conjuncts consist of an object and a locative adjunct, namely vP in the structure (2b), which means that the main verb moves at least to T⁰ out of VP. In (5b) and (5c), a subject appearing in the conjuncts forms a syntactic constituent with an object. In this case, the coordinated conjuncts should be TPs, and the main verb has moved to C⁰ out of VP.

According to Koizumi, verbs move from VP in the "across-the-board" manner, leaving the traces in their base generated positions within each constituent appearing in coordination (in clefting and scrambling as well,) as shown in (6) ((6a) and (6b) correspond to the example in (3) and (5b), respectively (cf. Koizumi 2000: 229)).

- (6) a. Mary-ga [[_{VP} John-ni ringo-o 2-tu t_i] to [_{VP} Bob-ni
 Mary-NOM [[_{VP} John-to apple-ACC 2-CL t_i] and [_{VP} Bob-to
 banana-o 3-bon t_i]] age_i-ta.
 banana-ACC 3-CL t_i]] give-PAST

- b. [[_{TP} Mary-ga ringo-o 2-tu t_i] to [_{TP} Nancy-ga banana-o
 [[_{TP} Mary-NOM apple-ACC 2-CL t_i] and [_{TP} Nancy-NOM banana-ACC
 3-bon t_i]] tabe-tai.
 3-CL t_i]] eat-PAST_i

Accordingly, in these cases the coordinated constituents are VPs in (6a) and TPs in (6b), respectively.

2.2 The Morphological Merger Approach

Contrary to the verb movement approach mentioned in subsection 2.1, analyses which do not assume verb movement in Japanese have also been proposed (Sakai 2000, Takano 2002, 2004, Fukui and Sakai 2003, etc.). Instead of verb movement in syntax, they assume morphological merger at PF to form final verbal complexes in Japanese. In this section, the analyses put forward by Fukui and Sakai (2003) and Takano (2002) will be illustrated in contrast with Koizumi (2000).

When comparing the morphological merger approach with the verb movement approach with respect to coordination, one must notice that the most remarkable difference between the two approaches is whether the verb trace is predicted in conjuncts or not. As mentioned above, Koizumi argues that the main verb in coordinate structure has moved out of VP in the across-the-board manner, leaving its trace in each conjunct. His argument is based on the assumption that each conjunct in coordinate structure is a syntactic constituent. If, however, a conjunct does not form a constituent, as Fukui and Sakai (2003) point out, verb movement can be no longer assumed. Let us observe the examples below:

- (7) a. Kono kurasu no hitotati-wa dooyuu purezento-kookan-o
 This class-GEN people-TOP what kind gift-exchange-ACC
 kono aida-no paatii-de yatta no? Gutaitekini agetemite yo.
 The other day-GEN party-at did Q concretely list-try-PRES
 'What kind of gift-exchanges did the people in this class do at the party
 the other day? Please tell me some concrete cases.'

- b. Taro-ga [Hanako-ni mannenhitu-o 2-hon] to [Tomoko-ni
 Taro-NOM [Hanako-to fountain pen-ACC 2-CL] and [Tomoko-to
 tokei-o 2-tu], sorekara, Ziro-ga [Hanako-ni hon-o
 watch-ACC 2-CL], and, Ziro-NOM [Hanako-to book-ACC
 1-satu] to [Tomoko-ni syasinsyuu-o 2-satu], ato,
 1-CL] and [Tomoko-to photo album-ACC 2-CL]. and
 Hanako-mo [Taro-ni syasinsyuu-o 1-satu] to [Ziroo-ni
 Hanako-also [Taro-to photo album-ACC 1-CL] and [Ziroo-to
 hon-o 1-satu] da-yo.
 book-ACC 1-CL] be-PRES

Lit. 'It was that Taro, [two fountain pens to Hanako] and [two watches to Tomoko], and Ziro, [one book to Hanako] and [two photo albums to Tomoko], Hanako, [one photo album to Taro] and [one book to Ziro].'

(The situation was such that: Taro gave two fountain pens to Hanako, and two watches to Tomoko. Ziro gave a book to Hanako and two photo albums to Tomoko. And also, Hanako gave a photo album to Taro, and a book to Ziro.)

(Fukui and Sakai 2003: 335-336)

The sentence in (7b) is supposed to be an answer to the question in (7a). In (7b), it is the case that not only does no verb appear overtly as a predicate at the end of the sentence, but also there is no candidate in (7a); that is to say, a verb trace is not necessarily assumed within all the bracketed portions. Therefore, in (7b) each conjunct which is considered as a syntactic constituent in Koizumi (2000) can no longer be taken as a constituent such as VP, vP or TP.

Moreover, Fukui and Sakai also point out the examples below in (8) as evidence indicating that the elements in question cannot be considered as VP, which contains a verb.

- (8) a. Taro-ga [Hanako-ni ringo 3-tu to Kumiko-ni banana
 Taro-NOM [Hanako-to apple 3-CL and Kumiko-to banana
 3-bon (to)]-o age-ta.
 3-CL (CONJ)]-ACC gave

Lit. 'Taro gave [three apples to Hanako] and [two bananas to Kumiko].'

- b. [Tokyo-kara daigakusei 3-nin to Osaka-kara
 [Tokyo-from college student 3-CL and Osaka-from
 kookoosei 2-ri (to)]-ga ki-ta.
 high school students 2-CL (CONJ)]-NOM came
 Lit. '[From Tokyo three college students] and [From Osaka two high school
 students] came.'

(Fukui and Sakai 2003: 345)

As is well known, the particles *o* for accusative Case and *ga* for nominative Case that occur in the examples in (8) can attach only to nominal elements. The examples in (8) demonstrate that the bracketed parts should not be regarded as VP because of the fact that the Case particle can attach to it.

In addition to Fukui and Sakai (2003), Takano (2002) also objects to Koizumi (2000). In particular, he proposes that coordinate structures in Japanese should be derived in a way which includes the "oblique movement".¹ The derivation shown in (9b)-(9e) is proposed for the example such as (9a).

- (9) a. [John-ga ringo-o 3-tu] to [Mary-ga banana-o 2-hon]
 [John-NOM apple-ACC 3-CL] and [Mary-ga banana-ACC 2-CL]
 kat-ta.
 bought
 Lit. '[John three apples] and [Mary two bananas] bought.'
 (John bought three apples, and Mary bought two bananas.)
 b. [TP [Y X Y] [TP t_x t_y V]]
 X=Mary-ga, Y=banana-o 2-hon
 c. [Z W Z]
 d. [& [Z W Z] to(&)]
 W=John-ga, Z=ringo-o 3-tu
 e. [TP [Y [& [Z W Z] &] [Y X Y]] [TP t_x t_y V]]

(Takano 2002: 274-275)

According to Takano, the two conjuncts are conjoined by way of adjunction of the first conjunct to the second, after they are firstly derived individually. Consider first the derivation of the two conjuncts. To begin with the second conjunct, as shown in (9b) the portion "*banana-o 2-hon*", which is included in the sentence "*Mary-ga banana-o*

¹ See footnote 2.

2-hon katta” adjoins to TP in the way of scrambling, and then the subject “*Mary-ga*” adjoins to “*banana-o 2-hon*” in the same way.² On the other hand, as shown in (9c) the first conjunct is generated independently of TP in (9b), and then adjoins to a conjunction “&” as shown in (9d). Finally, after both conjuncts are derived separately, the first conjunct accompanied by “&” adjoins to the second conjunct, as shown in (9e). As a result, it is only one verb that is presumed all the way of its derivation, which notably differs from Koizumi (2000).

To sum up, contrary to Koizumi (2000), Fukui and Sakai argue from the viewpoint of the morphological merger that a verb trace is not necessarily assumed in each conjunct, and even if no particular verb appears in the sentence, coordination can take place in Japanese. Furthermore, Takano maintains that only one verb should be presumed in a coordinate structure without a verb trace in each conjunct.

3. NPI Licensing in coordination

In the previous section, two arguments for and against verb movement were presented in terms of coordination: one assumes a verb trace in a conjunct, and the other does not assume any traces in conjuncts. In this section, I demonstrate empirical evidence in favor of the verb movement approach in terms of NPI licensing, particularly ‘*sika*’ only’. Consider the examples in (10) and (11):

- (10) a.? [Hanako-ga Taro-ni-sika ringo-o 3-tu] to [Yoko-ga
[Hanako-NOM Taro-to-only apple-ACC 3-CL] and [Yoko-NOM
Ziro-ni-sika banana-o 2-hon] age-nakat-ta.
Ziro-ti-only banana-ACC 2-CL] give-NEG-PAST
Lit. ‘[Hanako only to Taro three apples] and [Yoko only to Ziro two bananas]
gave.’
(Hanako gave three apples only to Taro, and Yoko gave two bananas only to
Ziro.)

- b.? [Hanako-sika Taro-ni ringo-o 3-tu] to [Yoko-sika Ziro-ni
[Hanako-only Taro-to apple-ACC 3-CL] and [Yoko-only Ziro-to
banana-o 2-hon] kawa-nakat-ta.
Banana-ACC 2-CL] buy-NEG-PAST
Lit. ‘[Only Hanako three apples to Taro] and [only Yoko two bananas to Ziro]
bought.’

² Takano assumes the adjunction of “*Mary-ga*” to “*banana-o 2-hon*” to be the “oblique movement,” which he proposes in the paper. Since it is not deeply related to the discussion here, I will not go into detail. For further details, see Takano (2002).

- (11) a. [Hanako-ga Taro-ni-sika ringo-o] sosite [Yoko-ga Ziro-ni-sika
[Hanako-NOM Taro-to-only apple-ACC] and [Yoko-NOM Ziro-to-only
banana-o] age-nakat-ta.
banana-ACC] give-NEG-PAST
Lit. '[Hanako an apple only to Taro] and [Yoko a banana only to Ziro] gave.'
- b. [Hanako-sika Taro-ni ringo-o] sosite [Yoko-sika Ziro-ni
[Hanako-only Taro-to apple-ACC] and [Yoko-only Ziro-to
banana-o] age-nakat-ta.
banana-ACC] give-NEG-PAST
Lit. '[Only Hanako an apple to Taro] and [only Yoko a banana to Ziro] gave.'
- c. Hanako-ga [Taro-ni ringo-sika] sosite [Ziro-ni banana-sika
Hanako-NOM [Taro-to apple-only] and [Ziro-to banana-only]
age-nakat-ta.
give-NEG-PAST
Lit. 'Hanako [only an apple to Taro] and [only a banana to Ziro] gave.'

In (10) and (11), different conjunctions appear in the sentences: *to* in (10) and *sosite* in (11). In general, both have the same meaning 'and'.³ Although the examples in (10) with *to* are not perfectly acceptable, the examples in (11) with *sosite* are fully

³ It has been controversial whether *sosite* should be treated as the same conjunction as *to* or not. As a matter of fact, Koizumi (2000) does not accept the use of *sosite* in the test of verb movement. In the case of (ia), its ungrammaticality can be explained by assuming that the elements in subjunctive clause and those in matrix clause cannot form a syntactic constituent. In the case of (ib), on the other hand, the elements in both clauses can form a constituent. Therefore, Koizumi concludes that not verb movement but PF-deletion should be assumed for *sosite*. See Appendix A in Koizumi (2000).

- (i) a.* [[Mary-ga John-ga ringo-o 2-tu] to [Nancy-ga Bob-ga
[[Mary-NOM John-NOM apple-ACC 2-CL]and [Nancy-NOM Bob-NOM
banana-o 3-bon]] katta to omotteiru (koto).
banana-ACC 3-CL]] bought that believe (fact)
Lit. '[Mary John two apples] and Nancy Bob three bananas]]believes that bought.'
(Mary believes that John bought two apples, and Nancy believes that Bob bought three bananas.)
- b. Mary-ga John-ga ringo-o 2-tu, sosite Nancy-ga
Mary-NOM John-NOM apple-ACC 2-CL, and Nancy-NOM
Bob-ga banan-o 3-bon katta to omotteiru.
Bob-NOM banana-ACC 3-CL bought that believe
Lit. 'Mary John two apples, and Nancy Bob three bananas, believes that bought.'
(Mary believes that John bought two apples, and Nancy believes that Bob bought three bananas.)

(Koizumi 2000: 276)

On the contrary, Takano (2002) points out that the coordination conjoined by *sosite* can be also analyzed in terms of verb movement. In this paper, this kind of problem is left for future research. The matter of importance here is the fact that NPI *sika* can be licensed in coordinate structure with *sosite* and *to*, even though the examples with *to* in (10) are slightly degraded. Needless to say, the contrast of the acceptability between (10) and (11) must be explained as well in future research. See Hirata (2005) for predicate coordination with *sosite*.

acceptable.

One must take the peculiarities of *-sika* into consideration when analyzing (10) and (11). It is a well-known fact that the NPI *-sika* basically requires a NEG within the same clause as its licenser, and must keep a one-to-one correspondence with NEG (Kato 1985, Aoyagi and Ishii 1994, Kuno 1995 among others), as shown in (12)-(14):

- (12) a. Hanako-ga Taro-ni sika ringo-o age-nakat-ta.
 Hanako-NOM Taro-to-only apple-ACC give-NEG-PAST
 'Hanako gave an apple only to Taro.'
- b.* Hanako-ga Taro-ni sika ringo-o age-ta.
 Hanako-NOM Taro-to-only apple-ACC gave
- (13) a. Hanako-wa [Yoko-ga Taro-ni sika ringo-o age-nakat-ta]
 Hanako-TOP [Yoko-NOM Taro-to-only apple-ACC give-NEG-PAST]
 koto-o sitteita.
 that-ACC knew
 'Hanako knew that Yoko gave an apple only to Taro.'
- b.* Hanako-wa [Yoko-ga Taro-ni sika ringo-o age-ta]
 Hanako-TOP [Yoko-NOM Taro-to-only apple-ACC give-PAST]
 koto-o sira-nakat-ta.
 that-ACC know-NEG-PAST
- (14) a. Hanako-sika [Yoko-ga Taro-ni sika ringo-o age-nakat-ta]
 Hanako-only [Yoko-NOM Taro-to-only apple-ACC give-NEG-PAST]
 koto-o sira-nakat-ta.
 that-ACC know-NEG-PAST
 'Only Hanako knew that Yoko gave an apple only to Taro.'
- b.* Hanako-ga Taro-ni sika ringo-sika age-nakat-ta.
 Hanako-NOM Taro-to-only apple-only give-NEG-PAST
- c.* Hanako-ga Taro-ni sika ringo-sika age-naku-nakat-ta.
 Hanako-NOM Taro-to-only apple-only give-NEG-NEG-T

The examples in (12) show that *-sika* never appears in affirmative sentences, which means that its occurrence enormously depends on whether or not NEG co-occurs as its clausemate, as shown in (13). However, even if the clausemate condition is maintained between NPI and NEG, more than one NPI cannot be properly licensed by one NEG, as shown in (14b); each NPI requires a NEG as its licenser to co-occur in the

same clause, retaining the one-to-one correspondence with NEG, as in (14a). In addition, note that only one “*sika*-NEG” pair can appear in a clause. Even though both the clausemate condition and the one-to-one correspondence are satisfied in a single clause, the sentence in which more than one “*sika*-NEG” pair appears turns to be ungrammatical, as in (14c).

Given these conditions on *sika* licensing, verbs with NEG must be assumed within each conjunct in (10) and (11), and therefore the coordinate structure should be as (15) below:

- (15) a. [[_{TP} Hanako-ga Taro-ni-sika ringo-o ti] sosite [_{TP} Yoko-ga
 [[_{TP} Hanako-NOM Taro-to-only apple-ACC ti] and [_{TP} Yoko-NOM
 Ziro-ni-sika banana-o ti]] age-nakat-tai.
 Ziro-to-only banana-ACC ti]] give-NEG-PAST_i
- b. [[_{TP} Hanako-sika Taro-ni ringo-o ti] sosite [_{TP} Yoko-sika
 [[_{TP} Hanako-only Taro-to apple-ACC ti] and [_{TP} Yoko-only
 Ziro-ni banana-o ti]] age-nakat-tai.
 Ziro-to banana-ACC ti]] give-NEG-PAST_i

The examples in (15a) and (15b) correspond to (11a) and (11b) respectively. These structures are essentially the same as the one proposed by Koizumi (2000), shown in (6) in subsection 2.1. It is obvious that the analysis which does not assume a verb trace in each conjunct under the morphological merger approach cannot account for the fact that NPIs can be correctly licensed in conjuncts.

However, notice that unlike (11), it is not only the verb but also the NEG and T that are assumed to move to the main clause in (15) in the across-the-board manner, which results in TP coordination. This is based on the analysis proposed in Matsui (2003): NPIs can be licensed not by NEG alone but by verbal complex resulting from the verb movement to T along with NEG. Consequently, an NPI must co-occur not only with NEG but also with T in order to be licensed properly in a conjunct; in other words, a conjunct containing NPI must be TP. If this analysis is on the right track, the sentence as in (6a), which is taken to be VP coordination by Koizumi due to the subject being excluded from each conjunct, should be reanalyzed as follows:

- (16) [[_{TP} Hanako_j-ga Taro-ni ringo-sika t_i] sosite [_{TP} pro_j Ziro-ni
 [[_{TP} Hanako_j-NOM Taro-to apple-only t_i] and [_{TP} pro_j Ziro-to
 banana-sika t_i]] age-nakat-tai.
 banana-only t_i]] give-NEG-PAST_i

Comparing (16) with (6a), each conjunct has a trace, but it is not a trace of the verb *age* 'give' alone; rather, it is a trace of the V-NEG-T complex *age-nakat-ta* 'did not give' in (16). According to Koizumi, the subject *Hanako* appearing at the beginning of the sentence in (16) is an element in the main clause, in other words, it belongs to neither conjuncts. On the contrary, following the analysis considering these conjuncts as TPs, each conjunct is expected to involve a respective subject. Therefore in (16), a null pronoun which is coindexed with the subject in the first conjunct, can be assumed as a subject in the second conjunct.

In this section, I have demonstrated that the verb movement approach is superior to the morphological merger approach in that the former can account for the fact that an NPI in a conjunct can be properly licensed.

4. Conclusion

In this paper, I have shown empirical evidence which supports the verb movement approach in Japanese from the viewpoint of NPI licensing in coordination. With respect to coordination in Japanese, the most significant difference between the verb movement approach and the morphological merger approach is whether or not verb trace is assumed in conjuncts. The difference results in whether NPI licensing can be predicted or not. I have demonstrated that traces must be assumed in each conjunct from the fact that the NPI *-sika* can appear in coordination. In light of this observation, the verb movement approach is apparently superior to the morphological merger approach.

The discussion in this paper, however, still has some remaining problems on the analysis of coordination itself. Most of the problems raised by Fukui and Sakai (2003) and Takano (2002) are also left unresolved: for example, why coordination lacking substantial verbs can be possible as shown in (7); why non-nominal elements such as VP, vP or TP can be attached by a case particle, as shown in (8). The former question might be possibly solved in pragmatics, for example the function of the copula *da*. For the latter, one may consider the example as in (17):

- (17)? Taro-ga [[Hanako-ni-sika ringo] to [Kumiko-ni-sika
 Taro-NOM [[Hanako-to-only apple] and [Kumiko-to-only
 banana]]-o age-nakat-ta.
 banana]]-ACC give-NEG-PAST
 Lit. 'Taro gave [an apple only to Hanako] and [a banana only to Kumiko]'

Although this sentence is not fully acceptable, the fact that *-sika* is able to appear in these conjuncts also shows a V-NEG-T trace is left in each conjunct. Therefore, (7) and (17) must be reanalyzed in some way.⁴ I do not refer to all of the problems related to the verb movement approach here. I will leave these issues open for future research.

Although some problems remain, this paper contributes to the issue of verb movement in the sense that it brings the viewpoint of NPI licensing into the study in terms of coordination.

⁴ Vermeulen (2005) proposes that the case marker outside the second conjunct in these cases does not necessarily indicate the conjuncts are nominal elements. According to her, this is due to a mismatch between syntax and phonology, and the case marker syntactically belongs to the second conjunct. Her analysis also supports the verb movement approach.

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