NP MOVEMENT INTO THETA-POSITIONS AND UNEXPECTED BEHAVIOR OF BEHAVIOR OF NUMERAL QUANTIFIER STRANDING[*]

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1.   Introduction

Whether an NP moves into theta position or not has been controversial. Chomsky (1986, 1995) claims that such a movement is disallowed. While Pesetsky (1992) and Bošković (1997) argue that such a movement is possible in ECM construction. Saito (2001), analyzing resultative constructions of English, claims that such a controversy is settled under a larger generalization; that an NP moves into an internal theta position, but not into an external one. In this paper, I will give further supporting evidence for Bošković (1997), and I will argue that in Japanese, an NP can move into an external theta position as well as an internal one. One piece of evidence for this claim comes from a numeral quantifier stranding in secondary resultative construction in Japanese. The other evidence is found in unexpected behaviour of numeral quatifier stranding in a sentence with a manner of motion verb with attained goal phrase. It has been pointed out in previous literatures (Miyagawa 1989, Tsujimura 1994, 1997, Takezawa 1993) that goal phrases play important roles both in resultative constructions and in a sentence with a manner of motion verb. In resultative construction, as Takezawa (1993) observes, when goal phrases appear between numeral quantifier and its NP host, they exhibit interference effect on numeral quantifier stranding. One small question emerges. Why goal phrases affect numeral quantifier stranding in resultatives? Further evidence comes from unexpected behaviour of numeral quantifier stranding in a sentence with a manner of motion verb. As Miyagawa (1989) observes, in a sentence with a manner of motion verb, the presence of goal phrases leads to a diagnostic mismatch. Since Miyagawa (1989), numeral quantifier stranding has been used as a diagnosis to detect unaccusativity, but the diagnosis singles out different class of verbs, unergative, when a manner of motion verb appears with a goal phrase. Two different kinds of questions arise. The first question is why numeral quantifier is construed with its NP host only in the presence of goal phrase. The second question is why the diagnosis wrongly selects unergative verbs. As to these two questions, Tsujimura (1994) demonstrates that a manner of motion verbs with attained goal phrase undergo classificational change from unergative into unaccusative, suggesting that there is no unaccusative diagnostic mismatch from the beginning. I will provide new evidence that cannot be explained by Tsujimura's (1994) hypothesis. Furthermore, I will argue that seeming unaccusativity that the diagnosis exhibits

in two different kinds of constructions is due to NP movements into another theta positions from goal phrases.

This paper is organized in the following way. In section 2, I will give supporting evidence for Bošković (1997) and Saito (2001). I will argue that logical subjects of secondary resultatives in Japanese are moved from resultative goal phrases into internal theta position. In section 2.1, I will look at Bošković (1997) and Saito (2001), and section 2.2 is concerned with numeral quantifier stranding in resultatives. In section 2.3, I will give an analysis of the fact. In section 3, I will claim that in Japanese an NP moves into an external theta position under a special circumstance. In section 3.1, I will review the basic discussion for unaccusative diagnosis. Section 3.2 is concerned with unexpected behaviour of numeral quantifier stranding, a diagnosis mismatch. In section 3.3, I will take a quick look at Tsujimura's (1994) account of the fact. In section 3.4, I will re-examine the fact by using two different kinds of adverbs, and demonstrate that the phenomenon cannot be explained by Tsujimura's hypothesis. Section 3.5 provides an alternative analysis. Section 4 is a conclusion.

2.   NP-Movement and Resultatives

2.1. Does Theta-Criterion Hold?

NP movement into A-position is highly controversial. Chomsky (1986, 1995) prohibits such a movement. Consider the example sentences in (1).

(1)   a.   *John$_i$ HIT t$_i$. (=John hit himself.)

        b.   *John$_i$ BELIEVES t$_i$ to be smart. (=John believes himself to be smart.)
                                                                (Chomsky 1986, 1995)

Chomsky observes that there are no capital HIT nor capital BELIEVE, which allow NP movements into another theta positions. The sentences in (1) are no good under the intended meanings. In (1), the NPs, *John* cannot move from their trace positions into their surface positions. Chomsky claims that there is a strict restriction on theta role assignment, which is stated as theta-criterion in (2).

(2)   Theta-criterion: Each theta role must be assigned to one argument, and each argument
        must receive one theta role.   (Chomsky 1981)

On the other hand, Bošković (1997) argues that such a movement is possible (see also Hornstein 2001). Bošković's argument is based on the following paradigm, which is shown in (3) and (4). Consider the sentences in (3) and (4).

(3)   a.   Sue estimated Bill's weight.

        b. *Sue estimated Bill.

(4)   a.   Sue estimated Bill's weight to be 150.

       b.   *Sue estimated Bill to be 150.

<div align="right">(Bošković 1997)</div>

The example sentences in (3) are simple sentences with transitive verbs. The example sentence in (3b) is no good due to selectional property of the verb, *estimate*. The example sentences in (4) are instances of ECM sentences. If (4b) is a simple ECM sentence, it is not clear why it should be ruled out in spite of the fact that the sentence in (4a) is good. But if we assume that the embedded subject, *Bill*, in (4b) is theta-marked also by the matrix verb, the contrast between (4a) and (4b), like (3), is accounted for in terms of selectional property of the matrix verb, *estimate*. According to Bošković claim, in (4b) an NP receives one theta role in the embedded clause, and then it moves into internal theta position to receive another theta role from the matrix verb. In this way, an NP in ECM receives multiple theta roles by Merge.

Saito (2001) argues that in a resultative construction of English an NP receives multiple theta roles from two distinct predicates by Merge. Look at the contrast between (5a) and (5b).

(5)   a.   *John ran tired.

       b.   John hammered the metal flat.

Unergative intransitive verb in (5a) cannot take resultative phrase, so that the predicate, *tired*, is not predicated of the subject, *John*, as the example sentence in (5a) shows. On the other hand, in (5b), the NP, *metal,* functions not only as subject of the secondary predicate, *flat*, but also the direct object of the verb, *hammer*. Saito accounts for why such a contrast occurs. Consider how the NP, *metal*, is assigned two theta roles from the distinct predicates. There are two possible ways; head movement or NP movement. As the sentence in (6) shows, secondary predicate is clefted.

(6)   How flat did John hammer the metal?

Based on this observation, Saito concludes that there is only one possibility left; NP movement. Look at the derivation of the sentence in (5b), which is shown in (7).

(7)   [$_{TP}$ John$_i$ [$_{vP}$ t$_i$ hammered   the metal$_j$ [$_{AP}$ t$_j$ flat]]]

In (7), the NP, *metal*, is first merged with the predicate, *flat*, and then it moves to internal theta position, where it receives another theta role from the predicate, *hammer*. Next consider the ill-formed derivation of (5b), which is shown in (8).

(8) *[$_{TP}$ John$_i$ [$_{vP}$ t$_i$ ran [$_{AP}$ t$_i$ tired]]]

In (8), the NP, *John*, cannot move to the Spec of vP and then next to the surface position. Saito (2001) claims that the contrast between (7) and (8) ceases to be a problem, when compared with the crucial sentences in (4b) and (1), and that a larger generalization emerges,

which is shown in (9).

(9) Saito's (2001) generalization: An NP moves into internal theta position, but not into external theta position.

In the next subsection, I will give supporting evidence for Bošković (1997) and Saito (2001), and argue that subjects of secondary resultatives are moved from prepositional phrases.

2.2. NP Movement in Resultatives in Japanese

2.2.1. Resultatives in Japanese

It has been observed in previous literatures (Kageyama 1993, Hasegawa 1999) that resultative phrases are predicated of internal arguments, not external arguments.

(10) a. *Taro-ga   kutakutani   hasit-ta   (koto)
          T-Nom   tired   run-Past

       'Taro ran tired.' (intended meaning, 'Taro ran himself tired.')

      b. Taro-ga   kuruma-o   makkani   nut-ta   (koto)
          T-Nom   car-Acc   red   paint-Past

       'Taro painted the car red.'

      c. Taro-ga   kodomo-o rippani   (dairiigaa-ni)   sodate-ta   (koto)
          T-Nom   child   independent (major player-as) raise-Past

       'Taro raised a child to be independent (major player).'

In (10a), unergative intransitive verb, *hasiru* "run", cannot take resultative phrase, so that the sentence does not mean that Taro ran himself tired. In (10b) and (10c), accusative case marked NPs, *kuruma* "car" and *kodomo* "child" are subjects of secondary predicates, *makkani* "red", and *rippani* "independent", respectively. How are these NPs assigned multiple theta roles? In Japanese, like English, resultative predicates are clefted, as the sentences in (11) shows.

(11) a. Taro-ga   kuruma-o   nut-ta   no-wa   makkani da
          T-Nom   car-Acc   paint-Past   Gen-Top red   be

       'It is red that Taro painted the car.'

      b. Taro-ga   kodomo-o   sodate-ta   no-wa   rippani   da
          T-Nom   child-Acc raise-Past Gen-Top   independent   be

       'It is independent that Taro raised child.'

c. Taro-ga   kodomo-o   sodate-ta   no-wa   dairiigaa-ni   da
   T-Nom   child-Acc   raise-Past Gen-Top major player be

   'It is major player that Taro raised his child.'

It is safe to conclude that in resultatives in Japanese, like those of English, an NP movement is involved in theta role assignments. The assumed structure of (10a) and (10c) are shown in (12a) and (12b), respectively.

(12)   a. *[$_{TP}$ Taro$_i$-ga [$_{vP}$ t$_i$ [$_{PP}$ t$_j$ [$_{PP}$ kutakuta-ni]] hasit-ta]]
           T-Nom   tired-to   run-Past

       'Taro ran himself tired.'

    b. [$_{TP}$ Taro$_i$-ga   [$_{vP}$ t$_i$ kodomo$_j$-o [$_{PP}$ t$_j$ [$_{PP}$ dairiigaa-ni]]   sodate-ta]]
          T-Nom   child-Acc   major player-as raise-Past

       'Taro raised his child to be independent.'

In (12a), the NP, *Taro*, cannot move to external theta position. Hence derivation crashes. On the other hand, in (12b), the NP, *kodomo* "children" is first merged with the predicate, *dairiigaa-ni* "major player-as", and then it moves to internal theta position to receive another. In the next subsection, I will give two pieces of evidence for this claim that subjects of resultatives are moved from prepositional phrases.

2.2.2. Numeral Quantifier Stranding in Resultative

Takezawa (1993) observes that numeral quantifier cannot be construed with its NP host when the resultative predicate intervenes between numeral quantifier and its NP host. First, look at the following sentence in (13).

(13)   Taro-ga   san-nin-no kodomo-o   rippani   sodate-ta   (koto)
      T-Nom   3-CL-Gen   children-Acc   perfectly raise-Past

    'Taro raised three children perfectly.'
    'Taro raised three children to be independent.'

The sentence in (13) is ambiguous between the following readings, 'Taro raised three children perfectly' and 'Taro raised three children to be independent.' Consider the contrast in (14).

(14)   a. *Taro-ga   kodomo-o   dairiigaa-ni   san-nin   sodate-ta   (koto)
        T-Nom   child-Acc   major player-as 3-CL   raise-Past

      'Taro raised three children to be major players.'

b. *Taro-ga   kodomo-o   rippa-ni   san-nin   sodate-ta   (koto)
   T-Nom   child-Acc   independent   3-CL   raise-Past

'Taro raised three children to be independent.'

(Takezawa 1993)

c. Taro-ga   kodomo-o   rippani   san-nin   sodate-ta   (koto)
   T-Nom   children-Acc perfectly   3-CL   raise-Past

'Taro raised three children perfectly.'

In (14a) an (14b), numeral quantifiers cannot be construed with their NPs. On the other hand, when the sentence means that Taro raised three children perfectly, the quantifier can be construed with its NP host, even when the predicate intervenes. Takezawa (1993) just attributes the ungrammaticality of these sentences in (14a) and (14b) to the fact that the goal phrases, *dairiigaa-ni* and *rippa-ni* are base generated in the lowest position of the structure, as schematized in (15).

(15)   Subject > Direct Object > Secondary Goal Predicate

(Takezawa 1993)

But why numeral quantifier cannot be construed with its host NP when the predicate intervenes them? Further evidence for the claim that subject of secondary resultative moves from goal phrase comes from the following paradigm.

(16)   a. *Taro-ga   dairiigaa-ni   san-nin   kodomo-o   sodate-ta   (koto)
          T-Nom   major player-as   3-CL   child-Acc   raise-Past

'Taro raised three children to be major players.'

b. Taro-ga   rippani   san-nin   kodomo-o   sodate-ta   (koto)
   T-Nom   perfectly   3-CL   child-Acc   raise-Past

'Taro raised three children perfectly.'

In (16a), the secondary predicate, *dairiigaa-ni* is predicated of the NP, *kodomo* "children". As the example sentence in (16a) shows, numeral quantifier cannot be construed with the NP, *kodomo* "children". On the other hand, when the sentence contains a simple adverb, *rippani* "perfectly", denoting manner of the verb, numeral quantifier can be construed with the NP, *kodomo* "children". Why such a contrast occurs between (16a) and (16b)? In the next subsection, I will give an analysis and claim that subject of resultative, which is traditionally considered to be a direct object, merges with secondary resultative predicate.

2.3. Analysis

Given the hierarchy in (15) is correct, the structure of the sentence in (14b) and (14c) are the followings in (17a) and (17b), respectively.

(17) a. *[$_{vP}$ Taro-ga [$_{VP}$ kodomo-o$_i$ [$_{PP}$ [$_{NP}$ rippa][$_P$ ni]$_j$ [$_{PP}$ t$_i$ san-nin   sodate-ta]]]
          T-Nom   children-Acc   independent   3-CL   raise-Past

       'Taro raised three children to be independent.'

     b. [$_{vP}$ Taro-ga [$_{VP}$ kodomo-o$_i$ [$_{VP}$ [$_{Adv}$ rippani] [$_{VP}$ t$_i$ san-nin   sodate-ta]]]]
          T-Nom   children-Acc   perfectly   3-CL   raise-Past

       'Taro raised three children perfectly.'

In (17a), the NP, *kodomo* "children" is base generated in prepositional phrase, and then it moves into internal theta position. When the secondary predicate, *rippa-ni* "independent" is scrambled over the prepositional phrase, such a movement is an adjunction to the same category. Hence the derivation in (17a) should be ruled out. While, in (17b), adverbial phrase, *rippani* "perfectly" adjoins to VP, and the NP, *kodomo* "children" is scrambled over the VP, and the NP, *kodomo* "children" and numeral quantifier mutually c-command in the lowest VP. Hence the association between them is recognizable in (17b). Next look at the derivation of the sentences in (16), which are shown in (18). The structures of (16a) and (16b) are the followings in (18a) and (18b), respectively.

(18) a. *[$_{vP}$ Taro-ga [$_{VP}$ [$_{PP}$ t$_i$ san-nin [$_{PP}$ [$_{NP}$ rippa][$_P$ ni]]]$_j$ [$_{VP}$ kodomo-o$_i$ [$_{PP}$ t]$_j$]]
          T-Nom   3-CL   independent   children-Acc
         sodate-ta]
         raise-Past

       'Taro raised three children to be independent.'

     b. [$_{vP}$ Taro-ga [$_{VP}$ san-nin$_i$ [$_{VP}$[$_{adv}$ rippani] [$_{VP}$ t$_i$ kodomo-o   sodate-ta]]]]
          T-Nom   3-CL   perfectly   children-Acc raise-Past

       'Taro raised three children perfectly.'

In (18a), the NP, *kodomo*, "children", first merges with the secondary resultative predicate, and then it moves into internal theta position. And then the remnant PP is scrambled over VP. While in (18b), numeral quantifier and its NP host, *kodomo* "children" mutually c-command in the lowest VP, and the numeral quantifier is scrambled over VP. The derivation of (18a) leads to the violation of the Proper Binding Condition, which is stated in (19). The ill-formed sentence in (18a) is excluded by the Proper Binding Condition, while permitting the derivation of (18b).

(19) Proper Binding Condition: Traces must be bound.

If this analysis is correct, subject of secondary resultative is merged with goal phrase and then it moves to internal theta position. In the next section, I will re-examine a certain diagnosis mismatch and give further supporting evidence for Bošković (1997).

3.   Unaccusative Diagnostic Mismatch in Japanese

In this section, we look at a certain diagnostic mismatch, where the diagnosis exhibits an unexpected behaviour of numeral quantifier stranding under a certain circumstance. The diagnosis is based on the fact that numeral quantifier and its host NP must meet a strict locality. Hence, a numeral quantifier stranding has been used to test the relative position of the NP and its numeral quantifier. (see Haig 1980, Kuroda 1983, Saito 1985, Miyagawa 1989 for original discussion on quantifier stranding). Since Miyagawa (1989), numeral quantifier stranding has been considered to be a syntactic diagnosis by which we distinguish an external argument from an internal argument.

3.1.   Numeral Quantifier Stranding and Unaccusativity

Since Harada (1969), it is observed that in Japanese, numeral quantifier can strand off its NP host, as is shown in (20).

(20)   a.   San-nin-no   Nihonjin-ga   Indo-ni   tui-ta   (koto)
            3-CL-Gen   Japanese-Nom   India-to   arrive-Past

       'Three Japanese arrived at India.'

       b.   Nihonjin-ga   Indo-ni   san-nin   tui-ta   (koto)
            Japanese-Nom   India-to   3-CL   arrive-Past

Under a traditional assumption, the sentence in (20b) is transformed from the sentence in (20a) by a quantifier stranding rule. But, such a transformational rule does not explain why the fact is such. Miyagawa (1989), making extensive observations on quantifer strandings, concludes that a quantifier and its NP host must observe strict locality, which provides strong evidence for the existence of NP-trace. Consider the contrast between (21a) and (21b).

(21)   a.   *[$_{TP}$ Gakusei$_i$-ga [$_{vP}$ t$_i$ [$_{VP}$ Hakone Marathon-o   san-nin   hasi-ta]]]   (koto)
                students-Nom   Hakone Marathon-Acc   3-CL   run-Past

       'Five students ran Hakone marathon race.'

       b.   [$_{TP}$ Nihonjin$_i$-ga [$_{VP}$ Indo-ni   t$_i$ go-nin   tui-ta]]   (koto)
            Japanese-Nom   India-to   5-CL   arrive-Past

       'Five Japanese arrived at India.'

                                                       (Miyagawa 1989 lexically altered)

The sentences in (21a) and (21b) are instances of unergative verb and unaccusative verb, respectively. In (21a), numeral quantifier cannot be construed with the subject NP. While, in (21b), numeral quantifier can be construed with the subject NP. Miyagawa (1989), contrasting (21a) with (21b), claims that the NP and its associated numeral quantifier must meet a locality requirement, which is stated as a structural requirement in (22).

(22) The Numeral Quantifier and its NP host or the trace of the NP must mutually
c-command each other.

It is widely acknowledged that the subject of unergative verb is an external argument. In (21a), the NP, *gakusei* "student" is base generated in the Spec of vP, and it is moved to the Spec of TP. There is nowhere throughout the derivation in (21a) that the NP, *gakusei* "student" and the numeral quantifier, *san-nin*, mutually c-command. Hence there is no association between the subject and the numeral quantifier in (21a). On the other hand, in (21b), there is an association between the subject, *nihonjin* "Japanese" and the numeral quantifier, *go-nin*, although they are too far away. It is widely acknowledged that the subject of unaccusative verb is an internal argument. The subject NP, *nihonjin* "Japanese" in (21b) is base generated in the trace position and then it is moved to the Spec of TP for case reason. If this assumption is correct, there is a point that the NP and the numeral quantifier can mutually c-command. Hence, the numeral quantifier can be construed with the subject NP, *gakusei* "student" in (21b). The contrast between (21a) and (21b) demonstrates that the numeral quantifier stranding is useful diagnosis in distinguishing unaccusative verb from the other kinds of verbs, transitive and unergative. I shall call this diagnosis unaccusative diagnosis.

In the next subsection, let us look at the fact that this diagnosis singles out different class of verb under a special circumstance, causing a diagnosis mismatch.

3.2. Unaccusative Diagnostic Mismatch in Japanese

Miyagawa (1989) observes that numeral quantifier stranding exhibits an unexpected behavior when a manner of motion verb is accompanied by a goal phrase. Consider the contrast between (23a) and (23b).

(23) a. *Kodomo-ga   inu-to   awatete san-nin   hasit-ta   (koto)
children-Nom   dog-with hurriedly 3-CL   run-Past

'Three children ran with a dog hurriedly.'

b. Kodomo-ga   inu-to   awatete kooen-made san-nin   hasi-ta   (koto)
children-Nom   dog-with hurriedly park-as far as 3-CL   run-Past

'Three children ran hurriedly as far as to the park with a dog.'

(Miyagawa 1989)

The sentences in (23) are examples with manner of motion verbs, which are unergative. As we have already seen in the previous section, in a sentence with unergative verb, it is expected that the surface subject cannot be construed with its numeral quantifier which is embedded in the VP because the unergative verb does not have an internal argument. In (23a), the association between the NP, *kodomo* "children" and its numeral quantifier is impossible, as we expect. On the other hand, in (23b), when the sentence contains a goal phrase, *kooen made* "as far as to the park", the association between the NP, *kodomo* "children" and its numeral

quantifier suddenly becomes recognizable, even though the numeral quantifier and its NP host are too far away. Every reader acknowledges the clear difference in judgment of their associations between (23a) and (23b). As we have seen in the previous section, numeral quantifier is construed only with an internal argument of unaccusative verb thanks to the presence of its trace. But in (23b), even though the verb is unergative, the sentence is grammatical. This suggests that the subject NP must have moved from a certain position within VP, where it left a trace behind. The contrast between (23a) and (23b) means that, the goal phrase, *made* "as far as to" plays a crucial role in the association between numeral quantifier and its NP host. The sentence in (23b) shows that Japanese exhibit unaccusative diagnosis mismatch. Why such a mismatch occurs only when the sentence contains a goal phrase? To solve this puzzle, Tsujimura (1994) hypothesizes that a manner of motion verb, when a goal phrase is added, undergoes classificational change into unaccusative, claiming that there is no unaccusative diagnostic mismatch in (23b). Next, let's take a quick look at Tsujimura's account.

3.3. Classificational Alternation Hypothesis

To solve this diagnostic mismatch puzzle, Tsujimura (1994), based on Miyagawa's (1989) suggestion, proposes that unergative verb, when it appears with a goal phrase, undergoes classificational change into unaccusative verb (see Takezawa 1993 for relevant discussion on English unergative verbs with goal phrase). Tsujimura hypothesizes that unergative verb, *kooen made hasiru,* "run as far as to the park" undergoes classificational change into unaccusative verb. She concludes that subject NP, *kodomo* "children" is moved from direct object position to the surface position. According to Tsujimura (1994), the assumed structure of (23b) is something like (24).

(24) [$_{TP}$ Kodomo$_i$-ga [$_{VP}$ inu-to   awatete t$_i$ san-nin   kooen-made   hasit-ta]] (koto)
   children-Nom   dog-with hurriedly   3-CL   park-as far as run-Past

   'Three children ran as far as to the house with a dog.'

   (Tsujimura 1994)

In (24), the NP, *kodomo* "children" is base generated as an internal argument of the VP, *kooen made hasi-ru*, and then it moves into the Spec of TP. The surface subject, *kodomo* "children" is mutually c-commanded with its numeral quantifier, *san-nin*, because of the presence of the NP trace. Tsujimura's main claim is that the unergative verb in (24) changes into unaccusative verb when the verb occurs with a goal phrase, suggesting that there is no unaccusative diagnosis mismatch from the beginning. According to Tsujimura, the NP, *kodomo* "children" in (24) is not an external argument, but an internal argument of the verb. In the next subsection, I'll give a piece of evidence against this classificational change hypothesis, and I will give an alternative analysis.

3.4. Against the Classificational Alternation Hypothesis

In this subsection, I will apply a diagnosis to the sentence in (23b), using two different kinds of adverbs which are sensitive to the verb classes; unaccusativity or unergativity. In section 3.4.1, I will show that there are two kinds of adverbs, one of which occur with the sentence with unergative verbs, while the other unaccusative. In 3.4.2, I will show that the verb phrase, *kooen-made hasiru* "run as far as to the park", does not undergo classificational change into unaccusative, but that Japanese does exhibit unaccusative diagnosis mismatch.

3.4.1. Basic Observation

Consider the example sentences in (25). The verbs, *hamaru* "fall into" in (25), are considered to be unaccusative verbs.

(25) a. Taro-ga   *ukkari*   wana-ni   hamat-ta (koto)
       T-Nom   *abstractedly* trap-in   fall-Past

       'Taro fell into the trap carelessly.'

    b. *Taro-ga *isyookenmeini*   wana-ni   hamat-ta (koto)
       T-Nom   *earnestly*   trap-in   fall-Past

       'Taro fell into the trap hard.'

As the example sentence in (25a) shows, the adverb, *ukkari* "carelessly", harmonizes with unaccusative verb. While, as the example sentence in (25b) shows, the adverb, *isyookenmeini* "earnestly", does clashes with unaccusative verb. Next consider the contrast in (26). The verbs, *hasiru* 'run' in (26), are considered to be unergative verbs.

(26) a. Taro-ga   *isyookenmeini*   Hakone Marathon-o   hasit-ta   (koto)
       T-Nom   *earnestly*   Hakone Marathon-Acc   run-Past

       'Taro ran Hakone marathon race reluctantly.'

    b. *Taro-ga   *ukkari*   Hakone Marathon-o   hasit-ta   (koto)
       T-Nom   *abstractedly*   Hakone Marathon-Acc   run-Past

       'Taro ran Hakone Marathon race abstractedly.'

As the example sentence in (26a) shows, the adverb, *isyookenmeini* "earnestly", harmonizes with unergative verb. While, as the example sentence in (26b) shows, the adverb, *ukkari* "abstractedly", does clash with unergative verb. These contrasts between (25a) and (26a) , and (25b) and (26b) show that the adverb, *isyookenmeini* "earnestly", is an unergative adverb, while the adverb, *ukkari* "abstractedly", is an unaccusative adverb. With this in mind, let us consider the numeral quantifier stranding in a sentence with attained goal phrase that we have seen in the previous section. In the next subsection, I will use these two kinds of adverbs as a diagnosis to show that unaccusative diagnostic mismatch is still exhibited in the example

sentence in (23b), contra to Tsujimura (1994).

3.4.2. Unaccusative Diagnosis Mismatch in New Evidence

The sentence in (23b) is repeated in (27), but this time each sentence in (27) contains either unergative or unaccusative adverbs.

(27) a. Gakusei-ga *isyookenmeini* inu-to kooen-made san-nin hasit-ta (koto)
      student-Nom *earnestly* dogs-with park-as far as 3-CL run-Past

‘Three students run as far as to the park with dogs earnestly.’

   b. *Gakusei-ga *ukkari* inu-to kooen-made san-ni hasit-ta (koto)
      student-Nom *abstractedly* dogs park-as far as 3-CL run-Past

‘Three students ran as far as to the park with dogs *abstractedly*.’

In (27), the associations between numeral quantifiers and their NP hosts are recognizable. But there is a contrast between (27a) and (27b) in the judgments of the occurrences of adverbs in the sentences. In (27a), the unergative adverb, *isyookenmeini* "earnestly", harmonizes with the manner of motion verb with a goal phrase. On the other hand, as the sentence in (27b) shows, there is a clash between the unaccusative adverb, *ukkari* "abstractedly", and the manner of motion verb with a goal phrase. This means that the manner of motion verb, *kooen made hasiru* "run" is still unergative, suggesting that the surface subject, *gakusei* "students", is an external arguement, an agent. In (27a), the NP, *gakusei* "students", should be as close as to the numeral quantifier, *san-nin*, so that they mutually c-command. And at the same time, it is an external argument. This fact cannot be accounted for by Tsujimura's hypothesis. Why unaccusative diagnosis mismatch is exhibited in a sentence with a manner of motion verb with attained goal phrase, *made* "as far as to"? Before proceeding to the analysis, I will try to show that numeral quantifier can be construed with external argument only when a manner of motion verb takes the goal phrase, *made* "as far as to", not the other PP phrase, *de* "in".

3.4.3. "*Made*" Phrase as a Predicate

Consider the contrast between (28a) and (28b). The sentence in (27a) is repeated in (28b).

(28) a. *Gakusei-ga isyookenmeini inu-to kooen-de san-nin hasit-ta (koto)
      student-Nom earnestly dog-with park-as far as 3-CL run-Past

‘Three students ran earnestly as far as to the park with dogs.’

   b. Gakusei-ga isyookenmeini inu-to kooen-made san-nin hasit-ta (koto)
      student-Nom earnestly dog-with park-as far as 3-CL run-Past

‘Three students ran hurriedly as far as to the park with a dog.’

As the sentence in (28a) shows, the numeral quantifier, *san-nin* cannot be construed with the

NP, *gakusei* "student", when the verb, *hasi-ru* "run" appear with a locative PP, *kooen de* "in the park". On the other hand, the numeral quantifier can be construed with the NP, when a sentence has a goal phrase, *made* "as far as"*,* as is shown in (28b). This contrast between (28a) and (28b) shows that the unaccusative diagnostic mismatch occurs only when the attained goal phrase, *made,* "as far as to" appears in a sentence, suggesting that the phrase, *made* "as far as to" is a predicate, not an adjunct. In the next subsection, I will give an alternative analysis to Tsujimura (1994).

3.5. Alternative Analysis

   The assumed structures of (28a) and (28b) are shown in (29a) and (29b), respectively.

(29)   a. *[$_{TP}$ Gakusei$_i$-ga   [$_{vP}$ t$_i$ isyookenmeini [$_{VP}$ kooen-de   inu-to   san-nin
             student-Nom   earnestly   park-in   dogs-with   3-CL
          hasit-ta]]] (koto)
          run-Past

          'Three students ran earnestly with dogs in park.'

       b. [$_{TP}$ Gakusei$_i$-ga   [$_{vP}$ t$_i$ [$_{vP'}$ isyookenmeini   [$_{VP}$ inu-to   [[$_{SC}$ kooen-made]$_j$
             student-Nom   earnestly   dogs-with   as far as park
          [$_{SC}$ t$_i$ san-nin   t$_j$]]   hasit-ta]]]] (koto)
              3-CL   run-Past

          'Three students run as far as to the park earnestly with dogs.'

In (29a), the NP, *gakusei* "student", is base generated in Spec of TP and the numeral quantifier, *san-nin*, is embedded within VP. They are too far away to be mutually c-commanded. Hence, the association between the two phrases is impossible in (29a). While, in (29b), the NP, *gakusei* "student" is subject of small clause, and at the same time, it is subject of matrix verb, *hasiru* "run". The NP, *gakusei* "student", is merged with the numeral quantifier, *san-nin* within a small clause headed by the predicate, *made* "as far as to"*,* where they mutually c-command. Hence the association between the two is realized within a small clause. As we have seen in the previous subsection, the NP, *gakusei* "student", is also an external argument of the verb*, isyookenmeini hasi-ru* "run earnestly". The NP further moves to the Spec of small vP, as is shown in (29b). In the derivation of (29b), the goal phrase, *kooen made* "as far as to the park" is scrambled over small clause from the remnant, and this derivation so far decides the word order, 'Gakusei-ga inu-to isyookenmei kooen-made san-nin hasit-ta (koto).' In (29a), *kooen-de* "in the park" is an adjunction, while in (29b), *kooen-made* "as far as to the park" functions as a head of small clause. Given this, we can explain why we observe unaccusative diagnostic mismatch when unergative verb appears with an attained goal phrase. Under this NP movement analysis, the NP, *gakusei* receives multiple theta roles from the two different kinds of predicates. If this analysis is correct, a new generalization emerges, which is stated in (30).

(30) Generalization on an NP Movement: An NP moves into external theta position as well as internal theta position.

Here, one interesting problem emerges. This generalization is inconsistent with Saito's (2001). Why an NP moves into external theta position in Japanese? It is widely assumed that English is a language of agreement, while Japanese is non-agreement language. I assume that this difference affects an NP movement. Furthermore, one problem remains to be solved as to resultative construction in Japanese. As we have seen in the previous section, why can't we have the sentence, 'Taro-ga kutakuta-ni hasit-ta (koto) (Taro ran himself tired.),' in Japanese? There is no intransitive verb, which allow resultative construction in Japanese, in which resultative phrase is predicated of an external argument.

4.   Conclusion

In this paper, I have provided two pieces of evidence for Bošković (1997) and Saito (2001). In section 1, I have argued that in resultative construction in Japanese, subject of secondary resultative receive multiple theta roles by Merge. In section 2, I have re-examined the unaccusative diagnosis mismatch in the new evidence and have given alternative analysis to Tsujimura (1994). I have shown that subject of a manner of motion verb with attained goal phrase is external argument, not internal argument. I have proposed that a manner of motion verb selects small clause, which is headed by the goal phrase, *made* "as far as to". The external argument of unergartive verb is first merged with attained goal phrase, and then it moves into its surface position. This movement analysis gives a solution to unaccusative diagnosis mismatch in Japanese.

Under Minimalist Program, the linguistic level are taken to be only the conceputally necessary, PF and LF, meaning that there are no intermediate level of D-Structure or S-Structure. Without the level of D-Structure, there seems to be no upper limits of theta role assignments to an NP. If we don't assume D-Structure, we can provide an adequate account of resultatives and unaccusative diagnosis mismatch in Japanese.

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