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ON EXCEPTIONAL CASE MARKING PHENOMENA IN JAPANESE

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1. INTRODUCTION

Japanese has an Exceptional Case Marking construction whose (embedded) subject is exceptionally marked with accusative case. In the early days of Japanese generative grammar, ECM subjects are taken to undergo movement from the embedded clause to the matrix clause, and hence the construction is traditionally referred to as the ‘Raising to Object (RTO)’ construction (e.g. Kuno 1976). This construction is more recently labeled as the ‘Exceptional Case Marking (ECM)’ construction.

In the Japanese literature, there is an issue as to where ECM subjects are located in clause structure. Logically, there are two possibilities. One possibility is that ECM subjects are located in the matrix object position, and another possibility is that they appear in the embedded clause. This paper argues for the latter view. I will provide some data that allow us to choose the non-raising analysis taking ECM subjects to remain in the subordinate clause over the raising analysis analyzing them to appear in the matrix clause.

The non-raising analysis has been advanced by Hiraiwa (2005a, 2005b), mainly in the light of the facts of indeterminate pronoun binding by the particle *mo*, but it is shown that the data pertaining to *mo*-binding cannot be used for assessing the structural position of ECM subjects. Instead, I will make use of the particle *ka* that can bind indeterminate pronouns, as well as *soo* replacement, to show that ECM subjects do not raise from the embedded clause to the matrix object position. I also suggest that the ECM subjects appear in the CP domain of the subordinate clause.

The discussion in this paper proceeds as follows. Section 2 reviews some issues related to ECM constructions in Japanese. Section 3 shows that it is necessary to distinguish between the ECM construction whose accusative-marked subject is located in the embedded clause and the major object construction whose accusative argument is an object selected by the upper predicate. In Section 4, it is shown that *soo* replacement provides evidence that ECM subjects are located in the embedded clause. Section 5 discusses the facts of indeterminate pronoun binding in ECM constructions. It is suggested that *mo*-binding does not provide us with evidence for the syntactic position of ECM subjects. Rather, their status can be assessed by appeal to *ka*, which can bind indeterminate pronouns in a way similar to the particle *mo*. A conclusion is presented in Section 6.

2. THE ISSUE

As a preliminary to the main discussion, this section discusses some proposals on how ECM subjects are sanctioned in Japanese ECM constructions which include a CP projection in the embedded clause.

Let us begin by noting that when a subordinate clause is introduced by verbs like *omou* ‘think’ and *iu* ‘say’, the embedded subject can be marked with either nominative case or accusative case, as in (1).

- (1) a. Ken-wa [Eri-ga kawai-i to] omot-te i-ru.
 Ken-TOP Eri-NOM cute-PRS COMP think-GER be-PRS
 ‘Ken thinks that Eri is cute.’
 b. Ken-wa [Eri-o kawai-i to] omot-te i-ru.
 Ken-TOP Eri-ACC cute-PRS COMP think-GER be-PRS
 ‘Ken thinks Eri to be cute.’

(1b) represents a case where the embedded subject receives exceptional case marking in Japanese. In this ECM construction, a complementizer is obligatory. In the 1970s, the ECM subject is taken to undergo raising from the embedded to the matrix clause, and hence the construction in (1b) is traditionally referred to as the ‘Raising to Object (RTO)’ construction (Kuno 1976). More recently, this construction is referred to as the ‘Exceptional Case Marking’ (ECM) construction. Predicates selecting ECM complements are given in (2).

- (2) a. *omou* ‘think’, *kangaeru* ‘consider’, *utagau* ‘doubt’, *sinziru* ‘believe’,
katei/soutei-suru ‘assume’, *iu* ‘say’, etc.
 b. *minasu* ‘regard’, *toru* ‘regard’ (ECM complement only)

In the Japanese literature, there is an issue as to where ECM subjects are located in clause structure, and there are three major proposals.

- (3) a. Raising-to-Subject Analysis (e.g. Kuno 1976, Sakai 1998, Tanaka 2002)
 b. Major Object Analysis (e.g. Hoji 1991, Takano 2003)
 c. In-Situ Analysis (e.g. Hiraiwa 2005a, 2005b, Taguchi 2015)

For the analyses taking ECM subjects to appear in the matrix clause, two different claims are available; one analysis takes ECM subjects to be placed in the matrix object position via movement (3a), and the other analysis takes them to be base-generated in that position as a major object (3b). The difference between the two analyses in (3a) and (3b) lies in whether the ECM subject is taken to be generated and licensed in the matrix object position via movement or binding. The analyses in (3a) and (3b) do not differ from each other in taking the ECM subject to reside in the matrix clause. This entails that there are two logical possibilities in regard to the position of ECM subjects, as illustrated in (4).

- (4) a. [CP Sub-ACC_i [CP t_i/pro_i]]
 b. [CP [CP Sub-ACC]]

Under the views (3a) and (3b), the ECM subject is located in the matrix object position, as in (4a). In the view (3c), it is located in the embedded subject position, as in (4b). Then, the issue is reduced to the question of whether the ECM subject is located in the matrix clause or the embedded clause.

It is worth noting that the Japanese ECM construction differs in structure from the ECM construction found in languages like English. In English, no complementizer appears in the embedded clause of the ECM construction, as exemplified in (5a). Accordingly, it is often claimed (e.g. Chomsky 1981, 1986) that the ECM predicate takes a TP-complement, which constitutes a structure smaller than the complement clause containing CP.

- (5) a. John thinks Mary to be honest.
 b. [John thinks [TP Mary to be honest]]

In the configuration in (5b), the Case licensing of the lower subject by a higher predicate is possible in the absence of an intervening CP projection. On the other hand, in Japanese, the ECM construction comprises the ordinary complementizer *to*, suggesting that the embedded clause includes CP. Since a verb generally cannot Case-license an argument across a CP boundary, this raises the question of how the accusative case on the ECM subject is licensed.

In the following discussions, I will argue that in Japanese, the configuration in (4b), where the subject resides in the embedded clause, can be posited for the ECM construction, while the structure in (4a) is obtained in the major object construction. It is also argued that while the ECM subject resides in the embedded clause, it is raised to CP for its Case-licensing.

3. ECM SUBJECT AND MAJOR OBJECT

In this section, I suggest that two kinds of accusative-marked arguments need to be distinguished, even though they function as the logical subjects of the embedded predicates. In (6a), the embedded subject is marked with accusative case, and in (6b), the argument appearing in the accusative case additionally accompanies the noun *koto* 'fact'.

- (6) a. Ken-wa **Mari-o** kawai-i to omot-te i-ru.
 Ken-TOP Mari-ACC cute-PRS COMP think-GER be-PRS
 'Ken thinks Mari to be cute.'
 b. Ken-wa **Mari-no koto-o** kawai-i to omot-te i-ru.
 Ken-TOP Mari-GEN fact-ACC cute-PRS COMP think-GER be-PRS
 'Ken thinks Mari to be cute.'

Note that when the embedded subject is marked with nominative case, it cannot accompany *koto*.

- (7) Ken-wa [Mari(*-no koto)-ga kawai-i to] omot-te i-ru.
 Ken-TOP Mari(-GEN fact)-NOM cute-PRS COMP think-GER be-PRS
 'Ken thinks that Mari is cute.'

The argument *Mari* can accompany *koto* when it is marked with accusative case, but not when it is marked with nominative case. At first sight, it looks as if *koto* occurs optionally with the accusative argument in (6) by virtue of 'formal noun' insertion (Sasaguri 2000, Takano 2003, Takubo 2010, Kishimoto 2004).

Nevertheless, the kind of alternation observed in (6) differs from the insertion of the formal noun *koto*. Upon close inspection, it turns out that the grammatical status of the accusative-marked argument differs depending on whether it accommodates *koto* or not. The accusative argument in (6a) is an ECM subject, which appears in the embedded clause, but the accusative argument with *koto* in (6b) is a major object selected by the matrix verb *omou* 'think', which appears in the matrix object position.

To make this point, observe that the formal noun *koto*, which does not carry a substantial meaning, can occur only with arguments in object position, as shown by the examples in (8).

- (8) a. Ken-ga Eri(-no koto)-o sikat-ta.
 Ken-NOM Eri(-GEN fact)-ACC scold-PST
 'Ken scolded Eri.'
 b. Ken(*-no koto)-ga Eri-o sikat-ta.
 Ken(-GEN fact)-NOM Eri-ACC scold-PST
 'Ken scolded Eri.'

When (8a) is passivized, the addition of *koto* to the theme argument is no longer possible, even though it starts out in object position, as shown in (9).

- (9) Eri(*-no koto)-ga Ken-ni sikar-are-ta.
 Eri(-GEN fact)-NOM Ken-by scold-PASS-PST
 'Eri was scolded by Ken.'

The impossibility of inserting *koto* to the passive subject in (9) is due to the surface direct object constraint that applies to the formal noun insertion. By contrast, it is possible to retain the noun *koto* even if the embedded subject in (6b) is promoted to subject via passivization.

- (10) Mari(-no koto)-ga minna-ni kawai-i to omow-are-te i-ru.
 Mari(-GEN fact)-NOM everyone-by cute-PRS COMP think-PASS-GER be-PRS
 'Mari is thought to be cute by everyone.'

In (10), the passive subject can accompany *koto* optionally. If *koto* were inserted as a formal noun, which is constrained by the direct object constraint, the subject would not be allowed to occur with *koto*. The fact that (10) is acceptable regardless of whether the passive subject accompanies *koto* shows that the noun *koto* is not a formal noun.

There is good reason to believe that the accusative argument with *koto* in (6b) counts as a major object selected by the matrix verb. This can be seen by the fact that in

a clause like (11), which is headed by verbs like *omou* ‘think’ and *iu* ‘say’, the accusative argument *Mari* must accompany *koto*.

- (11) Ken-ga { *Mari-o/Mari-no koto-o } omot-ta/it-ta.
 Ken-NOM { Mari-ACC/Mari-GEN fact-ACC } think-PST/say-PST
 ‘Ken thought/said about Mari.’

The verbs *omou* ‘think’ and *iu* ‘say’ select an object referring to an abstract entity, but not a human object. It is also important to see that *koto* cannot be appended to the subject of an adjectival predicate like *kawaii* ‘cute’.

- (12) Kono kurasu-de-wa { Mari-ga/*Mari-no koto-ga } kawai-i.
 this class-in-TOP { Mari-NOM/Mari-GEN fact-NOM } cute-PRS
 ‘Mari is cute in this class.’

Since the adjective *kawaii* ‘cute’ does not allow the subject *Mari* to occur with *koto*, it must be the case that *Mari-no koto* in (6b) is an object selected by the main predicate. These facts suggest that the noun *koto* in (6b) is not a formal noun. Given this, we can posit the structure in (13a) for (6a), and the structure in (13b) for (6b).

- (13) a. [CP [CP [Mari-o Pred to] omou]
 b. [CP [CP [Mari_i-no koto-o [pro_i Pred to] omou]

This means that (6a) is an ECM construction, while (6b) is a major object construction. As illustrated in (13b), the major object is co-indexed with *pro* in the embedded clause, so that *Mari* in (6b) is taken to be the subject of the embedded predicate.

While some authors (e.g. Hiraiwa 2005a) do not distinguish between the two kinds of accusative arguments, there is evidence that the position of the accusative arguments differs according to whether they accompany *koto* or not. For instance, the difference in their grammatical status can be discerned by placing them to the right of the complementizer *to*.

- (14) a. *Ken-wa kawai-i to **Mari-o** omot-te i-ru.
 Ken-TOP cute-PRS COMP Mari-ACC think-GER be-PRS
 ‘Ken thinks Mari to be cute.’
 b. Ken-wa kawai-i to **Mari-no koto-o** omot-te i-ru.
 Ken-TOP cute-PRS COMP Mari-GEN fact-ACC think-GER be-PRS
 ‘Ken thinks Mari to be cute.’

(14a), which involves the scrambling of the embedded predicate across the accusative subject *Mari-o*, is not acceptable.¹ This effect emerges when an argument located in the embedded clause is moved to the matrix clause, which is followed by the fronting of the embedded clause to the sentence-initial position, as in (15a).

- (15) a. *[CP [CP **NP_i** to] NP_i think]
 b. [CP [CP pro_i to] NP_i think]

In the configuration in (15a), the accusative subject fails to c-command its copy left in the embedded clause, and hence (14a) is excluded (cf. Saito 1989). When the accusative argument occurs with *koto*, no such deviance is caused, as shown in (14b). This suggests that the accusative argument is base-generated as a major object outside the embedded clause. In this case, no movement has taken place out of the embedded clause, i.e. the embedded clause does not contain a copy of the accusative argument. Therefore, it is possible for the accusative argument to appear to the right of the complementizer *to*, as in (14b). (14b) is acceptable, because *pro* can take as its antecedent an argument that does not c-command it, as in (15b).

Before proceeding, note that in cases where the ECM subject is raised via A-movement (by passivization), no deviance is caused even if it is positioned to the right of the complementizer *to*, as shown by (16).

- (16) a. **Mari-ga** minna-ni [kawai-i to] omow-are-te i-ru.
 Mary-NOM everyone-by cute-PRS COMP think-PASS-GER be- PRS
 ‘Mari is thought to be cute by everyone.’
 b. Minna-ni [kawai-i to]_i **Mari-ga** _{t_i} omow-are-te i-ru.
 everyone-by cute-PRS COMP Mary-NOM think-PASS-GER be- PRS
 ‘Mari is thought to be cute by everyone.’

The passive subject in (16a) is the thematic subject of the adjective *kawaii* ‘cute’. The fact poses a potential problem on the analysis attributing the unacceptability of (14a) to the presence of a copy of the accusative argument in the embedded clause, because the nominative subject *Mari-ga* is originated from the embedded clause, as in (17a).

- (17) a. [CP NP_i [CP NP_i that] think]
 b. *[CP [CP NP_i that] NP_i think]

If the passive subject is moved out of the embedded clause by A-movement, (16a) is expected to be unacceptable, obtaining the configuration in (17b), where the passive subject fails to c-command its copy in the embedded clause. This sentence has a configuration similar to the one posited for the unacceptable sentence in (14b). Nevertheless, (16b) is acceptable.

I suggest here that the sentence in (16b) is rendered acceptable, due to the availability of a rescue strategy to replace a copy left by movement with PRO.

- (18) [CP [CP PRO_i that] NP_i think]

If PRO appears in the embedded clause, as in (18), no deviance arises, because the fronted embedded clause does not include a copy of the subject. Note that this replacement strategy can also apply when vP-fronting takes place, as illustrated in (19).

- (19) a. Ken-ga sono hon-o yomi-sae si-ta.
 Ken-NOM that book-ACC read-even do-PST
 ‘Ken even read the book.’

- b. [Sono hon-o yomi-sae] Ken-ga si-ta.
 that book-ACC read-even Ken-NOM do-PST
 ‘Even read the book, Ken did.’

(19b), where the vP constituent is fronted, is acceptable, since the copy appearing in vP can be replaced by PRO, as in (20).²

- (20) [CP [vP PRO_i V-v] NP_i did]

As discussed by Hasegawa (1990), this replacement strategy is available only when the subject refers to an animate entity, because PRO, which can occur only in subject position, is constrained by the animacy condition. Thus, the example in (21b), which is derived by applying vP-fronting to (21a), is excluded, due to the failure of applying PRO replacement.

- (21) a. Ame-ga huri-sae si-ta.
 rain-NOM fall-even do-PST
 ‘It even rained.’
 b. *[Huri-sae] ame-ga si-ta.
 fall-even rain-NOM do-PST
 ‘It even rained.’

In (21a), the copy of the subject left in vP is c-commanded by the antecedent, so that the sentence is acceptable. When vP is fronted, the copy left in vP is neither c-commanded by the antecedent, nor is PRO replacement possible.

- (22) [CP [vP ~~NP_i~~ V-v] NP_i did]

(21b) turns out to be unacceptable, because it has the structure in (22), where the copy left in vP is not c-commanded by its antecedent.

The discussion suggests that the ECM construction in (16b), where the passive subject occurs to the right of complement clause, is tolerated on the grounds that PRO can replace the copy of the ECM subject in the embedded clause. The present analysis leads to the prediction that the passivized ECM construction will be unacceptable if the passive subject does not allow PRO replacement. This prediction is in fact correct, as shown in (23).

- (23) a. **Kobe-no yakei-ga** minna-ni [utukusi-i to] omow-are-te
 Kobe-GEN night.view-NOM everyone-by beautiful-PRS COMP think-PASS-GER
 i-ru.
 be-PRS
 ‘Kobe’s night view is thought to be beautiful by everyone.’
 b. ?*Minna-ni [utukusi-i to] **Kobe-no yakei-ga**
 everyone-by beautiful-PRS COMP Kobe-GEN night.view-NOM
 omow-are-te i-ru.
 think-PASS-GER be-PRS
 ‘Kobe’s night view is thought to be beautiful by everyone.’

In this section, I will show, on the basis of *soo* 'so' replacement, that the accusative subject in the ECM construction is located in the embedded clause rather than in the matrix clause. *Soo* replacement also provides a piece of evidence that a major object (i.e. an accusative argument accompanying *koto*) is located in the matrix clause.

(24) a. Ken-wa [Eri-ga kawaii to] it-ta.
Ken-TOP Eri-NOM cute-PRS COMP say-PST
'Ken said that Eri was cute.'
b. Mari-mo soo (*to) it-ta.
Mari-also so COMP say-PST
'Mari said so. too.'

(25) [CP [TP] to] it-ta
 └──────────┘
 soo

Let us next consider how *soo* replacement applies to the ECM construction. First, when (26a) is a linguistic antecedent, *soo* can replace the embedded clause containing an ECM subject, as shown in (26b), but the ECM subject cannot be overtly realized, as shown in (26c).

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- b. Mari-mo soo it-ta.
 Mari-also so say-PST
 ‘Mari said so, too.’
- c. *Mari-mo Eri-o soo it-ta.
 Mari-also Eri-ACC so say-PST
 (lit.) ‘Mari said (Eri) so, too.’

Given that *soo* substitutes for CP, the fact points to the conclusion that the ECM subject appears in the embedded clause; to be more precise, it appears below the embedded CP.

A major object argument accompanying *koto* behaves differently with regard to *soo* replacement, because it can be overtly realized even when *soo* replacement applies, as shown in (27).

- (27) a. Ken-wa Eri-no koto-o kawai-i to it-ta.
 Ken-TOP Eri-GEN fact-ACC cute-PRS COMP say-PST
 (lit.) ‘Ken said Eri to be cute.’
- b. Mari-mo Eri-no koto-o soo it-ta.
 Mari-also Eri-GEN fact-ACC so say-PST
 (lit.) ‘Mari said of Eri so, too.’
- c. Mari-mo soo it-ta.
 Mari-also so say-PST
 ‘Mari said so, too.’

In the major object construction, the accusative argument is selected by the upper predicate. Since the accusative argument, i.e. the major object, is located in the matrix clause, it can be overtly realized even when *soo* appears in the clause, as in (27b). Note also that *soo* replacement may apply to the embedded clause even if the major object is unrealized, as in (27c). (27c) is tolerated because the relevant argument can be a null pronoun *pro*. In (27c), the major object is not replaced by *soo*, but it is realized as *pro*.

In essence, the data regarding *soo* replacement suggest that the accusative arguments of the ECM and the major object constructions occupy distinct constituent positions, as illustrated in (28).

- (28) a. [CP [Ken-ga/-o Pred to] omou]
 b. [CP Ken_i-no koto-o [*pro*_i Pred to] omou]

In the ECM construction, *soo* replacement cannot apply when the ECM subject is overtly realized. Given that *soo* replacement applies to CP, this fact shows that the ECM subject is not located in the matrix object position.

For the purpose of confirming the validity of the structure posited for the ECM construction, let us consider some additional examples. The examples in (29) show how *soo* replacement takes place on the passivized ECM construction.

- (29) a. Eri-ga sensei-ni kawai-i to omow-are-te i-ru.
 Eri-NOM teacher-by cute-PRS COMP think-PASS-GER be-PRS
 ‘Eri is thought to be cute by the teachers.’

- b. Eri-wa tomodati-ni-mo soo omow-are-te i-ru.
 Eri-TOP friend-by-also so think-PASS-GER be-PRS
 ‘Eri is thought so by her friend.’

When the ECM subject in the embedded clause is promoted to a matrix subject by passivization, *soo* replacement is legitimate even if the passive subject is overtly realized, as shown in (29b). This fact suggests that when an argument is extracted from the embedded clause via A-movement, the moved argument is not interpreted as forming part of the embedded clause.

On the other hand, when the ECM subject is scrambled to the front of the sentence, *soo* replacement is legitimate only when the ECM subject is elided, as in (30b).

- (30) a. Eri-o Ken-ga kawai-i to it-ta.
 Eri-ACC Ken-NOM cute-PRS COMP say-PST
 (lit.) ‘Eri, Ken said to be cute.’
 b. Mari-mo soo it-ta.
 Mari-also so say-PST
 ‘Mari said so, too.’
 c. *Eri-o Mari-mo soo it-ta.
 Eri-ACC Mari-also so say-PST
 (lit.) ‘Eri, Mari said so, too.’

The possibility of *soo* replacement remains invariant regardless of whether the ECM subject is scrambled out of the embedded clause or not. Since *soo* replaces CP, this shows that the ECM subject is taken to be located in the embedded clause even if it has been moved to the front of the sentence by scrambling.

As argued by some researchers (e.g. Kaneko 1988, Hiraiwa 2005a), an ECM subject is located in a higher position than its nominative counterpart. It is in fact easy to confirm that the ECM subject appears in CP. To make this point, consider the examples in (31).

- (31) a. Mari-ga kawai-i dake (da).
 Mari-NOM cute-PRS only COP
 ‘It is only that Mari is cute.’
 b. Mari-wa kawai-i dake (da).
 Mari-TOP cute-PRS only COP
 ‘Mari is only cute.’

Kishimoto (2009) argues that when the adverbial particle *dake* is added to the right of a tensed predicate, it takes scope over TP. Thus, *dake* can be associated with the nominative subject in (31a), which appears in TP, and the sentence can have the interpretation that only Mari is cute.

- (32) a. [CP [TP Mari-ga T-*dake*] (da)]
 b. [CP Mari-wa [TP T-*dake*] (da)]

On the other hand, *dake* cannot be associated with the topic in (31b), and the sentence lacks the interpretation that only Mari is cute. The interpretative fact shows that the topicalized subject in (31b) is located in a position that falls outside the scope of *dake* appearing to the right of tense, suggesting that the topic is located in CP, as illustrated in (32b).

A similar contrast is observed between (33a) and (33b) in regard to the association with focus of the adverbial particle *dake*.

- (33) a. Ken-wa Mari-ga kawai-i **dake** (da) to omot-te i-ru.
 Ken-TOP Mari-NOM cute-PRS only COP COMP think-GER be-PRS
 ‘Ken thinks only Mari to be cute.’
 b. Ken-wa Mari-o kawai-i **dake** (da) to omot-te i-ru.
 Ken-TOP Mari-ACC cute-PRS only COP COMP think-GER be-PRS
 ‘Ken thinks Mari to be cute.’

In (33a), *dake* can be associated with the nominative subject *Mari*, so the sentence can have the subject-focus interpretation that only Mari is cute. By contrast, (33b) lacks this focus interpretation. This fact suggests that the ECM subject in (33) is located in a position higher than the nominative subject, which appears in the embedded TP. Since the ECM subject is not extracted from the embedded clause, it can be stated that the ECM subject occurs in CP, which is projected above TP, as shown in (34a).

- (34) a. [... [CP [TP Mari-ga T-*dake* (da)] to] omou]
 b. [... [CP Mari-o [TP T-*dake* (da)] to] omou]

In (34b), the ECM subject appears in a domain to which its Case-licensing head (i.e. the verb in the matrix clause) can have access, so the accusative Case of the ECM subject can be licensed by the matrix verb.

5. INDETERMINATE PRONOUN BINDING

This section will take a look at the facts of indeterminate pronouns. Indeterminate pronouns are interpretable relative to the particle *mo* or *ka*, provided the latter c-commands the former.⁵ The combined expressions are interpreted as NPIs (negative polarity items) or universal quantifiers when the particle is *mo*, and as existential quantifiers when the particle is *ka*. It is shown that the distribution of indeterminate pronouns which are construed with *ka* offers us another piece of evidence that the ECM subject is located in the embedded clause.

First, observe that the particle *mo* appearing after the complementizer *to* ‘that’ can bind an accusative-marked argument.

- (35) a. Ken-wa [**dare-o** gakusei da to-**mo**] omowa-nakat-ta.
 Ken-TOP anyone-ACC student COP COMP-Q think-NEG-PST
 ‘Ken did not think anyone to be a student.’
 b. Ken-wa **dare-no koto-o** [gakusei da to-**mo**] omowa-nakat-ta.
 Ken-TOP anyone-GEN fact-ACC student COP COMP-Q think-NEG-PST
 ‘Ken did not think anyone to be a student.’

The accusative argument *dare* in (35a) is an ECM subject, but the accusative argument *dare-no koto* in (35b) is a major object. In both cases, the indeterminate pronoun *dare* can be bound by *mo* attached to the complementizer *to*.

On the assumption that *mo* can bind constituents in the embedded clause when it is placed to the right of the complementizer, Hiraiwa (2005a, 2005b) claims that the ECM subject is located in the embedded clause, since a sentence like (35a) is acceptable. Nevertheless, given the acceptability of (35b), a question immediately arises as to whether the binding domain of *mo* is limited to the embedded clause. As a matter of fact, his claim is called into question because major objects are located in the matrix clause, as discussed in section 3. Note that the major object in (35b) can be bound by *mo* attached to the complementizer, which indicates that the scope of *mo* is not limited to the embedded clause, but extends beyond it, contrary to Hiraiwa's assumption.

In this connection, observe that while *mo* can bind the embedded subject marked with nominative case, as in (36a), it cannot bind a matrix subject, as shown by the unacceptability of (36b).

- (36) a. Ken-wa [**dare-ga** gakusei da to-**mo**] omowa-nakat-ta
 Ken-TOP anyone-NOM student COP COMP-Q think-NEG-PST
 'Ken thought that no one is a student.'
 b. ***Dare-ga** [Ken-o gakusei da to-**mo**] omowa-nakat-ta
 anyone-NOM Ken-ACC student COP COMP-Q think-NEG-PST
 'Ken thought that no one is a student.'

(36a) is well-formed, since the nominative-marked *dare* is an embedded subject. By contrast, the nominative argument appearing in the matrix TP in (36b) cannot be construed with *mo*. The fact suggests that the particle *mo* attached to the complementizer *to* extends its scope over the matrix vP, but not the matrix TP.

There is evidence that when *mo* is placed after the complementizer *to* 'that', it extends its scope over the matrix vP in the ECM construction. To understand this point, consider the example in (37).

- (37) Ken-wa tomodati-ni [PRO zyugyoo-o sabor-u to] iwa-nakat-ta.
 Ken-TOP friend-DAT class-ACC skip-PRS COMP say-NEG-PST
 'Ken did not tell his friend that he would skip a class.'

(37) is a subject-control construction where PRO in the embedded clause is controlled by the matrix subject. Thus the matrix subject *Ken* is understood to be the agent of the embedded verb *saboru* 'skip'. In (37), since the dative goal argument is selected by the matrix verb, it is possible to place this argument to the right of the complement clause.

- (38) Ken-wa ti [PRO zyugyoo-o sabor-u to] tomodati-ni iwa-nakat-ta.
 Ken-TOP class-ACC skip-PRS COMP friend-DAT say-NEG-PST
 'Ken did not tell his friend that he would skip a class.'

The example in (38) suggests that the dative argument is located in the matrix clause. Importantly, in (39a), the particle *mo* attached to the complementizer can bind the dative

argument, so that the combined expression can be interpreted as an NPI (see also Takano 2003, Akaso 2009, 2015 for similar observations).

- (39) a. Ken-wa **dare-ni** [PRO zyugyoo-o saboru to-**mo**] iwa-nakat-ta.
 Ken-TOP anyone-DAT class-ACC skip COMP-Q say-NEG-PST
 ‘Ken did not tell anyone that he would skip a class.’
 b. ***Dare-ga** Mari-ni [PRO zyugyoo-o saboru to-**mo**] iwa-nakat-ta.
 anyone-NOM Mari-DAT class-ACC skip COMP Q say-NEG-PST
 ‘Anyone did not tell Mari that he would skip a class.’

Since *mo* can bind the dative argument located in the matrix clause in (39a), but cannot bind the subject in the matrix clause, as in (39b), it must be the case that *mo* takes scope over the matrix vP.⁶

A question to be raised at this point is why the particle *mo* occurring after the complementizer *to* can bind the dative argument located in the matrix clause, as in (35b) and (39a). In answer to this question, I propose that when the host complementizer *to* to which *mo* is attached is incorporated into a higher verb at LF, the scope of *mo* is expanded to vP projected from the higher predicate, as illustrated in (40a) (cf. Ogawa 2007).

- (40) a. [_{vP} [_{CP} C-**mo**] omo(w)] → [_{vP} [_{CP} ~~C-mo~~] C-**mo**-omo(w)]
 b. [_{vP} [_{CP} ~~C-mo~~] C-**mo**-omo(w)] → [_{vP} [_{vP} [_{CP} ~~C-mo~~] C-~~mo~~-omo(w)]-**mo**]

I postulate here that *mo* is excorporated and adjoined to vP after the complementizer is raised to v, as in (40b), so that its scope is extended over the matrix vP.

Note at this point that similar scope expansion occurs in the light verb constructions where verbal nouns (VNs) are combined with the verb *suru* ‘do’.

- (41) a. Ken-wa Mari-ni {soodan-o si-ta/soodan-si-ta}.
 Ken-TOP Mari-DAT consult-ACC do-PST/consult-do-PST
 ‘Ken consulted Mari.’
 b. Ken-wa **dare-ni** soodan-**mo** si-nakat-ta.
 Ken-TOP anyone-DAT consult-Q do-NEG-PST
 ‘Ken did not consult anyone.’

The VN-*suru* construction has two variants—one variant in which VN is accusatively marked and the other in which VN is incorporated into *suru* ‘do’. When *mo* is attached to VN, it stands as an object. This can be seen by the fact that VN can include accusative case (optionally) even if it occurs with *mo*, as in *soodan(-o) mo*. Importantly, the dative argument in (41b) can be bound by *mo*.

By contrast, *mo* associated with a direct object cannot bind an indirect object in ordinary ditransitive constructions, as (42b) shows.

- (42) a. Ken-wa kodomo-ni okasi-o age-ta.
 Ken-TOP child-DAT cake-ACC give-PST
 ‘Ken gave sweets the child.’

- b. *Ken-wa dare-ni okasi-mo age-nakat-ta.
 Ken-TOP anyone-DAT cake-also give-NEG-PST
 'Ken did not give sweets to anyone.'

Example (42b) is not acceptable because *mo* appearing with a direct object cannot bind an indirect object.

In the VN-*suru* construction in (41b), *mo* can bind the indirect object even though it is attached to the direct object. In an attempt to account for the puzzling behavior of *mo* in the VN-*suru* construction, Kishimoto (2001) suggests that a VN object is incorporated to the verb *suru* at LF, so that the particle *mo* associated with the VN is allowed to extend its scope over vP.

- (43) a. [vP [NP VN-*mo*] su] → [vP [NP ~~VN-mo~~] VN-*mo*-su]
 b. [vP [NP ~~VN-mo~~] VN-*mo*-su] → [vP [vP [VN-mo] VN-mo-su]-*mo*]

When a head to which *mo* is attached is incorporated into a higher predicate, as in (43a), *mo* extends its scope over vP by virtue of VN incorporation plus adjunction of *mo* to vP, as in (43b). Note that VN incorporation is blocked when a modifier is present because it involves head movement. Thus, the example in (44) is not acceptable.

- (44) *Ken-wa dare-ni [okane-no soodan-mo] si-nakat-ta.
 Ken-TOP anyone-DAT money-GEN consult-Q do-NEG-PST
 'Ken did not consult anyone about money.'

The fact shows that the VN head *soodan* cannot be incorporated into a higher predicate while leaving a nominal modifier. If this option were available, the modifier would not modify the noun head. Owing to the presence of a nominal modifier, the VN *soodan* in (44) does not incorporate into the verb. Consequently, the dative argument cannot be bound by *mo*, and (44) is excluded as unacceptable.

The complementizer *to* to which *mo* is added can be incorporated into the higher predicate at LF, and thus, *mo* is allowed to take scope over vP. This type of scope expansion does not happen when embedded clauses are introduced by another complementizer *koto*. Thus, a contrast in acceptability is observed between (45a) and (45b).

- (45) a. Watasi-wa Ken-ni [PRO nani-o ka-u koto-mo]
 I-TOP Ken-DAT anything-ACC buy-PRS fact-Q
 motome-nakat-ta.
 ask-NEG-PST
 'I did not ask Ken to buy anything.'
 b. ?*Watasi-wa dare-ni [PRO hon-o ka-u koto-mo]
 I-TOP anyone-DAT book-ACC buy-PRS fact-Q
 motome-nakat-ta.
 ask-NEG-PST
 'I did not ask anyone to buy books.'

The particle *mo* can bind an argument inside the embedded clause, as shown in (45a), but cannot bind the dative argument residing in the matrix clause, as in (45b). This shows that *mo* does not extend its scope over the matrix vP. Under the present analysis, this is indicative of the fact that the complementizer *koto* does not incorporate into a higher predicate.

Note also that when the clause contains a nominative subject, complementizer incorporation does not take place, either. Thus, the example in (46) is excluded on the grounds that *mo*, which occurs with *to*, cannot bind the indeterminate pronoun.

- (46) ?*Ken-wa **dare-ni** [zibun-ga hon-o ka-u to-**mo**] iwa-nakat-ta.
 Ken-TOP anyone-DAT self-NOM book-ACC buy-PRS COMP-Q say-NEG-PST
 'Ken did not tell anyone that he himself would skip a class.'

The same holds true for the major object construction. The following example illustrates that when a nominative subject is present, *mo* does not take scope over a major object (cf. Sakai 1998).

- (47) *Ken-wa **dare-no koto-o** [sono hito-ga gakusei da to-**mo**]
 Ken-TOP who-GEN fact-ACC that man-NOM student COP COMP-Q
 omot-te i-nakat-ta.
 think-GER be-NEG-PST
 'Ken did not think of anyone that he was a student.'

The examples in (46) and (47) suggest that complementizer incorporation is blocked when the embedded clause includes a nominative subject. In such cases, *mo* does not extend its scope beyond the embedded clause. This is presumably due to the fact that complementizer incorporation takes place only when the tense is non-finite.

The data suggest that whenever complementizer incorporation is implemented, *mo* is allowed to take scope over vP projected from the verbal head which comes to accommodate the complementizer *to*, as illustrated in (40). When the complementizer *to* accompanying *mo* is incorporated into the higher verb, as in (40a), *mo* is exorporated and adjoined to vP, as illustrated in (40b). Consequently, *mo* can take scope over the vP associated with the higher verb.

The discussion shows that whether an ECM subject is located in the matrix clause or in the embedded clause cannot be determined by the syntactic behavior of the particle *mo* attached to the complementizer, because its scope expands over the matrix vP due to complementizer incorporation. The conclusion that can be drawn here is that it is not possible to claim that the ECM subject is located in the embedded clause, on the basis of *mo*-binding, contrary to Hiraiwa's claim.

In Japanese, indeterminate pronoun binding is possible with the particle *ka* as well. When an indeterminate pronoun is bound by *ka*, the whole complex is interpreted as an existential quantifier. Interestingly, the particle *ka* which is attached to the complementizer *to* can bind an indeterminate pronoun inside the complement clause, but not a dative argument located in the matrix clause.

- (48) a. *Ken-wa dare-ni [PRO soko-ni ik-u to-ka] iwa-nakat-ta.
 Ken-TOP anyone-DAT there-to go-PRS COMP-Q say-NEG-PST
 ‘Ken did not tell anyone that he would go anywhere.’
 b. Ken-wa Mari-ni [PRO doko-ni ik-u to-ka] iwa-nakat-ta.
 Ken-TOP Mari-DAT anywhere-to go-PRS COMP-Q say-NEG-PST
 ‘Ken did not tell Mari that he would go anywhere.’

(48a) shows that *ka* cannot bind the dative argument residing in the matrix clause, but (48b) shows that the locative argument included in the embedded clause can be bound by *ka*. The examples in (48) illustrate that the particle *ka* takes scope only over the embedded clause, i.e. the embedded CP.

If the particle *ka* does not extend its scope over vP in the matrix clause, it is possible to assess whether an argument is located in the embedded clause or in the matrix clause, by making use of the particle *ka*. For illustration, consider the following examples.

- (49) a. Ken-wa [dare-o gakusei da to-ka] iwa-nakat-ta.
 Ken-TOP anyone-ACC student COP COMP-Q say-NEG-PST
 (lit.) ‘Ken did not say anyone to be a student.’
 b. *Ken-wa dare-no koto-o [gakusei da to-ka] iwa-nakat-ta.
 Ken-TOP anyone-GEN fact-ACC student COP COMP-Q say-NEG-PST
 ‘Ken did not say of anyone that he was a student.’

In (49a), the accusative-argument can be bound by the particle *ka* attached to the complementizer *to*, which confirms that the ECM subject resides in the embedded clause. On the other hand, the accusative argument with *koto* in (49b) is a major object; this accusative argument cannot be bound by *ka*, which illustrates that the major object lies in the matrix clause.

One remaining question is what gives rise to the difference between *mo* and *ka* in the extent of scope. There are several possibilities that come into mind, but I suggest that *ka* blocks LF complementizer incorporation, so that the scope of *ka* does not extend beyond CP to which it is attached.

- (50) a. [_{VP} [_{CP} C-ka] V-v]
 b. [_{VP} [_{CP} C-ka] V-v] → * [_{VP} [_{CP} ~~C-ka~~] C-ka-V-v]

I surmise that this blocking effect accrues from the fact that *ka* has the property that it cannot attach to a verbal element, as shown in (51b).

- (51) a. Ken-ga hasiri-mo si-ta.
 Ken-NOM run-Q do-PST
 ‘Ken also ran.’
 b. *Ken-ga hasiri-ka si-ta.
 Ken-NOM run-Q do-PST
 ‘Ken ran.’

The examples in (51) show that the particle *ka*, unlike *mo*, cannot be associated with a verb. This being the case, it is naturally expected that complementizer incorporation is

doomed to fail when the complementizer comprises the existential particle *ka*, since it invokes the adjunction operation of *ka* to the verb. In such cases, the complementizer needs to remain in the original position without incorporation, and thus the particle *ka* attached to the complementizer takes scope only over the embedded CP.⁷ The possibility or impossibility of complementizer incorporation derives the asymmetry in indeterminate pronoun binding observed between (49a) and (49b).

In short, Japanese has two kinds of quantificational particles (i.e. *mo* and *ka*) that can bind indeterminate pronouns. The facts of *mo*-binding do not provide evidence that ECM subjects are located in the embedded clause because *mo* attached to the complementizer *to* extends its scope over the matrix vP, due to the LF incorporation of the complementizer *to* into a higher predicate. By contrast, the particle *ka* attached to the complementizer blocks LF complementizer incorporation, so that this particle takes scope only over the embedded CP. The data regarding *ka*-binding illustrate that the ECM subject resides in the embedded clause.

6. CONCLUSION

In this paper, it has been argued that two kinds of accusative-marked arguments, which function as the logical subjects of the embedded clauses, need to be distinguished. One kind of accusative argument is construed as a genuine ECM subject and the other, a major object. In the ECM construction, its accusative argument, i.e. the ECM subject, is located in the embedded clause. In the major object construction, the accusative argument is a major object selected by the upper predicate, which is co-referential with *pro* in the embedded clause. It has been argued that the ECM subject remains in the embedded clause (and it appears in the embedded CP). Several pieces of evidence, including *soo* replacement and *ka*-binding, are provided in support of the view that the ECM subject appears in the embedded clause. It has also been shown that *mo*-binding is not usable for evaluating where the ECM subject is located, in the presence of LF complementizer incorporation that applies to the complementizer *to*. By contrast, complementizer incorporation is blocked when the complementizer *to* carries the particle *ka*, and as a result, the particle *ka* takes scope only over the embedded clause. Accordingly, the position of the ECM subject can be evaluated on the basis of *ka*-binding.

NOTES

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¹ The phenomenon is often accounted for by the Proper Binding Condition (Saito 1989; see also Fiengo 1977), but there are attempts to dispense with it (e.g. Saito 2001).

² I assume here that the subject is originated in vP-internal position.

³ *Soo* can be combined with copula *da* or the verb *suru*. Needless to say, the combined expressions show syntactic behaviors that differ from those observed for *soo* used in isolation.

⁴ Although the English verb *say* does not take an ECM complement, the Japanese verb *iu* ‘say’ falls into the class of ECM verbs. In this section, I will make use of the verb *iu* ‘say’ rather than *omou* ‘think’, since what *soo* substitutes for can be easily understood if the verb *iu* is used.

⁵ Kishimoto’s (2001) argument for the structural relation is based on ‘m-command’.

⁶ There is a surface constraint on the order of an indeterminate pronoun and *mo/ka*. Thus, when an indeterminate pronoun occurs in a surface position that follows *mo*, as in (i), the sentence is unacceptable.

- (i) **Watasi-wa* [*PRO zyugyoo-o saboru to-mo*] *dare-ni iwa-nakat-ta.*
 I-TOP class-ACC skip COMP-Q anyone-DAT say-NEG-PST
 ‘I did not tell anyone that I would skip a class.’

This fact shows that an indeterminate pronoun needs to precede *mo* in the surface strings for the complex to be interpreted as an NPI.

⁷ A similar fact obtains in VN-incorporation because only the verb *suru* ‘do’ can host VN incorporation. Accordingly, in (i), which is headed by a verb like *motikomu* ‘bring’, VN incorporation does not take place.

- (i) **Ken-wa dare-ni soodan-mo motikoma-nakat-ta.*
 Ken-TOP anyone-DAT consult-Q bring-NEG-PST
 ‘Ken did not bring consultation to anyone.’

In (i), the scope of *mo* does not extend over vP. (i) is rendered unacceptable, due to the failure of *mo* to bind the dative argument.

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