Japanese ECM as Embedded Bare Topicalization[*]

Shigeki Taguchi

University of Connecticut

1. Introduction

In this paper, I analyze "bare topicalization" (i.e. topicalization with a non-*wa*-marked topic) in Japanese, which has not drawn much attention in generative syntax. The reason seems to be that bare topicalization, given in (1)a, and ordinary topicalization, given in (1)b, pattern in the same way with respect to a number of properties. However, I point out that they differ in that the former does not apply in embedded clauses, while the latter does, as shown in (2)a and (2)b, respectively. I argue that the apparent matrix/embedded asymmetry regarding bare topicalization actually does not exist. More specifically, I argue that in Japanese, embedded bare topicalization is allowed, but has been simply treated as another independent construction; namely, Exceptional Case-marking (ECM).

(1) a. Sono hito, kinoo-no   ziken-no   hannin da.
        that person yesterday-gen incident-gen culprit is
     b. Sono hito-wa   kinoo-no   ziken-no   hannin da.
        that person-top yesterday-gen incident-gen culprit is
        (lit.) 'That person, is the culprit of yesterday's incident.'

(2) a. *Watasi-wa [sono hito,   kinoo-no   ziken-no   hannin da to]
        I-top   that person yesterday-gen incident-gen culprit is that
        omot-teiru.
        think-prog
     b. Watasi-wa [sono hito-wa   kinoo-no   ziken-no   hannin da to]
        I-top   that person-top yesterday-gen incident-gen culprit is that
        omot-teiru.
        think-prog
        (lit.) 'I am believing that that person, is the culprit of yesterday's incident.'

2.   ECM and Raising to Object

Bošković (1997, 2007a, 2007b), Koizumi (1995), Lasnik (1999a,b,c), Lasnik and Saito (1991), and Postal (1974), among others, argue that English ECM involves overt raising to object (RTO) to SpecAgrOP/Spec$v$P. Hence, ECM subjects (i.e. the accusative embedded subjects) are in a higher position that c-commands into the adjunct clause, as shown by Condition A satisfaction in (3)a in contrast to (3)b, Weak Crossover mitigation in (4)a in contrast to (4)b, Negative Polarity Item licensing in (5)a in contrast to (5)b, and Condition C violation in (6)a in contrast to (6)b, respectively:

(3)   a. The DA proved two men$_i$ [t_i to have been at the scene of the crime] during each other's$_i$ trials.
         b. ?*The DA proved [that two men$_i$ were at the scene of the crime] during each other's$_i$ trials.

(4)   a. The DA proved no suspect$_i$ [t_i to have been at the scene of the crime] during his$_i$ trials.
         b. ?*The DA proved [that no suspect$_i$ was at the scene of the crime] during his$_i$ trials.

(5)   a. The DA proved no one [t_i to have been at the scene of the crime] during any of the trials.
         b. ?*The DA proved [that no one was guilty] during any of the trials.

(6)   a. *Joan believes him$_i$ [t_i to be a genius] even more fervently than Bob$_i$ does.
         b. Joan believes [he$_i$ is a genius] even more fervently than Bob$_i$ does.

Japanese ECM is also analyzed as involving RTO by some researchers. However, given that complement clauses in standard Japanese are CPs headed by an overt complementizer, it is assumed that the ECM subject moves to the matrix SpecAgrOP/Spec$v$P via the embedded SpecCP, in accordance with Chomsky's (2000, 2001) Phase Impenetrability Condition (PIC), defined in (7). For example, Kuno (1976) and Tanaka (2002) demonstrate that the ECM subject must move overtly to the higher clause, as opposed to Hiraiwa (2001), who claims that the relevant movement is at most optional. In the rest of this section, I summarize Kuno's and Tanaka's data showing that the ECM subject can undergo RTO, setting aside the issue whether the relevant movement is obligatory or optional. I will come back to this question in Section 3.

(7)   In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge are accessible to such operations.

First, the relative position between the matrix adverb and the ECM subject shows that RTO has applied in (8)a, but not in (8)b:

(8)   a. Taroo-wa Hanako-o$_i$ orokanimo [t_i tensai da to] omot-teiru.
        Taroo-top Hanako-acc   stupidly   genius is   that think-prog
        (lit.) 'Stupidly, Taroo is believing Hanako to be a genius.'
    b. *Taroo-wa [Hanako-ga   orokanimo   tensai da to] omot-teiru.
        Taroo-top   Hanako-nom stupidly   genius is   that think-prog
        (lit.) 'Stupidly, Taroo is believing that Hanako is a genius.'

Second, the following data regarding scrambling support the RTO analysis. The ECM subject in (9)a can undergo long-distance scrambling, but the embedded nominative subject in (9)b cannot. This is evidence that only the former has undergone RTO. Since Saito (1985), it has been standardly assumed that subjects cannot undergo long-distance scrambling (but see Ko 2007 for an opposing view). The grammaticality of (9)b suggests that the ECM subject is raised to the object position first, and subsequently undergoes short-distance scrambling to the sentence initial position.

(9)   a. Hanako-o$_i$ Taroo-ga t_i [t_i tensai da to] omot-teiru.
        Hanako-acc   Taroo-nom   genius is   that think-prog
        (lit.) 'Taroo is believing Hanako to be a genius.'
    b. *Hanako-ga$_i$ Taroo-ga   [t_i tensai da to] omot-teiru.
        Hanako-nom Taroo-nom   genius is   that think-prog
        (lit.) 'Taroo is believing that Hanako is a genius.'

The data in (10) also show that the ECM subject undergoes short-scrambling from the matrix domain. Mahajan (1990) and Saito (1992) maintain that short-distance scrambling is either A- or A'-movement, in contrast to long-distance scrambling, which is unambiguously A'-movement. Given the widely held view that only A-movement changes binding possibilities, it follows that the ECM subject in (10)a undergoes RTO before scrambling.

(10)   a. ??Otagai-no$_i$ sensee-ga   karera-o$_i$ [t_i tensai da to] omot-teiru.
        each.other-gen teacher-nom they-acc   genius is   that think-prog
    b. Karera-o$_i$ otagai-no$_i$ sensee-ga t_i [t_i tensai da to] omot-teiru.
        they-acc each.other-gen teacher-nom   genius is   that think-prog
        (lit.) 'Each other's teacher is believing them to be geniuses.'

Further evidence showing that scrambling of the ECM subject into a matrix position is short-distance is given in (11). Simply put, the *why-who-who* sequence in (11)a is prohibited in Japanese, but can be saved by short-distance scrambling of one of the *who*'s (cf. Saito 1994). The amelioration effect in (11)b shows that the relevant scrambling is short-distance:

(11)   a. ?*Naze dare-ga   dare-o$_i$ [t_i tensai da to] omot-teiru no?
        why   who-nom who-acc   genius is   that think-prog Q
    b. Dare-o$_i$ naze dare-ga t_i [t_i tensai da to] omot-teiru no?
        who-acc why who-nom   genius is   that think-prog Q
        (lit.) 'Who is believing whom to be a genius why?'

Third, the applicability of Quantifier Raising (QR) diagnoses the structural position of the embedded subjects in (12). Assuming that QR is clause-bound, the scope ambiguity in (12)a, as opposed to (12)b, naturally follows if the ECM subject is in the matrix clause:

(12) a. Dareka-ga minna-o$_i$ [t_i tensai da to] omot-teiru.
    someone-nom everyone-acc genius is that think-prog
    (lit.) 'Someone is believing everyone to be a genius.' ($\exists > \forall$, $\forall > \exists$)
  b. Dareka-ga [minna-ga tensai da to] omot-teiru.
    someone-nom everyone-nom genius is that think-prog
    (lit.) 'Someone is believing that everyone is a genius.' ($\exists > \forall$, $*\forall > \exists$)

Fourth, Condition B straightforwardly excludes (13)a, where the ECM subject appears as a pronoun bound by the matrix subject, implying that they are in the same binding domain. On the other hand, (13)b, though slightly degraded, is fine because each subject belongs to a different binding domain, in accordance with Condition B:

(13) a. *Taroo-ga$_i$ kare-o$_i$ [t_i tensai da to] omot-teiru.
    Taroo-nom he-acc   genius is that think-prog
    (lit.) 'Taroo is believing him to be a genius.'
  b. ?Taroo-ga$_i$ [kare-ga$_i$ tensai da to] omot-teiru.
    Taroo-nom he-nom genius is that think-prog
    (lit.) 'Taroo is believing that he is a genius.'

Fifth, (14)b, derived from (14)a through CP-scrambling, is ruled out as a violation of the Proper Binding Condition, which requires traces to be bound (cf. Saito 1992). This is because the trace left behind by RTO (i.e. t_i) cannot be properly bound in the CP-scrambled position:[1]

(14) a. Taroo-ga Hanako-o$_i$ [t_i tensai da to] omot-teiru.
    Taroo-nom Hanako-acc genius is that think-prog
  b. *[t_i tensai da to]$_j$ Taroo-ga Hanako-o$_i$ t_j omot-teiru.
     genius is that Taroo-nom Hanako-acc think-prog
    (lit.) 'Taroo is believing Hanako to be a genius.'

Finally, the data regarding cleft constructions also lend support for the RTO analysis. More specifically, Japanese cleft constructions allow only clause mates to stand as multiple foci. The well-formedness of (15)b constitute evidence that the ECM subject belongs to the same clause as that of the matrix subject:

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[1] As pointed out by Bošković (2006 UConn class lectures), the ungrammaticality of (14)b cannot be explained under the alternative analysis, on which the ECM subject is base-generated in the matrix clause and is coindexed with *pro* in the embedded clause (cf. Saito 1982, 1985, Takano 2003, etc.).

(15) a. Dare-ga   dare-o$_i$ [t_i tensai   da to] omot-teiru no.
         who-nom who-acc   genius is   that   think-prog Q
      b. t_j t_i [t_i tensai   da to] omot-teiru   no-wa
                            genius   is   that   think-prog   NM-top
         [dare-ga$_j$ dare-o$_i$] na   no?
            who-nom   who-acc   is   Q
         (lit.) 'Who is believing whom to be a genius.'

3.   Proposal

Thus far, it has been shown that the ECM subject in Japanese can move to the matrix SpecAgrOP/Spec*v*P. Two questions that arise are whether the ECM subject indeed starts out from the θ-position (i.e. the embedded SpecVP), and whether the relevant movement is obligatory or at best optional, as mentioned in Section 2.

At this point, I would like to draw attention to an observation that seems to show that the ECM subject in Japanese does not start out from the θ-position. Namely, Japanese ECM shows strong similarities with topicalization. I discuss two of them below. First, Kuno (1973) claims that topicalization in Japanese does not involve movement, based on the observation that it is free of island effects, as shown in (16):

(16) a. Sono hito-wa$_i$ [$_{adjunct}$ *pro*$_i$ sin-de   mo]   daremo naka-nai.
         that   person-top   die-inf even.if anyone cry-not
         'No one cries even if that person dies.'
      b. Sono hito-wa$_i$ [$_{Complex\ NP}$ *pro*$_i$ taberu   mono]-ga   nai.
         that   person-top   eat   thing -nom   absent
         'He doesn't have anything to eat.'

Just like the topic NPs in (16), the ECM subject in (17) is free from island effects, suggesting that it does not originate in the θ-position:

(17) a. Watasi-wa [sono hito-o$_i$ [$_{adjunct}$ *pro*$_i$ sin-de   mo]   daremo naka-nai to]
         I-top   that person-acc   die-inf even.if anyone cry-not that
         omot-teiru.
         think-prog
         (lit.) 'I am believing no one to cry even if he died.'
      b. Watasi-wa [sono hito-o$_i$ [$_{Complex\ NP}$ *pro*$_i$ taberu mono]-ga   nai   to]
         I-top   that person-acc   eat   thing -nom absent that
         omot-teiru.
         think-prog
         (lit.) 'I am believing him not to have anything to eat.'

The other is Hoji's (1985) claim that topicalization in Japanese does not involve movement, based on the observation that a topic NP in Japanese does not reconstruct, as shown in (18)b:

(18)   a. [pro_i kaita   ronbun]-o_j dare-ga_i t_j happyoosita   no?
                wrote   article   -acc   who-nom   presented   Q
         b. *[pro_i kaita   ronbun]-wa,   dare-ga_i happyoosita   no?
                wrote   article   -top   who-nom   presented   Q
          'Who presented the article that s/he wrote?'

In (18)a, the accusative NP is scrambled to the sentence initial position, and *pro* can be interpreted as a variable bound by *dare-ga* 'who' because scrambling is subject to reconstruction. However, the topic NP in (18)b does not allow this interpretation, because topicalization is not subject to reconstruction. It should be noted that the ECM subject in (19) patterns in the same way as the topic NP in (18)b, in that (19) does not allow the relevant interpretation.[2] This suggests that Japanese ECM does not allow reconstruction because it does not originate in the θ-position.

(19)   *Watasi-wa [[pro_i kaita ronbun]-o   daremo-ga_i suki da to]
        I-top   wrote article   -acc everyone-nom like   is   that
        omot-teiru.
        think-prog
        (lit.) 'I believe that the article s/he wrote, everyone likes.'

      As pointed out by a reviewer, the ill-formedness of (19) can also be captured by assuming that the ECM subject is base-generated in the θ-position and undergoes A-movement, which does not reconstruct (cf. Chomsky 1993, Lasnik 1999a,b, etc.). However, it has been observed that A-movement sometimes *does* reconstruct (cf. Bobaljik and Wurmbrand 2005, Fox 1999, etc.). Thus, I take (19) to be an example which supports the proposal that Japanese ECM does not involve movement from the θ-position, unless the strong empirical evidence that it does is provided.[3] Moreover, the current proposal correctly predicts the well-formedness of (17), if Bobaljik and Wurmbrand's (2005) system of Move and Agree is adopted, which hinges on the assumption that A-movement reconstructs. According to Bobaljik and Wurmbrand, an infinitival complement which does not have the ability to license a Case feature and is selected by a lexical verb constitutes an agreement domain. As a result, the subject of such an infinitival complement is forced to move in one fell swoop to the Spec of the next higher Case-licensing head. Since they assume that Case-checking relations are evaluated at LF, the subject of the infinitival complement does not show any reconstruction effects. In (17), the complement clause lacks the ability to license a Case feature and is selected by a lexical verb. If the ECM subject in (17) indeed moves in one fell swoop to the matrix Spec*v*P, an island violation should be observed, but the prediction is not borne out.

      Given the data above, I propose that Japanese ECM is analyzed on a par with topicalization, which base-generates the topic NP in SpecCP (cf. Rizzi 1997, Tonoike

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[2] Note that the embedded predicate *suki* 'like' in (19) is unable to Case-mark the object as accusative, and hence the accusative NP is Case-marked by the matrix *v*.

[3] I do not adopt Hiraiwa's (2001) data that seem to show that the ECM subject can stay in a lower position in the embedded clause (possibly, SpecVP or SpecTP), because they are controversial regarding the grammaticality. See Tanaka (2002) for discussion and criticism against Hiraiwa's data.

1989, etc.). Thus, the ECM subject is also base-generated in the embedded SpecCP (cf. Bruening 2001), as illustrated in (20). Crucially, under Chomsky's (2000, 2001) definition of the PIC (cf. (7)), the embedded SpecCP is a position which allows the matrix *v* to Case-mark the ECM subject via Agree:

(20) $[_{vP}\ v\ [_{VP}\ \text{believe}\ [_{CP}\ \text{SUBJ-acc}_i\ C\ [_{TP}\ T\ [_{VP}\ ...\ pro_i\ ...\ ]\ ]\ ]\ ]\ ]$
        Agree Possible   ▲

A remaining question is why bare topicalization, as opposed to ordinary topicalization, is limited to matrix clauses, as shown in (2), repeated as (21):

(21)   a. *Watasi-wa [sono hito,   kinoo-no   ziken-no   hannin da to]
            I-top   that person yesterday-gen incident-gen culprit is that
            omot-teiru.
            think-prog
        b. Watasi-wa [sono hito-wa   kinoo-no   ziken-no   hannin da to]
            I-top   that person-top yesterday-gen incident-gen culprit is that
            omot-teiru.
            think-prog
            (lit.) 'I am believing that that person, is the culprit of yesterday's incident.'

I assume that the ill-formedness of (21) is due to a violation of Bošković's (2002) Inverse Case Filter, which requires that traditional Case-assigners must assign their Case-feature. I revise the Inverse Case Filter as (22) below:

(22)   Traditional Case-assigners must assign their Case-feature *whenever possible in accordance with the PIC*.

Let us compare the non-ECM and the ECM cases. In the non-ECM case, the embedded subject is base-generated in the embedded VP, where it can be Case-marked by the embedded T, but not by the matrix *v*. Thus, (22) is not violated even if the matrix *v* does not assign its accusative Case, resulting in (23)a. In the ECM case, on the other hand, the embedded subject is base-generated in the embedded SpecCP, where it can be Case-marked by the matrix *v*. If the matrix *v* assign its accusative Case, (22) is observed, resulting in the well-formed examples (21)b and (23)b.[4] If it does not, (22) is violated, resulting in the ill-formed example (21)a. (24) illustrates these derivations:

(23)   a. Watasi-wa [sono hito-ga   kinoo-no   ziken-no   hannin da to]
            I-top   that person-nom yesterday-gen incident-gen culprit is that
            omot-teiru.
            think-prog
            (lit.) 'I am believing that that person is the culprit of yesterday's incident.'

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[4] I assume that the matrix *v* assign its accusative Case to the topic NP in (21)b as well, but it is simply absorbed by the topic marker *wa*. This assumption is consistent with the fact that nominative and accusative markers are always absorbed by *wa* in Japanese.

b. Watasi-wa [sono hito-o   kinoo-no   ziken-no   hannin da to]
I-top   that person-acc yesterday-gen incident-gen culprit is   that
omot-teiru.
think-prog
(lit.) 'I am believing that person to be the culprit of yesterday's incident.'

(24)   a. [$_{vP}$ v [$_{VP}$ believe [$_{CP}$ C [$_{TP}$ T [$_{VP}$ ... SUBJ-nom ...]]]]]
           Case-assignment impossible and disallowed   ⬆
   b. [$_{vP}$ v [$_{VP}$ believe [$_{CP}$ SUBJ-acc$_i$/NP-top$_i$ C [$_{TP}$ T [$_{VP}$ ... pro_i ...]]]]]
                           ⬆ *Case-assignment possible and obligatory*

One may wonder, however, what happens if the matrix verb loses its Case-feature, say, through passivization or nominalization, but still selects the same embedded clause. It is predicted that embedded topicalization should be possible in these cases. However, as shown in (25) and (26), only ordinary topicalization is allowed in these contexts:

(25)   a. *[Sono hito,   kinoo-no   ziken-no   hannin da to]
        that   person yesterday-gen incident-gen culprit is   that
omow-are-teiru.
think-pass-prog
   b. [Sono hito-wa   kinoo-no   ziken-no   hannin da to]
        that   person-top yesterday-gen incident-gen culprit is   that
omow-are-teiru.
think-pass-prog
(lit.) 'That that person, is the culprit of yesterday's incident is being believed.'

(26)   a. *[sono hito,   kinoo-no   ziken-no   hannin da toiu] omoi
        that   person yesterday-gen incident-gen culprit is   that   thought
   b. [sono hito-wa   kinoo-no   ziken-no   hannin da toiu] omoi
        that   person-top yesterday-gen incident-gen culprit is   that   thought
(lit.) 'the belief that that person, is the culprit of yesterday's incident'

I suspect that the ill-formedness of (25)a and (26)b is treated on par with English examples in (27) below. In other words, bare topicalization in Japanese and topicalization in English may be constrained by similar syntactic/semantic restrictions that prevent them from applying in sentential subjects and complex NPs (cf. Hooper and Thompson 1973).[5] I do not pursue any further in this paper what kind of restrictions they are.

(27)   a. (?*)That Mary, John loves is believed by everyone.
   b. (?*)the belief that Mary, John loves

      There are several consequences for the proposed analysis. First, the embedded SpecCP of Japanese ECM can be a mixed A/A′-position (Bošković 2007a,b).

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[5] I thank Jonathan Bobaljik (p.c.) for discussion. Note that the judgment for (27) is subject to speaker and dialectal variation (cf. Authier 1992, Lasnik and Saito 1992, Maki, Ochi, and Kaiser 1999, etc.).

Furthermore, it is possible to reconcile Kuno's (1976) and Tanaka's (2002) observations with Hiraiwa's (2001) claim that RTO is at best optional (cf. Section 2). More concretely, Hiraiwa claims that the ECM examples in (8)-(15), repeated below as (28)-(35), all show that the ECM subject *can*, but does not have to, occupy a position in the matrix clause. Let us consider the relevant examples once again. (28)-(32) can be accounted for by saying that the ECM subject is accessible to short-distance scrambling from the embedded SpecCP to a position in the matrix clause (taking scrambling to be optional):

(28) a. Taroo-wa Hanako-o$_i$ orokanimo [t_i tensai da to] omot-teiru.
       Taroo-top Hanako-acc stupidly   genius is   that think-prog
       (lit.) 'Stupidly, Taroo is believing Hanako to be a genius.'
      b. *Taroo-wa [Hanako-ga   orokanimo   tensai da to] omot-teiru.
       Taroo-top   Hanako-nom stupidly   genius is   that think-prog
       (lit.) 'Stupidly, Taroo is believing that Hanako is a genius.'

(29) a. Hanako-o$_i$ Taroo-ga t_i [t_i tensai da to] omot-teiru.
       Hanako-acc Taroo-nom   genius is   that think-prog
       (lit.) 'Taroo is believing Hanako to be a genius.'
      b. *Hanako-ga$_i$ Taroo-ga   [t_i tensai da to] omot-teiru.
       Hanako-nom Taroo-nom   genius is   that think-prog
       (lit.) 'Taroo is believing that Hanako is a genius.'

(30) a. ??Otagai-no$_i$ sensee-ga   karera-o$_i$ [t_i tensai da to] omot-teiru.
       each.other-gen teacher-nom they-acc   genius is   that think-prog
      b. Karera-o$_i$ otagai-no$_i$ sensee-ga t_i [t_i tensai da to] omot-teiru.
       they-acc each.other-gen teacher-nom   genius is   that think-prog
       (lit.) 'Each other's teacher is believing them to be geniuses.'

(31) a. ?*Naze dare-ga   dare-o$_i$ [t_i tensai da to] omot-teiru no?
       why   who-nom who-acc   genius is   that think-prog Q
      b. Dare-o$_i$ naze dare-ga t_i [t_i tensai da to] omot-teiru no?
       who-acc why who-nom   genius is   that think-prog Q
       (lit.) 'Who is believing whom to be a genius why?'

(32) can be accounted for if the ECM subject can undergo QR from the embedded SpecCP over the matrix quantifier:[6]

(32) a. Dareka-ga   minna-o$_i$ [t_i tensai da to] omot-teiru.
       someone-nom everyone-acc   genius is   that think-prog
       (lit.) 'Someone is believing everyone to be a genius.' (∃ > ∀, ∀ > ∃)

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[6] Given the generalization that operators in operator-variable chains cannot undergo further operator movement (cf. Bošković 2005, Epstein 1992), the applicability of QR in (32)a lends further support for my claim that the ECM subject (as a kind of topic NP) is base-generated in, rather than moved to, the embedded SpecCP. Note also that clause-boundedness of QR can be taken to be a phase/PIC effect, which can be irrelevant in the case in question, since the relevant NP is in the edge of CP.

b. Dareka-ga　　[minna-ga　　　tensai　da　to]　omot-teiru.
　　someone-nom　everyone-nom　genius　is　that　think-prog
　　(lit.) 'Someone is believing that everyone is a genius.' (∃ > ∀, *∀ > ∃)

(33) can be explained by assuming that a pronoun in SpecCP is accessible to the higher clause as a binding domain, satisfying Condition B:

(33)　　a. *Taroo-ga$_i$ kare-o$_i$ [　t_i　tensai　da　to]　omot-teiru.
　　　　　Taroo-nom he-acc　　　　genius　is　that　think-prog
　　　　　(lit.) 'Taroo is believing him to be a genius.'
　　　　b. ?Taroo-ga$_i$ [kare-ga$_i$　tensai　da　to]　omot-teiru.
　　　　　Taroo-nom　　he-nom　genius　is　that　think-prog
　　　　　(lit.) 'Taroo is believing that he is a genius.'

(34) is predicted if the ECM subject has undergone scrambling before the whole embedded CP is scrambled:

(34)　　a. Taroo-ga　Hanako-o$_i$ [　t_i　tensai　da　to]　omot-teiru.
　　　　　Taroo-nom Hanako-acc　　genius　is　that　think-prog
　　　　b. *[　t_i　tensai　da　to]$_j$ Taroo-ga　　Hanako-o$_i$　t_j　omot-teiru.
　　　　　　genius　is　that　Taroo-nom　Hanako-acc　　　think-prog
　　　　　(lit.) 'Taroo is believing Hanako to be a genius.'

(35) follows from assuming either that the ECM subject has undergone short-distance scrambling before cleft formation, or that cleft formation targets clauses mates which are defined in terms of the PIC, making the ECM subject in SpecCP accessible:

(35)　　a. Dare-ga　　dare-o$_i$ [　t_i　tensai　da　to]　omot-teiru no.
　　　　　who-nom　who-acc　　　genius　is　that　think-prog Q
　　　　b. t_j　t_i [　t_i　tensai　da　to　]　omot-teiru　no-wa
　　　　　　　　　genius　is　that　think-prog　NM-top
　　　　　[dare-ga$_j$　dare-o$_i$]　na　no?
　　　　　　who-nom　who-acc　　is　Q
　　　　　(lit.) 'Who is believing whom to be a genius.'

4.　　Conclusion

In this paper, I discussed embedded topicalization in Japanese, which appears to be applicable only in matrix clauses. I argued that the apparent inapplicability of bare topicalization in embedded clauses is due to a violation of the Inverse Case Filter, which is revised in accordance with the PIC. I further claimed that if it is satisfied, a well-formed output is obtained as ECM. Finally, I showed that the proposal in this paper is consistent not only with the data in support of the obligatory RTO analysis, but also with the claim that RTO is at best optional.

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Department of Linguistics, U-1145
University of Connecticut
337 Mansfield Road
Storrs, CT 06269-1145
USA

shigeki.taguchi@uconn.edu