THETA-MARKING VIA AGREE

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This paper investigates the mechanism of θ-marking. Given the feature approach to θ-marking that states that θ-marking is performed by the general mechanism of feature checking, I will propose that θ-marking takes place via Agree, and provide conceptual and empirical arguments in favor of this view of θ-marking, based on data from control constructions in English and Japanese that indicate that a controller is θ-marked in the embedded [Spec, C] (precisely, [Spec, Fin]) by a matrix predicate.*

Keywords: Agree, control constructions, EPP, greed, θ-marking

1. Introduction

The question of how θ-roles are assigned to arguments has been one of the major issues in Generative Grammar. The approaches to this question can be divided into two groups: the configurational approach and the feature approach. One representative of the configurational approach is Baker’s (1988) UTAH (the Uniformity of Theta Assignment Hypothesis), which states that θ-roles are assigned to arguments according to the structural position where arguments are placed. For instance, the Theme role is assigned to an argument in the complement position of a verb. On the other hand, the feature approach (cf. Bošković (1994), Bošković and Takahashi (1998), and Hornstein (1999)) states that “a D/NP ‘receives’ a θ-role by checking a θ-feature of a verbal/predicative phrase that it merges with.” (Hornstein

* This is a radically revised and extended version of the paper presented at the 135th meeting of the Linguistic Society of Japan held at Shinshu University on November 24, 2007. I am deeply indebted to Brent de Chene, Sayaka Goto, Yumiko Ishikawa, Yoichi Miyamoto, Kenichi Namai, Masao Ochi, and two anonymous EL reviewers for their helpful suggestions and valuable comments. I am also grateful to Yasuhiro Iida, Wataru Kambayashi, Hiroshi Mito, Shinta Tamaki, and Yoko Yumoto for discussion. All remaining errors and inadequacies are, of course, mine.
Proponents of the feature approach generally assume that the checking requirement of θ-features drives movement of arguments. Under the recent Minimalist perspective, however, it is necessary to carefully examine this assumption, because recently, the probe-goal system has been assumed to be the mechanism of feature checking. The probe-goal system does not require movement to take place to check features: Agree is sufficient for feature checking. Therefore, if we adopt the probe-goal system, the feature approach to θ-marking needs a theory that determines when movement takes place.

Chomsky (2000), based on the probe-goal system, argues that movement takes place when the target of movement has an EPP-feature. Pointing out numbers of conceptual and empirical problems with the EPP-feature, however, several authors have made an attempt to eliminate it from the theory of grammar: Martin (1999), Epstein and Seely (2006), Bošković (2002, 2007), among many others. Among them is Bošković’s (2007) theory, which in my view is the most comprehensive and explicit one. The core idea of his theory is that movement is driven solely by an uninterpretable feature of the moved element. In other words, movement must be greedy (Chomsky (1993)). I refer to Bošković’s theory as the Greedy Theory of Movement (GTM).

The aim of this paper is to reconsider the feature approach to θ-marking under the GTM. I will argue that it follows from the GTM that θ-features do not drive movement of arguments: Agree is sufficient for θ-feature checking. In other words, θ-roles are assigned to arguments through Agree. Proposing a specific mechanism of θ-marking under this view, I will consider how the proposed mechanism affects Hornstein’s (1999) Movement Theory of Control (MTC), which crucially relies on the feature approach to θ-marking, and revise the MTC accordingly. It will be shown, based on facts concerning passives and floating quantifiers in English, that the revised MTC is superior to the original MTC. Furthermore, I will argue that object control constructions in Japanese provide more direct evidence that Agree is sufficient for θ-feature checking than the English data do.

The paper is organized as follows. In section 2, I argue that the θ-marking via Agree hypothesis is derived from the GTM and the feature approach to θ-marking, and propose a specific mechanism of θ-marking under the θ-marking via Agree hypothesis. Furthermore, I revise the MTC of Hornstein in light of this mechanism, and provide arguments in favor of the proposed system. In section 3, it is argued that Japanese object control
constructions provide more direct evidence in favor of the proposed system than English control constructions. In particular, it is demonstrated that certain facts concerning object control constructions in Japanese indicate that θ-marking can take place in a non-local fashion, which is expected under the θ-marking via Agree hypothesis. Section 4 illustrates that given the proposed system, a peculiar fact about control complements (i.e. the fact that they allow long-distance A-scrambling) can naturally be subsumed under the improper movement constraint. Section 5 is the conclusion.

2. Theta-Marking via Agree

2.1. The Greedy Theory of Movement

The GTM is concerned with the driving force of (overt) movement, mainly arguing (i) that there is no EPP-feature and (ii) that overt movement is triggered only by uninterpretable features of the moved element. With regard to (ii), Bošković (2007) claims that an uninterpretable feature of an element can be checked solely by c-commanding (probing) an element that has a matching feature. Put differently, uninterpretable features must act as a probe in order to be checked. For instance, in the structure in (1), X has the uninterpretable feature [uF] and α has the matching uninterpretable feature [uF].

(1) \[ XP \ [YP \ldots \alpha \ldots] ]
\[ [uF] [uF] \]

In this configuration, X c-commands α. Thus, [uF] of X can be checked without any movement. On the other hand, [uF] of α cannot be checked in this configuration, since α does not c-command X. Thus, α moves to a position that c-commands X, [Spec, X]. In contrast, α does not need to move to check [uF] of X, if it has an interpretable feature rather than an uninterpretable one.

Furthermore, Bošković argues that successive cyclic movement such as long distance wh-movement can be derived from this c-commanding requirement on an uninterpretable feature, without postulating an EPP-feature for intermediate landing sites. In (2), the object wh-phrase in the embedded clause is moved to the matrix [Spec, C] via the embedded [Spec, C].

(2) What \( t_i \) do you think \[ CP t_i [C \ldots \text{that Mary bought } t_i] \]

Chomsky (2000) argues that the movement of what to the embedded [Spec, C] is motivated by the EPP-feature of the embedded C. Pointing out a number of problems with Chomsky’s EPP analysis, Bošković proposes the GTM analysis of (2) as an alternative. Under the GTM, the movement
of *what* to the embedded [Spec, C] is driven by an uninterpretable feature of the moved element itself, and not by a feature of C. The reasoning is as follows. There is no matching feature for the uninterpretable feature of *what* (e.g. Q-feature) within the embedded CP, which is hypothesized to be a phase, and the Phase Impenetrability Condition (PIC) (Chomsky (2000)) states that only the edge (Spec and head) of a phase is accessible from outside the phase. If *what* does not move to the embedded [Spec, C], its uninterpretable feature will never be checked, causing the derivation to crash. Thus, the movement of *what* to the embedded [Spec, C] conforms to Last Resort.

The core ideas of GTM can be summarized as follows: (i) there is no EPP-feature; (ii) an uninterpretable feature must c-command a matching feature in order to be checked; (iii) an element X has to move to the edge of the phase Y if X has (an) unchecked uninterpretable feature(s) and there is no matching feature within Y.

One of the important consequences of the GTM is that a DP with a structural Case-feature must move to a position that c-commands the Case assigner/checker (v, T, etc.), for the structural Case-feature is uninterpretable both in DP and on the Case assigner/checker. It follows that overt object shift is obligatory if the object has a structural Case-feature. With regard to English, there are many arguments in the literature to the effect that English does have overt object shift (see e.g. Johnson (1991), Koizumi (1995), Bošković (2007), and Epstein and Seely (2006), among many others). As for Japanese, Ochi (to appear) argues, based on a study of Nominative-Genitive Conversion, that Japanese has obligatory overt object shift.

Another important consequence of the GTM is concerned with θ-marking, especially when we adopt the view that a θ-role is a formal feature and θ-marking takes place via checking of θ-features. Given this approach to θ-marking, the GTM entails that arguments need not move to be θ-marked, since the most natural assumption is that the θ-feature of arguments, if any, is interpretable. In other words, under the GTM, it is expected that it is sufficient for θ-marking that the θ-assigner Agrees with the argument, given the feature approach to θ-marking.

In the next subsection, I propose a specific mechanism of θ-marking under the θ-marking via Agree hypothesis, and examine whether it works properly.

### 2.2. Θ-Marking via Agree

Some of the crucial ingredients for θ-marking via Agree are as follows:
(i) predicates (e.g. V, A, N, P) have a valued uninterpretable θ-feature ([uθ_val]); (ii) D has (an) unvalued interpretable θ-feature(s) ([iθ_unval]); (iii) there is a projection XP between TP and vP, whose head has an [uθ_val]; (iv) XP is a phase, while vP is not; (v) in English, V moves at least to X; (vi) when [uθ_val] c-commands (or probes) [iθ_unval], [uθ_val] is checked/deleted and [iθ_unval] is valued.

(i) and (ii) are a departure from Chomsky’s (2001) view of formal features, which is that a feature F is uninterpretable iff F is unvalued. If this view is correct, we cannot posit a valued uninterpretable feature ([uθ_val]) and an unvalued interpretable feature ([iθ_unval]). However, Pesetsky and Torrego (2007) propose a different view of formal features. They reject the biconditional relationship between interpretability and valuation, and argue that there are valued uninterpretable features and unvalued interpretable features. Given Pesetsky and Torrego’s view, (i) and (ii) are natural assumptions under the feature approach to θ-marking. Predicates, but not arguments, inherently have information concerning what kind of θ-roles occur in a sentence. Thus, predicates have valued θ-features, while arguments have unvalued θ-features. On the other hand, interpretation of θ-roles is performed on arguments, but not predicates. Therefore, arguments have interpretable θ-features, while predicates have uninterpretable θ-features.

The assumptions in (iii)–(v) are concerned with the assigner of an external θ-role. In order for θ-marking to work under the assumption that it takes place via Agree, it is necessary to assume that there is a θ-role assigner (i.e. [uθ_val] bearer) for the external argument higher than vP. This is because v does not c-command [Spec, v]. Given that the external argument is base-generated in [Spec, v], we cannot consider v to be a θ-role assigner for the external argument. Therefore, I assume that there is a category X between vP and TP, which has [uθ_val] for the external argument.¹ Note that whether or not we adopt the θ-marking via Agree hypothesis, it is necessary to posit some projection between TP and vP, to whose head V moves, if we would like to get the verb-object order in English under the GTM. This is because as I mentioned earlier, it follows from the GTM that overt object shift (i.e. the movement of objects with a structural Case to [Spec, v]) is obligatory. Therefore, in order to capture the fact that verbs precede ob-

¹ A possible alternative is to assume that v has [uθ_val] and that v moves to T, from which it c-commands the external argument in [Spec, v]. This alternative, however, is problematic, given that V in English does not move to T.
jects in English, V must move out of vP. Given that V does not move to T in English, unlike French (see Pollock (1989)), we have to posit the landing site for V between T and v. I assume that this landing site is X, which has [uθ\text{val}] for the external argument.\(^2\) Under this assumption, it is plausible to consider that XP, rather than vP, is a phase, since it is XP, but not vP, in which all θ-roles are assigned (cf. Chomsky (2000: 106)).\(^3\) Furthermore, I assume that [iθ\text{unval}] is valued by [uθ\text{val}], which is checked/ deleted, via Agree. Under these assumptions, θ-marking in a simple transitive sentence proceeds as illustrated in (3).

\[(3) \quad X \quad [vP \text{ DP} \quad v \quad [vP \text{ V} \quad \text{DP}]]\]

\[\quad [uθ\text{val}] \quad [iθ\text{unval}] \quad [uθ\text{val}] \quad [iθ\text{unval}]\]

In (3), the [uθ\text{val}] of V Agrees with the [iθ\text{unval}] of the object DP, valuing the [iθ\text{unval}] as Theme. As a result of this Agree, the [uθ\text{val}] is checked. Then, the [uθ\text{val}] of X Agrees with the [iθ\text{unval}] of the subject DP, valuing the [iθ\text{unval}] as Agent. As a result, the [uθ\text{val}] of X is checked.

Now, let us examine whether the present system (i.e. the GTM + the θ-marking via Agree hypothesis) overgenerates ill-formed sentences. First, consider the example in (4a) and its derivation under the present system illustrated in (4b).

\[(4) \quad \text{a.} \quad \ast \text{There hit a man.} \quad (\text{under the reading 'a man hit himself'})\]

\[\text{b.} \quad \left[TP \text{ there T [XP hit-} v \text{-} X \quad [vP \text{ a man}_i \text{ t}_v \quad [vP \text{ hit}_t \text{ t}_i]]]\right]\]

Suppose, following Belletti (1988) and Lasnik (1995), that there can check the uninterpretable Case-feature ([uCase]) of T. Then, the derivation in (4b) is not problematic with respect to Case. The [uCase] of v is checked by a man and the [uCase] of a man is checked by v. There seems to be no problem with respect to θ-roles either. The [uθ\text{val}] of hit is checked by a

\(^2\) Even if we divorce the external θ-role from v, Burzio’s generalization can be captured by stating that only X selects a v that has an uninterpretable Case-feature.

\(^3\) See Cole et al. (2008) for independent arguments in favor of the claim that there is a functional projection between TP and vP and that that projection is a phase rather than vP. They call the projection in question VoiceP, whose head has a morphological realization in Malay/Indonesian dialects.

Our XP also might correspond to Johnson and Tomioka’s (1997) mid-size clause (see also Johnson (2004)). The mid-size clause, like VoiceP and our XP, is placed between TP and verbal projection. Johnson and Tomioka argue that the specifier of the mid-size clause is a reconstruction site for subject QPs. Suppose that the mid-size clause is a phase. Then, subjects must move to the specifier of the mid-size clause on the way to [Spec, T]. Thus, if the mid-size clause is our XP, which is a phase, we can account for the status of the mid-size clause as a reconstruction site for subjects.
*man* before it moves to [Spec, v] and the [uθ<sub>val</sub>] of X is checked by *a* *man* in [Spec, v]. Thus, ungrammaticality of (4a) appears to pose a problem for the present system. However, Lasnik’s (1995) assumption concerning the expletive there provides a solution to this problem. He assumes that *there* requires as associate a D/NP with partitive Case, which is only assigned/checked by *be* and unaccusative verbs. In (4a), the associate *a man* bears accusative Case. Thus, *a man* cannot satisfy the requirement of *there*, yielding an ungrammatical sentence.

(5a) poses a more intricate problem for the present system. The derivation of (5a) under the present system is given in (5b).

(5) a. *There tried to be a man here.* (under the reading ‘a man tried to be here’)

b. \[TP \text{there} T [XP \text{try-}v-X [vP \text{try}] [CP C \text{[TP to [be [a man here]]]}]]]]

In (5), *a man* can be assigned partitive Case by *be* in the embedded clause. Thus, the requirement of *there* is satisfied. However, suppose that the CP of control complements is a phase, and that the PIC constrains Agree, contrary to Bošković (2007), then the [uθ<sub>val</sub>] of X in the matrix clause fails to Agree with the [iθ<sub>unval</sub>] of *a man*, which is contained in the complement domain of CP. Notice that *a man* cannot move to [Spec, C], the edge of the phase, since it does not have any unchecked uninterpretable features. Thus, we can account for the ill-formedness of (5a), given the standard assumption that the PIC constrains Agree as well as movement.  

4 Masao Ochi (personal communication) points out that the present analysis cannot rule out the following example, where the associate DP in (5a) in the text is wh-moved.

(i) *How many men did there try to be here.* (under the reading ‘how many men tried to be here?’)

According to the present system, *how many men* in (i) moves successive-cyclically from the embedded clause to the sentence initial position through the embedded [Spec, C] and the matrix [Spec, X], as illustrated in (ii) (irrelevant details are omitted).

(ii) \[\text{[how many men], did there [XP t<sub>i</sub> X try [CP t<sub>i</sub> [TP to be t<sub>i</sub> here]]]}\]

Notice that in (ii), [uθ<sub>val</sub>] of X can Agree with [iθ<sub>unval</sub>] of *how many men* without violating the PIC, when *how many men* is in the embedded [Spec, CP]. Therefore, we cannot attribute the unacceptability of (i) to the PIC.

A possible explanation for the unacceptability of (i) is to adopt Boeckx’s (2001) claim concerning the interpretation of arguments (see also Kitahara (1999, 2000, 2002)). This is given in (iii).

(iii) Arguments are interpreted in the position where their uninterpretable Case feature is erased. Given (iii), it is possible to say that in (ii), *how many men* must be interpreted in its original position, where its Case feature is checked/deleted. If so, however, one of the
Given that θ-marking is performed by Agree, it is expected that it is restricted by the Defective Intervention Constraint (DIC) (Chomsky (2000: 123)).

\[ \alpha > \beta > \gamma \]

(*Agree(\( \alpha, \gamma \)), where > is c-command and \( \beta \) is inactive due to prior Agree with some other probe.)

The evidence that this expectation is correct comes from certain peculiar facts about ECM constructions with the verb *estimate*. Postal (1974) observes that in ECM constructions with *estimate*, the embedded subject must be a measuring phrase, as illustrated in (7).\(^5\)

\( (7) \)

a. I estimate the length of Bill’s boat to be 36 feet.

b. *I estimate that beam to weigh 47 tons. (Postal (1974: 299))

We might interpret this observation as an indication that *estimate* θ-marks the embedded subject across a clause boundary (see Pesetsky (1992) and Bošković (1997)). If this is correct, the unacceptability of (7b) can be attributed to the fact that the [uθ] of *estimate* cannot Agree with the [iθ] of a measuring phrase 47 tons due to intervention effects induced by the embedded subject *that beam*, which has a θ-feature.\(^6\) Interestingly, Postal observes that an expletive can be an embedded subject of ECM constructions with *estimate*, as shown in (8).

\( (8) \)

I estimate there to be two million people in that valley.

(Postal (1974: 299))

Suppose that an expletive does not have a θ-feature. Then, this fact can

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\(^5\) Here, I simplify the facts. The actual generalization is more complex than I present here. According to Postal (1974), the embedded subject does not need to be a measuring phrase when it undergoes movement (e.g. wh-movement, passivization, topicalization, etc.). However, I do not discuss whether the present approach can be extended to explain all the facts concerning *estimate*, since that is beyond the scope of the present article.

\(^6\) Although, as Rizzi (1990) points out, a measuring phrase in the object position of *weigh* (a quasi-argument) exhibits a different behavior from an ordinary object argument, I ignore this point here, since it does not affect the discussion in the text. See Rizzi (1990) for a detailed discussion about the quasi-argument.
be easily explained under the proposed system. In (8), *estimate* can Agree with the measuring phrase *two million people*, because *there*, which lacks a θ-feature, is not a candidate for a matching goal. Notice also that ECM complements are TP, but not CP. Therefore, in (8), *estimate* can Agree with *two million people*, without violating the PIC. In this way, if we adopt the θ-marking via Agree hypothesis, the peculiar behavior of the ECM verb *estimate* can be subsumed under a general condition of UG, the DIC.

2.3. The Movement Theory of Control

The present system significantly affects Control theory, especially when we adopt the Movement Theory of Control (MTC) proposed by Hornstein (1999, 2000a, 2000b). This is because the MTC crucially relies on the feature approach to θ-marking. In this subsection, I attempt to revise the MTC in light of the GTM and the θ-marking via Agree hypothesis. Furthermore, it is demonstrated that the revised MTC is superior in empirical coverage to the original MTC.

The MTC argues (i) that in obligatory control constructions, PRO is a residue of NP-movement, (ii) that θ-roles are formal features on predicates, (iii) that an argument DP can receive a θ-role by moving to the checking domain of a predicate that has θ-features, and (iv) that a DP can receive more than one θ-role. Under these assumptions, let us consider the derivation of English obligatory control constructions. (9) and (10) are subject control and object control constructions, respectively (verb movement is omitted).

(9) a. John tried to win
   b. [TP Johni T [vp ti v [vp try [cp [TP ti to [vp ti win]]]]]]

(10) a. John persuaded Mary to go to Tokyo.
   b. [TP Johni T [vp ti v [vp Maryj persuade [cp [TP tj to [vp tj go to Tokyo]]]]]

In (9b), *John* is merged with the embedded verb *win*, and checks the θ-feature of *win*, receiving a θ-role. *John* then moves to the embedded [Spec, T] to check the EPP-feature of T before it moves to the matrix [Spec, v] to check the θ-feature of the matrix verb *try*, receiving another θ-role. Finally, *John* moves to the matrix [Spec, T] to check Case or φ-features. In (10b), *Mary* is merged with the embedded verb *go*, and checks the θ-feature of *go*, receiving a θ-role. Then *Mary* moves to the embedded [Spec, T] to check T’s EPP-feature. Finally, it moves to the matrix [Spec, V] to check the θ-feature of the matrix verb *persuade*, receiving another θ-role. Hornstein assumes that the Case-feature of *Mary* is checked by its
covert movement to [Spec, v (or AgrO)]. The movement of DP to check the θ-feature of a predicate is necessary for Hornstein’s analysis, especially in object control constructions like (10). If θ-driven movement does not exist, Mary must stay in the embedded [Spec, T].

Notice, however, that under the system proposed in the previous section, this kind of movement is not permitted. The present system predicts that the checking of a θ-feature can be performed by Agree rather than movement if the predicate c-commands the argument DP. Let us examine how the derivations of (9) and (10) proceed under the present system. They are illustrated in (11a, b) respectively.

(11) a. [TP Johni T [XP t1 try-v-X [VP ttry [CP t1 C [TP to [XP t1 win-v-X [VP t1 t v [VP twin]]]]]]]
   
   In (11a), which is a subject control construction, the [uθval] of the embedded X Agrees with the [iθunval] of John in the embedded [Spec, v], valuing the [iθunval] as Agent. Then, John, which has an unchecked [uCase], moves to the embedded [Spec, C] via the embedded [Spec, X], since XP and CP are phases. Then, the [uθval] of the matrix X Agrees with another [iθunval] of John in the embedded [Spec, C], valuing the [iθunval] as Agent. John moves to the matrix [Spec, X], because XP is a phase, and John has an unchecked [uCase]. Finally, John moves to the matrix [Spec, T] to check [uCase].

b. [TP Johni T [XP t1 persuade-v-X [VP tMary] [VP t t1 tC [TP to [XP t1 go-v-X [VP t1 t v [VP tgo to Tokyo]]]]]]

In (11b), which is an object control construction, the [uθval] of the embedded X Agrees with the [iθunval] of Mary, valuing the [iθunval] as Agent. Mary, which has an unchecked [uCase], moves to the embedded [Spec, C] via the embedded [Spec, X], for XP and CP are phases. Then, the [uθval] of persuade Agrees with another [iθunval] of Mary in the embedded [Spec, C], valuing the [iθunval] as Theme. Finally, Mary moves to the matrix [Spec, v] to check [uCase].

A crucial difference between Hornstein’s analysis and the present one is that in the present analysis, (i) the embedded [Spec, C] is a θ-position and (ii) the controller does not move to the embedded [Spec, T]. There is empirical evidence that indicates that the present analysis is more adequate than Hornstein’s analysis.

First, let us consider (i). Brody (1999) points out that Hornstein’s analysis cannot account for the contrast between (12b) and (12c). (12a) is a subject control construction and its passive counterpart is unacceptable, as shown in (12b). In contrast, an ECM verb like believe can be passivized, as illustrated in (12c). Notice that attempt can be passivized when it is not
in the control context, as indicated in (12d).

(12)  a. John attempted to leave.
       b. *John was attempted to leave.
       c. John was believed to have left.
       d. This was attempted.  \hspace{1cm} (Brody (1999: 219))

Under Hornstein’s analysis, (12b, c) have the structures given in (13a, b) respectively.

(13)  a. John, was attempted $[_{\text{CP}} [_{\text{TP}} t_i \text{ to } [_{\text{vP}} t_i \text{ leave}]]]$
       b. John, was believed $[_{\text{TP}} t_i \text{ to have } [_{\text{vP}} t_i \text{ left}]]$

In (13a), John A-moves to the matrix [Spec, T] via the embedded [Spec, T]. In (13b), John moves to the matrix [Spec, T] via the embedded [Spec, T]. This movement is also A-movement. Brody argues that it is not clear why there is a contrast between (12b, c) if control constructions are derived by A-movement, as Hornstein argues.

Hornstein (2000a) replies to Brody’s objection. He points out that unlike ECM complements, control complements are CPs, which are phases, and phases block extraction. Given this, he assumes that the CP phase is voided by some operation such as incorporation. According to Hornstein, in active control constructions like (12a), the embedded C is incorporated into the matrix verb. Thus, DP can move from the embedded [Spec, T] to the matrix clause. Furthermore, he argues that the incorporation is prevented from occurring in passive verbs. As a result, in (12b), John cannot be moved across the phase boundary. Hornstein presents evidence that passive verbs cannot support incorporated C. He points out that passive verbs cannot support the null complementizer, as shown in (14b). Given that the null complementizer must be incorporated into the higher verb, he argues that (14b) indicates that passive verbs cannot support incorporated C.

(14)  a. John fervently believes (that) there’s a man here.
       b. It’s fervently believed ??(that) there’s a man here.

       \hspace{1cm} (Hornstein (2000a: 137))

Landau (2003) notes several problems with Hornstein’s argument. One of them is concerned with object control constructions. Landau points out that object control constructions can be passivized, as illustrated in (15).

(15) Mary was persuaded to leave.  \hspace{1cm} (Landau (2003: 475))

Under Hornstein’s analysis, (15) has the following structure.

(16) Mary, was persuaded $t_i [_{\text{CP}} [_{\text{TP}} t_i \text{ to } [_{\text{vP}} t_i \text{ leave}]]]$

In (16), Mary moves from the embedded [Spec, T] to the matrix object position to check the θ-feature. However, this movement should not be allowed, since according to Hornstein (2000a), passive verbs cannot support
incorporated C. Therefore, Hornstein’s incorporation approach incorrectly predicts that (15) is ungrammatical.

I argue that the present analysis can save the MTC from Brody’s and Landau’s objections. Under the present analysis, the structures of the passive subject control construction (12b) and the passive object control construction (15) are as in (17a, b) respectively (verb movement is omitted).

\[(17)\]
\[a. \text{John was attempted} \left[ \text{CP} \text{ t} \text{ C to } \text{XP} \text{ t p i leave}] \right] \]
\[b. \text{Mary was persuaded} \left[ \text{CP} \text{ t} \text{ C to } \text{XP} \text{ t p i leave}] \right] \]

In (17a), John moves to the matrix [Spec, T] via the embedded [Spec, X] and [Spec, C]. This movement observes the PIC, since it passes through the edge of the phase, [Spec, C]. However, note that this movement is improper movement if we adopt the standard assumption that [Spec, C] is an A’-position. Therefore, the ungrammaticality of (12b) can be attributed to improper movement. In contrast, the movement of Mary in (17b) can be considered to be licit. This is because under the present analysis, Mary is θ-marked in the embedded [Spec, C]. A θ-marked position can reasonably be considered to be an A-position. Thus, the movement of Mary is not improper movement, yielding a grammatical sentence. Notice, in passing, that the ECM example in (12c) does not involve improper movement, because ECM complements are TP, unlike control complements.

In this way, if we adopt the present analysis, especially the assumption that in control constructions, the controller is θ-marked in the embedded [Spec, C] via Agree with the matrix verb, we can easily account for the ungrammaticality of (12b) and the grammaticality of (12c) and (15).

Let us then turn to the second difference between the present analysis and Hornstein’s analysis, that is, whether the controller passes through the embedded [Spec, T] or not. Ishikawa (2006) argues that the controller does not move to the embedded [Spec, T], based on Baltin’s (1995) observation concerning the distribution of floating quantifiers. Baltin points out that in control constructions, a floating quantifier cannot appear between the matrix verb and the embedded to, as shown in (18).

\[(18) \text{*They tried all to win.}\]

Given Sportiche’s (1988) stranding analysis of quantifier float, the structure

\[\text{Of course, the improper movement constraint is just a descriptive generalization. Thus, we should ask what principle derives the effect of this constraint under Minimalist assumptions. In this paper, however, I do not go into the details of this issue. I just argue that the facts we are looking at are subsumed under whatever principle is responsible for the improper movement constraint.}\]
of (18) is as follows under Hornstein’s analysis.

(19) *they$_i$ [$_{VP}$ $t_i$ $v$ [$_{VP}$ tried [$_{CP}$ [$_{TP}$ all $t_i$ to [$_{VP}$ $t_i$ $v$ [$_{VP}$ win]]]]]]

As indicated in (19), there is a position between the matrix verb and the embedded to where all could be stranded. Thus, given Sportiche’s stranding analysis, it is unclear why (18) is ungrammatical under the assumption that the controller moves to the embedded [Spec, T].

The present analysis can account for this fact if we adopt Bošković’s (2004) generalization concerning quantifier float given in (20).

(20) Quantifiers cannot be floated in θ-positions.

(Bošković (2004: 685))

The generalization (20) can account for the ill-formedness of (21), which had been problematic for Sportiche’s stranding analysis.8

(21) a. *The students arrived all.
   b. *The students were arrested all.
   c. *Mary hates the students all.

(Bošković (2004: 682))

Given that the generalization in (20) is correct, let us consider how we can account for the ungrammaticality of (18) under the present analysis. According to the present analysis, the structure of (18) is as follows.

(22) they$_i$ [$_{XP}$ $t_i$ tried-$v$-X [$_{VP}$ $t_i$ $v$ [$_{VP}$ tried [$_{CP}$ all $t_i$ C [$_{TP}$ to [$_{XP}$ $t_i$ win-$v$-X

8 The following sentences seem to be counterexamples to the generalization (20).

(i) a. Mary gave the kids all some candy.
   b. You put the pictures all on the table.

Bošković (2004), however, is able to account for the grammaticality of (i), assuming that the examples like (i) involve additional functional structure. According to him, give and put in (i) take small clauses (IPs in his analysis) as their complements (cf. Kayne (1984), Johnson (1991), among many others). The kids and the picture in (i), which are base-generated within the small clause in their θ-positions, move to the case-positions in the matrix clause through the specifier of the small clause ([Spec, I]). This is illustrated in (ii).

(ii) a. Mary gave [$_{VP}$ [the kids]; [$_{VP}$ [IP all $t_i$ [ti some candy]]]]
   b. You put [$_{VP}$ [the pictures]; [$_{VP}$ [IP all $t_i$ [ti on the table]]]]

Thus, all can be stranded in the specifier of the small clause, which is not a θ-position.

This analysis works properly under our system if we assume that the small clause is a functional projection whose head has [uθval] and is a phase head (let us call it FP). According to these assumptions, (ia, b) have the following structures.

(iii) a. Mary gave [$_{VP}$ [the kids]; [$_{VP}$ [IP all $t_i$ F [ti some candy]]]]
   b. You put [$_{VP}$ [the pictures]; [$_{VP}$ [IP all $t_i$ F [ti on the table]]]]

In (iii), the kids and the pictures are θ-marked by F in the base-generated position. Since they have unchecked [uCase], they moves to the edge of the phase, FP. Finally, they move to [Spec, v]. Notice that the edge of FP is not a θ-marked position. Therefore, all can be stranded there. I thank a reviewer for bringing this issue to my attention.
In (22), there is a position between the matrix verb and the embedded *to* where *all* could be stranded, namely [Spec, C]. The embedded [Spec, C], however, cannot be a target for a floating quantifier since it is the position that is θ-marked by the matrix X under the present system. Notice, in passing, that the present analysis correctly predicts that (23a) is grammatical, since the embedded [Spec, X] in (23a) is not θ-marked, as illustrated in (23b).

(23) a. They tried to all win.
   
   b. *they* tried [CP *ti* C [TP to [XP all *ti* win-v-X [vp *ti* tv [VP *tv*]]]]]

In this way, the present analysis, combined with Boškovič’s generalization, can properly account for the ungrammaticality of (18). Notice that if we assume that the controller moves to the embedded [Spec, T], we cannot account for the ungrammaticality of (18), even if the embedded [Spec, C] is a θ-position.

In this subsection, it has been shown that the revised MTC is empirically superior to the original MTC. In particular, I argued that our assumption that the edge of the CP of control complements is a θ-position saves the MTC from Brody (1999) and Landau’s (2003) objection. Notice that we cannot make the edge of the CP of control complements a θ-position under the assumption that θ-marking requires that some kind of local relation such as a head-complement or spec-head relation hold between a θ-assigner and θ-assignee. On the other hand, if we assume that Agree is sufficient for θ-marking, it follows automatically.

However, the argument in this subsection does not necessarily lead to the conclusion that θ-marking is performed by Agree, the main proposal of this paper. This is because the English data we have looked at in this subsection, i.e. the data concerning passives and floating quantifiers, can be accounted for without postulating that the edge of CP of the embedded clause is a θ-position, once we abandon the MTC and adopt the PRO-based theory. In the following sections, I provide Japanese data that can be accounted for under the θ-marking via Agree hypothesis, but cannot under the configurational approach or the feature approach that postulates θ-driven movement.

3. Object Control Constructions in Japanese

In this section, I show that object control constructions (OBC) in Japanese provide more direct evidence in favor of the θ-marking via Agree hypothesis than English data do. OBC is divided into two groups with respect to the
Case that the controller bears. They are illustrated in (24).\footnote{In this paper, I assume, following Aoshima (2001) and Fujii (2006), that sentences like (24) are obligatory control constructions. Furthermore, it is assumed, following Uchibori (2000), that \textit{yooni} is a complementizer.}

\begin{align*}
(24) & \quad \text{a. Taro-ga Hanako-ni Tokyo-e ik-u yooni meizi-ta.} \\
& \quad \text{Taro-Nom Hanako-Dat Tokyo-to go-Prs C order-Pst} \\
& \quad \quad \text{‘Taro ordered Hanako to go to Tokyo.’} \\
& \quad \text{b. Taro-ga Hanako-o Tokyo-e ik-u yooni settokusi-ta.} \\
& \quad \text{Taro-Nom Hanako-Acc Tokyo-to go-Prs C persuade-Pst} \\
& \quad \quad \text{‘Taro persuaded Hanako to go to Tokyo.’}
\end{align*}

In (24a), the controller \textit{Hanako} bears dative Case, while in (24b), it bears accusative Case. Let us call the former DatC and the latter AccC. Previous studies on Japanese control constructions, such as Nemoto (1993), Aoshima (2001), and Fujii (2006), among others, have not distinguished them. In particular, they presuppose that both DatC and AccC are in the matrix object position, as illustrated in (25).

\begin{align*}
(25) \quad \text{Subj DatC/AccC} & \left[ \Delta_i \quad \ldots \quad V \ yooni \right] V
\end{align*}

In this section, however, I present empirical evidence against (25). In particular, I argue that DatC can be in the embedded [Spec, C] (more precisely, [Spec, Fin]), while AccC must be outside of the embedded clause. Furthermore, it is argued that the proposed system in this paper can easily account for the difference between DatC and AccC.

3.1. Structural Positions for DatC and AccC

In this subsection, I attempt to establish the following generalization concerning structural positions for DatC and AccC: (i) DatC can be in [Spec, Fin] in the embedded clause; (ii) AccC must be outside of the embedded clause. In order to do this, I examine data involving indeterminates and \textit{sika-nai} constructions.

3.1.1. Indeterminate-Agreement

In Japanese, indeterminates such as \textit{nani} ‘anything,’ \textit{dare} ‘anyone,’ and \textit{doko} ‘anywhere’ can serve as negative polarity items (NPI), combined with the Q-particle \textit{-mo}, as illustrated in (26).

\begin{align*}
(26) & \quad \text{a. Taro-wa nani-mo yom-anak-atta.} \\
& \quad \text{Taro-Top anything-Q read-Neg-Pst} \\
& \quad \quad \text{‘Taro didn’t read anything.’}
\end{align*}
b. Dare-mo sono hon-o yom-anak-atta.
   anyone-Q the book-Acc read-Neg-Pst
   ‘No one read the book.’

Kuroda (1965) observes that the NPI reading is obtained even if the indeterminate is split from the Q-particle, as shown in (27), in which the indeterminate is the object and the Q-particle is attached to some head between T and V (i.e. V, v, or X in our phrase structure).

(27) Taro-ga nani-o yomi-mo si-nak-atta.
   Taro-Nom anything-Acc read-Q do-Neg-Pst
   ‘Taro didn’t read anything.’

As Kishimoto (2001) points out, however, the NPI reading is not licensed, when the indeterminate is the subject and the Q-particle is attached to the same head as in (27) as shown in (28).

(28) *Dare-ga sono hon-o yomi-mo si-nak-atta.
    anyone-Nom the book-Acc read-Q do-Neg-Pst
    ‘No one read the book.’

In contrast, when the Q-particle is attached to the C, the subject as well as the object can be an indeterminate.

(29) a. Taro-ga [Hanako-ga nani-o yon-da to-mo]
    Taro-Nom Hanako-Nom anything-Acc read-Pst C-Q
    iw-anak-atta.
    say-Neg-Pst
    ‘Taro didn’t say that Hanako read anything.’

b. Taro-ga [dare-ga sono hon-o yon-da to-mo]
   Taro-Nom anyone-Nom the book-Acc read-Pst C-Q
   iw-anak-atta.
   say-Neg-Pst
   ‘Taro didn’t say that anyone read the book.’

In order to explain the facts illustrated by (27)–(29), Hiraiwa (2005) proposes the following as the licensing condition for the indeterminates under the NPI reading.¹⁰

(30) Licensing Condition for Indeterminates (Hiraiwa (2005: 164))
   The head of the chain of the indeterminate must be in cd (Q) at
   Transfer. (cd (Q) means the c-command domain of the Q-particle.)

¹⁰ Kishimoto (2001) proposes another licensing condition for indeterminates. As Hiraiwa (2005) points out, however, Kishimoto’s condition refers to m-command, an undesirable notion in terms of Minimalism. Therefore, I adapt Hiraiwa’s condition that refers to the more natural notion, c-command.
THETA-MARKING VIA AGREE

Assuming that Q-particle is attached to X in (27) and (28), the structures for (27)–(29) under our system are as follows (NegP is omitted).

(31)  a. \[ \text{TP Taro-Nom} \ [\text{XP} \ t_i \ [\text{vP} \ \text{anything-Acc}] \ [\text{vP} \ t_i \ [\text{VP} \ t_j \ t\text{read}] \ t_v]] \ \text{read-v-X-mo}] \ T \]

  b. \*\[ \text{TP anyone-Nom} \ [\text{XP} \ t_i \ [\text{vP} \ \text{the book-Acc}] \ [\text{vP} \ t_i \ [\text{VP} \ t_j \ t\text{read}] \ t_v]] \ \text{read-v-X-mo}] \ T \]

  c. \[ \text{CP} \ \text{TP Hanako-Nom} \ [\text{XP} \ t_i \ [\text{vP} \ \text{anything-Acc}] \ t_i \ [\text{VP} \ t_j \ t\text{read}] \ t_v] \] \text{read-v-X] T] C-mo}\]

  d. \[ \text{CP} \ \text{TP anyone-Nom} \ [\text{XP} \ t_i \ [\text{vP} \ \text{the book-Acc}] \ t_i \ [\text{VP} \ t_j \ t\text{read}] \ t_v] \] \text{read-v-X] T] C-mo}\]

In (31a), the indeterminate \text{anything-Acc} is in [Spec, v] and the Q-particle \text{mo} attached to X c-commands it, fulfilling the licensing condition (30). Thus, (27) is grammatical. In (31b), the indeterminate \text{anyone-Nom} is in [Spec, T]. The Q-particle does not c-command [Spec, T], violating the licensing condition. Thus, (28) is ill-formed. In (31c, d), which are the structures of complement clauses of (29a, b) respectively, the Q-particle is attached to C, which c-commands both [Spec, v] and [Spec, T]. Thus, both (29a, b) are grammatical.

Suppose that the licensing condition (30) is correct. Then, it is predicted that if both the DatC and the AccC in OBCs are in the matrix clause, as the previous analyses presuppose, the NPI reading is not licensed when the indeterminate is the controller and the Q-particle is attached to the embedded C. However, this prediction is not borne out, as shown in (32).

(32)  a. Taro-ga dare-ni Tokyo-e ik-u yooni-mo
       Taro-Nom anyone-Dat Tokyo-to go-Prs C-Q
       meizi-nak-atta.
       order-Neg-Pst
       ‘Taro didn’t order anyone to go to Tokyo.’

  b.*Taro-ga dare-o Tokyo-e ik-u yooni-mo
     Taro-Nom anyone-Acc Tokyo-to go-Prs C-Q
     settokusui-nak-atta.
     persuade-Neg-Pst
     ‘Taro didn’t persuade anyone to go to Tokyo.’

(32a) is an OBC with the DatC \text{dare-ni} ‘anyone-Dat’ and (32b) is an OBC with the AccC \text{dare-o} ‘anyone-Acc.’ The Q-particle attached to the embedded C \text{yooni} can license the DatC, but not the AccC. One might think that the example in (32a) is not quite acceptable. However, the acceptability of (32a) becomes clearer if we compare it with that of the examples below.
(33) a. *Dare-ga Hanako-ni Tokyo-e ik-u yooni-mo meizi-nak-atta.
    anyone-Nom Hanako-Dat Tokyo-to go-Prs C-Q order-Neg-Pst
    ‘No one ordered Hanako to go to Tokyo.’

b. *Dare-ga Tokyo-e ik-u koto-mo kessinsi-nak-atta.
    anyone-Nom Tokyo-to go-Prs C-Q decide-Neg-Pst
    ‘No one decided to go to Tokyo.’

In (33a), the indeterminate is the matrix subject *dare-ga ‘anyone-Nom’* and the Q-particle is attached to the embedded C. In (33b), which is a so-called subject control construction, the indeterminate is a subject controller *dare-ga ‘anyone-Nom’* and the Q-particle is attached to the embedded C. There is a clear contrast in acceptability between (32a) on the one hand and (32b) and (33a, b) on the other. Thus, we can conclude that the contrast between (32a, b) is real.  

If this is correct, given the licensing condition (30), the contrast between (32a, b) leads to the conclusion that the DatC can be in the position which is c-commanded by the embedded C, whereas the AccC cannot. Then, possible candidates for the position of the DatC seem to be [Spec, T], [Spec, X], or [Spec, v] in the embedded clause. Among them, the possibility of [Spec, v] can be immediately ruled out, based on the unacceptability of (34) below.

(34) *Taro-ga dare-ni Tokyo-e iki-mo-suru yooni
    Taro-Nom anything-Dat Tokyo-to go-Q-do C
    meizi-nak-atta.
    order-Neg-Pst
    ‘Taro did not order anyone to go to Tokyo.’

In (34), the DatC is an indeterminate and the Q-particle is attached to the embedded X. If the DatC were in [Spec, v], it would be licensed by the Q-particle, since X c-commands [Spec, v]. Thus, the ill-formedness of (34) indicates that the DatC is in the position higher than [Spec, v]. Then, which is the correct position of DatC, [Spec, T] or [Spec, X]? In the next section, it is shown that neither [Spec, T] nor [Spec, X] are the correct position of DatC, based on the facts concerning so-called *sika-nai* constructions.

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11 A reviewer raises a question about the acceptability judgment for (32a). However, the majority of informants who I have consulted (ten out of thirteen) agreed with author’s judgment that there is a clear contrast between (32a, b). Thus, I assume that the acceptability judgment given is well-supported.
3.1.2. Sika-Nai Constructions

DP + sika serves as NPIs, as illustrated in (35).

(35) Taro-ga sono hon-sika yom-* (anak)-atta.
Taro-Nom the book-only read-Neg-Pst
‘Taro read only the book.’

Furthermore, DP + sika must be licensed by the negative particle -nai in the same clause, as shown in (36) (cf. e.g. Kato (1985), Kishimoto (2007)).

(36) a. Taro-ga Hanako-ni-sika [Ken-ga sin-da koto]-o
   Taro-Nom Hanako-Dat-only Ken-Nom die-Pst C-Acc
   iw-anak-atta.
   tell-Neg-Pst
   ‘Taro told only Hanako that Ken died.’

b. *Taro-ga Hanako-ni-sika [Ken-ga sin-anak-atta koto]-o
   Taro-Nom Hanako-Dat-only Ken-Nom die-Neg-Pst C-Acc
   it-ta.
   tell-Pst
   ‘Taro told only Hanako that Ken didn’t die.’

c. *Taro-ga [Hanako-ga ringo-sika tabe-ru to]
   Taro-Nom Hanako-Nom apple-only eat-Prs C
   omow-anak-atta.
   think-Neg-Pst
   ‘Taro thought that Hanako eats only an apple.’

Significantly, DP + sika in the subject position is licensed by -nai in the same clause:

(37) Taro-ga [Hanako-sika Tokyo-e ik-anak-atta to] it-ta.
Taro-Nom Hanako-only Tokyo-to go-Neg-Pst C say-Pst
‘Taro said that only Hanako went to Tokyo.’

Given that the subject must move to [Spec, T] in Japanese, the data in (35)–(37) can be captured by the following descriptive generalization.  

(38) DP + sika must be contained in TP with -nai in the same clause.

With this in mind, let us consider the example in (39), where DatC is DP + sika and the control complement clause contains -nai.

12 We should turn the generalization in (38) into a more precise, formal condition. Given that we do not posit m-command, we could say that DP + sika must be c-commanded by -nai in the same clause. In order for this condition to capture the generalization in (38), it must be assumed that Neg moves to C through T in Japanese. This is not a trivial assumption. Clearly, a more detailed discussion is required for this issue. See Kishimoto (2007) for head-movement of Neg in Japanese.
(39) *Taro-ga Hanako-ni-sika Tokyo-e ik-ana-i yooni meizi-ta.
Taro-Nom Hanako-Dat-only Tokyo-to go-Neg-Prs C order-Pst
‘Taro ordered only Hanako to go to Tokyo.’

Given the generalization in (38), it follows from the unacceptability of (39) that DatC is not contained in the embedded TP. Recall that in section 3.1.1, we concluded that DatC is in either [Spec, T] or [Spec, X] in the embedded clause. Therefore, there is a contradiction between the conclusion in this section and the one in the last section. In the next subsection, I propose a solution to this contradiction, based on Rizzi’s (1997) layered CP structure.

3.1.3. The Layered CP Structure

Rizzi (1997) argues that the left periphery of the clause is richer than we have assumed, as illustrated in (40).

(40) [ForceP Force\(^0\) [\((FocP) (Foc\(^0\)) [FinP Fin\(^0\) [TP \ldots \ldots ]]]]]

Adopting this structure, I assume that in OBC, *yooni* is Force to which the Q-particle is attached and DatC is in [Spec, Fin] in the embedded clause. Under these assumptions, the relevant part of the structure of (41a) is as in (41b).

(41) a. Taro-ga dare-ni Tokyo-e ik-u yooni-mo
Taro-Nom anyone-Dat Tokyo-to go-Prs C-Q
meizi-nak-atta.
order-Neg-Pst
‘Taro did not order anyone to go to Tokyo.’

b.                  VP
                    / \                   \
                  ForceP V                 \
                  /   \        order
                FinP Force                 \
                /     \      yooni-Q     \
            anyone-Dat TP Fin
                    / \          \
               Tokyo-to go

In (41b), the indeterminate DatC is c-commanded by the Q-particle attached to *yooni*. Therefore, the acceptability of (41a) can be accounted for under Hiraiwa’s (2005) licensing condition in (30). Furthermore, in (41b), the DatC is not contained in TP. Thus, the fact that DP + *sika* in the DatC position is not licensed by *-nai* in the embedded clause can be accounted for
under the generalization in (38).

Based on these considerations, I argue that the following generalization holds of the structural positions for DatC and AccC.

(42)  
   a. DatC can be in [Spec, Fin] in the embedded clause.\(^{13}\)
   b. AccC must be outside of the embedded clause.

The contrast between (43a, b) below supports the generalization in (42).\(^{14}\)

(43)  
   a. (?) Taro-ga asita Hanako-ni Tokyo-e ik-u yooni
      Taro-Nom tomorrow Hanako-Dat Tokyo-to go-Prs C
      meizi-ta.
      order-Pst
      \textquoteleft Taro ordered Hanako to go to Tokyo tomorrow.\textquoteright
   b. * Taro-ga asita Hanako-o Tokyo-e ik-u yooni
      Taro-Nom tomorrow Hanako-Acc Tokyo-to go-Prs C
      settokusi-ta.
      persuade-Pst
      \textquoteleft Taro persuaded Hanako to go to Tokyo tomorrow.\textquoteright

In (43a, b), the adverb that modifies the embedded clause, \textit{asita} ‘tomorrow,’ precedes the controller. As shown in (43a, b), the adverb can precede DatC, while it cannot precede AccC. Notice that adverbs like \textit{asita} cannot

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\(^{13}\) A reviewer doubts the generalization in (42a), based on the fact that the embedded clause in OBC can be preposed to the exclusion of the controller, as shown in (i).

(i) [Tokyo-e ik-u yooni], Taro-ga Hanako-ni ti meizi-ta.
   Tokyo-to go-Prs C Taro-Nom Hanako-Dat order-Pst
   \textquoteleft To go to Tokyo, Taro ordered Hanako.\textquoteright

Notice that the generalization in (42a) does not claim that DatC \textit{must} be in [Spec, Fin] in the embedded clause, but claims that it \textit{can} be. Thus, it is possible to derive the sentence in (i) by scrambling the controller, \textit{Hanako-ni} ‘Hanako-Dat,’ to the matrix clause, and preposing the remnant embedded clause.

Under this analysis of (i), however, it is unclear why the unbound trace in the preposed clause does not induce the Proper Binding Condition (PBC) effects (cf. Fiengo (1977) and Saito (1985)). The sentence in (i), however, can have an alternative structure, which has no unbound trace of the controller. As I will mention in section 4.2, Japanese control constructions permit overt pronouns (or anaphors) in the embedded subject position. If so, null pronouns too can appear in the embedded subject position. Thus, the example in (i) can be analyzed into the following alternative structure.

(ii) [pro Tokyo-e ik-u yooni], Taro-ga Hanako-ni ti meizi-ta.
   Tokyo-to go-Prs C Taro-Nom Hanako-Dat order-Pst
In (ii), there is no unbound trace. Thus, as long as the sentence in (i) can have the alternative structure in (ii), it is not incompatible with the generalization in (42a).

\(^{14}\) Some speakers judge (43a) to be somewhat marginal. Importantly, however, all the speakers who I consulted agreed that there is a clear contrast between (43a, b).
undergo long-distance scrambling to the edge of the matrix verbal phrase (i.e. VP-scrambling in Nemoto’s (1993) terms), as indicated in (44).


come-Prs C tell-Pst

‘Taro told Hanako that the teacher will come to his house tomorrow.’

Given this, the contrast between (43a, b) indicates that the DatC can be in the embedded clause, but the AccC cannot. This fact is expected under the generalization (42), but not under the assumption that both DatC and AccC are in the matrix clause. Therefore, the contrast between (43a, b) supports the generalization (42).

3.2. Analysis

In this section, it is demonstrated that the system that was proposed in section 2 can properly account for the generalization in (42), and that PRO-based theory and Hornstein’s version of the MTC cannot. Before going into the explanation, I introduce additional assumptions to adopt. They are given in (45).

(45)  a. In control complements, FinP is a phase, while ForceP is not.

b. Dative Case of DatC is an inherent Case, while Accusative Case of AccC is a structural one.

Regarding (45a), Hiraiwa (2005: 182) suggests that the phasehood of ForceP (C₃P in his terms) is related to the presence/absence of tense on the Force head. He argues that in ECM complements in Japanese, FinP (C₂P in his terms) is a phase (or a strong phase), while ForceP is not a phase (or a weak phase), based on the observation that in ECM constructions, the past tense on the embedded predicate is not allowed, when the matrix tense is present. This is illustrated in (46).

(46) Boku-wa Hanako(-no-koto)-wo kawai-i/*?/??kawaikat-ta 1Sg.-Top Hanako(-Gen-matter)-Acc pretty-Prs/pretty-Pst to omo-u.

C think-Prs

‘I think that Hanako was pretty.’ (Hiraiwa (2005: 180))

In (46), where the matrix predicate is in the present tense, the embedded tense must also be present. Hiraiwa relates this defectiveness of the ECM complements with respect to tense to the fact that ForceP in ECM comple-
ments comes with $[-T]$. And he assumes that $C$ with $[-T]$ is not a (strong) phase.

As is well known, the past tense is not allowed in control complements, as shown in (47).

(47) *Taro-ga Hanako-ni Tokyo-e it-ta yooni meizi-ta.
Taro-Nom Hanako-Dat Tokyo-to go-Pst C order-Pst
‘Taro ordered Hanako to go to Tokyo.’

Thus, if Hiraiwa’s conjecture is correct, it is safe to conclude that ForceP is not a phase in control complements, as in ECM complements.\(^{15}\)

As for (45b), I just follow the standard view that dative Case is a typical inherent Case and accusative Case is a typical structural Case.

First, let us consider how the derivation of OBC with DatC in Japanese proceeds under the present system. This is illustrated in (48) (the movement to [Spec, X] is omitted).

\[
\text{(48) a. } [\text{XP } X [\text{vP DatC } v [\text{vP V } ...]]] \\
\text{b. } [\text{FinP DatC Fin } [\text{TP T } [\text{XP } X [\text{vP } t_{\text{DatC}} v [\text{vP V } ...]]]]] \\
\text{c. } [\text{vP V } [\text{ForceP yooni } [\text{FinP DatC Fin } [\text{TP T } [\text{XP } X [\text{vP } t_{\text{DatC}} v [\text{vP V } ...]]]]]]]
\]

As shown in (48a), the [uθ] of X in the embedded clause Agrees with the [iθ] of DatC, which is base-generated in the embedded [Spec, v]. Then Fin is merged with TP and DatC moves to [Spec, Fin], because DatC has an unchecked [uCase], FinP is a phase, and there is no matching feature within FinP. This is illustrated in (48b). The FinP is further merged with Force and the matrix V. The matrix V has [uθ], and the [uθ] Agrees with the [iθ] of DatC in [Spec, Fin]. This is possible, since ForceP is not a phase. At the same time, the Case-feature of DatC is checked, because it is an inherent Case. I assume that predicates that assign/check an inherent Case have a special θ-feature that can check and value the [uCase] of the goal, unlike an ordinary θ-feature that solely values an unvalued θ-feature. All the uninterpretable features of DatC are checked at this point. Therefore, DatC does not need to move further. That is, DatC can stay in the embedded [Spec, Fin], deriving the generalization in (42a).

Next, let us turn to OBC with AccC. The derivation of OBC with AccC proceeds the same way in which the derivation of OBC with DatC proceeds, until the matrix V is merged with the embedded ForceP. Then, the matrix

\(^{15}\) For more detailed discussion about the tense properties of control complements in Japanese, see Uchibori (2000) and Aoshima (2001).
V is merged with the embedded ForceP, as illustrated in (49a) (the movement to [Spec, X] is omitted).

(49)  

\[
\begin{align*}
& a. \left[ VP V \left[ \text{ForceP} yooni \left[ \text{FinP} \text{AccC} \text{Fin} \left[ TP X \left[ VP t_{\text{AccC}} v \left[ VP V \ldots \right] \right] \right] \right] \right] \right] \\
& b. \left[ VP \text{AccC} v \left[ VP V \left[ \text{ForceP} yooni \left[ \text{FinP} t_{\text{AccC}} \text{Fin} \left[ TP X \left[ VP t_{\text{AccC}} v \left[ VP V \ldots \right] \right] \right] \right] \right] \right] \right]
\end{align*}
\]

The [uθ] of V Agrees with the [iθ] of AccC in [Spec, Fin]. In contrast with DatC, however, the Case-feature of AccC is not checked at the point of the derivation in (49a), since accusative Case of AccC is a structural Case. Thus, the θ-feature of AccC, but not its Case-feature, is checked in the embedded [Spec, Fin]. Then, as shown in (49b), the matrix v is merged with the VP and AccC moves to [Spec, v] to check its [uCase]. Now, we can derive the generalization in (42b) that states that AccC must be outside of the embedded clause.

Notice that neither PRO-based theory nor Hornstein’s version of the MTC can account for the generalization. This is because both require that θ-marking take place in a more local fashion, such as a sisterhood relationship or a spec-head relationship. Therefore, under these theories, both DatC and AccC should be in the matrix clause to be θ-marked. On the other hand, the generalization is easily derived, given that controller is θ-marked in [Spec, Fin] and overt object shift is obligatory, which is a main consequence of the proposed system.

4. Long-distance A-scrambling

In this section, I argue that the exceptional behavior of control complements is naturally accounted for by the fact that the FinP-edge of control complements is a θ-marked position: that control complements, unlike finite complements, allow A-movement extraction.

4.1. Object Control Complement and Finite Complement Clause

As noted by Tada (1993), clause-internal scrambling, which moves DP across the nominative-marked subject, can be an A-movement, as indicated by the acceptability of (50b) under the bound variable reading.

(50)  

\[
\begin{align*}
& a. *\left[ Soko-no \ yain\right]-ga \left[ Toyota ka Nissan\right]-o \\
& \quad \text{that\_place-Gen employee-Nom Toyota or Nissan-Acc} \\
& \quad \text{quit-Pst} \\
& \quad \text{‘Its employee quit Toyota or Nissan.’}
\end{align*}
\]
b. \[[\text{Toyota} \text{ ka Nissan}]-o \ [\text{soko}_i\text{-no syain}]-ga \ t_i\]  
\text{Toyota or Nissan-Acc that.place-Gen employee-Nom quit-Pst}

This argument is based on the fact that only A-movement remedies weak-crossover effects, as shown by the contrast between (51a) and (51b).

(51)  
\begin{align*}
   \text{a.}\ & \text{Who}_i\text{ does his}_i\text{ mother love } t_i? \\
   \text{b.}\ & \text{Who}_i\ [t_i\text{ seems to his}_i\text{ mother } [t_i\text{ to be intelligent}]]? \\
\end{align*}

On the other hand, long-distance scrambling out of finite complement clauses cannot be an A-movement. This is illustrated by the unacceptability of (52b) under the bound variable reading.

(52)  
\begin{align*}
   \text{a.}\ & * [\text{soko}_i\text{-no syain}]-ga \ [\text{Hanako-ga} \ [\text{Toyota ka } \\
   & \text{That place-Gen employee-Nom Hanako-Nom Toyota or Nissan}]-ni\ yatteki-ta\ to] \ it-ta. \\
   \text{Nissan-Dat come-Pst C say-Pst} \\
   \text{‘Its employee said that Hanako came to Toyota or Nissan.’} \\
   \\
   \text{b.}\ & * [\text{Toyota ka Nissan}]-ni\ [\text{soko}_i\text{-no syain}]-ga \\
   \text{Toyota or Nissan-Dat that.place-Gen employee-Nom} \\
   [\text{Hanako-ga } t_i\ yatteki-ta\ to] \ it-ta. \\
   \text{Hanako-Nom come-Pst C say-Pst} \\
\end{align*}

Thus, (52b) indicates that scrambling out of finite complement clauses must be an A’-movement.

Nemoto (1993) and Saito (1994) point out that control complements differ from finite complement clauses in this respect. That is, A-scrambling out of control complements is possible. (53b) shows that in OBC with DatC, long-distance scrambled DP can bind a bound pronoun (although the same holds of the OBC with AccC, I omit examples due to space limitations).

(53)  
\begin{align*}
   \text{a.}\ & * [\text{Taro-ga} \ [\text{soko}_i\text{-no keibiin}]-ni\ [10 izyoo-no} \\
   \text{Taro-Nom that.place-Gen guard-Dat 10 or more-Gen} \\
   \text{kaisya}]-ni\ keihoosooti-o\ torituker-u\ yooni\ meizi-ta} \\
   \text{company-Dat alarm.device-Acc install-Prs C order-Pst} \\
   \text{‘Taro ordered its guards to install an alarm device in ten or more companies.’} \\
   \\
   \text{b.}\ & [10 izyoo-no kaisya]-ni\ [\text{Taro-ga} \ [\text{soko}_i\text{-no} \\
   \text{10 or more-Gen company-Dat Taro-Nom that.place-Gen} \\
   \text{keibiin}]-ni\ t_i\ keihoosooti-o\ torituker-u\ yooni\ meizi-ta}.
   \text{guard-Dat alarm.device-Acc install-Prs C order-Pst}
\end{align*}

Based on these observations, we can conclude that finite complement clauses do not allow long-distance A-scrambling, while control complements do.
4.2. [Spec, Fin] as a Theta-Marked Position: Pseudo-Control Constructions

In this subsection, I argue that the fact that control complements allow A-movement is related to the fact that the FinP-edge of control complements is θ-marked, which is one of the main consequences of the system proposed in this paper.

Sakaguchi (1990) points out that Japanese control constructions permit overt pronouns (or anaphors) in the embedded subject position, as illustrated in (54).16 Let us call sentences like (54) pseudo-control constructions.

(54) ?Taro-ga Hanako-ni [kanozyōi-ga Tokyo-e ik-u yooni]
    Taro-Nom Hanako-Dat she-Nom Tokyo-to go-Prs C
    meizi-ta.
    order-Pst
‘Taro ordered Hanako to go to Tokyo.’

In what follows, it is shown that the FinP-edge of the complement clause in pseudo-control constructions is not θ-marked, unlike in genuine control constructions. A possible candidate that is θ-marked in the FinP-edge of the complement clause is the controller. If the controller is θ-marked in the FinP-edge, it is expected that DatC in pseudo-control constructions can stay there, as in genuine OBC. However, this is not the case, as indicated by the unacceptability of (55), where DatC is an indeterminate and the Q-particle is attached to Force.

(55) *Taro-ga dare-ni [soitu-ga Tokyo-e ik-u yooni-mo]
    Taro-Nom anyone-Dat he-Nom Tokyo-to go-Prs C-Q
    meizi-nak-atta.
    order-Neg-Pst
    ‘Taro did not order anyone that he would go to Tokyo.’
Notice that the sentence becomes acceptable when the Q-particle is attached to the matrix X, rather than the embedded Force, as illustrated in (56) below.

(56) ?Taro-ga dare-ni [soitu-ga Tokyo-e ik-u yooni]
    Taro-Nom anyone-Dat he-Nom Tokyo-to go-Prs C
    meizi-mo-si-nak-atta.
    order-Q-do-Neg-Pst
Thus, given Hiraiwa’s (2005) licensing condition in (30), the unacceptability

16 Although the examples in (54) appear to be less acceptable, the marginality disappears once an appropriate contrastive or emphatic stress is placed on the embedded subjects, as noted by Sakaguchi (1990).
of (55) is attributed to the fact that DatC in pseudo-control constructions cannot be in a position that is c-commanded by Force in the embedded clause. We can therefore conclude that the unacceptability of (55) indicates that DatC in pseudo-control constructions is \( \theta \)-marked at least higher than \([\text{Spec, Force}]\) in the embedded clause, given the discussion in section 3.

With this in mind, let us examine whether pseudo-control complements allow A-movement extraction. As shown in (57b), a QP that is extracted out of a pseudo-control complement cannot bind a bound pronoun.

(57) a. *Taro-ga [soko\textsubscript{10} no keibiin]-ni [soitu\textsubscript{1} ga 10 izyoo-no kaisya]-ni keihoosooti-o torituker-u or.more-Gen company-Dat alarm.device-Acc install-Prs yooni] meizi-ta.

b. *[10 izyoo-no kaisya]-ni Taro-ga [soko\textsubscript{10} no 10 or.more-Gen company-Dat Taro-Nom that.place-Gen keibiin]-ni [soitu\textsubscript{1} ga t\(i\) keihoosooti-o torituker-u yooni] guard-Dat he-Nom alarm.device-Acc install-Prs C meizi-ta.

That pseudo-control complements allow long-distance scrambling is attested by the acceptability of (58) below, which does not involve variable binding.

(58) ?[Ano kaisya]-ni Taro-ga buka\textsubscript{1} ni [soitu\textsubscript{2} ga t\(i\) That company-Dat Taro-Nom men-Dat he-Nom keihoosooti-o torituker-u yooni] meize-ta.

alarm.device-Acc install-Prs C order-Pst

‘Taro ordered his men to install an alarm device in that company.’

Given this, we can conclude that the unacceptability of (57b) is to be attributed to the impossibility of variable binding. This means that pseudo-control complements do not allow A-movement extraction.\(^{17}\) Recall that genuine OBCs and pseudo-control constructions differ in that in the former,

\(^{17}\) This fact cannot be subsumed under Uchibori’s (2000) generalization about long-distance A-scrambling, which is that long-distance A-scrambling is allowed if the tense of the embedded clause is defective or the C of the embedded clause is nominal. She assumes that the tense in clauses where the past tense cannot occur is defective. Notice
the FinP-edge of the embedded clause is a θ-marked position, while in the latter, it is not. I argue that this difference is responsible for the (im)possibility of A-movement extraction out of the embedded clause, proposing the following generalization.

(59) Long-distance A-scrambling is allowed if the FinP-edge of the embedded clause is θ-marked.

That as illustrated in (i) below, the past tense is disallowed in pseudo-control complements, just as in control complements.

(i) *Taro-ga Hanako-ni kanazyo-ga Tokyo-e it-ta yooni meizi-ta.
Taro-Nom Hanako-Dat she-Nom Tokyo-to go-Pst C order-Pst
‘Taro ordered that Hanako went to Tokyo.’

Thus, it is unclear why pseudo-control complements do not allow long-distance A-scrambling under her generalization.

The question that immediately arises is how the pseudo-control constructions are derived. Although I cannot provide a detailed discussion of this issue due to space limitations, I will make the stipulative suggestion that in pseudo-control constructions, the controller is in the matrix clause, and the embedded subject pronoun is assigned default Case. Fujii (2006) suggests that non-structural nominative Case is available in the subject position of clauses like control complements in Japanese.

The validity of (59) might be strengthened by data involving the tokoro-relative clause (TRC) construction, which is exemplified in (i) below (cf. Harada (1973), Kuroda (1999)), if we adopt Narita’s (2007) analysis of the construction. Under Narita’s analysis, the internal head, dorobo-ga ‘burglar-Nom’ in (i), undergoes Pre-Spell-Out Covert movement to the CP-edge of the TRC, where the internal head is θ-marked by the matrix predicate, tukamae ‘arrest’ in (i).

(i) Taro-ga [dorobo-ga nigeteik-u tokoro]-o tukamae-ta.
Taro-Nom burglar-Nom escape.go-Prs C-Acc arrest-Pst
(Lit.) ‘Taro arrested the moment a burglar tried to escape.’

Suppose that his analysis is correct and the CP-edge mentioned above is reinterpreted as the FinP-edge to fit into our system. It is then predicted from the generalization in (59) that a TRC allows long-distance A-scrambling. The prediction seems to be borne out, as indicated in (iib).

(ii) a. *[Soko,-no syain]-ga [dorobo,g, ga [Toyota ka Nissan],-ni that.place-Gen employee-Nom burglar-Nom Toyota or Nissan-Dat hair-oootosi-ta tokoro]-o tukamae-ta.
break-about.to.do-Pst C-Acc arrest-Pst
‘Its employee arrested a burglar, the moment he was about to break into T or N.’

b. [Toyota ka Nissan],-ni [soko,-no syain]-ga
Toyota or Nissan-Dat that.place-Gen employee-Nom
[dorobo-ga ti, hair-oootosi-ta tokoro]-o tukamae-ta.
burglar-Nom break-about.to.do-Pst C-Acc arrest-Pst

Thus, the acceptability of (iib) under the bound variable reading supports the generalization in (59) insofar as Narita’s analysis is correct.
Given the present system, the generalization in (59) can naturally be subsumed under the improper movement constraint. Saito (1994) argues that the impossibility of long-distance A-scrambling out of finite complement clauses can be attributed to improper movement violations. Given that scrambling obeys the PIC, it follows that the long-distance scrambled elements must move to the higher clause via the embedded CP-edge. If the CP-edge is generally an A′-position, long-distance A-scrambling out of finite complement clauses necessarily induces either an improper movement violation or a PIC violation. Therefore, long-distance A-scrambling out of a finite complement clause is always illicit. This is illustrated in (60).

\[
(60) \quad \begin{align*}
\text{a. } & *[A_\text{pos} \alpha] \ldots [\text{CP} [A_\text{pos} t\alpha] \ldots t\alpha \ldots] \\
\text{b. } & *[A_\text{pos} \alpha] \ldots [\text{CP} [... t\alpha \ldots]]
\end{align*}
\]

(improper movement violation) (PIC violation)

If this approach is correct, the generalization in (59) is naturally expected under the present system. Given that the FinP-edge of control complements is θ-marked, it is reasonable to consider it an A-position. Therefore, the elements that undergo long-distance A-scrambling can make use of the FinP-edge as an escape hatch, without violating either the improper movement constraint or the PIC. This is illustrated in (61).

\[
(61) \quad [A_\text{pos} \alpha] \ldots [\text{ForceP} [\text{FinP} [A_\text{pos} t\alpha] \ldots t\alpha \ldots]]
\]

Recall that the fact that the FinP-edge of control complements is θ-marked can be derived from the present system (i.e. the GTM + the revised MTC + the θ-marking via Agree hypothesis), but not from the PRO-based theory of control or Hornstein’s version of the MTC. Therefore, the generalization in (59) supports the present system.

5. Conclusion

In this paper, I have proposed that θ-marking takes place via Agree. Under this view of θ-marking, it is expected that θ-marking can in principle take place at a longer distance than ordinarily assumed. I provided evidence that in fact, this is the case. Specifically, I provided a number of data involving control constructions in English and Japanese that indicate that the controller in the embedded [Spec, C] (more precisely [Spec, Fin]) is θ-marked by the matrix θ-assigner (the [uθval] bearer).

Given the discussion about the parallelism between CP and DP, the question that arises is whether the DP-edge can also be θ-marked like the CP-edge. In order to answer this question, however, we have to closely examine the clausal architecture of the noun phrase and the Case system in
a nominal domain. I leave this issue open for future research.

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[received April 1 2008, revised and accepted November 16 2008]