On the Derivation of Backward Control in Japanese*

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ABSTRACT

In this paper, we will argue that there are two ways to check the θ-feature of the matrix verb against the embedded subject in backward control in Japanese: Merge or Probe-Goal Search. In the former, the embedded subject moves to the SPEC position of the matrix verb. Furthermore, when it raises, its Case is 'overridden' as Acc. In the latter, on the other hand, it does not move, remaining in the embedded subject position. Following Fujimori (2018), we will assume that the subject position in Japanese is SpecCP, which enables the embedded subject to count as the upper phase participant, but it is not so high enough to interact with the matrix element.

KEYWORDS

the Movement Theory of Control, backward control, the θ-feature checking either via Merge or by Probe-Goal Search, the rarity of backward control

1. Control as Movement: From PRO to A-Chain: Hornstein (1999)

In the era of Principles and Parameters Theory (P&P), the 'silent' subject of the infinitival clauses was treated as PRO, which should be 'controlled' by its antecedent.

(1) a. John hoped to leave.
    b. John$_i$ hoped [PRO$_i$ to leave]

In (1a), two verbs *hoped* and *to leave* emerge. The subject of the matrix verb *hoped* is overtly expressed as *John*, but that of the infinitival clause is not. However, it has been assumed that even infinitives have its own subject, though never pronounced, in the form of PRO, as indicated in (1b), and that PRO should have its antecedent, or controller, which locally c-commands, or controls, PRO.

However, as the syntactic theory proceeds from P&P to Minimalist Program (MP), the existence of PRO became quite doubtful. As Bošković (2013) notes, "MP explores the possibility that the content attributed to UG is an optimal way of satisfying requirements imposed on the language faculty

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by the external systems that the language faculty interfaces with and is characterized by optimal, computationally efficient ways" (P2). According to this view, superfluous symbols in representation, such as PRO, should be banned, which are equipped only for the language-faculty-internal reason; that is, PRO exists only to account for the 'silent' subject of infinitives, which cannot be interpreted, therefore is unnecessary, at the interface level.

Hornstein (1999) offers drastic proposals on the control phenomenon, which are consistent with the concepts of MP mentioned above. He argues, following Copy Theory in Chomsky (1993), that PRO should be treated as the member of A-chain.

(2) a. John hoped to leave. (= (1a))
    b. John$_i$ hoped <John$_i$> to leave[1]

In (2b), instead of positing conceptually doubtful PRO, the DP *John* emerges as the subject of the infinitive *to leave*, and then it A-moves to the matrix subject position. This proposal dispenses with PRO, which is the desirable result in accordance with MP. This analysis is called "the Movement Theory of Control (MTC)."

Furthermore, MTC has crucial implications. Among others, it is important to point out that MTC abandons the θ-criterion, which says that DP has to have at most one θ-role. Thus, in (2b), *John* receives two Agent roles from *to leave* (interpreted as 'leaver') and *hoped* (as 'hoper'). Multiple θ-role assignment has made the difference between raising and control, both of which are movement of the infinitival subject into the matrix clause, clear.

(3) a. John seems [<John> to be honest]
    b. John hoped [<John> to leave]

In both of the examples in (3), the embedded subject *John* moves to the matrix subject position, where *John* has its Case feature licensed as Nom. However, there is a crucial difference between (3a) and (3b): the matrix subject position in (3a) is the θ-bar position (*seem* does not have the external θ-role), while that in (3b) is the θ-position (*hope* has the external θ-role 'hoper'). Thus, it would be reasonable to assume that raising is the movement into the θ-bar position, while control is the one into the θ-position.

2. Backward Control

2.1. Backward Control in Tsez: Polinsky and Potsdam (2002)

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[1] Throughout this paper, we will use <　> as the 'trace' of movement.

Once control is regarded as A-movement, an interesting question arises: are there any reasons why only the moving DP, or the upper DP, realizes phonetically? That is, if we can encounter any control examples in which the lower DP, not the upper one, of the A-movement realizes phonetically, it would be so strong a support for MTC: if PRO were assumed, you could not account for why the DP itself occurs in the lower position. In fact, this expectation is borne out. Polinsky and Potsdam (2002) exemplify the so-called "backward control." According to them, in the language Tsez, which is an ergative language, the predicate agrees with the Absolutive element. However, when the matrix verbs are aspectual, such as *-oqa* 'begin' or *-iča* 'continue,' an unusual agreement pattern realizes, as shown in (4).

(4) kid-bā ziya b-išr-a y-oq-si
girl.**II**-Erg cow.III.Abs III-feed-INF **II**-begin-Past.Evid
'The girl began to feed the cow'

In (4), the matrix verb 'begin' agrees with the Ergative element 'girl', not with the Absolutive element 'cow.' To account for this, Polinsky and Potsdam (2002) propose that there be the empty element (Δ) in the matrix clause, as shown in (5a), which agrees with the matrix predicate. Following MTC, they further argue that Δ can be regarded as a DP which has moved from the embedded clause, as shown in (5b).

(5) a. Δ_i [kid-bā$_i$ ziya b-išr-a] y-oq-si
II.Abs girl.II-Erg cow.III.Abs III-feed-INF **II**-begin-Past.Evid
b. <kid$_i$> [kid-bā$_i$ ziya b-išr-a] y-oq-si
girl.**II.Abs** girl.II-Erg cow.III.Abs III-feed-INF **II**-begin-Past.Evid

Given that Δ bears the Absolutive Case[2], it is reasonable to say that the matrix predicate 'begin' agrees with the Absolutive Δ in the matrix clause, not with the Ergative 'girl' in the embedded clause. Thus, Polinsky and Potsdam (2002) elegantly account for the derivation of backward control.

2.2. Backward Control in Japanese: Harada (1973) and Fujii (2004)

Harada (1973) shows some examples on backward control in Japanese, as shown in (6a), which involves the so-called "TOKORO clause." Fujii (2004) also shows other backward control examples,

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[2] Note that the DP 'girl' has already its Case licensed as Erg in the embedded subject position: that is, the DP in itself has no Case-driven motivation to move further, which is a crucial fact in the current analysis to account for the θ-feature 'assignment.' See the discussion below.

one of which is shown in (6b).

(6) a. Keisatu-ga [sono-doroboo-ga nigeteiku-tokoro]-o tukamae-ta
Police-Nom [the-thief-Nom escape-TOKORO]-Acc capture-Past
'The police arrested the thief (as he was) trying to escape' (Harada (1973))
b. Taro-wa [John-ga siken-ni toor-u-no]-o tetudat-ta
Taro-Top [John-Nom exam-Dat pass-Prs-NO]-Acc assist-Past
'Taro assisted John to pass the exam' (Fujii (2004))

In both examples in (6), the matrix verbs are transitive, so they have the internal θ-roles to be assigned to their objects. However, what is marked as Acc in (6) is not the 'canonical' objects but a kind of clauses; that is, TOKORO clause in (6a) and NO clause in (6b). Thus, Harada (1973) and Fujii (2004) assume that the embedded subject moves to the matrix clause to have the internal θ-role of the matrix verb assigned.

(7) a. Keisatu-ga **<sono-doroboo-ga>** [**sono-doroboo-ga** nigeteiku-tokoro]-o tukamae-ta
b. Taro-wa **<John-ga>** [**John-ga** siken-ni toor-u-no]-o tetudat-ta

Note that since the upper copies moves to the matrix object position, if the upper copies realized phonetically, it should be Case-marked as Acc[3], which induces the Double-*O* Constraint.

(8) a. ?*Keisatu-ga sono-doroboo-**o** [<sono-doroboo-ga> nigeteiku-tokoro]-**o** tukamae-ta
b. ?*Taro-wa John-**o** [<John-ga> siken-ni toor-u-no]-**o** tetudat-ta

(9) The Double-*O* Constraint (Harada (1973))
A derivation is marked as ill-formed if it terminates in a surface structure which contains two occurrences of NPs marked with *O*, both of which are immediately dominated by the same VP-node.

Thus, it would be reasonable to say that, as Harada (1973) notes, in (6) the 'silent' matrix object exists syntactically, as shown in (7), but the language-specific constraint, the Double-*O* Constraint in Japanese, prevents the 'silent' object from realizing phonetically. Note here that in (7) the raised DPs have been already Case-marked as Nom in the embedded clauses, which means there is no Case-driven reason to move to the matrix clause according to Activation Condition, which requires that an element

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[3] As in note 2, the embedded subjects 'the thieves' and *John* have it Case licensed at the embedded subject position, so they have no Case reason to move further. Interestingly, when they move to the matrix object position, their Case should be replaced as Acc. Thus, there are two possibilities of realization: DP-Nom or DP-Acc. As for this, see the discussion below.

undergoing movement have an uninterpretable feature.

3. Where Is the ‘Silent’ Object in Backward Control?

Given that the ‘silent’ matrix object exists in the matrix clause, it is expected that some elements in the matrix clause (more precisely some elements in the matrix VP or *v*P) can have some interaction with the raised object. Recall that Lasnik and Saito (1991) convincingly argue that, in the Raising-to-Object (RTO) construction, the raised object does affect the element in the matrix clause, while the embedded subject does not.

(10) a. Condition A
The DA proved two men$_i$ [<two men>$_i$ to have been at the scene of the crime] during each other$_i$'s trials
b. Weak Crossover mitigation
The DA proved no suspect$_i$ [<no suspect>$_i$ to have been at the scene of the crime] during his$_i$ trial
c. NPI licensing
The DA proved no one$_i$ [<no one>$_i$ to have been at the scene] during any of the trials
(11) a. * The DA proved [that two men$_i$ were at the scene of the crime] during each other$_i$'s trials
b. * The DA proved [that no suspect$_i$ was at the scene of the crime] during his$_i$ trial
c. * The DA proved [that no one$_i$ was at the scene] during any of the trials

Furthermore, this is also the case in Japanese, as Sakai (1998) argues.

(12) a. ?* Rie-wa [karera-ga muzitu da to] otagai-no syoogen-niyotte
Rie-Top they-Nom innocent be Comp each.other-Gen testimony-by
sinziteiru
believe
‘Rie believes that they are innocent by each other’s testimonies’
b. Rie-wa karera$_i$-o [<karera-ga>$_i$ muzitu da to] otagai-no syoogen
Rie-Top they-Acc innocent be Comp each.other-Gen testimony
-niyotte sinziteiru
-by believe

In examples in (10) and in (12a), the RTO objects overtly raise to the matrix object position, where they have some interaction, such as condition A, with the elements in the matrix clause.

Given that, following MTC, control is A-movement and that backward control is also A-movement in which the lower member phonetically realizes, the same as shown above should hold: that is, the 'silent' object should have some interaction with the elements in the matrix clause[4]. In fact, Fujii (2004) tries to show that this should be the case, by exemplifying the following example.

(13) John$_i$-ga [kare$_{*i}$-ga otikondeiru-tokoro]-o nagusame-ta
John-Nom [he-Nom disappointed-TOKORO]-Acc console-Past
'John consoled ___ [when he was disappointed]'

In (13), Fujii (2004) argues, the embedded subject *kare-ga* 'he-Nom' cannot be coreferential with the matrix subject *John-ga* 'John-Nom,' which indicates that, in terms of condition B, the embedded subject behaves as if it is in the matrix clause. Thus, Fujii (2004) argues that in (13) the embedded subject actually raises into the matrix clause, though not realized at that position.

However, we have to be more careful to conclude that examples in (13) should be treated like the example in (12b): that is, though we agree with his judgement of coreferentiality in (13), it does not immediately follow that the embedded subject raises 'into the matrix object position,' as (12b). In fact, Fujimori (2018) argues that, in Japanese, the subject moves to SpecCP, not to SpecTP[5].

(14) a. * John$_i$-ga [kare$_i$-ga baka da to] omot-teiru
John-Nom [he-Nom stupid COP that] think-Prog
'John thinks that he is stupid'
b. John$_i$-ga [zibun-zisin$_i$-ga baka da to] omot-teiru
John-Nom [self-Nom stupid COP that] think-Prog
'John thinks that self is stupid'

(15) a. … [$_{\text{CP}}$ kare-ga [$_{\text{TP}}$ <kare> [$_{v\text{P}}$ <kare> [$_{\text{VP}}$ baka da] *v*] T] to(C$_{\text{[EPP]}}$)] …
b. … [$_{\text{CP}}$ zibun-zisin-ga [$_{\text{TP}}$ <zibun-zisin> [$_{v\text{P}}$ <zibun-zisin> [$_{\text{VP}}$ baka da] *v*] T] to(C$_{\text{[EPP]}}$)] …

In (14a), the embedded subject *kare-ga* is not coreferential with the matrix subject *John-ga*, as in (13), while in (14b) the embedded subject *zibun-zisin-ga* 'self-self-Nom' is coreferential with the matrix subject. That is, both of the embedded subjects in (14) should be clause mates with the matrix subjects respectively, which would rule out (14a) in terms of condition B and would rule in (14b) in terms of condition A. Thus, Fujimori (2018) argues that in Japanese the subject moves to SpecCP, and that the Phase Impenetrability Condition (PIC) enables the embedded subjects to count them as

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[4] Recall Polinsky and Potsdam's (2002) example, as in (5): even though Δ does not realize phonetically, it can behave as the matrix subject with Abs, which enables the matrix predicate to agree with the subject.

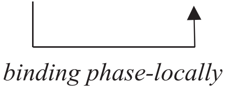
[5] Fujimori (2018) argues that in Japanese Feature Inheritance (FI) does not occur, which makes the φ-features remaining on C, so the subject moves to SpecCP to have its φ-features checked; on the other hand, in English, FI does take place, so the subject moves to SpecTP to check them. As for the details, see Fujimori (2018).

the member of matrix clause (more precisely, the upper phase), given that phases constitute the local boundary, following Quicoli (2008).

If this argument is on the right track, in the example in (13), although the embedded subject cannot be coreferential with the matrix subject, which indicates that the embedded one is the clause mate with the matrix one, it suffices to say that the embedded subject is in the embedded SpecCP, where it can be counted as one of the participants in the upper phase, or, as the 'clause' mate with the matrix subject.

(16) a. John$_i$-ga [kare$_{*i}$-ga otikondeiru-tokoro]-o nagusame-ta (= (13))

b. [$_{vP}$ John-ga [$_{VP}$ [$_{CP}$ kare-ga [$_{TP}$ otikondeiru] TOKORO] nagusameru] *v*]



Thus, it is concluded that the example in (13) is not sufficient to argue for the raising of the embedded subject 'into the matrix object position.'

What we need would be such examples as those in (10) and (12b): Assume that control, as a whole, involves two instances of the same DP (or copies) via A-movement, and that what matters is just the choice of which to be deleted: deleting the lower copy leads to 'forward' control, and the deleting the upper copy leads to 'backward' control. Then, the upper copy, whether phonetically realized or not, should affect some elements in the matrix clause, like the examples in (10) and (12b)[6]. In this respect, it would be noteworthy that Nunes (2004) introduces Chomsky's (1993) argument that even the copy deleted at PF remains available for interpretation at LF, which indicates that even the phonologically deleted copy does survive at LF.

(17) John$_i$ wondered [which picture of himself$_{i/j}$] Bill$_j$ saw <which picture of himself>

In (17), the antecedent of *himself* can be either the matrix subject *John* or the embedded subject *Bill*. To account for this, "… if the lower copy of *which picture of himself* in [(17)] is picked up for interpretation, we obtain the reading under which the embedded subject determines the reference of *himself*; if the higher copy is interpreted, we obtain the matrix subject reading instead" (Nunes (2004: 11)[7]. This clearly indicates that even the deleted copy has much to do with the interpretation at LF.

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[6] See note 4.

[7] In the current MP, Quicoli (2008) for example, this coreferenciality is accounted for on the basis of the phase theory: in the embedded *v*P phase, *Bill* locally binds *himself*, given that the phase forms the local domain.

(i) [$_{vP}$ Bill$_j$ *v* [$_{VP}$ saw which picture of himself$_j$]]

When the embedded CP phase is formed, the embedded TP is Transferred due to PIC, but the *wh*-phrase remains available from the upper or matrix *v*P phase.

(ii) [$_{vP}$ John$_i$ *v* [$_{VP}$ wondered [$_{CP}$ [which picture of himself$_i$] C [$_{TP}$ Bill saw <which picture of himself>]]]]

(the shaded unit is Transferred)

Now, look at the following examples.

(18) a. * Keisatu-ga [[futari-no doroboo]-ga kakureteiru-tokoro]-o otagai-no
Police-Nom [[two-Gen thief] -Nom hide-TOKORO]-Acc each.other-Gen
azito[8]-de hakkensi-ta
hangout-at find-Past
'The police found two thieves at each other's hangout when they were hiding'
b. *?Keisatu-ga [futari-no doroboo]-o [<futari-no doroboo> kakureteiru-tokoro]-o
Police-Nom [two-Gen thief] -Acc hide-TOKORO]-Acc
otagai-no azito-de hakkensi-ta
each.other-Gen hangout-at find-Past

In (18a), if the embedded subject *futari-no doroboo* 'two thieves' raised to the matrix object position, it would be expected that it should have interaction with the matrix element *otagai* 'each other,' just like the examples in (10) or (12b), even though it is not phonetically realized at that position. However, it can't actually. This means that the 'raised' DP is not in the position from which it binds the reciprocal in the matrix clause.

More interestingly, furthermore, though (18b) is ruled out due to the Double-*O* Constraint, if we ignore its deviance, the possibility of interaction between *futari-no doroboo* and *otagai* becomes much higher than that in (18b). This indicates that the 'raised' DP in (18b) actually raises high enough to bind the reciprocal in the matrix clause, just like the examples in (10) and (12b).

Then, where is the 'raised' object? We will assume, following Fujimori (2018), that in (7), the embedded subjects move to the embedded SpecCP, where the internal θ-role of the matrix verb is assigned, or checked[9].

(19) a. Keisatu-ga [$_{CP}$ **sono-doroboo-ga** [$_{TP}$ [$_{vP}$ <sono-doroboo-ga> nigeteiku]] tokoro]-o
tukamae-ta
b. Taro-wa [$_{CP}$ **John-ga** [$_{TP}$ [$_{vP}$ <John-ga> siken-ni toor-u]] no]-o tetudat-ta

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In (ii), *John* phase-locally binds *himself*, the coreferencial relation being established.
As for more details, see Quicoli (2008) and Fujimori (2018).

[8] One of our informants pointed out that the word *azito* 'hangout' would be misleading, since police would have no hangout, and hangout is just for criminals, which would misleadingly connect thieves and hangout, with the binding relation between 'two thieves' and 'each other's hangout' acceptable. However, she also pointed out that when *otagai-no ajito* 'each other's hangout' is replaced by *otagai-no ie* 'each other's home, the binding relation never occurs. Thus, it can be argued that in (18) the embedded subjects do not bind some elements in the matrix clause.

[9] Fujimori (2018) argues, following Saito's (2011) argument, that the subject base-generated in Spec*v*P moves to SpecCP via SpecTP to have its Case licensed. Here, the problem whether the subject moves through SpecTP or not is not relevant for the current analysis, so I will tentatively follow Saito's (2011) and Fujimori's (2018) assumption. Even if it is made out that the subject does not drop into SpecTP, no problem would occur in the current analysis. This problem will be left for future research.

Given PIC, when the embedded CP is formed, the complement of the phase head C, the embedded TP, will be Transferred. However, the phase head C and its SPEC remain in the derivation, and when the matrix verb enters into the derivation, it will start searching the matching goal as to the internal θ-role, finding the embedded subject on the embedded SpecCP as the θ-role 'receiver.' Recall Hornstein's (1999) assumptions on the θ-role 'assignment,' or the θ-feature checking.

(20) a. θ-roles are features on verbs.
  b. Greed is Enlightened Self-Interest.
  c. A D/NP "receives" a θ-role by checking a θ-feature of a verbal/predicative phrase that it merges with.
  d. There is no upper bound on the number of θ-roles a chain can have.
  e. Sideward movement is permitted.

According to the assumption (20c), in order to have the θ-role (or the θ-feature) checked, the θ-role 'receiver' has to move and merge with the θ-role 'assigner' (i.e. a verb). However, in the current assumption, the embedded subject can be the θ-role 'receiver' even though it does not move to and merge with the matrix verb, the θ-role 'assigner.' Therefore, it should be assumed that the θ-role assignment can be undergone not only by Merge (whether Internal Merge or External Merge) of the 'receiver' and 'assigner,' as Hornstein (1999) assumes, but also by Probe-Goal Search (PGS)[10]. If this is the case, we can account for some interesting data correctly. Recall the examples in (18b), repeated below as (21).

(21) *?Keisatu-ga [futari-no doroboo]-**o** [<futari-no doroboo> kakureteiru-tokoro]-**o**
otagai-no ajito-de hakkensi-ta

As argued above, the ungrammaticality of (21) stems from the Double-*O* Constraint violation; however, the RTO subject actually binds the reciprocal. In this case, the RTO subject has already had its Case licensed in the embedded clause, so it has no Case-driven reason to move to the matrix object position. However, if the θ-feature of the matrix verb Attracts the RTO subject to its SPEC position (i.e. the matrix SpecVP) to have the θ-feature checked, the Case of the RTO subject is 'overridden' by the higher Case. This analysis is consistent with Bejar and Massam's (1999) argument.

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[10] Bošković (2007) argues that movement is goal-driven, while Agree is target-driven. In this sense, if the current analysis is tenable, θ-role 'assignment' involves both: Merge (goal-driven) and PGS (target-driven). This assumption seems to me compatible with Hornstein's (1999) assumption on θ-role 'assignment' in (20b), which assumes that the driving force for θ-role 'assignment' could lie in either the goal (DP) or target (V).

(22) Multiple Case Checking (Bejar and Massam (1999))
"… if a DP receives more than one structural Case, the last one received will be the one that is pronounced."

(23) a. Teitei ke fakatau [**e** Sione] taha fale
nearly SUBJNCT buy **Erg** Sione one house
'It nearly happened that Sione bought a house.'
b. Teitei [**a** Sione]$_i$ ke fakatau t_i taha fale
nearly **Abs** Sione SUBJNCT buy one house
'Sione nearly bought a house.'

In Niuean, as the example in (23a) shows, when the subject has its Case licensed in the embedded clause, it gets Ergative Case. However, in (23b), when the embedded subject raises to the matrix subject position, it gets Absolutive Case. This means that the lower Case (Erg) has been 'overridden' by the higher Case (Abs). Now, we will argue that the same should hold in Japanese, as in (21); that is, in (21), though the embedded subject *futari-no doroboo* gets Nom in the embedded subject position, when it moves to the matrix object position, its Case is 'overridden' by Acc, resulting in the Double-*O* Constraint violation. In fact, Harada (1973) shows that the Double-*O* Constraint violation becomes mitigated when the Acc-marked object is clefted or passivized.

(24) a. ?*Keisatu-ga sono-doroboo-**o** [<sono-doroboo-ga> nigeteiku-tokoro]-**o** tukamae-ta (= (8a))
b. [Keisatu-ga sono-doroboo$_i$-**o** tukamae-ta-no]-wa [(soitsu$_i$-ga) nigeteiku]
[Police-Nom that-thief-**Acc** capture-Perf-NMLZ]-Top [(the guy-Nom) escape]
-tokoro-(**o**) da-tta
-TOKORO-(**Acc**) Cop-Perf
'It was as the thirf was escaping that the police captured him.'
c. Sono-doroboo-**ga** keisatu-ni nigeru-tokoro-**o** tukamae-rare-ta[11]
that-thief-**Nom** police-by escape-TOKORO-**Acc** capture-Pass-Perf
'That thief was captured by the police as (he was) trying to escape.'

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[11] (24c) seems to us problematic, though we agree with its grammaticality: it has been standardly assumed that the passivized subject is the underlying object, and that since the underlying object cannot have its Case checked in the object position in passives, it has to move to the subject position, where it has its Case checked as Nom. However, in (24c), the underlying object, which was the embedded subject, has already had its Case checked in the embedded clause, as we assume in the current analysis; furthermore, passivized verb does not have the external θ-feature which would Attract the underlying object. The only alternative driving force would be EPP, but many researchers argue against the existence of EPP (Abe (2010), Bošković (2007, 2011), Epstein and Seely (2006), among others). As for this, we will leave it to be solved in future research.

As argued above, (24a) violates the Double-*O* Constraint; however, as shown in (24b), when the 'violating' object is clefted, the grammaticality improves drastically. Furthermore, the fact that the 'violating' object can be passivized in (24c) indicates that the object has "full-fledged" status as the object, given that passivization targets the canonical object only. These data show that the Acc-marked object in (24a) actually moves to the matrix object position, its Case being 'overridden' as Acc.

Then, what would motivate this movement? As argued above, there is no Case reason in the embedded subject, since its Case feature has been already checked as Nom in the embedded clause. The only alternative driving force would be the θ-feature[12]: the θ-feature searches its matching goal, and find the embedded subject. There are two options to check the feature: by PGS, or by Merge. In (24a), among others, the latter is chosen. The embedded subject moves to the matrix SpecVP for the θ reason, having the internal θ-feature of the matrix verb checked: at the same time, since it is in the Case-checking configuration, its Case is re-checked, or 'overridden' as Acc, becoming the highest Case to be realized. Of course, PGS would be one of the possibilities, but when it is chosen, the embedded subject need not move to have the θ-feature checked, remaining in situ, in the embedded SpecCP. Furthermore, the configuration is not in the Case-checking configuration, its Case remains Nom, as in (19).

If this analysis is on the right track, such data as below can be accounted for as well[13].

(25) a. * Sono kyooju-ga [san-nin-no in-sei-**ga** gakkai-ni
the professor-Nom three-CLSF-Gen graduate student-**Nom** conference-to
syussekisuru-yoo] soitu-no heya-de settokusi-ta
attend-YOO his-Gen room-at persuade-Past
'The professor persuaded three students to attend the conference at their rooms'

b. Sono kyooju-ga san-nin-no in-sei-**o** [<san-nin-no in-sei>
the professor-Nom three-CLSF-Gen graduate student-Acc
gakkai-ni syussekisuru-yoo] soitu-no heya-de settokusi-ta
conference-to attend-YOO his-Gen room-at persuade-Past

In (25a), the variable-binding reading is impossible between the quantifier *san-nin-no in-sei* 'three graduated students' and the variable *soitu* 'his,' and this can be accounted for by the current analysis: the embedded subject is not so high as to bind the variable, in the embedded SpecCP, though it can

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[12] One may argue that the driving force would be EPP on V (Levin (2018), among others). However, if EPP drives movement, the embedded subject must 'always' move to the matrix object position. In the current analysis, what is important is the fact that the embedded subject is not so high enough to interact with the matrix element, and it is assumed, following Fujimori (2018), that in Japanese the embedded subject stays in the embedded SpecCP, from which it cannot interact with the matrix element. That is, the embedded subject may or may not raise, which cannot be accounted for by the EPP-driven movement analyses.

[13] We appreciate Jun Abe (personal communication) for suggesting the data in (25).

have the internal θ-feature of matrix verb checked. On the other hand, in (25b), the embedded subject actually moves to the matrix object position, from which it can bind the variable, and it can also have the internal θ-feature of matrix verb checked. Thus, the examples in (25) would enforce the validity of the current analysis.

The gist of this section is as follows: in the case of backward control, there are two options for the θ-feature licensing; by Probe-Goal Search or by Merge. When the former is chosen, the θ-feature of the matrix verb starts to search for its matching ‘receiver,’ and finds the embedded subject. Then, PGS suffices to the θ-feature ‘assignment’ in this case. On the other hand, when the latter is chosen, the embedded subject actually moves to the matrix object position, where not only is the θ-feature of matrix verb checked, but the Case feature is also (re-)checked or ‘overridden’ by Acc. In Japanese, the latter option, movement into the matrix object position, usually leads to the Double-*O* Constraint violation, but there are in fact some cases in which the violation becomes mitigated, which indicates that the embedded subject actually moves to the matrix object position.

4. The Difference between Forward and Backward Control

If the current analysis is tenable, it would lead us to the solution why English has only forward control. Recall why the embedded subject can stay in the embedded subject position in Japanese: it has already had its Case checked at that position, so there is no Case reason to move further, and it is only when the θ-feature of the matrix verb Attracts it that the embedded subject actually moves to the matrix object position. Otherwise, PGS suffices to the θ-feature ‘assignment.’

Now, consider the example below.

(26) a. John hoped to leave. (= (1a))

b. [$_{\text{TP}}$ $\underset{\text{Case}}{\text{John}}$ T [$_{v\text{P}}$ $\underset{\theta}{\text{<John>}}$ *v* [$_{\text{VP}}$ hoped [$_{\text{CP}}$ <John> C [$_{\text{TP}}$ <John> to(T) [$_{v\text{P}}$ $\underset{\theta}{\text{<John>}}$ *v* [$_{\text{VP}}$ leave]]]]]]]

In (26b), the embedded subject *John* cannot have its Case licensed in the embedded clause, so it has to move further for Case. On the way to the Case licensing position, the matrix SpecTP, it drops into the matrix Spec*v*P, where the external θ-feature of the matrix verb *hope* is checked. Thus, the embedded subject has to move not for the θ-feature, but for the Case feature. Since Case cannot be licensed via PGS, even though it might be possible for *John* in the embedded SpecCP in (26) to get the θ-feature of the matrix verb at that position, it still has to move to the Case licensing position. That is, in the case of forward control, the DP has not had its Case licensed in the lower position. On the other hand, in the case of backward control, the DP has already had its Case licensed in the lower position, so it doesn’t have Case-driven motivation for movement.

5. Conclusion

In conclusion, what is crucial in the current analysis is whether the DP has its Case licensed in the lower position or not. If YES, backward control; if NO, forward control. If this is the case, we could account for the rarity of backward control; it is usual that DP moves for Case, that is, the unvalued Case feature on the DP drives the movement of DP to have its unvalued Case feature valued, in the sense of Bošković (2011). On the other hand, in the case of backward control, the moving DP has already had its Case feature valued, so it has no Case-driven motivation to move further. Only when the upper θ-feature Attracts the DP, it raises to the SPEC position of the θ-role 'assigner.' Furthermore, when it raises to the θ-feature checking position, its Case should be 'overridden.' Thus, in a sense, the movement for the θ-feature checking should be treated as a costly or 'marked' operation, which would be one of the reasons why backward control is rarer than forward control.

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