

# Two Types of Long Scrambling in Japanese as a Focus-prominent Language\*

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## 1. Introduction

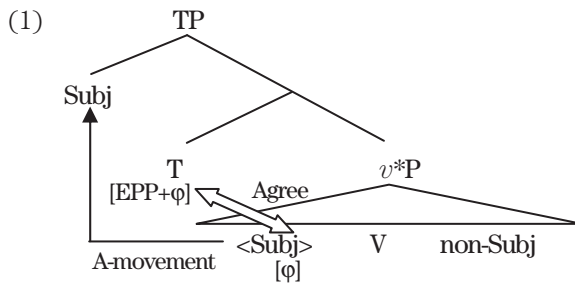
Since the establishment of the Principles-and-Parameters approach by Chomsky (1981), various parameters have been proposed to capture long-observed differences between English and Japanese (cf. Fukui (1986), Kuroda (1988), etc.).<sup>1</sup> Miyagawa (2010) attempts to attribute the differences between the languages to the parameterization of the feature inheritance system and the subsequent one of the EPP system. More specifically, he argues that human languages are divided into Subject-prominent languages and Focus-prominent languages with respect to whether a  $\phi$ -feature or a focus-feature is inherited from C to T, and the method by which these language types satisfy the requirement of the EPP on T is also parameterized depending on the type of inherited feature.<sup>2</sup> Under the parameterization, English is classified as a Subject-prominent language, in which a  $\phi$ -feature is inherited from C to T. The EPP on T works in tandem with the inherited  $\phi$ -feature and always triggers the A-movement of an XP that establishes an Agree relation with T through the  $\phi$ -feature:

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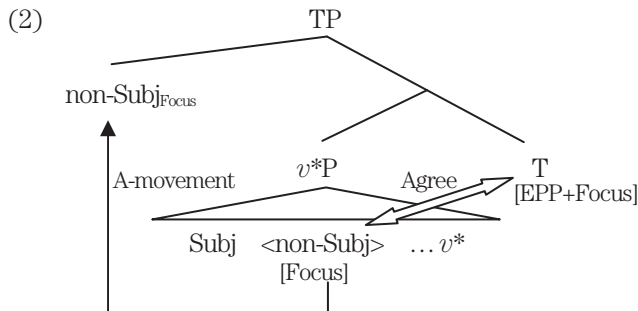
\* For many stimulating and rewarding discussions regarding an earlier version of this paper, I am indebted to Shigeru Miyagawa and Masaharu Shimada. I am also grateful to the Chukyo University Research Fund for financial assistance with this research. Needless to say, any remaining errors and shortcomings are my own.

1 In this paper, following Miyagawa (2005, 2007, etc.), I use the term *Focus-prominent language*. This term is almost identical to the more conventional terminology of *Topic-prominent language* and *Discourse-configurational language*.

2 One might wonder whether a  $\phi$ -feature and a focus-feature constitute a natural class. Miyagawa (2005, 2007, 2010, etc.) asserts that a link between agreement and focus is adequate from a historical perspective, based on Simpson and Wu's (2001) argument that agreement in a variety of languages develops from a focus structure.



In this derivational system, the Spec of TP is necessarily filled by a subject DP, because the DP is counted as the closest candidate with the  $\phi$ -feature; consequently, the Spec position serves as the so-called “subject position.” In contrast, Japanese is classified as a Focus-prominent language. In this type of language, a focus-feature instead of a  $\phi$ -feature is inherited from C to T, and the EPP on T triggers the A-movement of an XP that establishes an Agree relation with T through the focus-feature (i.e. a focused XP), irrespective of its grammatical function. Thus, unless a subject DP functions as a focused XP, even a non-subject XP can undergo A-movement to the Spec of TP, with the non-focused subject DP remaining in its original position, as illustrated in (2):<sup>3</sup>



In this type of language, the Spec of TP, which is occupied by either a subject DP or a non-subject XP, no longer serves as the “subject position.” Based on this syntactic property of Japanese as a Focus-prominent language, Miyagawa argues that in certain cases of Japanese Medium Scrambling (JMS), the Spec of TP can be filled by a scrambled object DP. That is, he proposes two distinct types of JMS (i.e. A-scrambling and A'-scrambling), which contribute to the so-called “dual” properties observed

3 In Focus-prominent languages, even when a sentence contains no focused XP, the EPP on T must be satisfied; otherwise, the derivation would not converge. In this case, a given non-focused XP undergoes A-movement to the Spec of TP as a last-resort method of satisfying the EPP requirement, irrespective of its grammatical function.

in the phenomenon (cf. Saito (1989, 1992), Tada (1993), Miyagawa (2001), etc.).<sup>4</sup>

In this paper, I attempt to clarify further the theoretical and empirical consequences of the parameterization of the feature inheritance system advocated by Miyagawa (2010) and to verify that his parametric view is highly promising with respect to research on the universality and diversity of human languages. More specifically, I argue that the mechanisms for the calculation of locality and for the formation of strong phases, which constitute the foundation of the current minimalist theory, are also parameterized according to the type of inherited feature. The series of parameterization makes it in principle possible for Focus-prominent languages to exhibit the long-distance A-movement out of finite clauses, which is generally considered prohibited in Subject-prominent languages. Furthermore, focusing on this property of Focus-prominent languages, I examine Japanese Long Scrambling (JLS), as exemplified in (3), in which an XP in the embedded clause is scrambled into the matrix clause:

- (3) Hon-<sub>o<sub>i</sub></sub> Hanako-ga [Taroo-ga  $t_i$  kat-ta to] it-ta.  
 book-Acc<sub>i</sub> Hanako-Nom [Taro-Nom  $t_i$  buy-Past C] say-Past  
 (Lit.)‘A book, Hanako said that Taro bought.’

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4 Miyagawa (2005, 2007, 2010, etc.) argues for the presence of the two distinct types of JMS, using the following example:

- (i) Tesuto-o zen'in-ga uke-nakat-ta. (Miyagawa (2001: 299))  
 Test-Acc all (the people)-Nom take-Neg-Past  
 ‘All (the people) did not take the test.’ (not > all, all > not)

This sentence can be interpreted in two ways; that is, we can obtain both the partial negation interpretation and the total negation interpretation. Under Miyagawa’s approach, the requirement of the EPP on T in this sentence is satisfied by either a subject DP or a scrambled object DP, because the sentence contains no focused XP. When the subject DP moves to the Spec of TP to satisfy the EPP requirement, the object DP only moves to sentence-initial position through A'-scrambling. In this case, the subject DP asymmetrically c-commands the Neg-element, which is generally assumed to be base-generated between  $v^*P$  and TP (cf. Pollock (1989)); consequently, the DP takes wide scope over the Neg-element. By contrast, when the object DP undergoes A-scrambling to the Spec of TP to satisfy the requirement of the EPP on T, the subject DP remains in its original position, where it is c-commanded by the Neg-element throughout the derivation. In this configuration, the subject DP takes narrow scope with respect to the Neg-element. In passing, this type of ambiguity in scope interpretation is obviated once a focused XP is introduced into the sentence.

- (ii) Tesuto-o ano gakusei-dake-ga uke-nakat-ta.  
 Test-Acc that student-only-Nom take-Neg-Past  
 ‘It is only that student that did not take the test.’ (only > not, \*not > only)

This sentence, which uses the *dake*-phrase ‘*only*-phrase’ as its subject DP, has only the scope interpretation of the subject DP over the Neg-element. This scope fact also follows from Miyagawa’s derivational system. According to Takano (2003), the *dake*-phrase functions as a focused phrase, when combined with the nominative particle. Thus, the focused subject DP obligatorily moves to the Spec of TP because of its focus property, and the DP asymmetrically c-commands the Neg-element. In this case, the object DP has no option but to move into a matrix clause through A'-scrambling.

This type of scrambling has uniformly been analyzed as (costless) A'-movement because of its lack of A-properties (cf. Saito (1989, 1992), Fukui (1993), Tada (1993), Miyagawa (2001), etc.). Contrary to the general view, I propose the A-movement type of JLS, in addition to the conventionally assumed A'-movement type of JLS. This new type of JLS is triggered by the properties of the EPP on the matrix T in Focus-prominent languages, whereby the scrambled object DP occupies the Spec of the matrix TP with the matrix subject DP remaining in its original position. This analysis succeeds in capturing the dual (more precisely, apparently contradictory) properties of JLS, which have not been elucidated in previous studies.

This paper is organized as follows. Section 2 proposes the parameterization of the mechanisms for the calculation of locality and for the formation of (strong) phases as the theoretical consequences of Miyagawa's (2010) parametric view. Section 3 proposes two distinct types of JLS, which follow from the syntactic properties of Japanese as a Focus-prominent language, and show that this analysis is also empirically desirable. Section 4 offers concluding remarks.

## 2. Theoretical Consequences

As briefly reviewed in the introduction, Miyagawa (2010) proposes parameterizing the feature inheritance system. According to his parametric view, human languages are divided into Subject-prominent languages and Focus-prominent languages with respect to whether a  $\phi$ -feature or a focus-feature is inherited from C to T, and the way to satisfy the requirement of the EPP on T is also parameterized depending on the type of inherited feature. In this section, I consider further theoretical consequences of the parameterization, and show that the parameterization affects other syntactic systems that constitute the foundation of the current minimalist theory.

### 2.1. Agree and Its Locality

Miyagawa (2010) assumes that agreement is implemented in order to establish functional relations by means of an Agree operation (cf. Chomsky (2000, 2001, etc.)), which is carried out under the structural relation in (4).<sup>5</sup>

(4) Agree:



Agree (P, G), where P is a probe and G is a matching goal, '>' is a c-command relation: P c-commands G.

<sup>5</sup> In this paper, following Miyagawa (2010), I assume that movement triggered by agreement takes place in order to keep a record of functional relations for semantic and information-structure interpretations.

According to Chomsky (2001), for this operation to be properly implemented, (i) the features of P and G must match, (ii) P must c-command G, and (iii) there cannot exist a matching element intervening between P and G.<sup>6</sup> It follows from these conditions that the operation always obeys the locality constraint, which is represented by “closest c-command,” but it is also theoretically possible for G<sub>2</sub> to establish an Agree relation with P across G<sub>1</sub> unless G<sub>1</sub> bears a matching feature, as the following contrast shows:

- (5) a. \* P > G<sub>1</sub> > G<sub>2</sub>  
           [α] [α] [α]  
           ↑ Agree ↑  
           └───┬───┘
- b. P > G<sub>1</sub> > G<sub>2</sub>  
      [α] [α]  
      ↑ Agree ↑  
      └───┬───┘

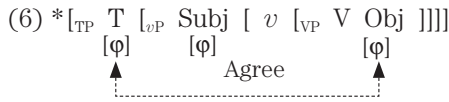
In these configurations, P c-commands both G<sub>1</sub> and G<sub>2</sub>, and G<sub>1</sub> c-commands G<sub>2</sub>. In (5a), P cannot enter into an Agree relation with G<sub>2</sub> across G<sub>1</sub>, because G<sub>1</sub> has a matching feature α and functions as an intervener for Agree.<sup>7</sup> However, once G<sub>1</sub> is replaced by an element that does not bear the matching feature, P succeeds in establishing an Agree relation with G<sub>2</sub> without violating any locality constraint, as schematized in (5b). In this case, G<sub>1</sub> is no longer considered an intervener for the Agree relation between P and G<sub>2</sub> due to its lack of the matching feature.

Given the parameterization of the feature inheritance system, this locality calculation system is also parameterized between Subject-prominent languages and Focus-prominent languages. In the former type of language, because a φ-feature is inherited from C, T enters into an Agree relation with the closest candidate bearing the φ-feature and raises the element to its Spec position. Given that both a subject DP and an object DP possess a matching φ-feature but the former is base-generated at a higher position than the latter, it follows that a subject DP serves as the closest candidate to establish an Agree relation with T and move to the Spec of TP. Thus, in this type of language, it is in principle impossible for an object DP to establish an Agree relation with T because of the presence of a subject DP as an intervener,

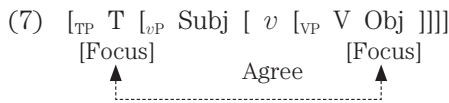
6 Chomsky (2000) proposes another condition for Agree, often called the Activation Condition, which states that a goal must have an uninterpretable feature to obtain agreement. However, this condition would be irrelevant for Miyagawa (2010). In his derivational system, agreement is assumed to occur to establish functional relations, in contrast to Chomsky’s original version, which views the operation as a means to value both the unvalued features of P and those of G.

7 Hiraiwa (2005) argues that in the configuration in (5a), P can enter into an Agree relation with G<sub>2</sub> via Multiple Agree only if it also establishes an Agree relation with G<sub>1</sub> at the same derivational point. Note that in this case, the Agree relation between P and G<sub>2</sub> does not result in a locality violation because locality is relativized to “derivational simultaneity.” For further details regarding this phenomenon and its empirical consequences, see Hiraiwa (2005).

as schematized in (6).<sup>8</sup>



In Focus-prominent languages, by contrast, it is a focus-feature that is inherited from C to T and is involved in the establishment of an Agree relation with T. Therefore, when bearing a matching focus-feature, a subject DP must establish an Agree relation with T and move to the Spec of TP. However, when the subject DP does not possess any relevant feature, it is possible for an object DP to enter into an Agree relation with T to move to the Spec of TP across the subject DP, as shown in (7):



This difference between the two types of languages assigns to Focus-prominent languages another option to satisfy the requirement of the EPP on T; that is, an object DP instead of a subject DP moves to the Spec of TP for the EPP requirement.

## 2.2. The Formation of Strong Phases and the Applicability of Syntactic Operations across Phase Boundaries

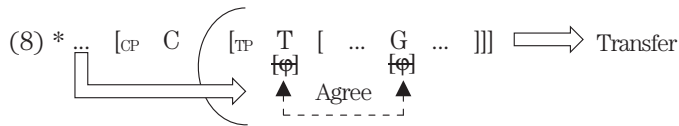
As confirmed in the introduction, Miyagawa's (2010) derivational system adopts the feature inheritance model of phase theory in Chomsky (2008). It follows that the derivation of a sentence proceeds phase by phase, and the derivational information is transferred to two interfaces at every strong phase level to reduce computational complexity (cf. Chomsky (2000, 2001)). Furthermore, as formalized by the Phase Impenetrability Condition (PIC), the complement domain of a phase is no longer accessible to any operations outside the phase once it is transferred to the two interfaces.

Since Chomsky's (2000) pioneering study, phases have generally been identified in terms of "propositionality," and CP and *v*\*P have been determined to be strong phases because of their propositional nature. However, clarifying some conceptual and empirical problems with this approach, Narita (2011) attempts to characterize phases in terms of "convergence" and redefine them as domains that are convergent at the CI- and SM-interfaces. Under this reformulation, a syntactic object that contains no unvalued features constitutes a strong phase, and its complement is transferred to

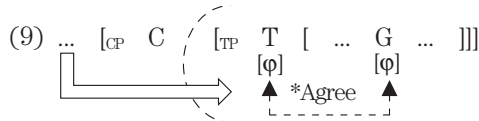
8 This derivational pattern in Subject-prominent languages is confirmed by the obligatory morphological agreement between finite verbs and subject DPs in English: the verbs exhibit no morphological agreement with object DPs.

the interfaces and eliminated from the derivational workplace.<sup>9</sup>

This new view of phases by Narita (2011) provides Subject-prominent languages and Focus-prominent languages with different behaviors with respect to the formation of strong phases. In the former type of language, a  $\phi$ -feature is inherited from C and is involved in the establishment of the Agree relation with T. When both the  $\phi$ -features on T and G are successfully checked through the Agree between them, the CP constitutes a strong phase and its complement TP domain is transferred to the interfaces; consequently, no syntactic operation taking place in higher phases is applicable to the G because of the PIC, as schematized in (8):

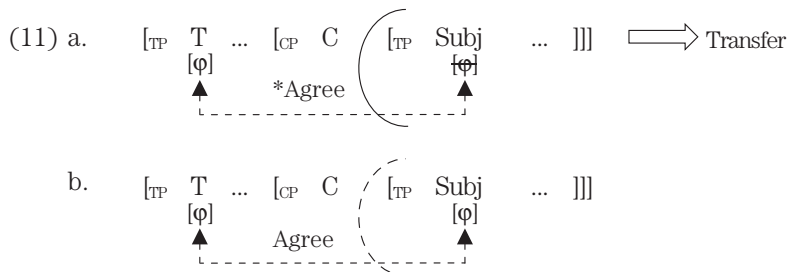


In contrast, when the  $\phi$ -features on T and G remain unchecked because of the failure of the Agree between them, the CP does not form a strong phase, nor is its complement TP domain transferred. In this case, it is possible for any syntactic operations in higher phases to apply to the G without violating the PIC:



This mechanism succeeds in capturing a familiar difference in behavior between finite and non-finite clauses: in English, finite clause boundaries constitute a barrier for syntactic operations, whereas non-finite clause boundaries do not, as shown by the contrast in (10):

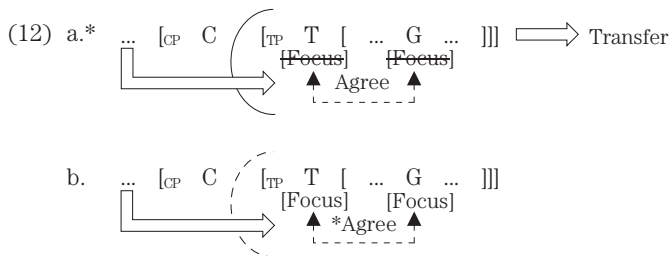
- (10) a. It seems that he is intelligent.  
 a'.\* He seems (that) is intelligent.  
 b.\* It seems he to be happy.  
 b'. He seems to be intelligent.



9 More strictly, Narita (2011) refrains from introducing the superfluous terminological distinction between weak and strong phases and uses the term *phase* to unambiguously refer to the domain subjected to Transfer.

In the case of a finite clause, as the grammaticality in (10a) shows that the subject DP in the embedded clause is assigned nominative Case from the embedded T, the  $\phi$ -feature on the subject DP is checked via Agree with the embedded T. As a result, the finite clause constitutes a strong CP phase, which prevents the subject DP from entering into an Agree relation with the matrix T and moving to the Spec of the TP because of the PIC, as schematized in (11a).<sup>10</sup> In the case of a non-finite clause, by contrast, as clearly indicated by the ungrammaticality in (10b), the  $\phi$ -feature on the subject DP remains unchecked due to the failure of the Agree with embedded T. Thus, the clause fails to form a strong CP phase, as illustrated in (11b): Consequently, the subject DP receives nominative Case from the matrix T and moves to the Spec of the matrix TP, as evidenced by the grammaticality in (10b'). As just described, in Subject-prominent languages, the formation of strong phases shows a strong correlation with the distinction between finite and non-finite clauses.

Turning to the case of Focus-prominent languages, it can easily be predicted that the type of language does not exhibit this type of correlation between finite and non-finite clauses, because it is a focus-feature that is involved in the Agree operation with T. Thus, unless the focus-features on T and G are successfully checked via Agree between them, even a finite clause does not constitute a strong CP phase, nor is its complement domain transferred to the interfaces, as shown in the following configurations:



This mechanism found in Focus-prominent languages in principle enables syntactic operations to apply even across finite clause boundaries; consequently, the type of language can allow for the long-distance A-movement out of the finite clause, which is considered a type of movement inappropriate in Subject-prominent languages.

10 Here, it might also be possible that the subject DP in the embedded clause first moves to the Spec of the embedded CP such that the DP is not transferred, followed by the movement of the subject DP from the Spec position into the matrix clause. Unfortunately, however, this possibility is also excluded because the derivation contains an “improper movement” chain (cf. Chomsky (1973)); that is, this derivation would involve an A-movement step after an A'-movement step.



### 3. The Reconsideration of Japanese Long Scrambling

In the previous section, I proposed the parameterization of the mechanisms for the calculation of locality and for the formation of strong phases as the theoretical consequences of the parameterization of the feature inheritance system advocated by Miyagawa (2010). In this section, I attempt to reconsider movement phenomena in Focus-prominent languages in terms of the series of parameterization. More specifically, I thoroughly examine JLS and propose two types of JLS, which follow from the syntactic properties of Japanese as a Focus-prominent language. Furthermore, I show that this analysis is also empirically supported by the presence of dual properties of JLS, which have not been properly captured in previous studies.

#### 3.1. Two Types of JLS: EPP-driven A'-scrambling and costless A'-scrambling

In the generative literature, JLS has uniformly been considered A'-movement because of its lack of A-properties, although details differ among various approaches (cf. Saito (1989, 1992), Fukui (1993), Tada (1993), Miyagawa (2001)). In particular, Saito (1989) views Japanese scrambling as “semantically vacuous A'-movement,” a different type of A'-movement from English topicalization and *wh*-movement, and argues that it can be freely reconstructed in the LF component, on the basis of the most outstanding property of Japanese scrambling, often referred to as “radical reconstruction.” Consider the following sentence:

- (13) Nani-<sub>o<sub>i</sub></sub> John-ga [Mary-ga  $t_i$  kat-ta ka] siri-tagattei-ru.  
 what-Acc<sub>i</sub> John-Nom [Mary-Nom  $t_i$  buy-Past Q] know-want-to-Pres  
 (Lit.) ‘What<sub>i</sub> John wants to know Mary bought.’ (cf. Saito (1989))

In this sentence, the *wh*-phrase is scrambled from the embedded clause into the matrix clause, but it can take only an embedded scope in a similar way that it remains in the embedded clause throughout the derivation. That is, we can consider this sentence only as a declarative sentence that contains an embedded question. This behavior of the scrambled *wh*-phrase contrasts with the English counterpart, as shown in (14):

- (14) What<sub>i</sub> do you wonder who bought  $t_i$  where?

In this sentence, the *wh*-phrase *what* moves to sentence-initial position through over *wh*-movement and must take a matrix scope in its surface position, but not an embedded one (cf. Lasnik and Saito (1992)). This contrast in their interpretations leads to the view that JLS is essentially “stylistic” in the relevant sense.

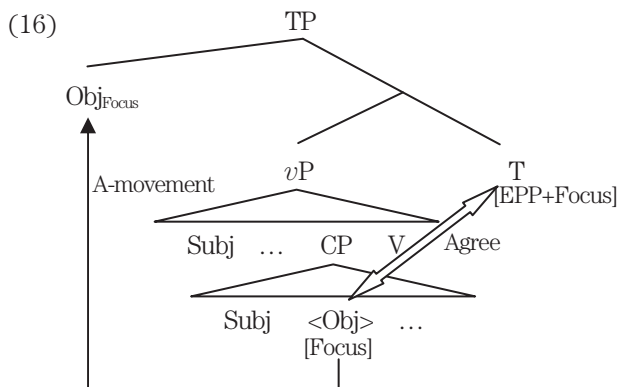
In this paper, extending Miyagawa’s (2010) idea, I adopt the revised derivational system ac-

accompanied with the parameterization of the feature inheritance system: The mechanisms for the calculation of locality and for the formation of strong phases are also parameterized between Subject-prominent languages and Focus-prominent language, and the latter type of language allows for the long-distance A-movement out of finite clauses, which is prohibited in the former type of language. Focusing this syntactic property of Japanese as a Focus-prominent language, I propose the A-movement type of JLS, in addition to the conventionally assumed A'-movement type of JLS. This new type of JLS is motivated by the requirement of the EPP on the matrix T, which works combined with the inherited focus-feature, and the scrambled XP occupies an A-position in the matrix clause, where it is prohibited from being radically reconstructed into the embedded clause. In contrast, the A'-movement type of JLS is the strictly optional type of movement in that it is not motivated by any grammatical factor in the sense of Fukui (1993), and it obligatorily undergoes radical reconstruction, as conventionally assumed in the previous studies.<sup>11</sup> Furthermore, I propose the following derivational patterns of JLS according to the status of the scrambled XP and the matrix subject DP as a focused/non-focused XP in the matrix clause:

(15) Possible Derivational Patterns of JLS:

	Scrambled XP: +Focus	Scrambled XP: -Focus
Subject: +Focus	costless A'-scrambling	costless A'-scrambling
Subject: -Focus	EPP-driven A-scrambling	EPP-driven A-scrambling/costless A'-scrambling

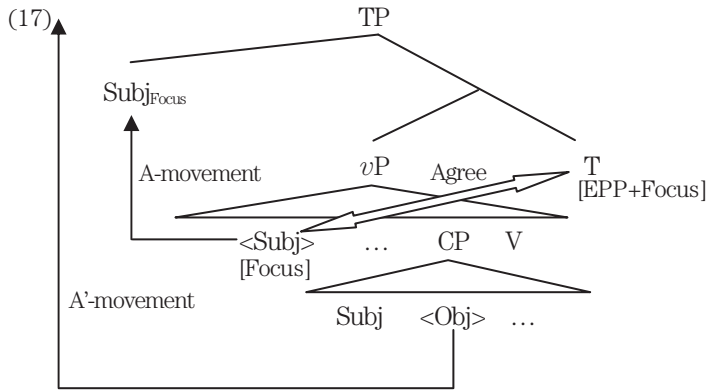
The scrambled XP, when interpreted as a focused XP in the matrix clause, must undergo the A-movement type of JLS to the Spec of the matrix TP to satisfy the requirement of the EPP on T in Focus-prominent languages, unless the matrix subject DP, which is closer to the matrix T, functions as a focused XP:



11 In this paper, I assume that this A'-movement type of JLS is not constrained at all and that this property is attributed to the costless nature of the movement; that is, the involvement of no agreement operation in the movement process. Every agreement operation is constrained by a variety of locality conditions, as discussed in section 2.

This EPP-driven A-scrambling enables the scrambled XP to fill the Spec of the matrix TP throughout the derivation; consequently, the matrix subject DP remains in its original position without undergoing any movement.

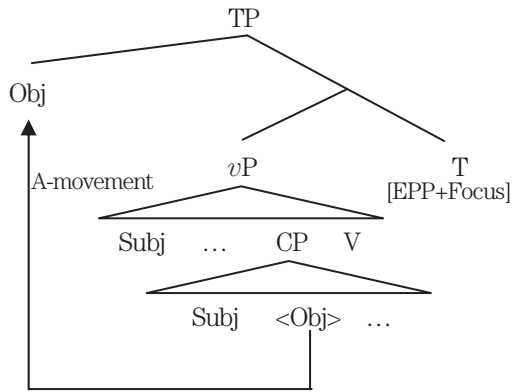
Conversely, the matrix subject DP, when interpreted as a focused XP in the matrix clause, must move to the Spec of the matrix TP to satisfy the requirement of the EPP on the T, irrespective of whether the scrambled XP is interpreted as a focused XP, because the subject DP is closer to the matrix T than the scrambled XP:



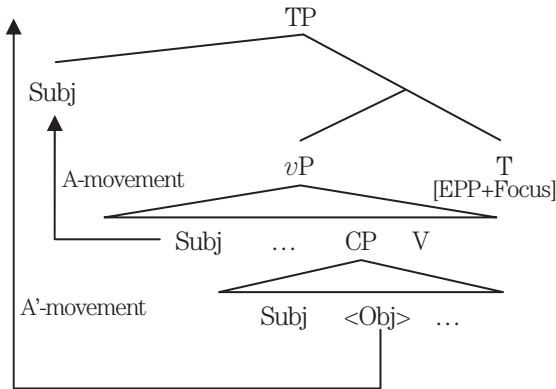
In this derivational pattern, the scrambled XP has no option but to move to sentence-initial position through costless A'-scrambling, which obligatorily exhibits the radical reconstruction effect.

In contrast, when neither the subject DP nor the scrambled XP functions as a focused XP in the matrix clause, either of the elements can fill the Spec of the matrix TP to satisfy the requirement of the EPP on the T. That is, the scrambled XP can undergo EPP-driven A-scrambling to the Spec of the matrix TP across the matrix subject DP, as in (18a); the matrix subject DP moves to the Spec of the matrix TP to meet the requirement of the EPP on the T, and the scrambled XP can move to sentence-initial position through costless A'-scrambling, as in (18b):

(18) a.



b.



Note that in both of these derivational patterns, the requirement of the EPP on the matrix T is satisfied in a last resort fashion by a non-focused XP that does not establish an Agree relation with the T.<sup>12</sup>

In this subsection, extending Miyagawa's (2010) idea, I have proposed two types of JLS, which follow from the syntactic properties of Japanese as a Focus-prominent language. In the next subsection, I consider the empirical consequences of the parameterization of the feature inheritance system by examining the presence of the dual properties of JLS, which are theoretically predicted under the parameterization of the syntactic system but have not been explored thoroughly in previous studies.

## 3.2. Empirical Consequences: The Dual Properties of JLS

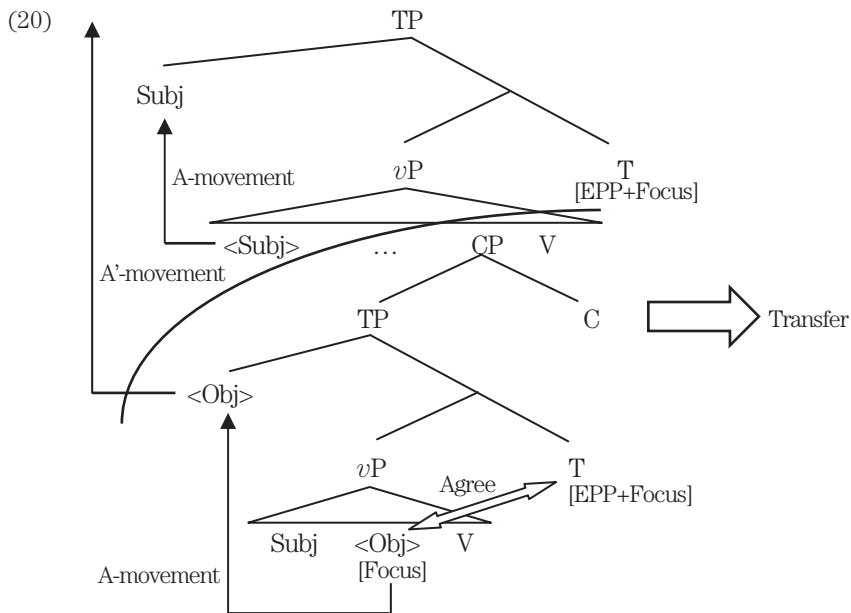
### 3.2.1. The Obviation of Radical Reconstruction

As confirmed in the previous subsection, JLS has uniformly been considered “semantically vacuous” A'-movement, on the basis of the fact that JLS obligatorily undergoes radical reconstruction. Consider the following sentence again, which was previously shown as (13):

<sup>12</sup> For further details of these derivational patterns, also see footnote 3.

- (19) Nani-o<sub>i</sub> John-ga [Mary-ga *t<sub>i</sub>* kat-ta ka] siri-tagattei-ru.  
 what-Acc<sub>i</sub> John-Nom [Mary-Nom *t<sub>i</sub>* buy-Past Q] know-want-to-Pres  
 (Lit.) 'What, John wants to know Mary bought.'

Although the *wh*-phrase moves into the matrix clause, this sentence can be interpreted only as a declarative sentence that contains an embedded question as if the *wh*-phrase remained in the embedded clause throughout the derivation. This most outstanding property of JLS can be properly accounted for in the proposed derivational system. In this sentence, as is clear from its obligatory interpretation as an indirect question, the scrambled *wh*-phrase is interpreted as a focused XP in the interrogative embedded clause. That is, the focus-feature on the *wh*-phrase is checked through Agree within the embedded clause. Therefore, the clause forms a strong CP phase, and the *wh*-phrase has no choice but to move into the matrix clause through costless A'-scrambling, which need not obey the PIC because of its costless nature:



Because this A'-scrambling forces the scrambled *wh*-phrase to be radically reconstructed at LF into the embedded clause, the phrase takes only an embedded scope.

However, the proposed derivational system found in Focus-prominent languages predicts an apparently contradictory possibility: such a radical reconstruction effect is obviated in some cases of JLS. The system also allows for the A-movement type of JLS in cases that the scrambled XP is interpreted as a focused XP in the matrix clause. Indeed, Takahashi (1993) notes that this kind of LF undoing effect is not observed when the *wh*-phrase is scrambled into an interrogative matrix clause:

- (21) Nani-o<sub>i</sub> John-ga [Mary-ga t<sub>i</sub> kat-ta ka] siri-tagattei-ru no?  
 what-Acc<sub>i</sub> John-Nom [Mary-Nom t<sub>i</sub> buy-Past Q] know-want-to-Pres Q  
 ‘What does John want to know whether Mary bought?’ (cf. Takahashi (1993))

In this interrogative sentence, the *wh*-phrase in the embedded clause is scrambled to the matrix clause in the same manner as in (19), but it can take only a matrix scope, without the phrase reconstructed into the embedded clause. Furthermore, according to Hasegawa (2005), the JLS of the phrase combined with the focus particle *mo* shows the same type of obviation effect. Consider the following sentences:

- (22) a. Hanako-ga [Taro-ga sono hon-mo yon-da to] it-ta.  
 Hanako-Nom [Taro-Nom the book-Q read-Past C] say-Past  
 ‘Hanako said that Taro also read the book (i.e., there is something else he read).’  
 b. [Sono hon-mo]<sub>i</sub> Hanako-ga [Taro-ga t<sub>i</sub> yon-da to] it-ta.  
 [the book-Q]<sub>i</sub> Hanako-Nom [Taro-Nom t<sub>i</sub> read-Past C] say-Past  
 \*‘the reading on (ia)’  
 ‘Also about that book, Hanako said that Taro read it (i.e., there is something else about which Hanako said that Taro read).’

(Hasegawa (2005: 55))

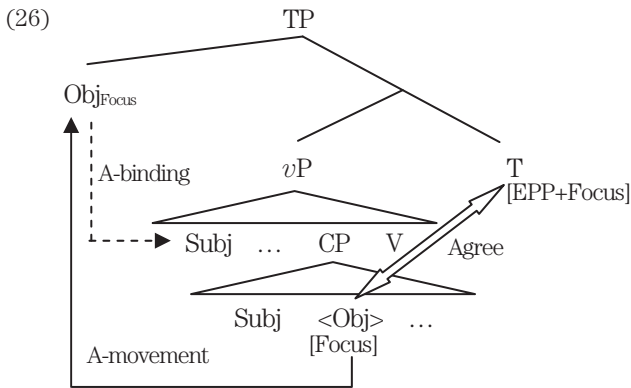
In these sentences, when the *mo*-phrase remains in its original position, as in (22a), it takes scope only in the embedded clause; once scrambled into the matrix clause, as in (22b), it takes only a matrix scope. Hasegawa argues that this phrase must move to the Spec of TP to satisfy the requirement of the EPP on T because of its inherent focus property. The proposed derivational system can provide a unified explanation for the behavior of the *wh*-object DP in (21) and the *mo*-phrase in (22b).<sup>13</sup> In these sentences, given that the phrases take only a matrix scope in their surface position, each phrase is interpreted as a focused XP in the matrix clause, but not in the embedded clause. In other words, the focus-features on these phrases remain unchecked in the embedded clause. The embedded clause is prevented from constituting a strong CP phase, which makes it possible for the matrix T to enter into an Agree relation with the focused phrases within the lower clauses and raise them to

13 This behavior of JLS would be problematic for the previous studies, because it strongly suggests that JLS can resist reconstruction at LF. To resolve this problem, Takahashi (1993) establishes the descriptive generalization that the movement of a *wh*-phrase to the initial position of a clause headed by a [+Wh] COMP can be considered *wh*-movement in Japanese, and he argues that the absence of a radical reconstruction effect in (21) results from the interpretation of the movement of the *wh*-object DP as *wh*-movement. However, the analysis may be untenable because the obviation of the radical reconstruction effect is also observable in the case of the JLS of non-*wh*-phrases, as indicated in (22b).



- b. ? Dono-hito-mo<sub>i</sub> [[soitu-no hahaoya]-wa [[Hanako-ga t<sub>i</sub> aisitei-ru] to] omottei-na-i].  
 Anyone-Q<sub>i</sub> [[the guy<sub>i</sub>-Gen mother]-Top [[Hanako-Nom t<sub>i</sub> love-Pres] C] think-Neg-Pres  
 (Lit.)‘Anyone<sub>i</sub>, his<sub>i</sub> mother does not think that Hanako loves t<sub>i</sub>.’ (Saito (1992: 109))

In these sentences, the pronouns contained in the matrix subject DPs can be understood as identical to the scrambled object DPs, in contrast to the case of (24). Note that in these examples, the scrambled XPs are interpreted as focused XPs in the matrix clause. The *wh*-phrase in the interrogative sentence in (25a) and the *mo*-phrase in (25b) take their scope in the matrix clause. Thus, these phrases undergo the A-movement type of JLS out of the non-strong CP phase to the Spec of the matrix TP to satisfy the requirement of the EPP on the T:



This movement enables the scrambled XPs to occupy an A-position throughout the derivation, where these XPs A-bind the matrix subject DPs that remain in their original positions.

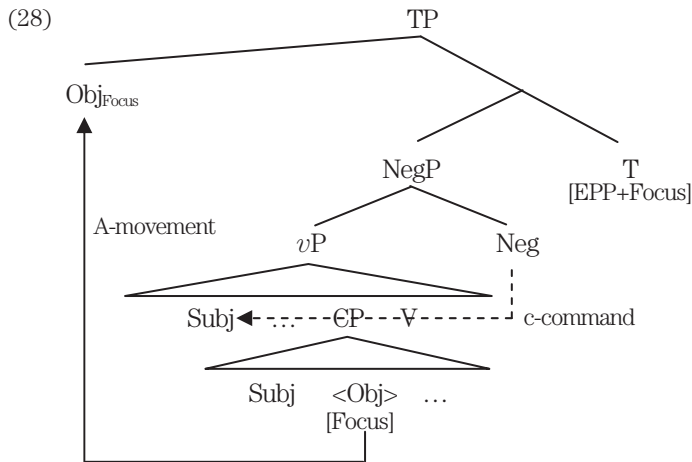
This type of dual behavior of the scrambled XP is further observed in the data concerning the scope interpretation between the matrix subject DP and the Neg-element. Consider the following examples:

- (27) a. Nani-o<sub>i</sub> zen'in-ga [Mary-ga t<sub>i</sub> kat-ta ka] iw-anakat-ta.  
 what-Acc<sub>i</sub> all (the people)-Nom [Mary-Nom t<sub>i</sub> buy-Past Q] say-Neg-Past  
 (Lit.)‘What, all (the people) did not say Mary bought.’ (all>not, \*not>all)
- b. Nani-o<sub>i</sub> zen'in-ga [Mary-ga t<sub>i</sub> kat-ta ka] iw-anakat-ta no?  
 what-Acc<sub>i</sub> all (the people)-Nom [Mary-Nom t<sub>i</sub> buy-Past Q] say-Neg-Past Q  
 (Lit.)‘What did all (the people) not say Mary bought?’ (?not>all, (all>not))
- c. [Sono hon-mo]<sub>i</sub> zen'in-ga [Taro-ga t<sub>i</sub> yon-da to] iw-anakat-ta.  
 [the book-Q]<sub>i</sub> all (the people)-Nom [Taro-Nom t<sub>i</sub> read-Past C] say-Neg-Past  
 (Lit.)‘Also that book, not all the people said that Taro read.’ (?not>all, (all>not))

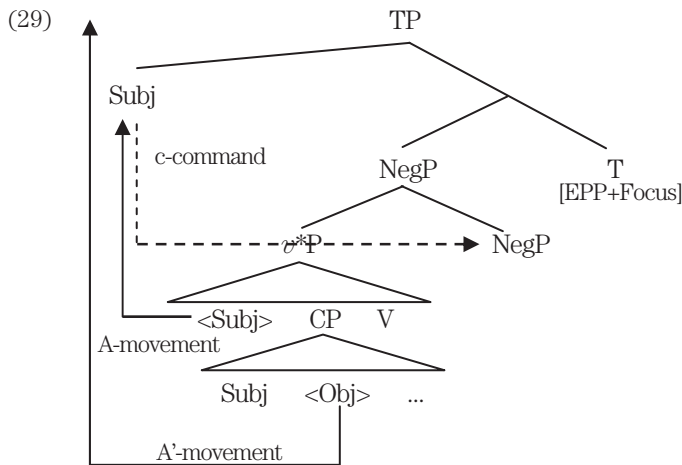
As shown in (27a), when the *wh*-phrase is scrambled from the embedded clause into the declarative



main clause, the matrix subject DP always takes a wide scope over the Neg-element. However, once the declarative sentence becomes an interrogative sentence, the matrix subject DP can take a narrow scope with respect to the Neg-element, as in (27b). Similarly, the JLS of the *mo*-phrase also permits the matrix subject DP to obtain a narrow scope interpretation, as in (27c). Here again, the possibility of the narrow scope in (27b) and (27c) is attributed to the focus property of the scrambled XPs. The following structure illustrates the derivational pattern of the sentences:



In (28), the object DP in the embedded clause undergoes EPP-driven A-scrambling to the Spec of the matrix TP for the proper interpretation of the DP as a focused XP in the matrix clause. Consequently, the non-focused subject DP in the matrix clause remains in its original position throughout the derivation, where it is asymmetrically *c*-commanded by the Neg-element. In contrast, the scrambled *wh*-phrase in (27a) is interpreted as a focused XP in the embedded clause, as clearly indicated by the obligatory interpretation of the sentence as an indirect question. Therefore, the embedded clause constitutes a strong CP phase, and the only way for the *wh*-phrase to move across the clause boundary into the matrix clause is costless A'-scrambling, which need not obey the PIC:



In this derivational pattern, the EPP on the matrix T is satisfied by the matrix subject DP, which asymmetrically c-commands the Neg-element.

### 3.2.3. The Negative Polarity Item in Japanese and the Clause-mate Condition

In Japanese, the *sika* ‘only’-phrase has been treated as a Negative Polarity Item (NPI). This phrase, unlike the English NPI *any*, is required to be a clause-mate with its licensing negation. Consider the following contrast:

- (30) a. Hanako-ga [Taro-ga soko-ni-sika ik-ana-kat-ta to] Ziro-ni it-ta.  
 Hanako-Nom [Taro-Nom there-Loc-only go-Neg-Past C] Ziro-Dat say-Past  
 ‘Hanako said to Ziro that it was only there that Taro went.’
- b. ?\* Hanako-ga [Taro-ga soko-ni-sika it-ta to] Ziro-ni iw-anakat-ta.  
 Hanako-Nom [Taro-Nom there-Loc-only go-Past C] Ziro-Dat say-Neg-Past  
 ‘It is only there that Hanako said to Ziro that Taro went.’

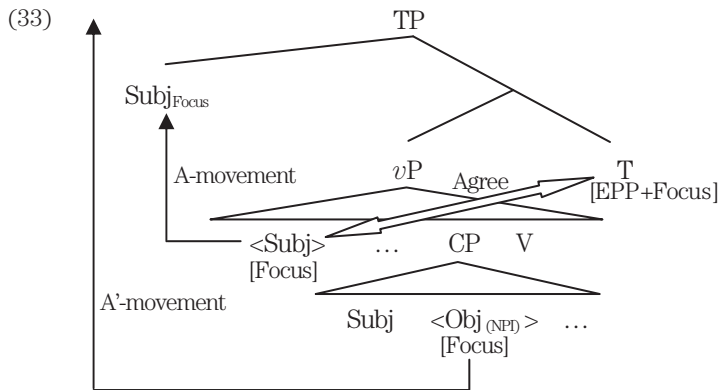
(31) He doesn’t believe that anyone attended the party.

In the case of the Japanese NPI in (30), when appearing in the embedded clause, the *sika*-phrase is licensed only by the Neg-element contained in the embedded clause, not by the Neg-element contained in the matrix clause. In contrast, English does not exhibit this type of restriction: the NPI contained in the embedded clause is properly licensed across the clause boundary by the Neg-element in the matrix clause, as the grammaticality in (31) shows.

Given this clause-mate condition, consider the following sentences, originally provided by Tanaka (1997), which contain a combination of the scrambled *sika*-phrase and the matrix *wh*-subject DP:

- (32) a. LGB-*sika*<sub>i</sub> dare-ga [Hanako-ga *t*<sub>i</sub> yom-ana-i to] it-ta no?  
 LGB-only<sub>i</sub> who-Nom [Hanako-Nom *t*<sub>i</sub> read-Neg-Pres C] say-Past Q  
 ‘Who said that Hanako reads only LGB?’
- b. ?\* LGB-*sika*<sub>i</sub> dare-ga [Hanako-ga *t*<sub>i</sub> yom-u to] iw-ana-katta no?  
 LGB-only<sub>i</sub> who-Nom [Hanako-Nom *t*<sub>i</sub> read-Pres C] say-Neg-Past Q
- (Tanaka (1997))

In both sentences above, the *sika*-phrases move from the embedded clause to the sentence-initial position. Nevertheless, sentence (32a), which contains the Neg-element in the embedded clause, sounds far better than sentence (32b), in which the Neg-element appears in the matrix clause. The proposed derivational system provides a principled explanation for the contrast in grammaticality between these two sentences. In these interrogative sentences, the matrix *wh*-subject DPs, which are viewed as the closest candidate with the matching focus-feature, must undergo A-movement to the Spec of the matrix TP to take their matrix scope. In contrast, the *sika*-phrase is also assumed to be interpreted as a type of focalized element, according to Nishioka (2000). In other words, the phrase is eligible to undergo A-movement to the Spec of the matrix TP to satisfy the EPP requirement. In the sentences in (32), however, the *sika*-phrases cannot move to that position because in this case, those phrases are not considered the closest focused XPs. The *sika*-phrases have no option but to move to sentence-initial position through costless A'-scrambling:



Consequently, the scrambled *sika*-phrases are radically reconstructed into the embedded clause at LF. When contained in the embedded clause, as in (32a), the Neg-element succeeds in being a clause-mate with the reconstructed *sika*-phrase at LF.<sup>14</sup> In contrast, the Neg-element appearing in the matrix clause fails to co-occur with the *sika*-phrase at the relevant derivational stage.

<sup>14</sup> In this paper, following Nishioka (2007), I assume that the NPI is licensed via some interpretation rule in the LF component.



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