Covert Wh/Focus Movement Obeys Derivational
Relativized Minimality in Japanese

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1. Introduction

As originally pointed out by Hoji (1985), certain kinds of focus elements and quantifiers induce a blocking effect on wh-movement when focus elements/quantifiers precede wh-phrases in Japanese (Endo (2007), Takahashi (1990), Tanaka (1997, 2003) and much other work). For instance, when the Negative Concord Item (NCI) wh-mo such as dare-mo ‘no one’ or nani-mo ‘nothing’ precedes a wh-phrase, the sentence is ungrammatical as in (1a). Notice also that its scrambled counterpart (1b) is grammatical.

(1) a. *Dare-mo nani-o tabe-na-katta no?
   who-MO what-ACC eat-NEG-PAST Q
   □ What didn’t anyone eat?’


In a similar vein, Takahashi (1990) shows that the Negative Polarity Item (NPI) sika ‘only’/‘except for’ shows the same blocking effect as shown in (2a). Again, the sentence becomes legitimate when the wh-phrase is scrambled over the focus phrase as in (2b).
(2) a.*John-sika nani-o tabe-na-katta no?
   -SIKA what- ACC eat- NEG-PAST Q (Takahashi (1990: 134))

b. Nani-o John-sika tabe-na-katta no?

Tanaka (1997) accounts for such contrasts by suggesting the Linear Crossing Constraint (LCC).

(3) **Linear Crossing Constraint (LCC)** (Tanaka (1997: 161))

Suppose that $Op_i$ precedes $Op_{i+1}$ and that $t_i$, the trace of $Op_i$, precedes $t_{i+1}$, the trace of $Op_{i+1}$, then $t_{i+1}$ cannot precede $Op_i$ at S-Structure.

According to Tanaka, the ungrammatical sentences (1a) and (2a) have the structure (4). Notice that Tanaka assumes that Operators move rightward in right-branching languages like Japanese.

(4)

In this structure, the focus operator precedes the wh-operator and the trace of the focus phrase precedes the trace of the wh-phrase. Furthermore, the wh-trace precedes the focus operator. Hence, this structure violates the LCC (3), yielding the ungrammatical sentences (1a) and (2a). More intuitively, the LCC states that two A'-dependency lines must not cross in its surface form.
However, it is commonly assumed that operators move leftward irrespective of whether the language is head initial or head final. Moreover, it is unclear why a constraint on precedence in the S-structure restricts the interpretation of a sentence. Hence, this paper explores a derivational syntactic account for the LCC effect. Specifically, I argue that quantifier-induced blocking effects like (1a)/(2a) can be explained by the assumption that overt movements such as scrambling precede covert wh/focus movements (Nissenbaum (2000), Chomsky (2004, 2008)) and Derivational Feature-based Relativized Minimality in the fine structure of the CP/vP periphery (Maeda (2010, to appear)). Moreover, these assumptions explain intervention effects between wh-phrases and focus particles such as *kosō* in a concessive clause and *sae* in a conditional clause (Kusumoto (2001), Sano (2000, 2009)). In the following, single lines denote wh-dependencies and double lines denote focus-dependencies.

(5) a. ??*[Keisatu-wa gakubutyoo-ni [Sano kyoojyu-ga kakuseizai-kosō]
   police-TOP dean-DAT professor-NOM stimulant drugs-FOC
dare-ni tewatasita ka]-o kiita keredomo],
who-DAT gave Q-ACC asked although
mayaku-o dare-ni tewatasita ka wa kika-na-katta.
narcotics-ACC who-DAT gave Q CONT ask-NEG-PAST
‘The police asked the dean who Professor Sano gave stimulant drugs to, but they didn’t ask who Professor Sano gave narcotics to.’

(Sano (2009:194))
b.  The police asked the dean who Professor Sano gave stimulant drugs to but didn’t give narcotics to.

c. *(Lit.) If Jiroo knows who has the driver’s license, he might let him use his car.*

(Kusumoto 2001: 14)

d. *(Lit.) If Taro says he invites who to the party, Hanako will come with relief?*

It is important to note that the LCC cannot explain (5a); since the two A’-dependencies nest, the LCC wrongly predicts that the sentence is acceptable. This paper suggests an alternative analysis which explains all the facts shown above in a uniform fashion.

This paper is organized as follows. Section two introduces some basic assumptions and outlines the new proposal. Section three gives a derivational
syntactic account for the LCC effect regarding wh-phrases and NCIs/NPIs. Section four extends the proposal to the intervention effect between wh-phrases and focus particles such as *koso and *sae. Section five summarizes the analysis.

2. A Proposal

2.1. The fine structure of the CP/vP periphery

Following Rizzi (1996, 1997, 2006), we assume that the CP periphery may be finely-structured and that designated heads in the finely-structured CP/vP domain trigger A'-movements.

\[ \text{[ForceP Force [TopP* Top* [FocP Foc [TopP* Top* [FinP Fin ]]]]]} \]

However, as the contrast in (7) shows, a topic phrase can precede a focus phrase, but cannot follow a focus phrase in English.

(7)a. This book to ROBIN I gave. (Culicover (1991: 61))

b. *This BOOK to Robin I gave. (Hatakeyama (1998: 356))

Thus, we propose to modify the fine structure in (8), where TopP does not project below FocP.

\[ \text{[ForceP Force [TopP* Top* [FocP Foc [FinP Fin ]]]]} \]

(8) [AspP Asp [TopP* Top* [FocP Foc [VoiceP Voice]]]]

Now, under Chomsky’s (2001, 2004, 2008) idea that properties of the CP phase hold for phases generally, we can assume that the vP periphery also has the articulated structure with hierarchical criterial heads. We therefore suggest the fine structure of the vP periphery shown in (9).

\[ \text{[AspP Asp [TopP* Top* [FocP Foc [VoiceP Voice]] ]]}} \]

The topmost head in the vP domain is the Aspectual head. Asp encodes perfective or imperfective aspect and takes scope over the entire event (Travis (2010)). At the bottom of the vP domain is Voice. Voice encodes the active or passive voice of the predicate, introducing the external argument as its Spec and takes VP as its
complement (Kratzer (1996), Pylkkänen (2008)). Further, TopP and FocP may project in the vP domain. This assumption is supported by many studies which show the existence of IP internal focus projections and topic projections (Belletti (2001, 2004), Horvath (1986), Jayaseelan (2001), Tuller (1992), Yanagida (2005)).

As in the CP domain, A’-elements may satisfy a criterion in the vP periphery. Specifically, since the NCI wh-mo and the NPI DP-sika are licensed by Neg, it is reasonable to assume that NCI/NPI satisfy the Foc Criterion with Neg, which in turn resides in the Foc head in the vP domain.

In addition, following Rizzi (2006: 110-111), I suppose that movements to the intermediate places are triggered by purely formal (“pseudo”) criterial features, which correspond to criterial features of the criterial heads in the higher CP, and have the same formal features as criterial features which trigger (final) A’-movements. Purely formal criterial features do not satisfy any criterion, but since purely formal criterial features and criterial features share the same features, a purely formal criterial feature resides in the same kind of criterial head as the corresponding criterial feature; let us take long-distance wh-movement to the main clause as an example. Following Rizzi (1997), we assume that a wh-phrase lands in Spec, FocP in the main clause, while it lands in Spec, ForceP in the embedded clause to satisfy the selectional requirement imposed by the main verb. Given this and the assumption that a purely formal criterial feature is assigned to the head which may trigger the same kind of criterion, we may assume that a wh-phrase moves via Spec, ForceP in the embedded CP to Spec, FocP in the main CP. More specifically, we assume that an element moves via the finely-structured vP domain as well, and thus we argue that a wh-phrase utilizes Spec, ForceP and Spec, AspP as an intermediate landing site, the latter of which may be endowed with purely formal criterial features because Asp corresponds to Force in its hierarchical position. Similarly, a focus
element moves via Spec, FocP in the vP/CP domain, which has a purely formal focus feature.

Let us turn to the nature of overt/covert movements. As will be discussed below, we assume that Japanese has syntactic covert wh/focus movements (syntactic movements without phonological features) and scrambling (syntactic movements with phonological features). The problem is which movement occurs first in a given phase. Firstly, we assume that when two A'-elements are attracted by the heads in the same phase edge, the higher one moves first. Remember that wh/focus movements are triggered by criterial features. Given that syntactic dependencies are governed by locality conditions (such as the Minimal Link Condition (Chomsky (1995)) and Relativized Minimality (Rizzi (1990)) and much subsequent work), it may be plausible to assume that criterial heads in the vP domain attract the closer goal, with closeness determined by c-command. Specifically, here we follow Rizzi (1997) in assuming that criterial heads in the CP/vP edge are amalgamated into a single head when there is no necessity to split: the heads split when attracting elements. Given this, we might assume that heads in the phasal edge are activated in order of attraction: when two elements move, a head which attracts the higher goal is activated first, and then another head which attracts the lower goal is activated (it is not the case that a lower phase head, such as Voice, is activated first, after which a higher head like Top is activated). Secondly, we assume with Nissenbaum (2000) and Chomsky (2004, 2008) that syntactic overt movements precede syntactic covert movements because the former (syntactic movements with phonological features) occur before transfer to the Sensory-Motor interface (S-M interface), while the latter (syntactic movements without phonological features) occur after transfer to the S-M interface but before transfer to the Conceptual-Intentional interface (C-I interface). Since wh-movement and focus movement in Japanese are covert syntactic
movements, they are always preceded by scrambling. That is, phase heads in the same phasal edge first trigger overt movements like scrambling before transfer to S-M, then they trigger covert wh/foc movements in Japanese.

In sum, we assume the following architectures and restrictions on movements.

(10) (i) The fine structure of the CP/vP periphery

\[
\begin{align*}
\text{a. CP:} & \{ \text{ForceP} \ \text{Force} \ [\text{TopP} \ \text{Top} \ [\text{FocP} \ \text{Foc} \ [\text{FinP} \ \text{Fin}]]] \\
\text{b. vP:} & \{ \text{AspP} \ \text{Asp} \ [\text{TopP} \ \text{Top} \ [\text{FocP} \ \text{Foc} \ [\text{VoiceP} \ \text{Voice}]]] \\
\end{align*}
\]

(ii) Japanese has syntactic covert wh-movement to Spec, CP and syntactic covert focus movement to Spec, FocP. In particular, NPIs and NCIs satisfy the Foc Criterion with Neg in the Foc head in the vP domain.

(iii) Wh-phrases move via Spec, ForceP/Spec, AspP and focus elements and NCIs/NPIs move via Spec, FocP in the CP/vP domain.

(iv) Overt movements such as scrambling precede covert wh/foc movements within a phase.

The next section introduces a proposal made in Maeda (2010) regarding relativized minimality effects.

2.2 Derivational Feature-based Relativized Minimality

Rizzi (2004) demonstrates that not all the intervening A'-elements block the A'-movement of another phrase, and goes on to argue that A'-elements can be classified into three classes shown in (11b-d).3

(11) a. Argumental: person, number, gender, case

b. Quantificational: wh, negation, measure, focus...

c. Modifier: evaluative, epistemic, negation, frequentative, celerative, measure, manner...

d. Topic (Rizzi (2004: 243))
Rizzi (2004: 243) then proposes relativized minimality on the basis of features, which requires that the elements with the feature of the same class exhibit intervention effects. Rizzi assumes that relativized minimality is a representational principle, and holds for chains at LF. The local relation which satisfies relativized minimality is defined as in (12).

(12) Minimal Configuration (Rizzi (2004: 225))

\[
Y \text{ is in a Minimal Configuration with } X \text{ iff there is no } Z \text{ such that }
\]

(i) \( Z \) is of the same structural type as \( X \), and

(ii) \( Z \) intervenes between \( X \) and \( Y \).

Here, the same structural type denotes either heads of the same class or the Spec positions which are licensed by heads with features of the same class in (11).

Under this assumption, if two phrases have the feature of the same class, only the closer phrase may be linked to the criterial head; if they do not share the same class feature, the lower phrase can also be linked to the criterial head. Although Rizzi assumes that relativized minimality is applied to chains at LF, we argue that relativized minimality applies through derivation, prohibiting movements which violate relativized minimality. We call this Derivational Feature-based Relativized Minimality (DFRM) and define it as in (13).

(13) Derivational Feature-based Relativized Minimality

\[
Y \text{ can move to } X \text{ iff }
\]

(i) \( Y \) is in a Minimal Configuration with \( X \), and

(ii) \( X \) and \( Y \) share a feature of the same class.

Under DFRM, if two phrases are in the same class, the closer of the two is attracted, while if they are not, the lower phrase can move over the higher phrase. For instance, since wh-features and focus features belong to the same class (Quantificational class), a focus phrase cannot move over a wh-phrase, and vice versa.
However, given that a wh-phrase can be scrambled over a focus phrase as shown in (1b) and (2b), and that a focus phrase does seem to block covert movement of wh-phrases in (1a) and (2a), we cannot naively adopt DFRM as a condition for interaction between wh/focus elements. Rather, we suggest that a wh/focus phrase counts as an intervener if and only if it has satisfied the Wh/Foc Criterion.

(14) An element counts as an intervening element iff it has satisfied a criterion. In the next section, we will show that DFRM in combination with the nature of movements proposed in section 2.1 properly explains the intervention effects induced by NCIs/NPIs; for the time being, all that is relevant for us is that an element which has satisfied the Wh/Foc Criterion blocks another wh/focus movement under DFRM, because they both belong to the same class.

3. A Syntactic Analysis of the Linear Crossing Constraint

As shown in the introduction, a focus phrase cannot precede a wh-phrase, but the sentence becomes acceptable if the wh-phrase is scrambled over the focus phrase.

(15) a. *Daremo nani-o tabe-na-katta no?
   who-MO what-ACC eat-NEG-PAST Q
   ‘What didn’t anyone eat?’

   b. Nani-o daremo tabe-na-katta no?  (=(1))

The derivations of (15a, b) are shown in (16) and (17), respectively. In the following, straight lines denote overt movements and dotted lines denote covert movements. Boxed elements are meant to have satisfied a criterion in that position.


In (16a), the subject NCI wh-mo is generated in Spec, VoiceP and the object
wh-phrase is generated in the complement of the verb. These two elements need to undergo covert movements to designated criterial positions, but which of the two moves first? Since wh-*mo* is closer to the vP edge, Foc head in the vP domain is activated first and attracts it. At this time, wh-*mo* is licensed by Neg; that is, wh-*mo* satisfies the Foc Criterion in the vP domain. The wh-phrase also needs to satisfy the Wh Criterion in Spec, CP. So, after wh-*mo* moving to Spec, FocP, *nani-o* is attracted by Asp, the intermediate landing site for wh-phrases. However, this movement is illegitimate under DFRM since wh-*mo*, which has satisfied the Foc Criterion and counts as an intervening element, blocks this movement. Thus the wh-phrase cannot move and the derivation crashes at this point.

Let us turn to the derivation of (15b) illustrated in (17).

\[
(17) \left[ \text{ForceP}\left[ \text{FocP} \left[ \begin{array}{c}
\text{wh} \\
\text{AspP} \\
\text{wh-mo} \\
\text{FocP} \left[ \text{t\_wh-mo} [\text{t\_wh} [\text{VP} \text{t\_wh}]] \text{Neg} \text{Asp}] \right] \\
\text{Foc} \end{array} \right] \right] \right] \text{Asp} \ldots
\]

The difference between (15a) and (15b) is that the wh-phrase *nani-o* undergoes covert movement in the former, while it undergoes overt movement, called scrambling, in the latter. Since overt movements precede covert movements within a phase, the first operation in the vP phase is that Asp attracts the wh-phrase to Spec, AspP. As this overt movement, scrambling, attracts the wh-phrase, it is triggered by a purely formal criterial feature in Asp (the same occurs when there is covert wh-movement). Secondly, the NCI *dare-mo* moves to Spec, FocP in the vP domain, satisfying the Foc Criterion with Neg. Thirdly, *nani-o* further moves to Spec, FocP in the CP domain and satisfies the Wh Criterion there. It is important to note that this derivation does not violate DFRM. At the derivational point where the vP edge attracts elements, scrambling of the wh-phrase precedes focus movement; since the focus phrase has not yet satisfied a criterion, it does not have a blocking effect on
wh-movement.

So far, we have concentrated on the intervention effect in a simple clause. Let us now examine long distance A'-dependencies. Suppose an NPI and a wh-phrase both reside in an embedded clause. Suppose further that one criterion is satisfied in the embedded clause and the other criterion is satisfied in the main clause. There are two possibilities. In one case, the NPI satisfies the Foc Criterion in the embedded vP and the wh-phrase satisfies the Wh Criterion in the main CP. In the other case, the wh-phrase satisfies the Wh Criterion in the embedded CP and the NPI satisfies the Foc Criterion in the main vP.

The former case shows a similar contrast to what we find in (1) and (2); the NPI cannot precede the wh-phrase as in (18a), but scrambling of the wh-phrase repairs the ungrammaticality as in (18b).

(18) a. *Who did Taroo ask whether Hanako bought what? □

Let us begin with the derivation of (18a), which is schematized in (19a). As the subject DP-sika is closer to the vP edge, Foc head is activated first to attract it. At this point DP-sika satisfies the Foc Criterion with Neg. Then, Asp is activated, and tries to attract the wh-phrase nani-o. However, this movement is blocked by DFRM because DP-sika, which has satisfied the Foc Criterion, intervenes in the wh-movement path.

In contrast, a scrambled counterpart (18b) is grammatical. As shown in (19b), the first movement in this derivation is scrambling of *nani-o; although the wh-phrase is lower than the focus phrase, scrambling of the wh-phrase is overt movement, and so it is applied before transfer to the S-M interface, which is in turn followed by covert focus movement. Next, the focus phrase DP-*sika moves to Spec, FocP in the vP domain, satisfying the Foc Criterion with Neg. The wh-phrase further undergoes successive cyclic movement to Spec, FocP in the main CP, where it satisfies the Wh Criterion, yielding the grammatical sentence (18b).

Now consider the second possibility: an NPI and a wh-phrase co-occur in the embedded clause and the wh-phrase satisfies the Wh Criterion in the embedded CP and the NPI satisfies the Foc Criterion in the main vP. As (20) shows, such sentences are unacceptable.

(20) a. *Taroo-ga [Hanako-*sika LGB-o yonda ka (dooka)] sira-nai (koto).
   -NOM -SIKA -ACC read Q whether know-NEG
   □ Taroo knows whether only Hanako read LGB. □ (Tanaka (1997: 150))

   -NOM -NOM -SIKA read Q want-to-know-NEG
   □ Taroo wants to know who read only LGB. □

However, we cannot ascribe the ungrammaticality only to DFRM, because the NPI DP-*sika and the NCI wh-mo obey the clause-mate condition (Muraki (1978)). That is, they resist long-distance licensing in the first place.
Therefore, we can conclude that the examples in (19) are illegitimate because the NPIs there fail to be licensed by the clause-mate licenser.\footnote{\textsuperscript{5}}

To sum up, this section presents a syntactic account for the LCC effect based on the distinction between overt/covert movements and DFRM. The next section extends this assumption to the intervention effect between wh-phrases and focus particles such as \textit{koso} and \textit{sae}.

\textbf{4. The Intervention Effect between \textit{Koso}/\textit{Sae} and Wh-\textit{phrases}}

This section first introduces two types of focus particles \textit{koso} and \textit{sae} and their distributional properties. Sano (2000, 2009) notes that the uses of the focus particle \textit{koso} are classified into two classes depending on its licenser. One type is licensed by a predicate associated with a certain kind of modal judgement, such as the copula \textit{da} ‘is’ as in (22a) or \textit{bekida} ‘should’ as in (22b).

\begin{enumerate}
\item[(22)a.] Taroo-\textit{koso} tensai-da.
  \begin{rendered}[KOSO] \[-KOSO\]
  \begin{rendered}[COP] \[-COP\]
  \begin{rendered}[genius] \[-genius\]
  \begin{rendered}[da] \[-da\]
  \begin{rendered}[is] \[-is\]
  \begin{rendered}[English] \[-English\]
  \begin{rendered}[\textit{Taroos a genius.} \textsuperscript{(Sano (2000: 331))}]
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
\item[(22)b.] Taroo-wa oya-ni-\textit{koso} soodansuru-\textit{bekida}.
  \begin{rendered}[TOP] \[-TOP\]
  \begin{rendered}[DAT] \[-DAT\]
  \begin{rendered}[koso] \[-koso\]
  \begin{rendered}[should] \[-should\]
  \begin{rendered}[\textit{Taroos should talk with his PARENTS.} \textsuperscript{(Sano (2000: 331))}]
  \end{rendered}
  \end{rendered}
  \end{rendered}
  \end{rendered}
\end{enumerate}

The other type of \textit{koso} is not licensed by an element with modal judgement but
should occur in a concessive clause introduced by a conjunction like keredomo ‘(al)though’, ga ‘but’ or noni ‘although’.

(23) Taroo-wa oya-ni-koso soodansita keredomo/ga,

-TOP parent-DAT-KOSO consulted although/but

jubun-no tsuma-ni-wa damatteita.

self-GEN wife-DAT-TOP kept-silent. (Sano (2000: 332))

Assuming that keredomo or ga is an instance of C, Sano (2000) argues that the concessive feature on C licenses the focus particle koso in a concessive clause. He then suggests that this licensing relation is achieved by the covert focus movement of koso to Spec, CP.6

Next, let us consider sae. Following Numata (2000), Kusumoto (2001) assumes that the uses of sae may be divided into two types: sae which corresponds to ‘even’ in English as in (23a) and sae with the meaning of minimum requirement ‘at least’. Based on the fact that sae ‘at least’ occurs only in concessive clauses, Kusumoto argues that sae ‘at least’ is licensed by C with(re)baltara ‘if’ by means of syntactic covert movement to Spec, CP.

The assumptions that koso in a concessive clause and sae in a conditional clause are licensed by way of covert focus movements are supported by the facts of long-distance licensing like (24) and island phenomena like (25).
(24) a. Watasi-wa [Ken-ga okusan-ni jyosigakusei-to kissaten-de
   I-TOP -NOM wife-DAT female-student-with café-at
   otya-koso nonda to] itta no]-o kiita keredomo.
   tea-KOSO drank C said C-ACC heard although
   baa-de osake-o nonda to itta no-wa kika-na-katta.
   bat-AT alcohol-ACC drank C said C-TOP heard-NEG-PAST
   ‘I heard that Ken told his wife he was drinking TEA with a female
   student at the café but I didn’t hear that Ken told his wife he was
drinking ALCOHOL at the bar.’ (Sano (2009: 193))

b. [Taoo-ga [Jiroo-ni nomimono-sae kattekuru yooni ]
   -NOM -DAT drink-SAE buy in.such.a.way
   iu no-o] oboetoke ba], hokanomono-wa kondodemo yoi.
   tell C-ACC remember if] other-things-TOP at-another-time good
   ‘If Taroo remembers to tell Jiroo to buy drinks, other things can be
   prepared at another time.’ (Kusumoto (2001: 7))

(25) a. *Watasi-wa [[Ken-ga jyosigakusei-to kissaten-de
   I-TOP -NOM female-student-with café-at
   otya-koso nonda] hanasi]-o kiita keredomo.
   tea- KOSO drank story-ACC heard although
   baa-de osake-o nonda hanasi-wa kiitei-nai.
   bar-AT alcohol-ACC drank story-TOP heard-NEG
   ‘I heard the story that Ken was drinking TEA with a female student at
   the café but I didn’t hear the story that he was drinking ALCOHOL at
   the bar.’ (Sano (2009: 193))
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b. ?? Taroo-ga Hanako-ni [[medamasyoohin-sae nakunatta] jijitu]-o
-NOM -DAT bargain-SAE sold-out fact-ACC
hanase-ba, (hokano syoohin-ga nokotteita to shitemo) moo
tell if other goods-NOM remain C even though anymore
sono mise-ni iku koto-wa naidaroo.
the store-DAT go C-TOP never (Kusumoto (2001: 9))
‘If Taroo tells Hanako the fact that the BARGAIN is sold out, she will
never go to the store (even if there will remain other goods).’

We follow the assumption that DP-\textit{koso} in a concessive clause and DP-\textit{sae} in a
conditional clause undergo syntactic covert movement to Spec, CP. In particular,
based on the notion of fine structure, we argue that they move to Spec, FocP in the
CP domain. Now, given such facts, it may be interesting to examine whether we find
relativized minimality effects between these focus elements and wh-phrases.

Let us first examine the case where a wh-phrase intervenes between DP-\textit{koso} and
C with a concessive feature. As Sano (2009) shows, the resulting sentences are
ingrammatical.

(26) a. *Keisatu-wa gakubutyoo-ni [Sano kyoojyu-ga dare-ni]
police-TOP dean-DAT professor-NOM who-DAT
kakuseizai-koso tewatasita ka]-o kiita keredomo, dare-ni
stimulant drugs- KOSO gave Q-ACC asked although who-DAT
mayaku-o tewatasita ka wa kika-na-katta.
narcotics-ACC gave Q CONT ask-NEG-PAST
‘The police asked the dean who Professor Sano gave stimulant drugs to,
but they didn’t ask who Professor Sano gave narcotics to.’

(Sano (2009: 194))
b. ?*[Keisatu-wa gakubutyoo-ni [Sano kyoojyu-ga kakuseizai-koso

police-TOP dean-DAT professor-NOM stimulant drugs- KOSO
dare-ni tewatasita ka]-o kiita keredomo], mayaku-o
who-DAT gave Q -ACC asked although narcotics-ACC
dare-ni tewatasita ka wa kika-na-katta.
who-DAT gave Q CONT ask-NEG-PAST

‘The police asked the dean who Professor Sano gave stimulant drugs to,
but they didn’t ask who Professor Sano gave narcotics to.’

The analysis proposed here can provide a plausible analysis for the
ungrammaticality of the above sentences. The derivation of (26a) is shown in (27).

(27) *[...[FocP DP-koso_k ...[ForceP wh] [FocP t_k ... [AspP t_i [FocP t_k [VP t_i t_k] Foc]Asp]

...Foc]Force]...Foc]...]

The wh-phrase dare-ni must move to Spec, ForceP in the most embedded CP
domain and the focus phrase DP-koso must move to Spec, FocP in the higher C
headed by keredomo. At the derivational point of the most embedded vP domain, the
heads in the vP edge attract both the wh-phrase and DP-koso to ensure the cyclic
nature of movements. Since the wh-phrase is closer to the vP edge, Asp head in the
vP domain is activated first, attracting the wh-phrase. After that, Spec, FocP is
activated and attracts the focus phrase. Then, at the embedded CP phase headed by
question marker ka, the closer wh-phrase is attracted to Spec, ForceP and satisfies
the Wh Criterion therein. After that, DP-koso is attracted by Foc, which is activated
by the purely formal criterial focus feature. This focus phrase needs to undergo
further movement to the higher CP to satisfy the Foc Criterion with Foc headed by
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keredomo. However, this movement violates DFRM because the wh-phrase which has satisfied the Wh Criterion intervenes. Hence the derivation crashes.

Next, let us consider the case where “the focus island” by DP-koso and the concessive C intervenes between a wh-phrase and the interrogative C. In this case, the wh-phrase successfully establishes a relation with the interrogative C as in (28).

(28) Keisatu-wa gakubutyoo-ni [Sano kyoojyu-ga dare-ni
    police-TOP dean-DAT professor-NOM who-DAT
    kakuseizai-koso tewatasita noni] mayaku-o
    stimulant drugs-KOSO gave although narcotics-ACC
    tewatasa-na-katta no ka tazuneta.
    give-NEG-PAST C Q asked

    ‘The police asked the dean who Professor Sano gave stimulant drugs to,
    but they didn’t ask who Professor Sano gave narcotics to.’ (=(5b))

The derivation of (28) includes two types of covert A'-movement: covert focus movement of DP-koso to Spec, FocP in the most embedded CP domain, and covert wh-movement to Spec, ForceP in the higher CP. Since the wh-phrase is higher than the element with a focus particle in its base position, the first movement in the derivation of (28) is covert wh-movement to Spec, AspP in the most embedded vP domain as shown in (29).

(29) \[
\begin{array}{c}
\text{[...[ForceP wh] [AspP t_i ...[ForceP t_i [FocP DP-koso] ... [AspP t_i [FocP t_k [VP t_i t_k ]}\n\end{array}
\]

Foc[Asp]...Foc[Force]...Force]...

Then DP-koso moves to Spec, FocP in the vP domain. At the next phase, the concessive CP, Force attracts the closer wh-movement first, and Foc attracts DP-koso, the latter of which satisfies the Foc Criterion. The wh-phrase further
undergoes successive cyclic movement to the next embedded CP to satisfy the Wh Criterion there; note that this movement does not violate DFRM because the wh-phrase is located higher than the focus particle in the concessive CP domain and thus the wh-movement does not cross the focus element which has satisfied a criterion. In this way, the derivation (29) yields the convergent sentence (28).

Summing up, the assumption that the wh-phrase lands at the higher place than the focus phrase in combination with DFRM gives a plausible account for the contrast between (26) and (28); in the former, the wh-phrase which has satisfied the Wh Criterion blocks covert focus movement because it intervenes in the focus movement path. In the latter, the wh-movement avoids the DFRM effect because it precedes the focus movement which satisfies the Foc Criterion and the landing site for the wh-phrase is higher than the focus phrase.

More interestingly, the empirical coverage of the proposal can be extended to the interaction between DP-sae in a conditional clause and a wh-phrase. Notice that the wh-island blocks the focus-dependency between DP-sae and conditional C as in (30a, b), while the “focus island” created by DP-sae and the conditional C does not block the wh-dependency as shown in (30c, d).^8

(30) a. *[Dare-ga menkyo-sae motteiru ka] wakare ba Jiroo-wa kuruma-o kasitekureru daroo.
who-NOM license-SAE have Q know if -TOP car-ACC let.use might

‘(Lit.) If Jiroo knows who has the driver’s license, he might let him use his car.’

(=(5c))
b. *(Taroo-ga) doko-de kyookasyo-sae katta ka] wakare ba,
    -NOM where-AT textbook-SAE bought Q know if
    notebook-POSS fact-TOP not-know good.
    ‘(Lit.) If we know where Taroo bought textbooks, we may not know about
    notebooks.’
    (ibid.)

c. ?[Dare-ga menkyo-sae motteire ba], Jiroo-wa kuruma-o kasitekureru no?
    who-NOM license-SAE have if -TOP car-ACC let.use Q
    ‘(Lit.) If who has the drivers license, Jiroo will let him use his car?’

d. [Taroo-ga [dare-o paatee-ni sasotta to] -sae ie ba],
    -NOM who-ACC party-DAT invited C -FOC say if
    Hanako-wa ansinsite yattekuru no?
    -TOP with relief come Q
    ‘(Lit.) If Taro says he invites who to the party, Hanako will come with
    relief?’
    (=5d)

The derivation of (30a) is schematized in (31) and that of (30c) is schematized in
(32). Let us consider (31), where the wh-phrase needs to satisfy the Wh Criterion
with Force in the most embedded CP and the focus phase needs to be licensed by
Foc in the next embedded CP.

\[
(31) ^*[\ldots[\text{FocP} \text{DP}-sae}_{k} \ldots[\text{ForceP} \text{wh}] \text{[FocP} t_{k} \ldots[\text{TP} t_{i} \text{[AspP} t_{i} \text{[FocP} t_{k} \ldots[\text{VoiceP} t_{i} \text{[VP} t_{k} \text{]Voice}]]]Foc]}\text{Asp}[T]]\text{Foc}[\text{Force}]\ldots\text{Foc}\ldots]
\]

At the derivational step of the most embedded vP phase, the focus phrase undergoes
covert movement to Spec, FocP to ensure successive cyclic movement. Notice that
the wh-phrase in Spec, VoiceP needs to satisfy its A-property against T before it
satisfies the A'-property, and thus does not move to Spec, AspP at this point. At the next phase level, the T head attracts the subject to its Spec. After A-movement, the wh-phrase is higher than the focus phrase, and so it is attracted by Force in the CP domain, satisfying the Wh Criterion. After that, the focus phrase moves to Spec, FocP in the CP domain. This movement does not violate DFRM, since the its landing site is lower than the landing site of the wh-phrase. However, the next movement of DP-sae does violate DFRM, because it must cross the wh-phrase which has satisfied the Wh Criterion, hence yielding the ungrammatical sentence.

Unlike (31), the derivation in (32) generates a licit sentence. That is, the focus dependency between DP-sae and conditional C does not block covert wh-movement.

(32)?[[FocP[wh]...[ForceP t_{l}][FocP DP-sae]...[ForceP t_{l}][FocP t_{k}][[TP t_{l}][FocP t_{k}][VoiceP t_{l}][VP t_{k}]]

The first derivational steps of (32) are analogous to those of (31). At the most embedded vP, DP-sae moves to Spec, FocP. Then, at the next phase, the subject wh-phrase undergoes A-movement to Spec, TP and then further moves to Spec, ForceP. DP-koso also moves to Spec, FocP in the CP domain. At the next phase level comes the first difference; the wh-phrase has not satisfied the Wh Criterion, and so undergoes further covert wh-movement. More importantly, the fact that the wh-phrase has not satisfied a criterion allows DP-sae to move over the wh-phrase without violating DFRM. Therefore, DP-koso is attracted by Foc with the concessive feature and the Foc Criterion can be satisfied with no difficulty. The wh-phrase further undergoes successive cyclic wh-movement to the main CP, satisfying the Wh Criterion. This movement does not violate DFRM because no
element with the Quantificational feature intervenes in the wh-movement path.

To sum up, by making use of the Minimalist assumptions regarding overt/covert movements, DFRM can handle the existence of awh-island regarding focus movements as well as the absence of a “focus island” regarding wh-movements.

5. Conclusion

This article has attempted to account for why a focus phrase cannot precede a wh-phrase in terms of covert wh/focus movement and DFRM. Furthermore, this analysis is extended to the interaction between wh-phrases and focus phrases including koso and sae. To the extent that this is on the right track, the analysis sheds new light on relativized Minimality effects in Japanese and offers further support for the assumption that Japanese has covert wh/focus movements.

Notes

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Other types of quantifiers which induce the intervention effect include John-ka Bill ‘John or Bill’, John-mo ‘John-also’, Mary-sae ‘Mary-even’ (see Hoji (1985), Endo (2007)). It is also noteworthy that such intervention effects are observed cross-linguistically (see de Swart (1992), Beck (1996, 2006) and references cited there.)

2. Dare-mo is often regarded as an NPI which corresponds to anyone in English. However,
Nishioka (2007) convincingly argues against the idea and suggests that dare-mo is in fact an NCI.

3. “Measure” denotes amount adverbs such as a lot and little. Other adverb types include evaluative adverbs: e.g. unfortunately, epistemic adverb: probably, celerative adverb: rapidly, suddenly, and frequentative adverb: often. See Cinque (1999) for discussion.

4. We could suppose that a scrambled phrase first undergoes A-movement to outer Spec, VoiceP, after which the scrambled element sits closer to the phase edge than the subject. When Asp/Foc head attracts an element, the scrambled element counts as a first attractee because it is the closest. Then transfer to the phonological component takes place, which is followed by covert wh/focus movement. We will leave this possibility for future research.

5. We expect that a similar contrast can be seen in the case of long-distance scrambling; as (ia) shows, a wh-phrase can be scrambled over a focus phrase to the main clause, where it takes scope, which is expected. The grammaticality of (ia) can be explained on a par with (17) and (19b); at the derivational point of the embedded vP phase, the wh-phrase can be scrambled over the focus phrase without violating DFRM, because the latter has not satisfied the Foc Criterion and does not count as an intervener.

(i) a. 「Dono-hon-o, Taroo-ga [Hanako-sika, ti yoma-nai to] omotteiru no?」
which-book-ACC -NOM -SIKA read-NEG C] think Q
‘Which book did Taro think that only Hanako reads?’

b. 「Nani-mo, Taroo-wa [Hanako-ga dare-ni ti watasita ka] siritagattei-nai.」
nothing -TOP -NOM who-DAT gave Q want-to-know-NEG
‘Taro doesn’t want to know who Hanako gave nothing.’

c. 「Hanako-sika, Taroo-ga [ti donohon-o yonda ka] siritagattei-nai,」
-SIKA -NOM which-book-ACC read Q want-to-know-NEG
‘Taro doesn’t want to know which book only Hanako read.’

The unexpected case is (ib,c), where a focus phrase can be scrambled over a wh-phrase which has satisfied the Wh Criterion in the embedded CP. Under the algorithm developed here, the
focus phrase cannot move from Spec, FocP in the embedded CP to the main clause, because this movement crosses the wh-phrase which has satisfied the Wh Criterion in Spec, ForceP, hence it violates DFRM.

Yuji Takano (personal communication) suggests the possibility that (1b) and (1c) are grammatical because in these examples the NCI/NPI may receive an interpretation where they are base-generated in the main clause and associated with the main verb; that is, we can interpret \textit{nani-mo} as \textit{nani-ni tuite mo} ‘about nothing’ and \textit{Hanako-sika} as \textit{Hanako-ni tuite sika} ‘only about Hanako’, yielding the interpretation given in (iii).

(iii) a. ‘About Hanako, Taroo doesn’t want to know who she gave nothing.’

b. ‘Only about Hanako, Taroo doesn’t want to know which book she read.’

Notice that \textit{nani-mo} and \textit{Hanako-sika} here are ‘aboutness’ phrases which are linked with the main verb \textit{want-to-know}, not with the embedded clause. These facts are analogous to the facts shown by Gallego (2005, 2007, 2010) as evidence against sub-extraction from the phrase which has satisfied a criterion (Rizzi (2004)).

6. Sano (2000) further argues that CP with [+CO] matches against the main CP to which it is adjoined, so that we can determine whether the concessive interpretation of the adjunct clause is appropriate or not.

7. A wh-phrase cannot occur in a concessive clause introduced by \textit{keredomo} ‘although’.

(i) *\textit{Dare-ga tazunetekita keredomo}, kimi-wa awa-na-katta no?

who-NOM visited although you-TOP see-NEG-PAST Q

‘(Lit.)Although who visited you, you didn’t see?’ (Takubo (1987: 44))

In contrast, Kazuma Fujimaki (personal communication) points out that a concessive clause introduced by \textit{noni} ‘although’ and a conditional clause can contain a wh-phrase.
(ii) *[Dare-ga tazunetekita noni], kimi-wa awa-na-katta no?
who-NOM visited although you-TOP see-NEG-PAST Q

‘(Lit.) Although who visited you, you didn’t see?’  
(Takubo (1987: 44))

(iii) Nani-o agere-ha, Hanako-wa yorokobu no?
what-ACC give-if -TOP be-glad Q

‘(Lit.) If we give what, Hanako will be glad?’

This might be related to the typology of adverbial clauses proposed by Minami (1974, 1993), but we leave this discussion for future research.

8. The scrambled counterpart of (29) and (31c) is degraded as shown in (i) and (ii).

(i) ??Keisatu-wa gakubutyo-ni [Sano kyoojyu-ga kakuseizai-koso
police-TOP dean-DAT professor-NOM stimulant drugs-FOC
dare-ni tewatasita noni] mayaku-o tewatasa-na-katta no ka tazuneta.
who-DAT gave although narcotics-ACC give-NEG-PAST C Q asked
‘The police asked the dean who Professor Sano gave stimulant drugs to, but they
didn’t ask who Professor Sano gave narcotics to.’

(ii) ?? [Menkyo-sae dare-ga motteire ba], Jiroo-wa kuruma-o kasitekureru no?
license-SAE who-NOM have if -TOP car-ACC let.use Q

‘(Lit.) If who has the drivers license, Jiroo will let him use his car?’

This is unexpected in the theory proposed here. Let us take the derivation of (i) as an example.

(iii) \[
\begin{array}{cccc}
\text{[FocP wh]} & \text{[FocP DP-koso]} & \text{[AspP t]} & \text{[FocP [VP t l] Foc] Asp] Foc} \\
5 & 3 & 2 & 1
\end{array}
\]

At the derivational step of the concessive CP, the wh-movement (movement 3) precedes the focus movement (movement 4) which satisfies the Foc Criterion because both of them are covert movement. Thus, none of the derivation steps should violate DFRM, yielding the grammatical sentence: the wrong prediction. We leave this matter for future research.
References


Covert Wh/Focus Movement Obeys Derivational Relativized Minimality in Japanese
Masako Maeda

Heavy NP Shift,” JELS 28.


