

# The Left Periphery and Focus-*Wh* Interaction

Yuko YANAGIDA

A majority of recent literature suggests that *wh-in-situ* are sensitive to the syntactic constraints such as Subjacency and the ECP, which render empirical motivation for the existence of covert *wh*-movement (cf. Nishigauchi 1986, 1990, Watanabe 1992). In this paper it is shown that focusing crucially affects the presence or the absence of the existing syntactic constraints on *wh-in-situ*.

Furthermore, the ECP fails to provide a comprehensive account for adverbial *wh*-words, suggesting that the ECP must be eliminated entirely from the grammar of Japanese. I argue that various constraints observed in *wh*-questions are reducible to the scopal restrictions between a focused phrase and a *wh*-word, which is accounted for by the Defective Intervention Constraints (Chomsky 2000:123). Within the multiple CP hypothesis as advanced by Rizzi (1997), I argue that Japanese possesses a configurational TOPIC-FOCUS system within CP.

The fact that FOCUS is structurally represented within CP enables us to provide a principled account for otherwise complex scope interaction between focused elements and *wh*-words.

## 1. Background

### 1.1 Islands

It is well known that *wh-in-situ* do not induce the CED effects, as exemplified in (1a-b).

- (1) a. Tanaka-san-wa [Hanako-ga nani-o kowasita kara] okotteiru-no?  
Tanaka-Mr-TOP Hanako-NOM what-ACC broke because upset-Q For  
which x, is Mr. Tanaka upset because Hanako broke x?
- b. Tanaka-san-wa [nani-o kowasita hito-o] sagasiteiru-no?  
Tanaka-Mr-TOP what-ACC broke person-ACC look for-Q  
For which x, is Mr. Tanaka looking for a person who broke x?

While the CED effects are completely absent, *wh-in-situ* seem to exhibit the *wh-island* effect:

- (2) Tanaka-kun-wa [dare-ga nani-o tabeta-ka] oboeteiru-no?  
 Tanaka-TOP who-NOM what-ACC ate-Q remember-Q  
 a. 'Does John remember who ate what?'  
 b. \*For which x, does John remember [for which y, x ate y]?  
 c. \*For which y, does John remember [for which x, x ate y]?

When sentence (2) is given out of the blue, it is grammatical as a yes-no question, but not with the reading in which the two *wh*-words have distinct scope. Two representative interpretive mechanisms for *wh-in-situ* recently proposed in the literature are given in (3a-b).

- (3) a.  $Q_i$  [... $wh_i$  ...]  
 b.  $Q_i$  [... $t_i$   $wh$ ...]

In (3a), the expletive question operator (henceforth  $Q$ ) originates in the domain of CP and binds the *wh-in-situ* without recourse to Move  $\alpha$ . This interpretive approach for *wh-in-situ* originates back to Baker (1970) and is later developed by Nishigauchi (1986) and Pesetsky (1987) within the framework of unselective quantification, as outlined in Heim (1982). (3b), on the other hand, involves Move  $\alpha$ . The movement approach is advocated by Watanabe (1991, 1992), who claims that in Japanese a phonologically empty *wh*-operator originates in *wh-in-situ* and undergoes syntactic movement to Spec/CP. Both Nishigauchi and Watanabe assume the existence of covert movement to account for the island effects. Nishigauchi suggests that covert LF movement is subject to Subjacency, and that the acceptability of a *wh*-phrase inside the CED contexts is attributable to the possibility of large-scale LF pied piping in Japanese, whereby the entire island moves into an operator position. The CED effects are absent in cases where the option of pied-piping is available.<sup>1</sup> Watanabe, on the other hand, claims that Japanese possesses S-structure movement of an invisible *wh*-operator. The

<sup>1</sup> According to Nishigauchi, a *wh*-word inside an island does not move outside of the island, but instead moves to the specifier position of some projection inside the island. Once the *wh*-word moves to this position, its [+wh] feature percolates up to the highest node in the island. As a result of this process, the entire island phrase is identified as [+wh] and moves to the specifier position of the matrix CP.

absence of effects of the adjunct and complex NP conditions is attributable to the view that Japanese has an option of having a null operator base-generated outside the island clause, as shown in (4).

- (4) [... [Q<sub>i</sub> [island...nani<sub>i</sub>...]] ...]

Q originates at the edge of the island clause and movement of this operator to the matrix CP does not violate Subjacency. Some complications, however, arise in the scope interpretation of *wh-in-situ* inside a *wh*-island.

Nishigauchi (1986, 1990) observes that the two *wh*-words can have different scope if the second *wh*-word is scrambled over the subject and pronounced with heavy stress, as indicated in (5) by capitals.

- (5) Tanaka-kun-wa [NANI-O<sub>i</sub> dare-ga t<sub>i</sub> tabeta-ka] oboeteiru-no?

Tanaka-TOP what-ACC who-NOM ate-Q remember-Q

'What did Tanaka remember who ate?'

According to Nishigauchi, (5) is acceptable with the reading in which the scrambled *wh*-word takes matrix scope. The wide scope reading is more readily available when the bare *wh*-word is replaced by *dono* 'which'. Sentence (6) is taken from Saito (1994), who observes that the scrambled *wh*-word can have matrix scope, while the *wh-in-situ* must have embedded scope.

- (6) Kimi-wa [dono hon-o dare-ga toshokan-kara karidasita-ka] siri-tai-no?

you-TOP which book-ACC wh-NOM library-from checked-out-Q  
know-want-Q

'Which book do you want to know who checked out from the library?'

It has been noted in the literature that sentences like (2) have additional readings in which all *wh*-words have matrix scope. The ambiguity can be resolved by intonational prominence, as indicated in (7a-b).

- (7) a. Tanaka-kun-wa [DARE-DA NANI-O tabeta-ka] oboeteiru-no?

Tanaka-TOP who-NOM what-ACC ate-Q remember-Q

For which x and y, does Mr. Tanaka remember whether x ate y?

- b. Tanaka-kun-wa [dare-ga nani-o tabeta-ka] OBOETEIRU-no?

Tanaka-TOP who-NOM what-ACC ate-Q remember-Q

'Does Mr. Tanaka remember who ate what?'

When the stress is placed on the *wh*-words, the sentence can have a matrix reading and the embedded *ka* is interpreted as the complementizer 'whether'.

When the stress is placed on the predicate, it is unambiguously interpreted as a yes-no question, in which case the *wh*-words have embedded scope. Given that intonational prominence is the phonological representation of focus, examples (5) and (7) show that focusing on elements crucially affects the scope interpretation of *wh*-words.

### 1.2 Linear Crossing Constraint (LCC)

Another interesting scope problem was originally observed by Saito (1987, 1994), who indicates that the configuration in which the adjunct *naze* 'why' precedes the argument *wh*-word is ill formed in Japanese, as exemplified in (8a-b).

- (8) a. \*Kimi-wa naze nani-o katta-no?  
           you-TOP why what-ACC bought-Q  
           'Why did you buy what?'  
       b. Kimi-wa nani-o naze katta-no?  
           you-TOP what-ACC why bought-Q  
           'Why did you buy what?'

In (8a), *naze* 'why' precedes *nani-o* 'what', while in (8b), *naze* follows *nani-o*. Saito (1987) originally argues that contrast in (8a-b) is accounted for by a linear crossing constraint, which states that in multiple *wh*-questions, one that linearly follows others is coindexed with Q, and that two lines formed by A' dependencies must not cross at S-structure. In (8a), *nani-o* is coindexed with Q to satisfy a linear crossing constraint, but this results in an ECP violation. That is, *naze*, which is not coindexed with Q, is not properly governed by Q, following the Comp indexing mechanism, as proposed by Aoun, Hornstein and Sportiche (1981). In (8b), *naze* is coindexed with Q. Since *nani-o* is lexically governed, an ECP violation does not arise.

On similar grounds, Tanaka (1997) argues that the linear crossing constraint (LCC) applies at S-structure and that it accounts for the contrast given in (9a-b).

- (9) a. \*?Taroo-sika nani-o yoma-na-katta-no?  
           Taroo-only what-ACC read-not-past-Q  
           'What did only Taroo read?'  
       b. Nani-o<sub>i</sub> Taroo-sika t<sub>i</sub> yoma-na-katta-no?

what-ACC Taroo-only read-not-past-Q

'What did only Taroo read?'

Tanaka assumes with Watanabe (1992) that *wh-in-situ* involve a covert *wh*-movement, and argues that the negative polarity items marked by *sika* 'only' are treated on a par with *wh*-words in that they contain an invisible operator that moves to the Spec of NegP. In examples (9a-b), the *wh*-Q and *sika-nai* form two independent A' dependencies at S-structure. Example (9a) violates the LCC since the two lines cross, while (9b) does not violate the LCC.

The LCC, however, runs into a serious problem for *wh*-questions that contain an adverbial *wh*-word, or a focused *wh*-word, as illustrated in (10a-b).

- (10) a. John-wa naze itsu sore-o katta-no?

John-TOP why when it-ACC bought-Q

'Why did John buy it when?'

- b. John-wa naze ittai nani-o katta-no?

John-TOP why ITTAI what-ACC bought-Q

'What is it that John bought why?'

In (10a), *naze* 'why' precedes *itsu* 'when'. Following Saito's analysis, this structural configuration would result in an ECP violation. But (10a) is perfectly grammatical. Likewise, (10b), in which *naze* precedes the *wh*-word associated with the focus marker *ittai*, is acceptable. Similarly, Tanaka's LCC analysis does not work for adverbial *wh*-words and focused *wh*-words.

- (11) a. John-sika naze ko-na-katta-no?

John-only why come-not-past-Q

'Why did only John come?'

- b. John-sika ittai nani-o kawa-na-katta-no?

John-only ITTAI what-ACC buy-not-past-Q

'What is it that only John bought?'

(11a-b) are clearly in violation of the LCC, but they are perfectly grammatical.

Furthermore, unlike clause internal scrambling, long *wh*-scrambling does not remedy the LCC violation:

- (12) a. \*Taroo-sika [Hanako-ga dare-ni atta to] omottei-nai-no?

Taroo-only Hanako-NOM who-ACC met that think-not-Q

'Who does only Taroo think that Hanako met?'

- b. \*Dare-ni<sub>i</sub> Taroo-sika [Hanako-ga t<sub>j</sub> atta to] omottei-nai-no?  
 who-DAT Taroo-only Hanako-NOM met that think-not-Q  
 'Who does only Taroo think that Hanako met?'

Given that the LCC applies at S-structure, example (12b) does not violate the LCC, and yet (12b) is just as bad as (12a). The same observation holds of *naze*, as shown in (13a-b).

- (13) a. \*Taroo-wa naze [Hanako-ga dare-ni atta to] omotteiru-no?  
 Taroo-TOP why Hanako-NOM who-DAT met that think-Q  
 'Why does Taroo think that Hanako met whom?'  
 b. \*Dare-ni<sub>i</sub> Taroo-wa naze [Hanako-ga t<sub>j</sub> atta to] omotteiru-no?  
 who-DAT Taroo-TOP why Hanako-NOM met that think-Q  
 'Why does Taroo think that Hanako met whom?'

In (13a), *dare-ni* 'to whom' linearly follows *naze* and thus must be coindexed with the Q at S-structure in order to satisfy the LCC. The LF movement of *naze* yields an ECP violation, and thus the ungrammaticality of (13a) is expected. (13b), however, does not violate the ECP, but the sentence is just as bad as an ECP violation in (13a). All the complex scope problems illustrated in this section involve the interaction between *wh*-words and focused expressions and the ECP simply fails to account for these problems. A question then arises as to what is responsible for the presence or the absence of the syntactic constraints under consideration. Given that focus plays a significant role in determining the grammaticality of the sentence, the next section will discuss the syntactic properties of focused phrases in Japanese.

## 2. Split CP Structure

### 2.1 Focus

In SOV languages, it is well documented that in unmarked sentences the rightmost constituent receives a default focus within VP. Following Selkerk (1984), Diesing (1988) indicates that focus is the feature that appears on an accented word and that it is projected upward to the entire VP. Thus, consider (14a-b).

- (14) a. Kimi-wa kinoo nani-o sita-no?  
 you-TOP yesterday what-ACC did-Q

'What did you do yesterday?'

b. Toshokan-de hon-o yonda.

library-LOC book-ACC read

'(I) read a book in the library.'

In the unmarked answer for the question given in (14a), the default focus is placed on the object NP and focus is projected up to the entire VP. The whole VP conveys new information. Sentence (15), where the focus is placed on the locative PP, is a marked answer for (14a).

(15) Toshokan-de hon-o yonda.

library-LOC book-ACC read

'(I) read a book in the library.'

A preferred reading for (15) is a narrow focus reading in that the focus may not project and only the locative PP itself receives a focus reading. In a narrow focus reading, focusing divides sentences into two parts; focus and presupposition, as roughly illustrated in (16a-b).

(16) a. Focus: library

b. Presupposition: I read a book in x.

When an element is morphologically marked by the focus particle, the narrow focus reading is obligatory.

(17) Boku-wa hon-wa yonda.

I-TOP book-FOC read

'I read a book.'

(17) cannot be an appropriate answer for (14a) since (17) has a presuppositional reading. The subject marked by the particle *wa* is interpreted as a topic, while the object marked by *wa* receives a contrastive focus reading. Assuming with Rizzi (1997) that CP is split into several independently motivated subcategories, I propose that both non-contrastive and contrastive *wa*-phrases originate in the domain of CP. They can, therefore, cooccur with the argument NP, as illustrated in (18).

(18) Boku-wa hon-wa shousetsu-o yoku yomu.

I-TOP book-TOP/FOC novel-ACC often read

'As for books, I often read novels.'

The second *wa*-phrase can be read as either the non-contrastive topic or

contrastive topic, bearing a part-whole relation with the object NP.

Within the multiple CP hypothesis, Rizzi proposes that a sentential type operator resides in what he calls FORCE, which specifies "clause-type," indicating whether a sentence is a question, a declarative, an exclamative, an imperative, or an adverbial of some kind. It is a functional category in the highest layer within CP. TOPIC and FOCUS reside in the lower layers, each of which heads its own projection. Following traditional observations with respect to the agreement between C and INFL, Rizzi assumes a FINITE-category, responsible for the co-occurrence of *that* and the tensed verb, of *for* and an infinitive in English. The C-system is then represented as in (19).

(19) Force ... (Topic) ... Focus ... (Topic) ... Finite ... IP ...

According to Rizzi, FORCE is an obligatory category in CP, but TOPIC and FOCUS are optional in that not all clauses contain TOPIC or FOCUS. The main purpose of the following discussion is to show that the C-system can be taken to reflect structural properties that bear on Japanese. I will assume that some morphologically marked focused phrases including the contrastive *wa* and *sae* 'even' are base-generated in the focus projection within CP. These particles are sensitive to "clause-type," namely, non-interrogative focused phrases do not appear in irrealis clauses such as conditionals, questions, and obligations, as shown in (20a-c).

- (20) a. \*Taroo-wa wain-wa/sae nomu toki uresi-soo-da.  
           Taroo-TOP wine-\*TOP/\*FOC drink when happy-look  
           'When Taroo drinks wine, he looks happy.'
- b. Dare-ga wain-wa/sae katta-no?  
           who-NOM wine-TOP/\*FOC bought-Q  
           'Who bought wine?'
- c. Gakusei-wa Nikkei sinbun-wa/sae yomu-beki-da.  
           student-TOP Nikkei newspaper-TOP/\*FOC read-should  
           'Students should read the Nikkei newspaper.'

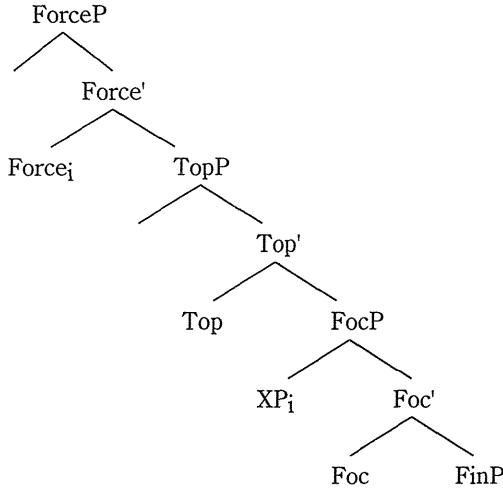
Although the non-contrastive topic reading of the second *wa*-phrase is possible in (20b-c), the focus reading is not available in any of these contexts. The distributional constraints illustrated in (20a-c) may support the view that a focused phrase must agree with a sentential operator in FORCE when it appears



directly in FocP. This relation is expressed at LF, as in (21).<sup>2</sup>

(21) Focus introduces a variable bound by the sentential operator [+Ass]. The non-interrogative focused elements are bound by the assertive mood, which is incompatible with irrealis operators. The multiple CP structure in Japanese is now represented in (22).

(22)



## 2.2 *Naze*

It has been widely recognized in the literature that *naze* 'why' in Japanese is subject to strong locality conditions.

- (23) \*Taroo-wa [Hanako-ga naze kabin-o kowasita kara] okotteiru-no?  
 Taroo-TOP Hanako-NOM why vase-ACC broke because angry-Q  
 '(Lit.) Taroo is angry because Hanako broke the vase why?'

The ungrammaticality of (23) is accounted for by the ECP; the trace in the adverbial clause is not properly governed. Following Nishigauchi (1986, 1990), while the argument *wh*-word is treated as an indefinite NP whose interpretation is

<sup>2</sup> Krifka (1995) claims that a focused constituent is bound by the illocutionary operator: ASS (ertion). ASS is located in the position of the complementizer.

given by unselective binding, the adverbial *wh*-word *naze* is treated as a pure quantificational operator and moves directly to Spec/CP. Consequently, it patterns with English in displaying Subjacency and the ECP effect.

The idea that *naze* is a quantificational operator that resists unselective binding is primarily based on the observation that argument *wh*-words, but not adverbial *wh*-words, behave as universal quantifiers when c-commanded by the universal determiner *mo*. Consider (24a-b).

- (24) a. Taroo-wa [Hanako-ga nani-o katte-mo] okora-nai.  
 Taroo-TOP Hanako-NOM what-ACC buy-MO upset-not  
 'Taroo does not get upset no matter what Hanako buys.'  
 b. \*Taroo-wa [Hanako-ga naze sore-o katte-mo] okora-nai.  
 Taroo-TOP Hanako-NOM why it-ACC buy-MO upset-not  
 'Taroo does not get upset for no matter what reason Hanako buys it.'

In (24a), *nani* 'what' receives a universal reading, while in (24b), the universal reading of *naze* 'why' is impossible.

The ECP approach for (23), however, fails to provide a comprehensive account for the syntactic constraints of adverbial *wh-in-situ*. The adverbial *wh*-word *itsu* 'when' behaves differently from *naze* 'why' in that it does not display the ECP effect.

- (25) Taroo-wa [Hanako-ga itsu ki-tara] yorokobu-no?  
 Taroo-TOP Hanako-NOM when come-if happy-Q  
 'Taroo is happy if Hanako comes when?'

The trace of *itsu* is not properly governed and thus if moved, it would lead to an ECP violation. (25) is, however, completely grammatical. Since *itsu* can appear inside the adverbial clause, it is predicted that it can also have a universal reading within the *mo*-clause. This is attested to by (26).

- (26) John-wa Mary-ga itsu kite-mo yorokobu.  
 John-TOP Mary-NOM when come-MO happy  
 'John is happy no matter when Mary visits him.'

Given the multiple CP hypothesis, I propose that *naze* is inherently focused and treated in the same way as focused phrases in that it is base-generated in Spec/FocP. The unavailability of (23) is then accounted for straightforwardly without appeal to the ECP. The adverbial particles *tara* 'if' and *mo* that head

ForceP do not select a Focus Projection. (Recall that Focus Projection is optional.) Thus, not only *naze* but also morphologically marked focus phrases do not appear in the adverbial clause:

- (27) \*Taroo-wa [Hanako-ga kabin-wa/sae kowasita kara] okotteiru-no?  
 Taroo-TOP Hanako-nom vase-FOC/even broke because angry-Q  
 'Taroo is angry because Hanako broke (even) THE VASE?'

The fact that *itsu* 'when' can appear within the adverbial clause leads us to the view that *itsu* is adjoined to the projection lower than CP.

### 3. Phase-Based Analysis

#### 3.1 Covert Movement

Given that Japanese possesses a configurational TOPIC and FOCUS structure, this section is an attempt to provide a principled account for syntactic constraints on *wh-in-situ*. The basic syntactic framework I will be assuming is that of the phase-based minimalist approach recently developed by Chomsky (2001a, b).

Two major components that differ crucially from the earlier versions of Chomsky's minimalist approach are as follows. First, Spell-out is taken to apply cyclically at the strong phase level, which is identified as vP (light verb phrase) and CP. The cyclic Spell-out system lends itself to the conclusion that three components: narrow syntax (NS), LF and PF, proceed cyclically in parallel.

Phase Impenetrability Condition (PIC) reduces the search domain for operations:

#### (28) The Phase Impenetrability Condition

In phase  $\alpha$  with head H, the domain of H is not accessible to operations outside  $\alpha$ , only H and its edge are accessible to such operations. (Chomsky (2001a:13))

Due to PIC, the phonological components do not look into the earlier stages. For illustrative purposes, consider (29).

- (29) [<sub>CP</sub> ... [<sub>vP</sub> [<sub>v</sub> [<sub>vP</sub> ...]]]]

VP is spelled-out at the level of vP. The status of the edge of vP: and v is determined at the next strong phase CP. This means that the edge of vP is accessible to operations outside vP and hence movement must uniformly proceed through the edge of the phase. Scope of *wh*-phrases, for example, has long

distance property. Assuming that the subject is generated in Spec/vP, the PIC forces the *wh*-phrase to move though the outer edge of vP successive cyclically. Movement is subject to the Defective Intervention Constraints (DIC), which is assumed to be part of the definition of Move.

- (30) Defective Intervention Constraints (Chomsky (2000:123))

$\langle \langle \gamma$

(\*AGREE ( ,  $\gamma$ ), is a probe and is a matching goal, and is inactive due to a prior AGREE with some other probe)

In Chomsky (2000), AGREE is taken as a probe and goal relation defined in terms of 'closest c-command'. That is, a functional head seeks an element that matches its feature. Matching must satisfy the locality condition defined in terms of 'closest c-command.' (31-32) are taken from Chomsky (2000).

- (31) P matches G iff G is in the domain of D(P) of P and satisfies locality conditions defined in terms of 'closest c-command'.

- (32) Closest C-command.

D(P) is the c-command domain of P, and a matching feature G is closest to P if there is no G' in D(P) matching P s.t. G is in D(G').

Under the multiple CP hypothesis, I propose that *wh*-words in Japanese move either overtly or covertly to check off the uninterpretable feature of the probe FORCE.

Let us first consider cases where the *wh*-island effect is absent, as illustrated in (33a-b).

- (33) a. Tanaka-kun-wa [nani-o<sub>i</sub> dare-ga t<sub>j</sub> tabeta-ka] oboeteiru-no?  
 Tanaka-TOP what-ACC who-NOM ate-Q remember-Q  
 'What did Tanaka remember who ate?'  
 b. Kimi-wa [dono hon-o<sub>i</sub> dare-ga toshokan-kara t<sub>j</sub> karidasita-ka]  
 you-TOP which book-ACC wh-NOM library-from checked-out-Q  
 siri-tai-no?  
 know-want-Q

'Which book do you want to know who checked out from the library?'

Nishigauchi (1986, 1990) and Saito (1994) independently observe that while *wh-in-situ* are subject to the *wh*-island condition, the scrambled object can be island free. If we take the view that a sentential operator resides in FORCE, it

'What did only Taroo read?'

Under the phase-based analysis, the notion of equidistance is dispensable. In (35a) the two *wh*-words appear in the different phase; *naze* 'why' in the C-phase, and *nani-o* 'what' in the v-phase, and hence the former is closest-c-commanded by FORCE. It follows that *naze* serves as an intervening element for the AGREE relation between the probe FORCE[Q] and the goal *wh*-word for the purpose of the DIC. Since the AGREE relation is blocked by the inactive goal feature, (35a) is excluded by the DIC. Now since *naze* is closer to ForceP than *nani-o*, there is a possibility that *naze* moves to ForceP to check off the uninterpretable feature of the goal FORCE[Q]. The ill-formed structure of (35a) leads us to speculate that *naze* does not move to ForceP. There are both conceptual and empirical reasons why *naze* does not move to ForceP. *Naze* in FocP does not bear a AGREE relation with the probe FORCE [Q] feature because of the feature mismatch. (Recall that focus that appears in FocP introduces a variable bound by the sentential operator [+Ass] (see (21)). The view that *naze* does not move is empirically attested to by (36-37).

- (36) a. Taroo-wa ittai<sub>j</sub> Hanako-ni nani-o<sub>j</sub> ageta-no?  
 Taroo-TOP ITTAI Hanako-DAT what-ACC gave-Q  
 'What is it that Taroo gave to Hanako?'  
 b. Nani-o<sub>j</sub> Taroo-wa ittai<sub>j</sub> Hanako-ni t<sub>j</sub> ageta-no?  
 what-ACC Taroo-TOP ITTAI Hanako-DAT gave-Q  
 'What is it that Taroo gave to Hanako?'  
 (37) a. Taroo-wa ittai<sub>j</sub> naze<sub>j</sub> Hanako-ni atta-no?  
 Taroo-TOP ITTAI why Hanako-DAT me-Q  
 'Why is it that Taroo met Hanako?'  
 b. \*Naze<sub>j</sub> Taroo-wa ittai<sub>j</sub> t<sub>j</sub> Hanako-ni atta-no?  
 why Taroo-TOP ITTAI Hanako-DAT met-Q  
 'Why is it that Taroo met Hanako?'

The word *ittai* is an adverbial focus operator used only in questions, and *wh*-words within the scope of *ittai* are obligatorily focused. In (36a) the *wh*-word appears within the scope of *ittai* and receives a focus reading. (36b) shows that although the *wh*-word is scrambled out, it can still be bound by *ittai*. Similarly, *naze* in (37a) appears within the scope of *ittai*. *Naze*, however, differs from the argument *wh*-word in that it cannot precede *ittai*, as shown in (37b). The

ungrammaticality of (37b) shows that *naze* does not undergo movement.<sup>3</sup> It follows that the derivations in (35a-b) crash, since no element moves to FORCE [Q] and the uninterpretable [Q] feature is not checked off. Now, recall that *wh*-questions that contain *itsu* 'when' are exempt from both the LCC and the ECP. (10a) is represented as in (38).

- (38) [<sub>ForceP</sub> [<sub>TopP</sub> John-wa [<sub>FocP</sub> naze [itsu sore-o katta]]] no]  
           John-TOP               why when it-ACC bought Q  
           'Why did John buy it when?'

Given that *naze* does not move to ForceP, it must be *itsu* that moves to ForceP to check off the probe feature FORCE[Q]. Note that *itsu* behaves like the argument *wh*-word in that it can precede the focus operator *ittai*, suggesting that *itsu* moves from inside TP, leaving a trace behind, as illustrated in (39a-b).

- (39) a. Taroo-wa ittai<sub>i</sub> itsu<sub>j</sub> Hanako-ni atta-no?  
           Taroo-TOP ITTAI when Hanako-DAT me-Q  
           'When is it that Taroo met Hanako?'  
       b. Itsu<sub>j</sub> Taroo-wa ittai<sub>i</sub> t<sub>j</sub> Hanako-ni atta-no?  
           when Taroo-TOP ITTAI Hanako-DAT-met-Q  
           'When is it that Taroo met Hanako?'

The grammaticality of (38) shows that *naze* does not block the AGREE relation between the probe FORCE and *itsu*, suggesting that *naze* and *itsu* are equidistant from FORCE. I propose that *itsu* is base-adjoined to TP and is accessible to the operation at the C-phase.

### 3.2 Long Distance *Wh*-scrambling

Recall that long *wh*-scrambling does not remedy the LCC violation. (12b, 13b) are repeated in (40a-b).

- (40) a. \*Nani-o<sub>i</sub> Taroo-wa naze [Hanako-ga t<sub>j</sub> katta to] omotteiru-no?  
           what-ACC Taroo-TOP why Hanako-NOM bought that think-Q  
       b. \*Dare-ni<sub>i</sub> Taroo-sika [Hanako-ga t<sub>j</sub> atta to] omottei-nai-no?

<sup>3</sup> It has been widely recognized that adverbial *wh*-words do not form a chain by movement. Rizzi (1991:46) argues that *why* and *pourquoi* in English and French are base-generated in Comp and thus, leaving no clause-internal traces (see also Reinhart 1998).

who-DAT Taroo-only Hanako-NOM met that think-not-Q

Examples (40a-b) are straightforwardly ruled out by the DIC. To account for the difference between clause-internal *wh*-scrambling and long *wh*-scrambling it is crucial to assume with Takahashi (1993) that long *wh*-scrambling is an instance of *wh*-movement.<sup>4</sup> In other words, the probe FORCE enters an AGREE relation with the *wh*-word, which triggers movement of the *wh*-word. (40a-b) have the structure given in (41).

(41) \*<sub>[ForceP WH<sub>i</sub> [<sub>FocP</sub> XP [<sub>TP</sub>... [<sub>CP</sub>...t<sub>i</sub>...]...]]]</sub>

Movement to the matrix ForceP is ruled out by the DIC; the focused phrase in FocP blocks the AGREE relation between FORCE and the *wh*-word. A question then arises as to why clause-internal scrambling does not lead to a violation of the DIC. Note that if we assume with Saito (1992) and Fukui (1993) that clause-internal scrambling has no morphological drive, the DIC is, by definition, not applicable, and as a result, clause internal scrambling cannot be ruled out by this condition.<sup>5</sup>

### 3.3 Additional Wh-effects

In this final section, I will discuss the additional *wh*-effects as observed by Saito (1994). Examples of the additional *wh*-effect are illustrated in (42a-b).

- (42) a. \*John-wa [Mary-ga naze sono hon-o katta kara] okotteiru-no?  
 John-TOP Mary-NOM why that book-ACC bought because angry-Q  
 'John is angry because Mary bought that book why?'

<sup>4</sup> Takahashi (1993) proposes that a long *wh*-scrambling is an instance of *wh*-movement and is subject to the Superiority condition. Consider example (i).

(i) ??Nani-o<sub>i</sub> John-ga dare-ni [Mary-ga t<sub>i</sub> tabeta to] itta-no?

what-ACC John-nom who-DAT Mary-NOM ate that said-Q

'lit. What did John tell who that Mary ate?'

The Superiority Condition roughly states that when two *wh*-words take the same scope and one asymmetrically c-commands the other, the c-commanding *wh*-word must be the one in Spec/CP. In (i), *nani-o* c-commanded by *dare-ni* moves to Spec/CP. Thus, (i) is excluded in the same way as (ii) in English

(ii) a. ?\*Who<sub>j</sub> did you give what to t<sub>j</sub>?

b. What<sub>i</sub> did you give t<sub>j</sub> to who?

<sup>5</sup> Saito (1992) argues that long distance scrambling differs from clause-internal scrambling in that the former is taken as an A' movement, whereas the latter has some properties of both A and A' (cf. Takahashi 1993).



- b. ?John-wa [Mary-ga nani-o naze katta kara] okotteiru-no?  
 John-TOP Mary-NOM what-ACC why bought because angry-Q  
 'John is angry because Mary bought what why?'

Saito observes that when a *wh*-word is added to the sentence that otherwise violates the ECP, the grammaticality of the sentence significantly improves. According to Saito, (42b) is exempt from the ECP in a way that *naze* is adjoined to the preceding *wh*-word *nani-o* 'what' at LF, which enables the trace of *naze* to be antecedent-governed by the argument *wh*-word. When *naze* precedes *nani-o*, an ECP violation emerges, as exemplified by (43).

- (43) \*John-wa [Mary-ga naze nani-o katta kara] okotteiru-no?  
 John-TOP Mary-NOM why what-ACC bought because angry-Q  
 'John is angry because Mary bought what why?'

The adjunction of *naze* to the following *wh*-word yields the structure in which the trace is not properly governed, leading to an ECP violation. The same observation holds of sentence (44a-b).

- (44) a. \*Taroo-wa [Hanako-ga naze nani-o katte-mo] okora-nai.  
 Taroo-TOP Hanako-NOM why what-ACC buy-mo upset-not  
 'Taroo does not get upset for no matter what reason Hanako buys what.'  
 b. ?Taroo-wa [Hanako-ga nani-o naze katte-mo] okora-nai.  
 Taroo-TOP Hanako-NOM what-ACC why buy-MO upset-not  
 'Taroo does not get upset for no matter what reason Hanako buys what.'

While (44a) is completely unacceptable, (44b) is marginally acceptable with the reading in which both *nani-o* 'what' and *naze* 'why' have a universal reading. Without appeal to the ECP analysis, the above observation suggests that *naze* is not always treated as a quantificational operator that appears in FocP, but it can be interpreted inside TP as a non-quantificational variable, just like *itsu* 'when'. Now suppose that the absence of the adjunct condition is accounted for by the possibility of a large-scale LF pied-piping of the entire adverbial clause (cf. Nishigauchi 1986, 1990), a sentential operator FORCE of the adverbial clause need to be interpreted as [Q]. It is natural to assume that it can be interpreted as [Q] after the *wh*-word moves covertly to ForceP and checks off the

uninterpretable FORCE[Q]. (42b, 43) would be represented at LF in (45a-b) respectively.

- (45) a. ?...[<sub>ForceP</sub> nani-o<sub>i</sub> Q<sub>i</sub>, j ... [TP t<sub>i</sub> [<sub>TP</sub> naze<sub>j</sub> ...]]] ...  
 b. \*...[<sub>ForceP</sub> ... [TP naze [<sub>TP</sub> ... [<sub>vP</sub> ..nani-o ...]]]] ...

Given that *naze* is adjoined to TP in (45a), the scrambled *wh*-word *nani-o* and *naze* appear within the C-phase, and *nani-o* is able to move to Spec/ForceP. No violation of the DIC results. The non-quantifictional *naze*, the one adjoined to TP, is interpreted by binding. By contrast, in (45b) *naze* and *nani-o* appear in the different phase, the former in the C-phase and the latter in the v-phase. The covert movement of *nani-o* to ForceP is blocked by the DIC. *Naze*, on the other hand, does not move to ForceP since the focus feature of *naze* does not AGREE with FORCE[Q]. Consequently, the derivation of (45b) crashes because the adverbial clause containing the *wh*-elements is not identified as [Q] and no pied-piping to the matrix FORCE is possible. The empirical observations illustrated above have suggested that the matrix clause FORCE selects FocP, but the adverbial clause FORCE does not. *Naze* is base-adjoined to FocP in the matrix clause, while it may be base-adjoined to TP in case FocP is not selected. This duality of *naze* can be supported by the fact that *naze* is ambiguous between quantificational and non-quantificational interpretations. The non-quantificational interpretation of *naze* is possible inside the adverbial clause in (42b) and the *mo*-clause in (44b), whose head FORCE is interpreted as an operator [ $\pm Q$ ].

#### 4. Summary

In this paper, I have discussed the scope interaction between *wh*-words and focused phrases in Japanese. The idea that Japanese possesses a configurational TOPIC-FOCUS structure within CP enables us to provide a straightforward account for otherwise complex scope restrictions observed in *wh*-questions. Given that a focused phrase moves to Spec/FocP within CP, various syntactic constraints on *wh*-questions are simply subsumed under the DIC; an AGREE relation between FORCE and a *wh*-word is blocked by the intervening FOCUS. Furthermore, the view that *naze* is treated exactly like focused phrases and appears directly in FocP enables us to dispense with the ECP entirely from the grammar of Japanese.

## References

- Baker, C.L. (1970) "Notes on the Description of English Questions: the Role of an Abstract Question Morpheme," *Foundations of Language* 6, 197-219.
- Chomsky, Noam (2000) "Minimalist Inquiries: Framework," in Roger Martin, D. Michaels, and Juan Uriagereka (eds.), *Step by Step*, 89-155, MIT Press, Cambridge, MA.
- Chomsky, Noam (2001a) "Derivation by Phase," in Michael Kenstowicz (ed.), *Ken Hale: A Life in Language*, 1-52, MIT Press, Cambridge, MA.
- Chomsky, Noam (2001b) "Beyond Explanatory Adequacy," *MIT Occasional Papers in Linguistics* 20, MIT.
- Diesing, Molly (1988) "Bare Plurals and the Stage/Individual Contrast," in M. Krifka (ed.), *Genericity in Natural Language: Proceedings of the 1988 Tübingen Conference*, Universitat Tübingen, pp.107-154.
- Fukui, Naoki (1993) "Parameters and Optionality," *Linguistic Inquiry* 24,399-420.
- Heim, Irene (1982) "The Semantics of Definite and Indefinite Noun Phrases," PhD dissertation, University of Massachusetts.
- Krifka, Manfred (1995) "Focus and the Interpretation of Generic Sentences," in Carlson Gregory and Pelletier Fancis Jeffry (eds.), *The Generic Book*, University of Chicago Press, Chicago.
- Nishigauchi, Taisuke (1986) "Quantification in Syntax," PhD dissertation, University of Massachusetts.
- Nishigauchi, Taisuke (1990) *Quantification in the Theory of Grammar*, Kluwer, Dordrecht.
- Pesetsky, David (1987) "*Wh-in-Situ*: Movement and Unselective Binding," in Reuland and ter Meulen (eds.), *The Representation of (In)definiteness*, 98-129, MIT press, Cambridge.
- Reinhart, Tanya (1998) "*Wh-in-Situ* in the Framework of the Minimalist Program," *Natural Language Semantics* 6, 29-56.
- Rizzi, Luigi (1991) "Residual Verb Second and the *Wh*-Criterion," *Technical Reports in Formal and Computational Linguistics* 2, Faculty of Letters, University of Geneva, Geneva.
- Rizzi, Luigi (1997) "The fine structure of the left periphery," in Liliane

- Haegeman (ed.), *Elements of Grammar*, 281-337, Kluwer, Dordrecht.
- Saito, Mamoru (1987) "An Extension of K.I. Harada's Wh-Q Binding Analysis," Paper Presented at the Fifth Annual Meeting of the English Linguistics Society of Japan.
- Saito, Mamoru (1992) "Long Distance Scrambling in Japanese," *The Journal of East Asian Linguistics* 1, 69-118.
- Saito, Mamoru (1994) "Additional-Wh effects and the Adjunction Site Theory," *Journal of East Asian Linguistics* 3, 195-240.
- Tanaka, Hidekazu (1997) "Invisible Movement in *Sika-Nai* and the Linear Crossing Constraint," *Journal of East Asian Linguistics* 6, 143-178.
- Takahashi, Daiko (1993) "Movement of Wh-Phrases in Japanese," *Natural Language and Linguistic Theory* 11, 655-678.
- Watanabe, Akira (1991) "Wh-in-Situ, Subjacency, and Chain Formation," *MIT Occasional Papers in Linguistics* 2, MIT, Cambridge.
- Watanabe, Akira (1992) "Subjacency and S-structure Movement of Wh-in-situ," *Journal of East Asian Linguistics* 1, 255-291.