

Final Draft in March, 2004

Revised version of this paper will appear in Lisa Cheng & Norbert Corver, (eds.) *Wh-Movement Moving on*. Cambridge, Mass.: MIT Press. [expected: spring 2006]

On the Structural Height of Reason *Wh*-Adverbials: Acquisition and Consequences

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Acknowledgement

This paper is a developed version of the paper presented at *Workshop on Wh-movement* held in 2002 at Utrecht/Leiden university. I am grateful to the participants of the workshop and the two reviewers for helpful comments. I am deeply thankful to David Pesetsky and Danny Fox for insightful discussions on the earlier versions of the paper. I am also indebted to Sylvain Bromberger, Rajesh Bhatt, Stephen Crain, Paul Hagstrom, James Huang, Sabine Iatridou, Shigeru Miyagawa, Norvin Richards, Luigi Rizzi, Mamoru Saito, William Snyder, Akira Watanabe and Ken Wexler for comments and suggestions. I thank Ressy Ai, Feng-Fan Hsieh, Sachiko Kato, Youngjoo Lee, Zhiqiang Li, Hideki Maki, Hooi-Ling Soh, and Shoichi Takahashi for grammaticality judgments and discussion. Of course, all errors in the paper are of my own.

1. Introduction

In this paper, I discuss the structural position of the reason *wh*-adverbial ‘why’ in three typical *wh-in-situ* languages (Korean (K), Japanese (J), and Mandarin Chinese (C)). I argue that ‘why’ in these languages is externally-merged in [Spec,CP] as a CP-modifier, and that this high base-position of ‘why’ plays a central role in determination of its unique syntax in *in-situ* languages. I argue for this proposal on the basis of a peculiar interaction between ‘why’ and scope-bearing elements in Korean and Japanese (Section 2; Ko 2003). I show that the proposal is further supported by child Korean acquisition data (Section 3). Specifically, I demonstrate that child Korean makes systematic distinctions between *way* ‘why’ and other *wh*-adjuncts such as *eti* ‘where’ in their placement, which are predicted by the present proposal. Furthermore, I explore the implications of the fine structure of CP for the syntax of ‘why’ in *in-situ* languages (Section 4). Investigating the *Anti-Superiority Effect* (Saito 1982, Watanabe 1992, Chung 1996), I argue that there are two distinct C-heads in *in-situ* languages for licensing *wh*-interrogatives. In particular, ‘why’ is licensed by the lower C (C_{INT}), whereas the other *wh*-phrases are licensed by the higher C (C_{FOC}) (cf. Rizzi 1999). I show that this approach, in conjunction with other independent properties of *in-situ* languages (the presence or absence of A'-scrambling, in particular), accounts for cross-linguistic variations between K/J and Chinese in multiple *wh*-questions. This paper is in line with a series of researches arguing that a reason *wh*-adverbial can be licensed in its base-position without undergoing movement (Rizzi 1990, 1999; Collins 1991; Lin 1992; Bromberger 1992; Hegarty 1992; Bošković 2000; McCloskey 2002; Ko 2003).

2. External-Merge Position of ‘Why’ in Korean and Japanese

This section discusses a puzzle concerning the interactions between ‘why’ and a Scope-Bearing Element (SBE) in Korean and Japanese and introduces the main proposal of this paper.¹

2.1 Puzzles: Non-uniform Behavior of ‘why’ in Korean and Japanese

Korean and Japanese are SOV scrambling languages. In most cases, elements in K/J may freely undergo scrambling, yielding various types of non-canonical word order.² Interestingly, however, there are some environments in which possible word orders are restricted. In particular, it is well-known that K/J imposes restrictions on relative word order between a *wh*-phrase and an SBE (Hoji 1985; Kim 1991; Beck and Kim 1997; Hagstrom 1998, among others).

As illustrated in (1) and (2), when a *wh*-phrase and an SBE co-occur in the sentence, the SBE cannot precede (and c-command) the *wh*-phrase in K/J. The SBEs inducing this effect include Negative Polarity Item (NPI) such as *amwuto/dareka* ‘anyone’, *-pakkey/-sika* ‘-only’, negation *anh/nai* ‘not’, and some non-polarity quantifiers such as *man* ‘only’ (K), *to/mo* ‘also’, *nwukwunka/dareka* ‘(non-specific) someone’, and *nwukwuna/daremo* ‘everyone’ (For the sake of space, I present only the examples with NPIs in this section, but see Ko (2003) for other K/J examples).

- (1) a. ***Amwuto** **mwues-ul** **ilk-ci-anh-ass-ni?**
 Anyone what-Acc read-CI-not-Past-Q
- b. **Mwues-ul₁** **amwuto** **t₁** **ilk-ci-anh-ass-ni?**
 What-Acc anyone read-CI-not-Past-Q
- ‘What did no one read?’ [K]
- (2) a. ***Hanako-sika** **nani-o** **yoma-nai no?**
 Hanako-only what-Acc read-not Q
- b. **Nani-o₁** **Hanako-sika** **t₁** **yoma-nai no?**
 What-Acc Hanako-only read-not Q
- ‘What will only Hanako read?’ [J]

A variety of approaches have been proposed to capture the paradigm in (1)-(2) (Hoji 1985; Takahashi 1990; Kim 1991; Sohn 1995; Beck and Kim 1997; Tanaka 1997; Hagstrom 1998; Pesetsky 2000; Lee and Tomioka 2000; Kim 2002; Kratzer and Shimoyama 2002). Although this paper can be made compatible with other approaches, I present an analysis slightly modified from Beck and Kim (1997). This permits a reasonably simple presentation of my arguments in a manner consistent with other current work in syntax. Following Chomsky (1995), I assume that a *wh*-phrase contains an uninterpretable *wh*-feature [uWH] to be checked off by [+Q] feature, and that [+Q] is hosted by a question morpheme Q in a head C. Adapting Beck and Kim (1997), I take the *Intervention Effect* in (3) as a constraint on *wh*-movement at LF.^{3,4}

(3) **Intervention Effect** (modified from Beck and Kim 1997)

At LF, a *wh*-phrase cannot move across an SBE to its checking (scope) position

- a. * [...] Q **SBE** WH ...]: (1)a,(2)a
- b. ✓ [...] Q WH_i **SBE** t_i ...]: (1)b,(2)b

As described in (3)a, ‘what’ in (1)a and (2)a cannot move across the NPI to its checking position at LF, and thereby the unlicensed ‘what’ renders the sentence ungrammatical. On the other hand, a scrambled ‘what’ in (1)b and (2)b can be licensed because the NPI does not block the LF-movement of the overtly scrambled ‘what’, as illustrated in (3)b.

What is interesting for the present discussion is the distribution of *way* ‘why’ in Korean and *naze* ‘why’ in Japanese. As shown in (4) and (5), in some contexts, ‘why’ may precede or follow an SBE, unlike the paradigm seen in (1) and (2) (Miyagawa 1997a, Cho 1998, Kuwabara 1998, Watanabe 2000).⁵

- (4) a. **Amwuto** **way** ku chayk-ul ilk-ci-**anh**-ass-ni?
 Anyone why that book-Acc read-CI-not-Past-Q
 ‘Why did no one read that book?’
- b. **Way** **amwuto** ku chayk-ul ilk-ci-**anh**-ass-ni? [K]
- (5) a. Taroo-**sika** **naze** sono hon-o yoma-**nakat**-ta no?
 Taroo-only why that book-Acc read-not-Past Q
 ‘Why did only Taroo read that book?’
- b. **Naze** Taroo-**sika** sono hon-o yoma-**nakat**-ta no? [J]

Given the contrast between *way/naze* and other *wh*-phrases shown above, one might think that *way/naze* is just exempt from the Intervention Effect (see Cho 1998, Kuwabara 1998, and Watanabe 2000 for this approach). This conjecture, however, is incorrect. *Way/naze* does show the Intervention Effect in other contexts. This point is illustrated in (6)-(9) (see also Miyagawa (1999) for Japanese).

As described in (6)a and (7)a, when *way/naze* is merged in an embedded declarative clause, it cannot be preceded by an NPI in the higher clause. The grammaticality of (6)b and (7)b, on the other hand, shows that *way/naze* may obtain a long distance reading if it is not preceded by an NPI.⁶ If *way/naze* were simply an exception to the Intervention Effect, we would expect (6)a and (7)a to be as grammatical as (6)b and (7)b, contrary to the fact. Hence, the claim that *way/naze* is just an exception to the Intervention Effect is untenable.

- (6) a. ***Amwuto** [John-i **way** saimha-yess-ta-ko] malha-ci-**anh**-ass-ni?
 Anyone John-Nom why resign-Past-Dec-C say-CI-not-Past-Q
 ‘What is the reason x such that (s.t.) no one said that John resigned for x?’ [K]
- b. Mary-nun [John-i **way** saimha-yess-ta-ko] malha-yess-**ni**?
 Mary-Top [John-Nom why resign-Past-Dec-C] say-Past-Q
 ‘What is the reason x s.t. Mary said that John resigned for x?’ [K]
- (7) a. ***Hanako-sika** [Taroo-ga **naze** kuru to] iwa-nakat-ta no?
 Hanako-only Taroo-Nom why come C say-not-Past Q
 ‘What is the reason x s.t. only Hanako said that Taroo will come for x?’ [J]

- b. Hanako-ga [Taroo-ga **naze** kuru to] itta **no?**
 Hanako-Nom Taroo-Nom why come C said Q
 ‘What is the reason x s.t. Hanako said that Taroo will come for x?’ [J]

The ungrammaticality of (8) and (9) provides further support for the observation that *way/naze* is subject to the Intervention Effect in certain contexts. As demonstrated in (8) and (9), *way/naze* cannot be preceded by an NPI even when they are clausemates.^{7,8}

- (8) *John-un [**amwuto** **way** ku chayk-lul ilk-ci-anh-ass-ta-**ko**] malha-yess-**ni?**
 John-Top [anyone why that book-Acc read-CI-not-Past-Dec-C] say-Past-Q
 ‘What is the reason x s.t. John said that no one read that book for x?’
 ‘What is the reason x s.t. John said that for x, no one read that book?’ [K]
- (9) *John-wa [**Mary-sika** **naze** sono hon-o yoma-na-katta-**to**] itta **no?**
 John-Top [Mary-only why that book-Acc read-not-Past- C] said Q
 ‘What is the reason x s.t. John said that only Mary read that book for x?’
 ‘What is the reason x s.t. John said that for x, only Mary who read that book?’ [J]

The paradigm discussed in this section indicates that what is crucial for the distribution of *way/naze* in K/J is the type of the clause that *way/naze* is merged into in the overt syntax. If *way/naze* is merged within an interrogative clause, as in (4) and (5) (local construal), it can be preceded by an NPI. In this respect, *way/naze* behaves differently from the other *wh*-phrases. On the other hand, when *way/naze* is merged within a declarative clause, as in (6)-(9) (non-local

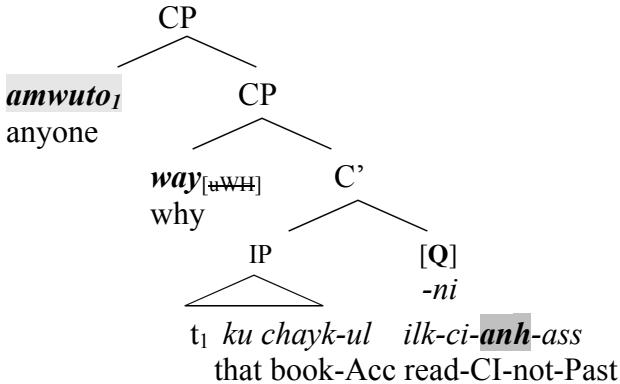
construal), it cannot be preceded by an NPI. In this aspect, *way/naze* behaves just like other *wh*-phrases. In the following, I show that this non-uniform behavior of *way/naze* in K/J can be naturally accounted for by assuming a particular External-Merge position of *way/naze*.

2.2 Proposal and Analysis

I argue that *way/naze* is always subject to the Intervention Effect and that the non-uniform behavior of *way/naze* discussed in the previous section stems from its External-Merge position. More specifically, I propose that ‘why’ in *in-situ* languages (including *way/naze*) is an adverb which is externally-merged (i.e. base-generated) in [Spec,CP] of the clause it modifies (i.e. it is a CP-modifier). Crucially, the CP that ‘why’ modifies may be interrogative or declarative. I call this proposal the *CP-Modifier Hypothesis* (CMH) (see Ko (2003) for cross-linguistics variations in the External-Merge position of reason *wh*-adverbials).⁹

Let us first consider the case where *way/naze* is merged into an interrogative clause, as in (4)-(5). For the presentation purpose, a Korean example is repeated here as (10), which represents the structure of (4)a. (The account for (4)a extends to Japanese (5)a.)

(10)



'Why did no one read that book?'

As described in (10), under the CMH, *way* is merged into [Spec,CP] of an interrogative clause.

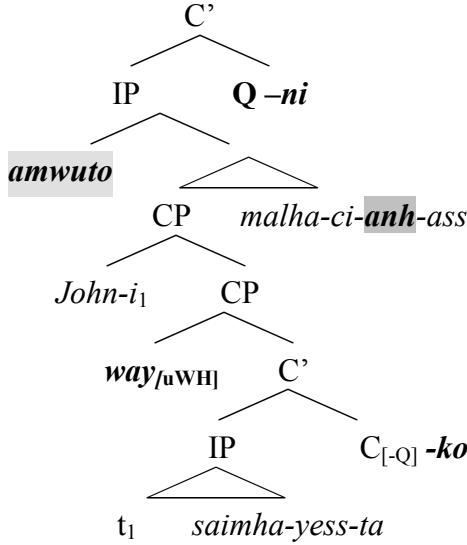
Notice that the uninterpretable *wh*-feature [uWH] of *way* in (10) is licensed in the overt syntax, since the interrogative clause has the licenser Q-morpheme for *way*. This implies that *way* in (10) does not undergo any movement at LF to be licensed. The NPI *amwuto* 'anyone' may undergo scrambling over *way* in (10) (Lee 1993 and Sohn 1995 for the independent evidence that NPIs may A'-scramble in K/J; see note 14 for discussions about subject scrambling).¹⁰ Crucially, however, this scrambling of the NPI does not induce the Intervention Effect, because *way* has already been licensed in the overt syntax. Hence, the grammaticality of (4)a is correctly expected.

Now turn to the case where *way/naze* is merged into an (embedded) declarative clause, as in (6)-(9). Korean examples are repeated here as (11)a and (11)b, which represent the structure of (6)a and (8), respectively. (The same account extends to Japanese (7)a and (9).)

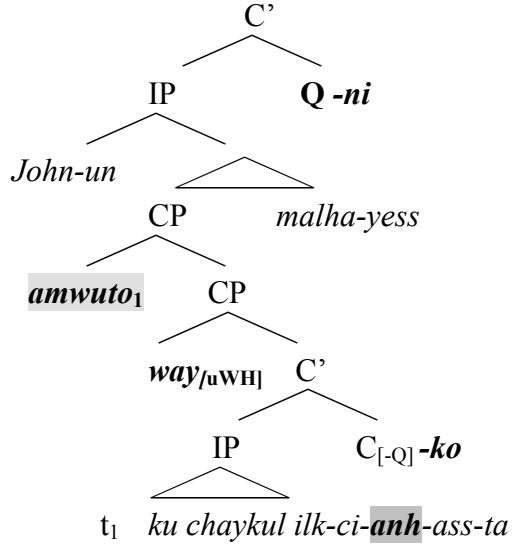
Under the CMH, *way* in (11a) is merged into [Spec,CP] of a declarative clause. Note, however, that *way* in (11a) cannot be licensed in its External-Merge position, in contrast to *way* in (10). Since the declarative clause does not contain a Q-morpheme, *way* in (11a) must undergo LF-movement to a higher clause to be licensed. The NPI preceding *way*, however, induces the

Intervention Effect, blocking the LF-movement of *way*. Hence, (11a) is ungrammatical. The same account extends to (11b). (In (11b), the NPI precedes *way* via scrambling, unlike the NPI in (11a). Both (11a) and (11b), however, are ruled out by the same reason: violation of the Intervention Effect constraint.¹¹)

(11) a. Tree of (6)a under the CMH



b. Tree of (8) under the CMH



To sum up, *way/naze* merged in an interrogative clause does not undergo any movement at LF, so it does not show the Intervention Effect, unlike other *wh*-phrases. *Way/Naze* merged in a declarative clause, on the other hand, must move at LF, so it shows the Intervention Effect, just like other *wh*-phrases. As pointed by Ko (2003), this asymmetry between K/J ‘why’ with local construal vs. non-local construal is comparable to the non-uniform behavior of *perchè* ‘why’ in Italian (Rizzi 1999) and *cén fáith* ‘what reason’ and *cad chuige* ‘why’ in Irish (McCloskey 2002).

In the next section, I discuss predictions of the CMH and provide further evidence in favor of the CMH from child Korean data.

3. The Position of ‘Why’ in Child Korean

Under the CMH, ‘why’ in Korean and Japanese occupies [Spec,CP] in the overt syntax. This implies that if an XP may precede ‘why’, it must either be able to undergo A'-movement over [Spec,CP], or it must be base-generated above [Spec,CP]. This is described in (12). In this section, I investigate the implications of (12) with respect to child Korean.^{12, 13}

(12) Word order in *why*-questions under the CMH view

- a. [CP why [IP XP YP V]]
- b. [CP XP_i [CP why [IP (t_i) YP V]]]

3.1. Prediction

Consider the following Korean sentences in (13).

- (13) a. **Way** **John-i** ku chayk-ul ilk-ess-ni?
 Why John-Nom that book-Acc read-Past-Q
 ‘Why did John read that book?’
- b. **John-i** **way** ku chayk-ul ilk-ess-ni?

Both sentences in (13) are grammatical and are freely uttered in adult Korean. Under the CMH, however, there is a crucial difference between (13)a and (13)b in terms of their derivational

history. Specifically, the CMH predicts that (13)a reflects the base order between *way* ‘why’ and the subject *John-i*, whereas (13)b reflects the derived order via scrambling of *John-i* over *way*, as described in (14).¹⁴

- (14) [CP John-i_i [CP **way** t_i ku chayk-ul ilk-ess-ni]]?
- Scrambling*

Given that adult Korean quite freely allows scrambling, the grammaticality of (13)b is expected. Suppose, however, that some Korean speakers do not allow scrambling. The CMH then predicts that (13)b will not be uttered by this group of Korean speakers. Of course, it is difficult to test this prediction with adult Korean due to the possibility of scrambling. Child Korean data, however, do provide such an opportunity.

It has been attested cross-linguistically that children rarely employ operations such as scrambling in the early stages of language acquisition (2;00-3;00) (Slobin 1966 for Russian; Barbier 2000, Schaeffer 2000 for Dutch; but see Otsu 1994 for perception tests with Japanese). This generalization extends to child Korean, as reported in Cho (1981) and Kim (1997).¹⁵ Given that Korean children utter only a few sentences with scrambling, the CMH makes the following prediction about child *way*-questions.

- (15) *Way* ‘why’ will generally precede the subject in child Korean, since the base order *way*<*subject* is preserved. (‘A<B’ indicates that A precedes B)

To evaluate this prediction, I examined the naturalistic production data of a Korean child JK, from age (2;00;06) to (2;11;29).¹⁶ The total data include 53 files, which were recorded every week by his mother. To compare *way*-questions with other *wh*-adjunct questions, I also examined *eti* ‘where’ questions in the same database. Since it was not clear from the literature whether child Korean allows topicalization in this early stage, the paper focuses on analyzing the sentences clearly involving scrambling rather than topicalization. (In this study, I define scrambling as an operation that moves an overtly Case-marked item from its canonical position. When the Case marker for the subject is dropped, it was not clear whether the subject has undergone topicalization, scrambling, or some other processes. Thus, I counted only the subjects clearly marked with the nominative Case marker).¹⁷

3.2 Result

Overall, the JK files contained 111 tokens of *way*-questions. Unfortunately, however, most of them did not represent the subject overtly (72.97%, 81/111), or did not mark the subject with a nominative Case (12.6%, 14/111). Given that Korean is a null subject language and that Case-dropping is common even in adult Korean, this is not a surprising result. Crucially, however, when the subject is overtly marked with a nominative Case marker, I do find a remarkably consistent pattern. This is summarized in (16).

(16) *Way*-questions with a nominative Case-marked subject in JK speech

| | Word Order | Tokens | % |
|---|---------------------------------------|---------------|------------|
| a | Way S_{NOM} (O) (Verb) | 12 | 75% |
| b | S_{NOM} Way (O) (Verb) | 4 | 25% |
| | Total | 16 | 100% |

As illustrated in (16), *way* in the JK speech precedes the nominative marked subject at a very high rate 75% (12/16). Thus, the data in (16) support the prediction of the CMH in (15). (I also note that there were extremely rare instances of object scrambling (O<*way*) in JK *way*-questions (2/111, 1.8% of the time)).¹⁸ Some examples of JK *way*-questions are given below.

- (17) **Way** Joonkyu-ka balp-ass-nunde?

Why Joonkyu-Nom step-Past-Q?

‘Why did Joonkyu step (on something)?’ (JK 2;06;07)

- (18) Appa-ka **way** an-o-ci?

Daddy-Nom why not-come-Q

‘Why does daddy not come?’ (JK 2;05;16)

In addition, I suggest that the remaining 25% of *subject*<*way* order in (16) is attributed to JK’s limited ability of scrambling. There were some sentences with non-canonical word order (non-SOV) in the JK speech, which amounts to 16% of all the JK transitive sentences (73/465). This indicates that JK can utter some sentences with scrambling, even though the instances are rather

rare. Since the number of *subject<way* utterances is comparable to the overall scrambling rate in the JK speech, I conclude that the prediction of the CMH consistently holds in the JK data.¹⁹

3.3 Further Comparison: *Eti* ‘where’ vs. *Way* ‘why’ in Child Korean

One might think that the pattern concerning *way* in (16) could be a general pattern found with any *wh*-adjunct in child Korean. To test this alternative hypothesis, I examined *eti* ‘where’ questions in the same database. Strikingly, the data show a sharp contrast between *way* ‘why’ and *eti* ‘where’ questions.

Overall in the *eti*-questions, there were a large number of subject omissions (45.2 %, 66/146) and nominative Case-marker omissions (45.2 %, 66/146). In clear contrast to *way*-question, however, *eti* never preceded the nominative marked subject. This is illustrated in (19) (There were extremely rare instances of object scrambling in JK *eti*-questions (3.42%, 5/146)).

(19) *Eti*-questions with a nominative marked subject in the JK speech

| | Word Order | Tokens | % |
|----|--|---------------|-----------|
| a. | <i>Eti S_{NOM} (O) (Verb)</i> | 0 | 0% |
| b. | <i>S_{NOM} Eti (O) (Verb)</i> | 14 | 100% |
| | Total | 14 | 100% |

An example of JK *eti*-questions is given in (20).

- (20) kunde, appa-ka eti ka-ass-e? ²⁰

But, father-Nom where go-Past-Q

‘By the way, where is daddy?’ (JK 02;02;29)

Statistically, the distributional differences between *way* and *eti* are highly significant, as described in (21).²¹

- (21) Comparison between *way* and *eti* in JK speech

| Child WH | wh S _{NOM} | S _{NOM} wh |
|--------------------|---------------------|---------------------|
| <i>Way</i> ‘why’ | 12 (75%) | 4 (25%) |
| <i>Eti</i> ‘where’ | 0 (0%) | 14 (100%) |

($\chi^2=17.5^{***}$, p<.001; Fisher Exact, p<0.0001)

This contrast indicates that the word order pattern with *way* in (16) is not accidental, but rather systematic. As the CMH predicts, *way* is merged higher than the subject, and so precedes the subject in non-scrambled child speech. The absence of *eti*<*subject* order, on the other hand, suggests that *eti* is merged lower than the subject, in contrast to *way*.

3.4 Adult vs. Child Korean *way*-questions

Finally, one might wonder whether the pattern concerning *way* in (16) results from mere imitations of adult input. The child data, however, show the opposite pattern from the adult input in uttering *way*-questions. Refer to the table in (22) for adult *way*-questions in the JK files.

(22) Adult *way*-questions in the JK files

| | Word Order | Tokens | % |
|---|---------------------------------------|--------|------|
| a | Way S_{NOM} (O) (Verb) | 32 | 34% |
| b | S_{NOM} Way (O) (Verb) | 63 | 66% |
| | Total | 95 | 100% |

In contrast to the child data in (16), the *subject*<*way* order was the dominant order (66%) for the adults communicating with JK. This contrast argues strongly that the pattern reported in (16) did not originate from the influence of the adult input. In fact, the child reverses the predominant *subject*<*way* order in the adult input into the *way*<*subject* order in his own speech.

This point is directly shown in the following dialogue between JK and his mother. In (23), JK listens his mother *way*-question, which contains *daddy-Nom*<*way* order. In repeating her mother's question, however, JK switches the word order into *way*<*daddy-Nom*.

- (23) Mother: **Appa-ka** **way** dwul-i-ni?
 Daddy-Nom why two-be-Q
 ‘Why are daddy two?’ (‘why do you have two daddies?’)
- JK: **Way** **appa-ka** dwul-i-ni?
 Why daddy-Nom two-be-Q
 ‘Why are daddy two?’ (‘why do you have two daddies?’) (JK 2;06;07)

The differences between the adult and child data in the placement of *way* reached the statistical significance as well, as described in (24).²²

(24) Child vs. Adult *way*-questions in the JK files

| | <i>way S_{NOM}</i> | <i>S_{NOM way}</i> |
|-------|----------------------------|----------------------------|
| Child | 12 | 4 |
| Adult | 32 | 63 |

($\chi^2=9.7694744^{**}$, $p<.01$; Fisher Exact, $p<.002$)

As for adult *eti*-questions, there was no significant difference between the child and adult.

As illustrated in (25), *eti* in adult speech follows the nominative marked subject in most cases (95%), as in the child data (19). The difference between the child and the adult in the placement of *eti* was not statistically significant ($\chi^2=0.76$, $p<.5$; Fisher Exact, $p<.499$).

(25) Adult *where*-questions in the JK files

| | Word order | Tokens | % |
|---|--|---------------|------------|
| a | <i>Eti S_{NOM} (O) (Verb)</i> | 5 | 5% |
| b | <i>S_{NOM} Eti (O) (Verb)</i> | 91 | 95% |
| | Total | 96 | 100% |

The comparison between the child and the adult *eti*-questions suggests two possibilities. Either the child simply reproduces the adult pattern in uttering *eti*-questions, or *eti* is base-generated lower than the subject and remains below the subject in adult speech. The former is implausible,

given the contrast between the child and adult *way*-questions. Thus, I suggest that the latter be the plausible interpretation. In further research, I hope to investigate a large adult corpus to determine whether *wh*-adjuncts generally resist scrambling in adult speech.²³ Since it is beyond the scope of this paper, I leave it further research.²⁴

3.5 Implications of the acquisition data

This section demonstrated the distributional differences between *way* ‘why’ and *eti* ‘where’ in child Korean. It was shown that *way* ‘why’ preceded the subject most of the time, whereas *eti* ‘where’ never preceded the subject. It was argued that the distributional differences between the two *wh*-adjuncts are not accidental, but predicted by the CMH. It was further pointed out that this word order pattern cannot be traced to adult input.

Before closing the section, I would like to address the theoretical import of the child Korean data. First, the discussion in this section provides another piece of empirical evidence for the thesis that child data are needed to evaluate predictions that cannot be tested in adult data. In adult Korean, the base order of the sentence may always be obscured by scrambling. Investigation of child data, in contrast, provided a clear test for verifying the base word order in *way*-questions. Second, the discussion in this section contributes to the cross-linguistic observation that acquisition of ‘why’ shows special patterns in many languages. A series of works on child English, in particular, has shown that *why*-questions do not require subject-aux inversion, in contrast to other *wh*-questions (Stromswold 1990, Berk 2003; see also Thornton 2003 for the asymmetry between *why* in local vs. non-local construal in child English). This observation has been attributed to merge of ‘why’ in some *wh*-fronting languages at the top of

the clause (Rizzi 1990, 1999). This paper shows that the same type of argument extends to child Korean. *Way* ‘why’ in Korean is directly merged in [Spec,CP], and this results in the “Non-Inversion” of the base order *way*<*subject* in child Korean.

4. The “Fine Structure of CP” in *in-situ* Languages

So far, I have been agnostic about the “fine structure of CP” (Rizzi 1997, 1999) in *in-situ* languages, because the evidence adduced in support of the CMH can be explained under a simple CP structure without further assumptions. In this section, I investigate a possible consequence of the CMH in a split CP system. Issues of multiple *wh*-questions in K/J/C are of special concern. Note, however, that this section should be read as a possible extension of the CMH introduced in section 2 rather than an absolute alternative for it.

4.1 Two C-heads for *wh*-interrogatives

Rizzi (1997, 1999) has argued that the complementizer system is actually a structural zone containing several distinct functional heads and their projections, much as the IP system and the DP system under many proposals. On the basis of an examination of the position of focus (FOC), topic (TOP), *se* ‘if’ (INT), *che* ‘that’ (FORCE), *wh*-phrases (FOC), and *perchè* ‘why’ (INT) in Italian, Rizzi proposes the following CP-structure:

(26) FORCE (TOP) INT (TOP) FOC (TOP) FIN IP ... (Rizzi 1999, p.5)

This section does not aim at providing a full picture of the split CP system in *in-situ* languages. Instead, I focus on the interactions between the two positions that may be occupied by *wh*-phrases in (26): INT and FOC. Rizzi (1999) argued that INT is a base-generation position of *perchè* ‘why’ in Italian, whereas FOC is a landing site of all the other *wh*-movement (including *perchè* in non-local construal). I argue that this idea of positing an interrogative head for ‘why’ distinct from the landing site of *wh*-movement has the potential to resolve certain puzzles that arise in *in-situ* multiple *wh*-questions. I will suggest that *in-situ* languages have two C-heads for *wh*-phrases as in (26), but that the hierarchical order of INT (the merge site for ‘why’) and FOC (the landing site for *wh*-movement) are reversed. This is illustrated in (27). To avoid unnecessary confusion with Rizzi’s (1999) proposal, I refer to the C head hosting ‘why’ as $C_{INT.}$, and the other C hosting *wh*-movement as C_{FOC} .²⁵ In the following subsection, I present evidence for this structure.

$$(27) \quad [C_{FOC} \dots C_{INT} [IP \dots]]$$

4.2 Evidence for Two C-heads System in *In-situ* Languages

The first argument in support of the structure (27) comes from the interaction between multiple *wh*-questions and the Intervention Effect ((3), see section 2). Consider the Korean examples in (28). (According to my informants, the same contrast holds in Japanese).²⁶

- (28) a. *? **Amwuto** **mwues-ul** **way** mek-ci-anh-ass-ni?
 Anyone what-Acc why eat-CI-not-Past-Q
 ‘Why did no one eat what?’ [K]
- b. **Mwues-ul** **amwuto** **way** mek-ci-anh-ass-ni?
 What-Acc anyone why eat-CI-not-Past-Q
 ‘Why did no one eat what?’ [K]
- c. **Mwues-ul** **way** **amwuto** mek-ci-anh-ass-ni?
 What-Acc why anyone eat-CI-not-Past-Q
 ‘Why did no one eat what?’ [K]

Under the single C-system, the CMH might expect that (28)a would be grammatical because *mwues* ‘what’ has scrambled to the [Spec,CP] domain (crossing *way*) in the overt syntax and thus can obviate the Intervention Effect via Spec-Head agreement with C, as schematized in (29).

- (29) [CP *amwuto_i* *mwues-ul_j* *way* C [IP *t_i* *t_j* ...]]

Without further assumptions about the internal structure of CP or the path of multiple scrambling to [Spec,CP], the ungrammaticality of (28)a is difficult to explain.²⁷

However, if we assume that (27) represents the internal structure of CP in K/J, (28)a is correctly ruled out. This is described in (30).

- (30) *[CP C_{FOC} **amwuto_i** *mwues-ul_j* *way* C_{INT} [IP *t_i* *t_j* ...]]

Under the structure in (27) (shown in (30)), *mwues* ‘what’ in (28)a cannot be licensed, because *amwuto* ‘anyone’ blocks LF-movement of *mwues* to the licensing head C_{FOC}. Hence, the ungrammaticality of (28)a follows.

The other argument for the structure of (27) comes from the phenomenon called the *Anti-Superiority Effect* (ASE; Saito 1982, Watanabe 1992, Saito 1994, Watanabe 1995, Chung 1996, among others). Descriptively speaking, the ASE is a word order restriction between *way/naze* ‘why’ and other *wh*-phrases in K/J such that *way/naze* ‘why’ cannot precede the other *wh*-phrases, retaining a multiple *wh*-question reading. This is illustrated in (31) and (32).^{28, 29}

- (31) a. *John-i **way** **mwues-ul** sa-ss-ni?
 John-Nom why what-Acc buy-Past-Q
 ‘Why did John buy what?’ [K]
- b. John-i **mwues-ul** **way** sa-ss-ni?
 John-Nom what-Acc why buy-Past-Q
 ‘Why did John buy what?’ [K]

- (32) a. *John-wa **naze** **nani-o** katta no?
 John-Top why what-Acc bought Q
 ‘Why did John buy what?’ [J]
- b. John-wa **nani-o** **naze** katta no?
 John-Top what-Acc why bought Q
 ‘Why did John buy what?’ [J]

I argue that the ASE can be naturally captured under the structure in (27) if we adopt a particular hypothesis about the semantic property of ‘why’. I suggest that *way/naze* ‘why’ in K/J is itself a scope-bearing element that induces the Intervention Effect. In other words, the ASE is just a variant of the Intervention Effect (cf. Cho 1998; Richards 2001, pp. 287-299 for an approach unifying the Intervention Effect and the ASE), and the ungrammaticality of (31)a and (32)a is ascribed to the Intervention Effect, as shown below.

- (33) a. *[C_{FOC} **‘why’**] C_{INT} ‘what’]: (31)a, (32)a
 b. [C_{FOC} ‘what’_i **‘why’**] C_{INT} t_i]: (31)b, (32)b

There are several reasons why this proposal might be plausible. First, the solution in (33) assimilates the ASE to the already existing phenomena, the Intervention Effect. Hence, we do not have to resort to additional constraints invented only for the ASE (cf. Watanabe 1992). Second, there is evidence that ‘why’ does share some semantic properties with scope-bearing elements triggering the Intervention Effect. As Kim (2002) argued, it is focus-related items that induce the Intervention Effect. Interestingly, *why*-questions typically induce focus-association.

As Bromberger (1992) pointed out, the answer to a *why*-question in English crucially differs depending on the association between *why* and a focus with emphatic stress. This is shown in the question-answer pairs in (34) (Bromberger 1992, pp.160-161).

- (34) a. Why did Adam eat the apple?
 -because God intended that to happen

- b. Why did **ADAM** eat the apple?
-because he was the one that Eve worked on
- c. Why did Adam **EAT** the apple?
-because he couldn't think of anything else to do with it.
- d. Why did Adam eat the **APPLE**?
-because it (the apple) was the only food around.

Note that this focus-association disappears in other *wh*-questions. For instance, compare (34) with *when*-questions in (35).

- (35) a. When did Adam eat the apple?
-At 4 P.M. on July 7, 24,000 B.C
- b. When did **ADAM** eat the apple?
-At 4 P.M. on July 7, 24,000 B.C
 - c. When did Adam **EAT** the apple?
-At 4 P.M. on July 7, 24,000 B.C
 - d. When did Adam eat the **APPLE**?
-At 4 P.M. on July 7, 24,000 B.C

Unlike *why*-questions, the placement of emphatic stress on different words in (35) does not impose different conditions on what counts as an answer.³⁰ The same fact holds in Korean, as shown in (36) and (37) (The same paradigm is attested in Japanese). The answer for *way* questions in (36) differs depending on the focus, as in English (34), whereas the answer for *ency*

‘when’ questions in (37) (and all other types of *wh*-questions) remains the same regardless of the focus, as in English (35).

- (36) a. Way Adam-i sakwa-lul mek-ess-ni? [K]

Why Adam-Nom apple-Acc eat-Past-Q

‘Why did Adam eat the apple?’

- *Hanunim-i kukes-ul uytobhasiessu-nikka*

God-Nom that-Acc intend-because

‘because God intended it (to happen)’

- b. Way **ADAM-i** sakwa-lul mek-ess-ni?

- *Ivu-ka Adam-eykey kwonhayssu-nikka*

Eve-Nom Adam-Dat recommended-because

‘because he was the one that Eve recommended (to eat the apple)’

- c. Way Adam-i **SAKWA-lul** mek-ess-ni?

- *kukes-i cwupyeney iss-ten yulihan umsik iessu-nikka*

That-Nom around be-RC only food be-because

‘because it (the apple) was the only food around’

- d. Way Adam-i sakwa-lul **MEK-ess-ni?**

- *kukes-ulo mwues-ul halci mollassu-nikka*

That-with what-Acc to.do be.ignorant.of-because

‘because he couldn’t think of anything else to do with it’

- (37) a. Encey Adam-i sakwa-lul mek-ess-ni? [K]
 When Adam-Nom apple-Acc eat-Past-Q
 ‘When did Adam eat the apple?’
 -chil wol chil il ohwu ney si
 7 month 7 day afternoon 4 hour ‘July, 7th, 4PM’
- b. Encey **ADAM**-i sakwa-lul mek-ess-ni?
 -chil wol chil il ohwu ney si ‘July, 7th, 4PM’
- c. Encey Adam-i **SAKWA**-lul mek-ess-ni?
 -chil wol chil il ohwu ney si ‘July, 7th, 4PM’
- d. Encey Adam-i sakwa-lul **MEK**-ess-ni?
 -chil wol chil il ohwu ney si ‘July, 7th, 4PM’

Given that ‘why’ in Korean (and Japanese) invokes focus-associations, like many other scope-bearing elements inducing the Intervention Effect, it is quite plausible to assume that the ASE is a variant of the Intervention Effect.³¹

The contrast between Chinese and K/J with respect to the ASE provides further support for the analysis in (33). Compare the following Chinese sentences in (38) with K/J sentences in (31) and (32) (H-L. Soh and F-F. Hsieh, p.c; see also Huang 1982).^{32, 33}

- (38) a. Zhangsan weishenme bu chi shenme (**dongxi**)?
 Zhangsan why not eat what thing
 ‘Why did Zhangsan not eat what?’

- | | | | | |
|--|------------|----------------------|------------------|---------|
| b. | *?Zhangsan | shenme dongxi | weishenme | bu chi? |
| | Zhangsan | what thing | why | not eat |
| ‘Why did Zhangsan not eat what?’ | | | | |
| c. | Zhangsan | na wan fan | weishenme | bu chi? |
| | Zhangsan | the bowl rice | why | not eat |
| ‘Why did Zhangsan not eat the bowl of rice?’ | | | | |

Interestingly, (38) illustrates that the ASE does not hold in Chinese. In fact, the judgments about Chinese *weishenme* ‘why’ questions go in the opposite direction from K/J counterparts: *weishenme* may precede *shenme* ‘what’ in (38)a, whereas *shenme* cannot precede *weishenme* in (38)b. The same point can be made with embedded *weishenme*-questions in (39).

- (39) Ni xiang-zhidao [Lisi **weishenme** mai-le **shenme**?
 You wonder Lisi why buy-Asp what
 ‘What is the thing x such that you wonder why Lisi bought?’
 (Huang 1982, p.526, and see also Lasnik and Saito 1984, p.243)

This contrast between K/J and Chinese has been reported in the literature, but to the best of my knowledge, there has been no obvious answer about why there should be such a difference. I argue that the CMH and the analysis in (33) provide an account of this asymmetry.

Suppose that the CMH holds in Chinese as in Korean and Japanese (Ko 2003 for various arguments in favor of this assumption; see also Lin (1992) for Chinese), and that the ASE is a variant of the Intervention Effect. Under these assumptions, the contrast between K/J (31)a/(32)a

and Chinese (38)a is reduced to the independent fact that Chinese *wh*-nominals (*wh*-phrases except *weishenme*) do not show the Intervention Effect (Cheng and Rooryck 2001, Soh 2001, Guérin and Soh 2003). As described in (40), Chinese *wh*-nominals may be preceded by a scope-bearing element, which may induce the Intervention Effect in K/J (see Cheng and Rooryck 2001, Soh 2001, Guérin and Soh 2003 for other examples in Chinese; cf. Ko (2003) for the interactions between *weishenme* and the Intervention Effect).

- (40) {*Meiyouren/henshaoren/zuiduo liang-ge ren*} gan gen shei dajia?
 Nobody/few person/at most two person dare with who fight
 ‘Who is the person x such that {nobody/few people/at most two people} dare(s) to fight
 with x?’ (Soh 2001)

Given that Chinese *wh*-nominals are insensitive to the Intervention Effect, it is expected from (33) that Chinese lacks the ASE (a variant of the Intervention Effect) in (38). Furthermore, it is also correctly predicted that K/J *wh*-nominals may show the ASE in (31) and (32), as a variant of the Intervention Effect, since they *are* sensitive to the Intervention Effect (Section 2).

One remaining question is why Chinese (38)b is degraded, in contrast to K/J (31)b and (32)b. I argue that this contrast is, in fact, naturally captured by the CMH. If ‘why’ in K/J/C is merged in [Spec,CP] in the overt syntax, *wh*-arguments may precede ‘why’ in K/J/C only when it may undergo A'-movement (e.g. A'-scrambling or A'-topicalization) over a C boundary (see (12)). It is well-known that K/J *wh*-phrases may undergo A'-movement (via A'-scrambling), as described in (41) (Saito 1992 for Japanese examples). Thus, it is not surprising that *mwues/nani* ‘what’ may scramble over *way/naze* ‘why’ in (31)b and (32)b.³⁴

- (41) a. John-un [Mary-ka **mwues-ul** mek-ess-ta-ko] malhay-ss-ni?
 John-Top Mary-Nom what-Acc eat-Past-Dec-C say-Past-Q
 ‘What did John say that Mary ate?’ [K]
- b. **Mwues-ul_i** John-un [Mary-ka t_i mek-ess-ta-ko] malhay-ss-ni?
 What-Acc John-Top Mary-Nom eat-Past-Dec-C say-Past-Q
 ‘What did John say that Mary ate?’ [K]

Now let us turn to Chinese. In contrast to K/J, Chinese does not allow A'-scrambling (cf. Soh (1998) for short scrambling in Chinese). Thus, in order for *shenme* ‘what’ to precede *weishenme* ‘why’ in (38)b, it must be able to undergo A'-topicalization. However, as illustrated in (42), *wh*-phrases resist A'-topicalization in Chinese. Hence, it is predicted from the CMH that *shenme* cannot precede *weishenme* in (38)b.^{35, 36}

- (42) a. Zhangsan suo Mali chi le **shenme (dongxi)?**
 Zhangsan said Mary eat Asp what thing
 ‘What did Zhangsan say that Mary ate _?’
- b. *?**Shenme (dongxi)** [Zhangsan suo [Mali chi le t_i]]?
 What thing Zhangsan said Mary eat Asp
 ‘What did Zhangsan say that Mary ate _?’
- c. **Pingguo_i** [Zhangsan suo [Mali chi le t_i]]
 Apples Zhangsan said Mary eat Asp
 ‘Apples, Zhangsan said that Mary ate _.’

To wrap up, this section explored the implications of the CMH concerning the fine structure of CP in *in-situ* languages. It was suggested that there might be two distinct C heads for licensing *wh*-interrogatives in *in-situ* languages (cf. Rizzi 1999). By assuming that ‘why’ is merged in the lower head C_{INT} , and that the other *wh*-phrases covertly move to the higher head C_{FOC} , we can account for the emergence of the Intervention Effect within the CP field. It was argued that the ASE is a variant of the Intervention Effect, and that this proposal accounts for interesting contrasts between K/J and Chinese with respect to the ASE.

5. Conclusion

This paper has argued that the base position of ‘why’ in *in-situ* languages sheds new light on its unique properties in syntax. I proposed that ‘why’ in Korean, Japanese, and Chinese is directly merged into [Spec,CP] as a CP modifier (CMH), and that this proposal accounts for various puzzles concerning ‘why’ in *in-situ* languages. In particular, the local vs. non-local asymmetry of K/J ‘why’ with respect to the Intervention Effect was explained under this proposal. Predictions concerning the left periphery of ‘why’ were confirmed with K/J/C. Korean child acquisition data provided further support for the CMH, showing that ‘why’ is externally-merged higher than the subject. The theoretical importance of the acquisition data was stressed, in that predictions concerning the base order in *way*-questions cannot be easily tested with adult Korean. It was also pointed out that child Korean data contribute to the cross-linguistic observation that acquisition of ‘why’ shows special patterns due to its high base-position. Investigating the fine structure of CP in *in-situ* languages, the paper proposed that the ASE is a variant of the Intervention Effect.

This proposal not only accounts for the ASE in K/J, but also explains the asymmetry between K/J and Chinese concerning the ASE.

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¹ This section has been developed from Ko (2003). This section focuses on the facts in Korean and Japanese, but see Ko (2003) for detailed discussion concerning Chinese *weishenme* ‘why’ (see also Section 4).

² The motivation for scrambling in K/J has been controversial. Some argue that discourse factors like topic/focus (most likely optionally) derive scrambling (Choi 1996), whereas others argue that morphological features like Case or EPP (obligatorily) trigger scrambling (Lee 1993; Miyagawa 1997b). This issue, however, is immaterial for this paper. The paper is concerned with the distribution of the scrambled elements, regardless of the trigger for scrambling. As for the landing site of a scrambled phrase, refer to note 10.

³ Beck and Kim (1997) implemented (3) within the semantic frameworks of Hamblin (1973) and Kartunnen (1977): a *wh*-phrase must move to [Spec,CP] for semantic reasons and an SBE blocks the binding relationship between the LF-trace of the *wh*-phrase and its binder. As far as this paper is concerned, however, the empirical consequences of Beck and Kim (1997) and (3) are the same. The term *Intervention Effect* was first introduced by Hagstrom (1998), who implemented (3) with different assumptions about *wh*-movement from the one the paper adopts. For alternative approaches to (3), see the references cited in the text.

⁴ In Chomsky (1995), a bundle of formal features are attracted to its licensing head at LF. Thus, (3) needs to be understood as a LF-constraint on *wh*-feature movement rather than *wh*-phrasal movement (see Pesetsky 2000 for implications). For presentation purposes, however, I abstract away from the distinction between feature and phrasal movement. For concreteness, I assume Chomsky’s (1995; Chap.4) framework (copy-theory of movement, a single Y-model, etc.), but the paper can be made compatible with other approaches of Chomsky (1999, 2000, 2001) (see

Ko 2003). For convenience, a copy of a moved element is represented with a trace bearing an index, but this has no theoretical import. The notation for features (e.g. [uWH]) is borrowed from Pesetsky and Torrego (2001).

⁵ It is only *way/naze* ‘why’ that shows the pattern in (4)-(5). Other *wh*-adjuncts in K/J such as *eti/doko* ‘where’, *encey/itsu* ‘when’, or *etlehke/donoyounisite* ‘how’ cannot be preceded by an NPI, just like *wh*-arguments (see also Beck and Kim 1997 for relevant Korean examples).

⁶ Negation alone (without accompanying an NPI) may induce the Intervention Effect when *way/naze* is embedded in a declarative clause. That is, the sentence like (i) is ungrammatical in Korean. (The same is true of Japanese). I thank Daeho Chung for clarifying this.

- (i) *Mary-nun [John-i **way** saimha-yess-ta-ko] malha-ci-anh-ass-ni?
 Mary-Top [John-Nom why resign-Past-Dec-C] say-Past-not-Past-Q
 ‘What is not the reason x s.t. Mary said that John resigned for x?’ [K]

⁷ For some speakers, (8) marginally allows a matrix reading of *way*, with the interpretation ‘why₁ did John say t₁ that no one read the book?’. This reading is irrelevant for our discussion because we focus on whether *way* can be interpreted *across* the NPI, with modifying the embedded clause.

⁸ Miyagawa (1999) argued that *naze* is exempt from the Intervention Effect only when the NPI and *naze* are clausemates. The example (9) argues against this proposal.

⁹ As will be shown in Section 4, this proposal extends to *weishenme* ‘why’ in Chinese (See also Lin 1992; Ko 2003 for other evidence in Chinese). Similar approaches have been proposed for reason *wh*-adverbials in some *wh*-fronting languages: *pourquoi* ‘why’ in French (Rizzi 1990; Bošković 2000), *perchè* ‘why’ and *come mai* ‘how come’ in Italian (Rizzi 1999), *cad chuige*

‘why’ and *cén fáth* ‘what reason’ in Irish (McCloskey 2002), and *why* in English (Bromberger 1992; Hegarty 1992) and *how come* in English (Collins 1991). See also Tsai (1999) and Tsai and Chang (to appear) for arguments that in Tsou, causal *mainci* ‘why’ and causal *mainenu* ‘how’ are merged higher than IP as a sentential operator.

¹⁰ Following the common assumption in the scrambling literature (Mahajan 1990; Saito 1992; Sohn 1995, among others), I assume that a scrambled phrase adjoins to the closest maximal projection that it may land at. For instance, in (10), the subject *amwuto* adjoins to the CP where *way* is merged, and projects a segment of CP. The possibility that there might be a specific position designated for a scrambled phrase in the [Spec,CP] domain leaves my arguments intact, however. Following Mahajan (1990), when scrambling occurs across a C-boundary, I will call it A'-scrambling (whether it is clause-internal or clause-external). Since *amwuto* in (10) scrambles over C-boundary, this scrambling counts as A'-scrambling (see the literature cited in this note for clause-internal A'-scrambling). I thank Lisa Cheng and Chris Reintges for clarifying this.

¹¹ This analysis assumes that LF-reconstruction of an NPI does not bleed the application Intervention Effect at LF. For the relevant discussion, see Beck and Kim (1997) and Ko (2003).

¹² A'-movement refers to the movement crossing a C-boundary (Mahajan 1990; note 10). Since movement over ‘why’ in (12) crosses [Spec,CP], it counts as A'-movement. This movement may be instantiated by A'-scrambling (in K/J) or by A'-topicalization (in K/J/C: see section 4 for further discussion).

¹³ See Ko (2003) for other evidence supporting the prediction in (12). Ko (2003) argues that this prediction accounts for the cross-linguistic variation between K/J and Chinese *why*-questions. K/J SBEs (e.g. *-man/-sika* NP ‘only NP’, *-to/-mo* NP ‘also NP’, *-kkaci/-sae* NP ‘even NP’, *nukwunka/dareka* ‘someone’ *nwukwuna/daremo* ‘everyone’) may undergo A'-movement (via

A'-scrambling), and so can precede ‘why’ in K/J. In contrast, Chinese SBEs (e.g. *zhizyou* NP ‘only NP’, *meiyouren* ‘nobody’, *henshaoren* ‘few people’) may not undergo A'-movement (topicalization), and thus cannot precede *weishenme* ‘why’ in Chinese, unlike K/J counterparts. Furthermore, in Korean, epistemic adverbials (e.g. *amato* ‘probably’) cannot undergo A'-movement like Chinese SBEs, and they cannot precede *way* ‘why’ in Korean (see Ko 2003 for the relevant examples).

¹⁴ Whether a subject may undergo A or A'-scrambling in K/J has been controversial. Some researchers argue that subject scrambling exists (Kurata 1991; Lee 1993; Sohn 1995) while other researchers argue the opposite (Saito 1985, Hoji 1985). The CMH has an important implication for this debate. Since a subject may precede *way/naze*, as in (14), the CMH crucially entails that a subject is able to undergo scrambling (more precisely, A'-scrambling in (14)). Thus, to the extent that the CMH is successful, we have direct support for the existence of subject scrambling.

¹⁵ Kim (1997) shows that the rate of the non-canonical word order (non-SOV) from five children varies from 6% to 27%. Cho (1981) reports that the rate of non-SOV varies from 5.7% to 17.7% (cited in Kim 1997), except one child who uttered the non-canonical order in 56.8% of all utterances. This exceptional child seems to be an outlier or a bilingual English speaker, given that her rate of SVO order was extremely high at 24.3%, in contrast to the other children examined in Cho (1981) and Kim (1997), whose SVO rate ranged from 4.5% to 0%.

¹⁶ I am grateful to Seungbok Lee for allowing me to study the JK data for this paper.

¹⁷ Tokens were counted as one utterance. Each utterance of self-repetition was counted as one token. Total imitation was not counted as a token. Partial or transformed imitation was counted as one token of voluntary child utterance, given that partial imitation often changes the word

order of the preceding adult utterances (see (17) and (18); see also Stromswold (1996) for methods analyzing children's spontaneous speech). In counting *way-* and *eti*-questions, I counted only the sentences containing more than one words.

¹⁸ There was one token of *way-doubling* in a sentence containing a nominative marked subject. As shown in (i), *way* ‘why’ appeared twice in the sentence: one before the subject, and the other after the subject. This was not counted in (16) because it was not clear which of the two instances of *way* we need to consider.

- (i) Way kangaci-ka way an-muk-ni?
Why puppy-Nom why not-eat-Q
'Why does not the puppy eat (it)?' (JK 2;09;09)

¹⁹ It is worth noting that the overall scrambling rate of the transitive sentences in the adult input (i.e. non-SOV sentences) was 11.4% of the time (95/832). This indicates that when the adults corresponded with the child, they preferred to use the canonical word order in the transitive sentences (but see also note 22).

²⁰ As Chris Reintges (p.c.) notes, *eti* in (20) is a complement selected by a directional verb *ka* ‘go’ (and may be viewed as a direct object for Levin and Rappaport 1985). It will be interesting to see whether a true VP-adjunct like *etlehkey* ‘how’ (with manner reading) shows a different distribution from *eti*. I leave this for further research.

²¹ I thank Tania Ionin, Ken Wexler, and William Snyder for helping me to conduct the statistical analysis.

²² This leaves the question of why the scrambled rate in *way*-questions (*subject*<*way*) in the adult input amounts to 66% while the non-canonical order (i.e. non-SOV) in the transitive sentence is limited to 11.4% (note 19). I leave this issue further research.

²³ In Hindi, when scrambling of a *wh*-phrase places the *wh*-phrase first in the sentence, the scrambling is generally blocked for stylistic reasons (Rajesh Bhatt p.c.). I leave it open whether this generalization may explain the tendency that *subject*<*where* order is preferred in (25)b.

²⁴ As Chris Reintges (p.c.) pointed out, it will be interesting to see whether scrambled order in child Korean is acquired gradually over the time course of acquisition or appears suddenly. In addition, more thorough research on the corpus would be helpful in the evaluation of the result reported in this paper (e.g. comparison of the child data in the paper with other large corpora (William Snyder, p.c.), comparison between *way* and *wh*-arguments in Korean (Bonnie Schwartz, p.c.)).

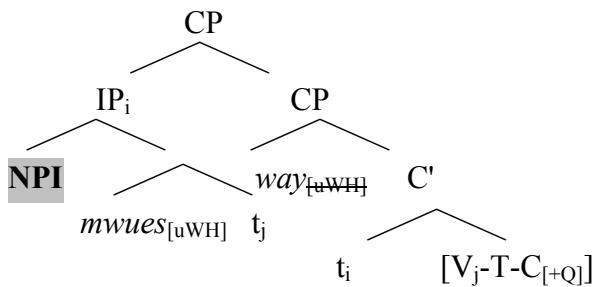
²⁵ It remains to be seen whether the CP-fields between C_{INT} and C_{FOC} is filled by a Topic in *in-situ* languages, as argued by Rizzi (1997, 1999) for Romance languages. In addition, it needs to be made clear that this paper does not provide a full picture of a fine structure of CP in *in-situ* languages. I do not argue that there is a designated projection for a scrambled NP, but nothing hinges on this. As in section 2 and 3 (see note 10), I keep the simplest assumption that scrambling over ‘why’ adjoins to the closest maximal projection above ‘why’, which is [Spec,C_{INT}] under the double-C system in (27) (see (30) for details).

²⁶ I thank Norvin Richards for bringing this example to my attention.

²⁷ Ko (2003) suggests that if we adopt Yatsuhiko’s (1996) analysis on multiple scrambling, (28)a can be explained under the single C-system. Noting the scope rigidity between a scrambled indirect object and a scrambled direct object, Yatsuhiko argued that when multiple scrambling occurs, the maximal projection dominating the scrambled items move to the target (cf. Sauerland and Elborne 2002 for criticism of Yatsuhiko (1996)). If we extend this analysis to the multiple scrambling over ‘why’, (28)a is ruled out, as shown in (ii). Given that ‘what’ is c-commanded by

the NPI in (ii), ‘what’ cannot be licensed at LF due to the Intervention Effect. I leave it open which of the two alternatives ((ii) or (30)) provides the better theory for the ungrammaticality of (28)a.

(ii)



²⁸ One should not confuse the ASE in K/J with a general constraint on multiple *wh*-questions in English. In contrast to *way/naze* ‘why’, all the other *wh*-phrases in K/J including other *wh*-adjuncts (e.g. *eti/doko* ‘where’, *encey/itsu* ‘when’, *etlehke/donoyounisite* ‘how’) may precede or follow other *wh*-phrases irrespective of their structural height. The ASE is limited only to the interactions between *way/naze* ‘why’ and the other *wh*-phrases.

²⁹ The sentence in (31)a is fine with the indefinite reading of ‘what’: ‘why did John buy something?’.

³⁰ As David Pesetsky (p.c.) notes, the difference between *why* and *when* shown above can be weakened in some contexts. For instance, suppose that there are several dishes in the breakfast menu (e.g. apples, bagels, eggs, juice, etc.) that Adam or Eve might have eaten. If the speaker is interested in the overall time that Adam or Eve started to eat the breakfast, the answer for questions in (35) would be the same. But, the speaker is interested in the exact time that Adam or Eve started to eat/drink a specific food, the answers for questions in (35) could differ. It might be the case that the focus association for *why* is more contextually salient and easily invoked than

the one for *when*, just for pragmatic reasons. If this suggestion is correct, the argument that ‘why’ is the only *wh*-operator inducing focus-associations would also be weakened.

³¹ It has been known that the ASE is ameliorated by an additional *wh*-phrase c-commanding ‘why’, as in (i) (the “additional *wh*-effect” discussed in Saito 1994; see also Chung 1996).

- (i) Dare-ga naze nani-o katta-no?

Who-Nom why what-Acc buy-Q

‘Who bought what why?’ [J]

It is not clear whether this additional *wh*-effect holds for the Intervention Effect generally. While Tanaka (1998) (see also Richards 2001) argues that an additional *wh*-phrase improves the ungrammaticality of the Intervention Effect in Japanese, Beck and Kim (1997) reports the opposite judgments in Korean. I leave it further research the nature of this difference.

³² Negation was added in (38) in order to elicit a pragmatically more plausible answer for the *weishenme*-question. Negation, however, is not the factor that contributes to the differences between K/J and Chinese. Judgments about the sentences in (38) remain the same even though we omit negation to the sentences in (38). See also Huang’s example in (39) for the same point.

³³ Discussion about *weishenme* in this section is limited to the reason/causal reading of *weishenme*. It remains to be seen whether the arguments about causal *weishenme* in this section extend to *wei(-le)shenme* with a purpose reading. (See also Tsai 1994, 1999 for some differences between causal and purpose *weishenme*.)

³⁴ Cross-linguistically, a *wh*-phrase generally resists topicalization. As shown in (i), K/J *wh*-phrases cannot host a topic marker (implying that they cannot undergo topicalization for Lee and Tomioka 2000). It is important to note that K/J *wh*-phrase may precede *way/naze* in (31)b and

(32)b because K/J allows scrambling of *wh*-phrases, not because K/J allows topicalization of a *wh*-phrase.

- (i) *Nwukwu-nun Mary-lul manna-ss-ni?

Who-Top Mary-Acc meet-Past-Q

‘Who met Mary?’

³⁵ Lisa Cheng (p.c.) suggested that (38)b might be degraded because the indefinite *shenme* cannot undergo object shift (Soh 1998), unlike the definite NP, *na wan fan* in (38)c. Since both topics and elements undergoing object shift in Chinese require definiteness, it is difficult to tease the two analyses apart as far as (38)b is concerned. Note, however, that this alternative analysis does not explain the cross-linguistic variation in the ASE between K/J (31)a/(32)a and Chinese (38)a.

³⁶ There is one potential counterexample to this generalization in the literature.

- (i) [ni xiang-zhidao [shei weishenme mai-le shu]]?

You wonder who why buy-Asp book

‘Who is the person x such that you wonder why x bought books?’ (Huang 1982, p.525)

I speculate two reasons why (i) can be grammatical. First, according to my Chinese informant (F.-F. Hsieh, p.c.), *weishenme* in (i) does not have the causal reading: (i) has only the purpose reading. It might be the case that *weishenme* with a purpose reading may be merged lower than [Spec,CP] (see Tsai (1999) for arguments that purpose *weishenme* is merged in VP-adjoined position). Second, there might be some elements that may precede *weishenme* but cannot undergo clause-external topicalization. Example (i) is compatible with the CMH if we assume that some speakers allow elements to undergo clause-internal A'-topicalization, but not clause-

external A'-topicalization. At this moment, however, I am not aware of a clear test distinguishing clause-internal A'-topicalization from clause-external A'-topcialization. I leave this issue open.