1. Introduction
The position of the subject in Korean and Japanese has been widely discussed in the literature. In particular, whether a subject undergoes movement in the overt syntax has been quite controversial (Saito 1985; Y-S Lee 1993; Sells 1995; K-W Sohn 1995; Fukui and Sakai 2003, and references therein). Most of the literature, however, has limited the discussion to movement of a subject from [Spec,vP] to [Spec,TP] for nominative Case checking purposes (Miyagawa 1997b; Fukui and Sakai 2003, among others; cf. K-W Sohn 1995). In this paper, I provide a new perspective on this issue by extending the empirical domain of the question.

The main goal of the paper is to examine the possibility of clause internal scrambling of a subject to [Spec,CP], which would clearly not be Case-
driven. Investigating why-questions in adult and child Korean, I argue that a subject must be able to scramble to [Spec,CP].

The paper is organized as follows. Section 2 points out that previous arguments against Subject Scrambling (SS) are inconclusive. Section 3 investigates the position of way ‘why’ in Korean and proposes that way is directly merged in [Spec,CP] in the overt syntax. Section 4 demonstrates that subjects can scramble to [Spec,CP], providing evidence from the distribution of floating quantifiers in Korean why-questions. Section 5 shows that the proposal is supported by unique word order patterns in child Korean why-questions. Section 6 discusses the implications of the paper.

2. Previous Arguments
The controversy regarding the position of the subject is rooted in the fact that subject movement is, in most cases, string vacuous, as shown in (1).

(1) \[ CP \ S \ [TP \ tS \ [VP \ tS \ [VP \ O \ V] v] T] C \]

In the absence of clear word order tests, indirect evidence has led researchers to different conclusions (see Saito 1985; Hoji 1985; Y-S Lee 1993; K-W Sohn 1995; as Yoon (2003) notes, the same issue arises in the discussions of verb movement in Korean and Japanese). This section points out that the key arguments against Subject Scrambling (SS) are, in fact, inconclusive.

Saito (1985) argues that a subject never undergoes scrambling, discussing the contrast between (2) and (3). (The same fact holds in Korean.) While the scrambled object in (2) may license the object-oriented floating quantifier, the scrambled subject in (3) cannot license the subject-oriented floating quantifier.

(2) Sake-o, gakusei-ga, ti san-bon nondeiru
   Beer-Acc student-Nom three-CL bottle drinking
   ‘A student is drinking three bottles of beer.’ (J: Japanese)

(3) *Gakusei-ga, sake-o, ti san-nin ti nondeiru
    Student-Nom beer-Acc three-CL people drinking
    ‘Three students are drinking beer.’ (J)

Saito (1985) claims that if gakusei-ga may scramble over the scrambled sake-o in (3), the numeral san-nin could be licensed by the trace of the subject. Since (3) is ungrammatical, Saito (1985) concluded that subjects never scramble (see Saito 1985 for details).

Under close inspection, however, this argument does not constitute evidence against SS. Consider, first, the example in (4), which shows that a subject does sometimes float a numeral quantifier.

(4) [CP S [TP tS [VP tS [VP O V] v] T] C]
As demonstrated in (4), the subject *hakpwumo* licenses the numeral *sey-myeng* across the temporal adverbial *ecey* (Miyagawa 1989 for Japanese). This indicates that a certain amount of subject movement should be allowed. Since Saito (1985) was built on the theoretical frame that the subject is base-generated at [Spec,IP], we might accommodate (4) by adopting the vP-internal subject hypothesis (Kitagawa 1986, among others), as shown in (5).

(5) \[[\text{IP} \quad \text{Subj} \quad [\text{vP} \quad \text{Adv} \quad [\text{vP} \quad \text{tj} \quad \text{FQsubj} \quad [\text{VP} \quad \text{Obj} \quad \text{V}]]]]\]

Once we adopt the vP-internal subject hypothesis, however, Saito’s original argument against SS becomes inconclusive. As illustrated in (6), if the subject undergoes Case-driven-movement to [Spec,IP] across the scrambled object at the vP-edge, we expect (3) to be grammatical, regardless of SS. However, this is not true. This indicates that the ungrammaticality of (3), in fact, does not crucially rely on the inability of the subject to scramble.

(6) \[[\text{IP} \quad \text{Subj} \quad [\text{vP} \quad \text{Obj} \quad [\text{vP} \quad \text{tj} \quad \text{FQsubj} \quad [\text{VP} \quad \text{tj} \quad \text{V}]]]]\]

Further, arguments against clause-external SS are also indecisive. Saito (1985) argues that clause-external SS is impossible. Apparently, however, counterexamples like (7) do exist. Saito argues that (7) can be explained by assuming that the matrix subject is ‘downgraded as a parenthetical expression’. The grammaticality of (7), however, may simply demonstrate that the clause-external SS is possible (see K-W Sohn 1995 for this position).

(7) John-i i [na-nun [ti, Mary-lul salangha-n-ta-ko]] sayngkakhanta J-Nom I-Top M-Acc love-Pres-Dec-C think ‘John, I think that _ loves Mary.’ (K)

Given the controversy concerning SS, we are in need of a configuration like (8) to test the availability of SS.

(8) \[[\text{CP} \quad \text{Subj} \quad \text{Adv} \quad [\text{IP} \quad \text{tj} \quad [\text{vP} \quad \text{tj} \quad [\text{VP} \quad \text{Obj} \quad \text{V}]]]]\]

Since the adverb in (8) is base-generated higher than [Spec,IP], Case-driven subject movement is not an issue. Further, the subject movement in (8) is not string vacuous, we may obtain direct evidence for SS. In the following sections, I show that the adverb ‘why’ provides such a case.
3. The Position of *Way* ‘why’ in Korean

In this section, I demonstrate that *way* ‘why’ in Korean is (externally-) merged into [Spec,CP] of the clause it modifies. The crucial evidence comes from the interaction between the Intervention Effect (Beck and Kim 1997) and the distribution of *way* ‘why’ in Korean (cf. E Cho 1998).

In Korean (and Japanese), there is a well-known word order restriction between *wh*-words and some Scope-Bearing Elements (SBE) (see Hoji 1985; S W Kim 1991; Beck and Kim 1997, among others).

(9) a. *Amwuto mwues-ul ilk-ci-anh-ass-ni?*
   Anyone what-Acc read-CI-not-Past-Q
   ‘What did no one read?’

b. *Mwues-ul_t1 amwuto t1 ilk-ci-anh-ass-ni? (K)*

As illustrated in (9), *wh*-words cannot be preceded (and c-commanded) by a scope-bearing element, such as *amwuto* ‘anyone’. This phenomenon was analyzed as the *LF blocking effect* (Beck and Kim 1997) and reanalyzed as the *LF Intervention Effect* (IE: Hagstrom 1998). A descriptive statement of the effect is given in (10). (The technical details implementing (10) may vary.) On this approach, while LF movement of *mwues* ‘what’ in (9a) to its checking position is blocked by *amwuto*, overt scrambling of *mwues* in (9b) is allowed.

(10) A *wh*-phrase cannot move across some SBEs at LF to its checking position–such SBEs include ‘anyone’, ‘only’, ‘even’, and ‘not’.

What is interesting is the behavior of *way* ‘why’ with respect to the IE. As noted by Cho (1998), *way* may precede or follow *amwuto*, unlike other *wh*-words. This is illustrated in (11) (see Miyagawa 1997a for Japanese).

   Anyone why the book-Acc read-CI-not-Past-Q
   ‘Why did no one read the book?’


Given the contrast between (9) and (11), one might think that *way* is simply exceptional to the IE (see E Cho 1998 for this approach). Under closer investigation, however, this conjecture is not correct.

If *way* is simply exceptional to the IE, we expect that *way* can be preceded by an SBE in any structural configuration. As demonstrated in (12), however, this is not the case. When *way* is merged in the (embedded) declarative clause, the higher negation or ‘anyone’ makes the sentence un-
grammatical. Compare (12) with (13), which shows that way may obtain a long-distance reading when there is no SBE in the higher clause.

Anyone J-Nom way resign-Past-Dec-C say-CI-not-Past-Q  
‘What is the reason x such that (s.t.) no one said John resigned for x?’ (K)

M-Top [J-Nom why resign-Past-Dec-C] say-Past-Q  
‘What is the reason x s.t. Mary said that John resigned for x?’ (K)

Given (11) and (12), one may think that way cannot be preceded by an SBE only when the SBE is in a higher clause (Miyagawa 1997a for Japanese naze ‘why’). Under closer inspection, however, this hypothesis is also incorrect. As demonstrated in (14), even the clausemate SBE incurs ungrammaticality when way is merged in a declarative clause.

(14)  'Ne-nun [amwuto way ku chayk-ul ilk-ci-anh-ass-ta-ko]  
You-Top [anyone why the book-Acc read-CI-not-Past-Dec-C]  
malhay-ss-ni? say-Past-Q  
‘What is the reason x s.t. you said no one read the book for x?’(K)

By contrast, when way is merged in an embedded interrogative clause, way can be preceded by an SBE. This is illustrated in (15).

I-Top [anyone why the book-Acc read-CI-not-Past-Q] know  
‘I know why no one read the book.’(K)

The generalization capturing the distribution of way is presented in (16).

(16)  When way is merged in an interrogative clause, SBEs may precede it. On the other hand, when way is merged in a declarative clause, SBEs cannot precede it.

On the surface, the generalization in (16) may seem puzzling because there is no obvious reason why the position of the SBE should be correlated with the types of the clause that way merges into. However, once we understand the position of way in the syntax, (16) is captured in a principled way.
I argue that the peculiar behaviors of way with respect to the IE are attributed to its base position in the syntax. Specifically, I propose that way is a clausal modifier, which is externally-merged (base-generated) in [Spec,CP] of the clause it semantically modifies.\footnote{Similar proposals have been made for wh-fronting languages like French and Italian (Rizzi 1990, 1999). See also Lin (1992) for Chinese weishenme ‘why’.} I label this proposal the 
*Clausal Modifier Hypothesis* (CMH). In the following, I demonstrate how the generalization in (16) is explained under the CMH.

Consider first the behavior of way merged in interrogative clauses (see (11) and (15)). As illustrated in (17), when way is merged in an interrogative clause, the clause has a Q-morpheme that licenses way in [Spec,CP]. Through Spec-Head agreement between way and Q, thus, way is licensed in the overt syntax (cf. Chomsky 2000).\footnote{Chomsky (2000) does not allow Spec-Head relationship as a legitimate configuration for agreement. The CMH can be accommodated into Chomsky (2000) by assuming that way is a ‘head’ that probes the head C (see the similar analysis on expletives and T in Chomsky 2000).} After way is merged in [Spec,CP], an SBE may scramble over way, as illustrated in (18) (see Y-S Lee 1993 and K-W Sohn 1995 for independent evidence that SBEs may scramble in Korean). This movement, however, does not trigger the IE because way has already been licensed in the overt syntax. Hence, (11a) is grammatical. The tree structure for (11a) is given in (19). The same account extends to (15).

(17) \[ CP \text{ way}_\text{Q} \ldots \text{SBE} \ldots \]: External-Merge of way
(18) \[ \text{CP SBE}_1 \left[ CP \text{ way}_\text{Q} \ldots \text{SBE}_1 \ldots \right] \]: SBE-Scrambling over way
(19) 

\[
\text{amwuto}_{\text{amwuto}} \quad \text{CP} \quad \text{way} \quad \text{C'} \quad \text{IP} \quad [\text{Q} \ -ni \ -ni \ ku \ chayk-ul \ ilk-ci-anh-ass]
\]

Now let us turn to the behavior of way in declarative clauses. Consider (20) and (21), which represent the structure of (12) and (14), respectively.

(20) \*

\[
[\text{Q SBE}_1 \left[ CP \text{ way}_\text{Q} \ldots \text{C}_{1} \ldots \right]] \quad \text{; see (12)}
\]

(21) \*

\[
[\text{Q SBE}_1 \left[ CP \text{ way}_\text{Q} \ldots \text{t}_{1} \ldots \right]] \quad \text{; see (14)}
\]

By requirement of the CMH, way in (20) is merged into [Spec,CP] of the declarative clause. Importantly, however, way in (20) cannot be licensed in its External-Merge position, in contrast to way in (17). Since the declarative
clause does not contain the Q-morpheme, way in (20) must undergo LF-movement to be licensed. The SBE preceding way, however, blocks this LF-movement. Hence, the sentence is ungrammatical. The same account extends to (21). In short, way is merged into [Spec,CP] in the overt syntax, and this property leads to the non-uniform behavior of way with respect to the Intervention Effect.

4. Subject Scrambling in Why-questions

One of the immediate consequences of the CMH is that we have direct evidence for SS. As illustrated in (22), the subject John may topicalize or scramble across way. Under the CMH, this indicates that a subject may scramble over [Spec,CP] clause-externally. Hence, to the extent that the CMH is successful, we have a strong argument for the existence of SS.

(22) John-i/un way t'i ku chayk-ul ilk-ess-ni?
    John-Nom/Top why the book-Acc read-Past-Q
    ‘Why did John read the book?’ (K)

The floating numeral quantifier test provides further evidence for the existence of SS. If a subject is indeed base-generated below way, we predict that the subject licenses a subject-oriented floating quantifier across way.

3 As demonstrated in (23), this prediction is borne out. (Way-question is embedded in (23) to preserve the naturalness of the colloquial speech. However, the same fact holds in root way-questions.)

(23) (Na-nun) [haksayng-tul-i way sey-myeng hakkyo-lul
     (I-Top) student-Pl-Nom why three-CL school-Acc
     pangmwunha-yess-nunci] an-ta
     visit-Past-Q know-Dec
     ‘I know why three students visited the school.’ (K)

In sum, interesting facts concerning the Intervention Effect lead us to pinpoint the position of way in the overt syntax as [Spec,CP]. This, in turn, provides a direct way of testing non-string vacuous scrambling of a subject. Given that way is in [Spec,CP], the fact that a subject may precede way constitutes a genuine instance of SS without involving Case-checking.

3 I thank Howard Lasnik (p.c.) for pointing out this prediction.
4 As for Japanese, there are differences among speakers about whether (11a) is allowed (Miyagawa 1997a; cf. Tanaka 1997; Ayumi Ueyama (p.c.)). The Korean paradigm shown in section 3 and 4, however, holds for those Japanese speakers allowing (11a). Thus, the CMH may extend to those Japanese speakers. For the lack of space, Japanese examples are omitted.
5. Child Korean *Why*-questions

Considering that adult Korean freely allows scrambling, it is not surprising that we find both sentences in (24) grammatical.

(24) a. Way John-i ku chayk-ul ilk-ess-ni?
   Why John-Nom the book-Acc read-Past-Q
   ’Why did John read the book?’

b. John-i way ku chayk-ul ilk-ess-ni?

Suppose, however, that some Korean speakers do not allow scrambling. Then, under the CMH, we predict that this group of speakers would not utter (24b). Particularly, since these speakers do not allow SS, the CMH predicts that a subject, in general, would not precede *way* for these speakers. Of course, it is difficult to test the prediction with adult Korean speakers due to their ability to scramble. Interestingly, however, child Korean does provide such an opportunity.

It has been noted that Korean children are not good at word order changing operation, such as scrambling, when they are in the early stages of language acquisition (2;00-3;00) (Kim 1997 for details; but see also Otsu 1994 for perception tests with Japanese children). An interesting prediction follows from this observation.

(25) If child Korean does not allow scrambling in contrast to adult Korean, child utterances will show the original word order between *way* and a (non-topic) subject. Under the CMH, we predict that *way* in child Korean will precede the subject, in most cases.

To evaluate this prediction, I examined a corpus containing 53 files of Korean child JK’s spontaneous speech, whose age ranged from (2;00) to (2;11). The main concerns of the study were the following: (i) to find the word order pattern in child *way*-questions, (ii) to compare *way* ‘*why*’ and *wh*-adjunct *eti* ‘*where*’ in their distributions with respect to the subject, (iii) to compare child and adult *way*-questions in terms of word order.

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5 Kim (1997) examined five children’s spontaneous production data, showing that non-canonical word order is rare (ranging from 6% to 27%) in early child Korean.

6 I am deeply grateful to Seung-Bok Lee for allowing me to study the JK data. I am thankful to Tania Ionin and William Snyder for helping me perform the statistical analyses on the data.

7 The following method was employed for the analysis. A token was counted as one utterance. Each utterance of self-repetition was counted as one token. Total imitation of adult speech was not counted as a token. Partial or transformed imitation of adult speech was counted as one token. If the nominative marker is dropped, it is hard to tell whether the subject has undergone topicalization or scrambling. Thus, I counted only the subjects clearly marked with a nominative marker.
Overall, I found 111 tokens of *way*-questions with more than one word in the JK speech. But most of them did not represent the subject overtly (72.97%, 81/111) or did not mark it with the Case-marker (12.6%, 14/111). Crucially, however, when the subject was overtly marked with the nominative Case marker, a remarkably consistent pattern was observed. The table in (26) summarizes this pattern in JK *way*-questions.

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

<table>
<thead>
<tr>
<th>Word Order</th>
<th>Tokens</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>way</em> S_{NOM} (O) (Verb)</td>
<td>12</td>
<td>75%</td>
</tr>
<tr>
<td>S_{NOM} <em>way</em> (O) (Verb)</td>
<td>4</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>100%</td>
</tr>
</tbody>
</table>

As illustrated in (26), *way* in the JK data precedes the nominative marked subject at a very high rate: 75% (12/16). Thus, the data in (26) support the prediction of the CMH in (25). (There were extremely rare instances of object scrambling (*object <*way*) in JK *way*-questions (2/111, 1.8%).)

One might think that the pattern in (26) could be a general pattern occurring with any *wh*-adjunct in child Korean. The data, however, show that this is not the case. In sharp contrast to *way*, *eti* ‘where’ never preceded the nominative subject. This is illustrated in (27). As described in (28), the difference between *way* and *eti* in their placement is statistically significant.

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

<table>
<thead>
<tr>
<th>Word Order</th>
<th>Tokens</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>eti</em> S_{NOM} (O) (Verb)</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>S_{NOM} <em>eti</em> (O) (Verb)</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>100%</td>
</tr>
</tbody>
</table>

(28) The contrast between *way*- and *eti*-questions in JK speech

<table>
<thead>
<tr>
<th>Child WH</th>
<th>wh S_{NOM}</th>
<th>S_{NOM} wh</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>way</em> ‘why’</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td><em>eti</em> ‘where’</td>
<td>0</td>
<td>14</td>
</tr>
</tbody>
</table>

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

Overall, in *eti*-questions, there were a large number of subject omissions (45.2%, 66/146) and nominative Case-drop (45.2%, 66/146). The rate of object scrambling in JK *eti*-questions was extremely low (3.42%, 5/146), as in *way*-questions.
Finally, one might wonder whether the pattern in (26) may result from mere imitation of adult input. The data, however, demonstrate that this is not the case. Refer to the table (29).

(29) Adult way-questions in the JK files

<table>
<thead>
<tr>
<th>Word Order</th>
<th>Tokens</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>way NOM (O) (Verb)</td>
<td>32</td>
<td>34%</td>
</tr>
<tr>
<td>S NOM way (O) (Verb)</td>
<td>63</td>
<td>66%</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100%</td>
</tr>
</tbody>
</table>

In contrast to the child data, the subject<way order was the dominant order (66%) for adults communicating with JK. This contrast shows that the result in (26) did not originate from the influence of the adult input. In fact, the child reversed the predominant subject<way order in the adult input into the way<subject order in his own speech. Statistically, the difference between the adult and child in the placement of way reached significance, as illustrated in (30).

(30) Child vs. Adult way-questions

<table>
<thead>
<tr>
<th></th>
<th>way S NOM</th>
<th>S NOM way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Adult</td>
<td>32</td>
<td>63</td>
</tr>
</tbody>
</table>

\(\chi^2=9.7694744, p<.01\)

6. Summary and Implications

With close examinations of the distribution of way ‘why’ in Korean, I proposed that way is directly merged in [Spec,CP] and showed that way is subject to the Intervention Effect, contrary to the previous suggestions. Further, investigating the behaviors of way both in adult and child Korean, this paper demonstrated that a subject may undergo clause-internal scrambling over [Spec,CP]. This paper implies that given that subject scrambling is allowed, previous arguments relying on ‘the ban on subject scrambling’ should be reconsidered. In particular, the floating quantifier paradigm discussed in Saito (1985) requires a new account.

References


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