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When *in-situ* languages diverge: Altaic vs. Non-Altaic *wh*-adjunct constructions *

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This paper discusses the peculiar interactions between *wh*-adjunct ‘why’ and the *Intervention Effect* (Beck and Kim 1997), with a comparative approach to *in-situ* languages: Korean, Japanese, Turkish, and Chinese. This paper shows that in *in-situ* languages, there exists a systematic language-internal and cross-linguistic asymmetry between ‘why’ with short distance vs. long distance construal. I maintain that language internal peculiarities of ‘why’ is attributed to the base-merge position of ‘why’, [Spec,CP] (cf. Rizzi 1990). Further, I demonstrate that cross-linguistic divergences between Altaic vs. Non-Altaic *why*-questions are originated from *Scrambling* properties of Altaic languages.

1. Introduction

It has been much discussed in the literature that ‘why’ in *in-situ* languages (*why-in-situ*, hereafter) behaves differently from other *wh*-phrases (Huang 1982, Akar 1990, Nishigauchi 1990, Saito 1992, Aoun and Li 1993, Tsai 1994, Sohn 1995, Chung 1995, Arslan 1999, to name a few). This peculiarity of *why-in-situ* has often been attributed to special mechanisms that target ‘why’, but not other *wh*-phrases, such as Empty Category Principle (ECP) (Huang 1982), Covert movement (Tsai 1994), or Ban on covert pied-piping (Nishigauchi 1990, Saito 1994). In this paper, however, I investigate less-studied syntactic properties of *why-in-situ* that cannot be attributed to the previous proposals. In particular, I discuss **language-internal and cross-linguistic diversity among *why*-constructions**, with a comparative approach to *in-situ* languages: Korean (K), Japanese (J), Turkish (T), and Chinese (C). I show that in Altaic (K/J/T), ‘why’

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sometimes does and sometimes does not behave like other *wh*-phrases. Further, I demonstrate that the behaviors of Altaic and non-Altaic (C) ‘why’ systematically diverge and converge, depending on the scope of ‘why’ at LF. I propose that these diverse behaviors of *why-in-situ* are due to the restriction on the initial merge position of ‘why’ ([Spec,CP] as I will argue) in *in-situ* languages (cf. Rizzi 1990, 1999). Crucial evidence for the proposal comes from the non-uniform interactions between ‘why’ and the *Intervention Effect* (Beck and Kim 1997, Hagstrom 1998).

The paper proceeds as follows. Section 2 discusses the peculiar properties of ‘why’ with respect to the *Intervention Effect* in K/J, pointing out the problems with previous approaches. Section 3 proposes a new account for the puzzles on K/J ‘why’. Section 4 shows that the proposal extends to Turkish with an interesting implication. Section 5 compares the diverging behaviors of ‘why’ in Altaic and Non-Altaic, and illustrates that our proposal predicts such divergence. Section 6 concludes the paper.

2. A Puzzle: Language-Internal Diversity of *Why*-constructions in Altaic

2.1 Background: Peculiarity of ‘why’ in K/J

In K/J, there is a well-known word order restriction between a *wh*-phrase and a Scope-Bearing Element (SBE) (Hoji 1985 and Kim 1989). As shown in (1a) and (2a), a *wh*-phrase cannot be preceded by an SBE such as NPI, ‘-only’, ‘-also’, ‘someone’, ‘everyone’. The sentences become grammatical when the *wh*-phrase is scrambled over the SBE, as in (1b) and (2b).

- | | | | | |
|-----|----|-------------------------------|------------------------------|--|
| (1) | a. | *Amwuto | mwues-ul | ilk-ci- an -ass-ni? |
| | | Anyone | what-Acc | read-CI-Neg-Past-Q |
| | | ‘What did no one read?’ | | |
| | b. | Mwues-ul ₁ | amwuto t ₁ | ilk-ci- an -ass-ni ¹ (K) |
| (2) | a. | *Hanako-sika | nani-o | yoma-nai no? |
| | | Hanako-only | what-Acc | read-Neg Q |
| | | ‘What will only Hanako read?’ | | |
| | b. | Nani-o ₁ | Hanako- sika | t ₁ yoma-nai no? (J) |

This word order restriction was analyzed as an *LF-Blocking Effect* by Beck and Kim (1997), and later called the *Intervention Effect (IE)* by Hagstrom (1998). On this approach, the ill-formedness of (1a) and (2a) is attributed to the IE that an SBE blocks the LF movement of a *wh*-phrase to its checking position [Spec,CP], as stated in (3) (see also Beck 1996, Pesetsky 2000, Kim 2002; For different approaches, see Takahashi 1990, Sohn 1995, Tanaka 1997, Lee and Tomioka 2001, Kratzer and Shimoyama 2002).

¹ D-linked *wh*-phrases do not show the word order restriction seen in (1) and (2). This paper restricts the discussion to non-D-linked *wh*-phrases. See Ko (2002) for further discussion about ‘for what reason’ vs. ‘why’ in Korean and Japanese.

- (3) **Intervention Effect (IE):** A *wh*-phrase cannot move across certain SBEs at LF. The SBEs triggering the IE include *negation*, *NPI*, ‘only’, ‘even’, ‘someone’ (*nonspecific*), and ‘everyone’.²

The diagrams in (4) illustrate the asymmetry between the scrambled and unscrambled sentences in (1) and (2). According to the IE, *mwues* in (1a) and *nani* in (2a) cannot be licensed, because the SBE *amwuto* ‘anyone’ and *hanako-sika* ‘hanako-only’ block LF-movement of the *wh*-phrases to their checking position, as illustrated in (4a). Scrambled *mwues* in (1b) and *nani* in (2b), on the other hand, are licensed, because the SBE does not interfere with the LF-movement of the scrambled *wh*-phrases, as shown in (4b).³

- (4) a. * $[Q \leftarrow \text{SBE} \text{-----} \text{what}]$: (1a),(2a)
 b. $\sqrt{[Q \leftarrow \text{what}_i \text{ SBE } t_i]}$: (1b),(2b)

Interestingly enough, however, it has been noted that ‘why’ in K/J shows a rather peculiar distribution. Unlike other *wh*-phrases, ‘why’ may be preceded by an SBE in K/J (Cho 1998 and Lee 2002 for Korean; Miyagawa 1997a, Kuwabara 1998, and Watanabe 2000 for Japanese). The examples are given (5) for Korean and (6) for Japanese (Kuwabara 1998:10).⁴

- (5) a. **Amwuto way** ku chayk-ul ilk-ci-an-ass-ni?
 Anyone why the book-Acc read-CI-Neg-Past-Q
 ‘Why did no one read the book?’
 b. **Way amwuto** ku chayk-ul ilk-ci-an-ass-ni?
 (6) a. **Taroo-sika naze** sono hon-o yoma-nakat-ta no?
 T.-only why that book-Acc read-Neg-Past Q
 ‘Why did only Taroo read that book?’
 b. **Naze Taroo-sika** sono hon-o yoma-nakat-ta no?

Based on this contrast between ‘why’ and other *wh*-phrases, previous literatures have concluded that ‘why’ is simply not subject to the IE. I will refer to this line of analyses as the *Non-Interaction Approach* (7) (see Cho 1998, Kuwabara 1998, and Watanabe 2000 for details).

² The exact nature of the SBE triggering IE has been controversial. The SBEs are quantifiers for Beck and Kim 1997, Anti-Topic Items for Lee and Tomoika 2001, and Focus elements for Kim 2002. This paper does not attempt to account for the characteristics of the SBEs, but rather focuses on the interactions between SBEs and ‘why’. For concreteness, I assume that the elements reported as QUIB (Quantifier Induced Barrier) in Beck and Kim (1997) are SBEs triggering IE. The list of the SBEs is given in (i) with K/J order. I employ NPI examples for the purpose of presentation, but the same patterns hold for other SBEs in (i).

(i) *-man/-sika* ‘only’, *-to/-mo* ‘also’, *-kkaci/-sae* ‘even’, *nukwunka/dareka* ‘someone’(nonspecific) *nwukwuna/daremo* ‘everyone’, *-an/nai* ‘not’.

³ The linear order in (4) reflects the hierarchical order in the overt syntax.

⁴ There is no doubt that (5a) is grammatical in Korean. Some Japanese speakers, however, find (6a) somewhat degraded (Tanaka 1997, Ayumi Ueyama personal communication (p.c.)). The discussion in this paper applies to K/J speakers who accept (5a) and (6a), in contrast to (1a) and (2a).

- (7) ***Non-Interaction Approach:*** Unlike other *wh*-phrases, ‘why’ is “exempt” from the Intervention Effect, because ‘why’ undergoes a special licensing process that is not subject to the IE.

2.2 Is K/J ‘why’ really exempt from the Intervention Effect?

The Non-Interaction Approach argues that ‘why’ may be preceded by an SBE in (5) and (6), because ‘why’ in K/J is free from the IE. This approach, therefore, crucially assumes that ‘why’ occupies “a lower position than an SBE” in the overt syntax, but freely licensed “across” the SBE at LF, unlike other *wh*-phrases. This assumption is described in (8).

- (8) $\sqrt{[_{CP} Q \leftarrow \text{SBE} \dots \text{why} \dots]}$

I argue that the Non-Interaction approach based on this assumption faces two fatal problems. One problem comes from the scope property of *way* ‘why’ in Korean, and the other comes from emergence of the Intervention Effect in *why*-constructions with long-distance construal.

Let me first discuss the problem concerning scope of *way*. Reason Operators (RO) in Korean such as *etten iyu-lo* ‘for what reason’ or *-se* ‘because’ show scope ambiguity with respect to SBEs such as *an-* ‘not’ and *-man* ‘only’. This is illustrated in (9) and (10).^{5 6}

- (9) **Amwuto etten iyu-lo saimha-ci-an-ass-ni?**
 Anyone which reason-for resign-CI-Neg-Past-Q
 ‘For what reason, is it the case that nobody resigned?’ (Reason>>Neg)
 ‘What was the reason (among these) such that there is nobody who had that reason for resigning?’ (Neg>>Reason)
- (10) **John-man etten iyu-lo saimha-yess-ni?**
 John-only which reason-for resign-Past-Q
 ‘For what reason is it the case that only John resigned?’ (Reason>>only)
 ‘What is the reason (among these) such that it is only John who had that reason for his resigning?’ (only>>Reason)

Etten iyu-lo in (9) may have two readings with respect to the negation. When the RO is interpreted higher than negation, (9) presupposes that ‘nobody resigned’ and asks the reason for that situation. On the other hand, when the RO is interpreted lower than the negation, (9) does not presuppose that ‘nobody resigned’. It may be the case that somebody resigned. On this reading, the speaker asks the hearer to pick out a reason such that nobody pointed out that

⁵Notice that D-linked ‘for what reason’ in (9) is not subject to the IE so that it can be preceded by ‘anyone’, unlike non-D-linked *wh*-phrases (see footnote 1). I also note that unlike (9), only the Reason>>Neg reading is available with short form negation. Interestingly, the Japanese counterpart of (9) also has ‘Reason>>Neg reading’ only (Shoichi Takahashi p.c.). I speculate that the lack of ambiguity in the Japanese counterpart of (9) comes from the lack of long-form negation in Japanese.

⁶Strictly speaking, the scope of ‘for what reason’ in (9) is always the proposition it dominates at LF since the question operator scopes over the proposition. However, for convenience, I will employ a scope marking notation ‘>>’ or terminology *under/over* to express the possible readings of the sentence. I thank Danny Fox for clarifying this point.

particular reason for their resigning. The example in (10) illustrates that the same type of ambiguity occurs between *-man* ‘only’ and RO in Korean.

Given the ambiguity in (9) and (10), one can conclude that a RO, in principle, may have two readings with respect to negation or ‘only’, as in (11).

- (11) REASON >> SBE (e.g. Negation_{long-form}, ‘-only’) >> REASON

Considering the fact that ‘why’ is a RO like ‘for what reason’, one might expect that *way* ‘why’ in Korean would show the same ambiguity as described in (11). In particular, if ‘why’ were base-generated below an SBE, as argued in the Non-Interaction Approach (see (8)), we predict that there would be no problem in obtaining the lower reading of ‘why’ at LF. However, the scope of *way* contradicts this prediction. As illustrated in (12) and (13), *way* consistently takes scope over the negation and ‘only’.

- (12) **Amwuto way** ku chayk-ul ilk-ci-an-ass-ni?
 Anyone why the book-Acc read-CI-Neg-Past-Q
 ‘Why did no one read the book?’ (Reason >> Neg, *Neg >> Reason)
- (13) **Mary-man way** ku chayk-ul ilk-ess-ni?
 Mary-only why the book-Acc read-Past-Q
 ‘Why did only Mary read the book?’ (Reason >> only, *only >> Reason)

Unlike (9), *way*-question in (12) always presupposes that ‘nobody read the book’, and asks the reason for the situation. Unlike (10), *way*-question in (13) always presupposes that ‘only Mary read the book’, and asks the reason for the situation. The non-existence of the lower reading of ‘why’ in (12) and (13), therefore, casts doubts on the Non-interaction approach arguing that ‘why’ moves “across” an SBE at LF. If *way* had moved from the position below negation or ‘only’, we would wrongly predict scope ambiguity in (12) and (13).

In addition to the problem regarding the scope of ‘why’, the Non-Interaction Approach encounters a more serious problem with respect to the behaviors of ‘why’ with long distance construal. The Non-Interaction Approach argues that ‘why’ in K/J is “exempt” from the IE. If this position is on the right track, we would expect that ‘why’ in K/J can be preceded by an SBE in “any” structural context. Since an SBE does not block the licensing of ‘why’, an SBE must be able to precede ‘why’ in any syntactic position.

Under close investigation, however, this prediction is not borne out. Consider (14) for Korean and (15) for Japanese (see also Miyagawa 1997a), where ‘why’ is merged in an embedded declarative clause.

- (14) ***Amwuto** [John-i **way** saimha-yess-ta-ko] malha-ci-an-ass-ni?
 Anyone J-Nom way resign-Past-Dec-C say-CI-Neg-Past-Q
 ‘What is the reason x such that no one said that John resigned for x?’
- (15) ***Hanako-sika** [Taroo-ga **naze** kuru to] iwa-nakat-ta no?
 H.-only T.-Nom why come C say-Neg-Past Q
 ‘What is the reason x such that only Hanako said that Taroo came for x?’

The Non-Interaction Approach predicts that the sentences in (14) and (15) would be grammatical, because there is no blocking effect for ‘why’ at LF.

However, this is not the case. As shown in (14) and (15), ‘why’ in an embedded declarative clause cannot be preceded by an SBE in a higher clause. This ungrammaticality of (14) and (15) sharply contrasts with grammatical sentences in (16) and (17), where the matrix subject is replaced with a referential DP (without negation).⁷ The ungrammaticality of (14) and (15), thus, challenges the basic premise of the Non-Interaction Approach that ‘why’ is simply free from the IE.

- (16) Mary-nun [John-i **way** saimha-ass-ta-ko] malha-yess-ni?
 M.-Top [J.-Nom why resign-Past-Dec-C] say-Past-Q
 ‘Why did Mary say that John resigned __?’ (K)
- (17) Hanako-ka [Taroo-ga **naze** kuru to] itta no?
 H.-Nom T.-Nom why come C said Q
 ‘Why did Hanako say that Taroo will come __?’ (J)

One might modify the Non-Interaction Approach, and claim that ‘why’ is exempt from the IE *only when* ‘why’ and an SBE are in the same clause (Miyagawa 1997a). This view may accommodate the contrasts between (5)-(6) vs. (14)-(15). Under thorough scrutiny, however, this claim is not correct, either. Consider the following examples.

- (18) *John-un [**amwuto way** ku chayk-lul ilk-ci-an-ass-ta-ko]
 John-Top [anyone why the book-Acc read-CI-Neg-Past-Dec-C]
 malh-yess-ni?
 say-Past-Q
 ‘What is the reason x s.t. John said that no one read the book for x?’
- (19) *John-wa [Mary-**sika naze** sono hon-o yoma-nakat-ta-to] itta no?
 J-Top [M-only why the.book-Acc read-Neg-Past C] said Q
 ‘What is the reason x s.t. John said that only Mary read the book for x?’

If ‘why’ were exempt from the IE with respect to a clausemate SBE, as Miyagawa (1997a) suggests, we expect that (18) and (19) would be grammatical, under the reading where ‘why’ scopes below the negation and the NPI. This prediction, however, is not borne out. The sentences in (18) and (19) do not have the intended reading. It is, at best, an echo question. Thus, (18) and (19) again show that ‘why’ is not free from the IE, contrary to the previous literatures.

To sum up, this section demonstrates the peculiarity of the behaviors of ‘why’ with respect to the IE. As observed in the previous literatures, ‘why’ may be preceded by an SBE in some context, unlike other *wh*-phrases ((5), (6)). More importantly, however, ‘why’ may not be preceded by an SBE in other contexts, just like other *wh*-phrases ((14),(15),(18),(19)). The previous approaches fail to explain these dual aspects of ‘why’ in K/J and make a wrong

⁷ As Daeho Chung and Ayumi Ueyama (p.c.) pointed out, the crucial factor contributing the ungrammaticality of (14) and (15) is the Negation rather than the NPI. The sentences are still ungrammatical when the higher clause contains a negation without an NPI. Importantly, however, this pattern extends to other types of SBEs listed in footnote 2. Thus, one cannot attribute the ungrammaticality of (14) and (15) simply to the weak island effect (Rizzi 1990).

prediction about the scope of ‘why’ at LF. In the next section, I provide a new generalization capturing the puzzling behaviors of ‘why’ and propose an analysis on the puzzle.

3. Proposal and Analysis

3.1 The New Generalization

Though the behaviors of ‘why’ look complex on the surface, there is a consistent factor governing the distribution of ‘why’ in K/J. Namely, the distance between ‘why’ and the question morpheme Q in the overt syntax. In particular, I note the systematic fact that ‘why’ behaves differently from other *wh*-phrases, only when it is *locally* construed within the clause it merged into. This generalization is given in (20).

- (20) a. When ‘why’ and Q are clausemates (*local construal*), ‘why’ may be preceded by an SBE (e.g. (5), (6))
b. When ‘why’ and Q are not clausemates (*non-local construal*), ‘why’ may not be preceded by an SBE (e.g. (14),(15),(18),(19))

Consider first (20a), which illustrates the disparity between ‘why’ and other *wh*-phrases. When ‘why’ and Q are in the same clause as in (5) and (6), ‘why’ is interpreted within the clause it is merged in (i.e. *local construal*). In this context, ‘why’ may be preceded by an SBE, unlike other *wh*-phrases. The generalization in (20b), on the other hand, captures the similarity between ‘why’ and other *wh*-phrases. When ‘why’ and Q are in different clauses as in (14),(15),(18), and (19), ‘why’ is interpreted in a higher clause than the clause it is merged in (i.e. *non-local construal*). In this context, ‘why’ may not follow an SBE, just like other *wh*-phrases. The puzzle is how to capture this generalization in (20).

3.2 Proposal

In the previous literatures, the peculiarity of ‘why’ in K/J has been attributed to the claim that ‘why’ is “exempt” from the IE. As we have seen in section 2.2, however, this view makes wrong predictions. Rather, I argue that ‘why’ is in fact subject to the IE all the time, just like other *wh*-phrases. I propose that the non-uniform behaviors of ‘why’ in K/J are originated from the restriction on its External-Merge position (in the sense of Chomsky 1995, 1999).

It has been suggested that ‘why’ in *wh*-fronting languages is base-generated high in its potential checking position, so does not move (overtly) at all in some context (Bromberger 1985 for English; Rizzi 1990, Boškovic 2000 for French; Rizzi 1999 for Italian). I argue that this suggestion should also extend to *in-situ* languages like K/J. I will call this proposal *External-Merge Hypothesis* (EMH). The detailed description of EMH is given in (21).

- (21) ***External-Merge Hypothesis (EMH)***: ‘Why’ in *wh*-in-situ languages is externally-merged into its potential checking position [Spec,CP] in the

overt syntax. Crucially, the CP that ‘why’ merges into is a declarative or interrogative CP that it semantically modifies.

According to (21), ‘why’ in K/J is merged into [Spec,CP] of a clause that it semantically modifies. This is illustrated in (22a). If the CP is interrogative, it is interpreted within the clause without any movement. If the CP is declarative, it moves to a higher clause at LF to get its WH-feature licensed. As described in (22b), other items like XP and YP may precede ‘why’ in [Spec,CP] via Scrambling or Topicalization in K/J.

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

3.3 Analysis

3.3.1 *Why-in-situ in local construal*

Under the EMH, let us consider the first part of our puzzle: the behavior of *why-in-situ* in local construal (see (20a)). A relevant Korean example is repeated here as (23). The account for Korean extends to Japanese.

- (23) **Amwuto way** ku chayk-ul ilk-ci-an-ass-ni?
 Anyone why the book-Acc read-CI-Neg-Past-Q
 ‘Why did no one read the book?’

The grammaticality of (23) is peculiar in the sense that *way* may follow *amwuto*, in contrast to other *wh*-phrases. On the EMH view, however, this peculiarity is, in fact, expected from the consequence of the External-Merge. Consider the derivation of (23). First, *way* in (23) is externally-merged in [Spec,CP] of the interrogative clause, as shown in (24).

- (24) [CP way_[uWH] Q ...NEG... **amwuto**...]

Importantly, the syntactic requirement of *way* is satisfied just by the External-Merge operation in (24). In more theoretical terms in the Minimalist Program (Chomsky 1995), the uninterpretable WH-feature ([uWH]) of *way* is checked off immediately by [ϕ features, +Q] in Q, since *way* is externally-merged in the checking domain of Q, namely in [Spec,CP] (cf. Chomsky 1999).⁸ Under this view, therefore, *way* in (24) does not undergo any movement at LF.

⁸ This analysis may conflict with Chomsky’s (1999) Derivation by Phase framework (DbP), since DbP does not allow Spec-Head relationship as a legitimate agreement configuration (as pointed out by David Pesetsky and Chris Collins p.c.). However, I suggest that we may reconcile the EMH with the DbP as in (i).

(i) The EMH in the DbP: *way* is externally-merged with C, as a non-branching head.

The DbP does allow External-Merge to value features if it is head-to-head relation. For instance, consider the expletive constructions: *there* as a “head” may value the uninterpretable features in the head *I* via head-to-head agreement. Hence, if *way* is base-merged with C as a head, no conceptual

What makes the matter more interesting is the following. It is well-known that K/J allow long distance Scrambling of SBEs (Saito 1985, Lee 1993), as illustrated in (25) and (26).

- (25) **Amwu-ekey-to_i** John-un [Mary-ka t_i panci-lul
 Anyone-Dat J-Top [M-Nom ring-Acc
 cwu-ci-an-ass-ta-ko] mitnunta
 gave-CI-Neg-Past-Dec-C] believe
 ‘Anyone_i, John believes that Mary did not give a ring to t_i.’ (K)
- (26) **Dare-ni-mo_i** John-wa [Mary-ga t_i yubiwa-o age-nakat-ta to]
 Anybody-Dat J-Top M-Nom ring-Acc give-Neg-Past C
 omotteiru
 think
 ‘Anyone_i, John thinks that Mary did not give a ring to t_i.’ (J)

Given the possibility of NPI movement shown above, I argue that *amwuto* may undergo Scrambling over *way* in (24), as described in (27) (cf. Saito 1985, but see also Sohn 1995).⁹

- (27) [_{CP} **amwuto**₁ [_{CP} way_{t_iWH} Q NEG... t₁...]]

The NPI Scrambling in (27) yields the correct word order in (23), in which *amwuto* precedes *way*. More importantly, however, the Scrambled NPI in (27) does not give rise to the IE. Since *way* has already been licensed by External-Merge, *way* does not move at LF at all. Hence, the NPI may precede *way* without triggering licensing problems at LF.

3.3.2 ‘why’ in non-local construal

Now let us turn to the behavior of ‘why’ in non-local construal. A relevant Korean example is repeated here as (28).

- (28) ***Amwuto** [John-i way saimha-yess-ta-ko] malha-ci-an-ass-ni?
 Anyone J-Nom way resign-Past-Dec-C say-CI-Neg-Past-Q
 ‘What is the reason x such that no one said that John resigned for x?’

problems arise in DbP: *way* may probe Q, just as *there* probes I. Since *way* is, indeed, a non-branching item, it may count both as a minimal and maximal node. Thus, I suggest that (i) might be a possible ramification of the EMH.

⁹ It has been controversial whether a subject may undergo Scrambling or not. Saito (1985) argues that a subject may not Scramble either clause-internally or externally. On the other hand, building on Frasier (1978), Sohn (1995) suggests that a subject, in principle, may Scramble unless parsing difficulty arises (See also Y. Lee 1993 for this position). As for this issue, the EMH takes a position that a subject may undergo Scrambling, at least over ‘why’ in K/J. Therefore, to the extent that the EMH is successful, it supports the view that Scrambling is in principle possible. Further, since Scrambling in (27) does not give rise to parsing problems unlike clause-external scrambling, the EMH view is compatible with Sohn (1995). In my recent work (Ko, in progress), I suggested that the data in Saito (1985) should be account for different principles (Cyclic Linearization, Fox and Pesetsky 2003) rather than Ban on subject scrambling.

Under the EMH, the ungrammaticality of (28) is simply reduced to the IE, as in other *wh*-constructions. Consider the derivation of (28). First, by the requirement of the EMH, *way* is externally-merged in [Spec,CP] of a declarative clause that it modifies. This is illustrated in (29a).

- (29) a. $[_{CP} \text{ way}_{[uWH]} \text{ C } \dots]$
 b. $[_{QP} \leftarrow \text{amwuto} \text{--NEG--} [_{CP} \text{ way}_{[uWH]} \text{ C } \dots]]$

Unlike (24), however, the External-Merge in (29a) cannot license *way*, because the declarative CP lacks the licenser Q. Hence, *way* in a declarative clause must move to a higher clause that does contain Q, as illustrated in (29b). However, since an SBE intervenes between *way* and Q in (29b), *way* cannot move to Q because of the IE. Thus, the IE rules out (28), just like other *wh*-constructions.

In sum, the EMH approach accounts for the local vs. non-local asymmetry of K/J ‘why’ with two inherent properties in K/J: Scrambling and the IE. When locally construed, ‘why’ is licensed in its base position. Hence, the Scrambled SBE does not matter at all. When non-locally construed, on the other hand, ‘why’ must move to a higher clause as other *wh*-phrases. Therefore, the preceding SBE does matter, triggering the IE.

3.3.3 The scope of ‘why’ at LF

In section 2, we have seen that unlike Reason Operators, ‘why’ in Korean may not take scope under SBEs such as Negation or ‘only’ ((9)-(10) vs. (12)-(13)). These scopal differences between ‘for what reason’ and ‘why’ are indeed expected under the EMH. On this approach, ‘why’ is merged into [Spec,CP] unlike other Reason Operators. Hence, as illustrated in (30), there is no trace of ‘why’ under Negation or ‘only’ when they are clausemates.

- (30) a. $[_{CP} \text{ why} \quad [_{IP} \text{ NEG} \quad \text{only} \quad \text{V}]]$
 b. $[_{QP} \text{ for what reason}_i \quad [_{IP} \text{ NEG} \quad \text{only} \quad \mathbf{t}_i \quad \text{V}]]$

Since there is no trace of ‘why’ below the SBEs, there is no reason to expect the lower reading of ‘why’ at LF. In other words, unlike the problematic previous approaches, the EMH derives the lack of lower reading of ‘why’ from the same principle accounting for obviation of the IE.^{10 11}

¹⁰ For the sake of space, I do not discuss a weaker version of the EMH in this paper (but see Ko 2002 for the extensive review). On this view, the EMH assumes that ‘why’ can be, rather than, *must be* merged into [Spec,CP]. This approach is compatible with the IE data and Scope data reported in the paper. However, there is empirical evidence against the weak EMH. If ‘why’ can be merged into the lower position than [Spec,CP], we may expect that Scrambling over ‘why’ may be A or A’-Scrambling. On the other hand, if ‘why’ must be merged in [Spec,CP], Scrambling over ‘why’ must be A’-Scrambling. Based on anaphor binding test (Mahajan 1990, Saito 1992) and idiom chunk test (Miyagawa 1997b), Ko (2002) shows that the fact favors the strong EMH assuming that ‘why’ is obligatorily merged into [Spec,CP] in the overt syntax.

¹¹ As James Yoon (p.c) suggests, this paper does not show direct evidence that in a declarative embedded clause, ‘why’ must be merged into [Spec,CP]. Thus, one might argue that ‘why’ is merged into [Spec,CP] in an interrogative clause, but not in an declarative clause. However, I do not accept this alternative for the following reason. I argue that the EMH is both semantic and syntactic

4. Implications: The EMH extends to Turkish ‘why’

One straightforward implication of the EMH is that the IE provides a diagnostic for the External-Merge position of ‘why’ in other *in-situ* languages. It is difficult to tell the base-merge position of a *wh*-adjunct, since it is not constrained by lexical selection. Furthermore, if a language allows Scrambling, it is even more challenging to pinpoint the base-position of a *wh*-adjunct. The EMH, however, provides a legitimate test for this. If ‘why’ in a language X shows the same distribution as K/J with respect to the IE, we may infer that ‘why’ is externally merged in [Spec,CP] in the language X. By this logic, I argue that we can extend the EMH to Turkish ‘why’, *niye*. As shown in (31) and (32), *niye* behaves exactly like *way* in Korean and *naze* in Japanese.¹²

- (31) **Kimse niye** kitab-ı oku-**ma**-dı?
 Anyone why book-Acc read-Neg-Past
 ‘Why did no one read the book?’
- (32) a. *(Hiç) **kimse** [Ali-nin **niye** ayrıl-dığ-ın]-ı söyle-**me**-di?
 Anyone [A-Gen why leave-Nom-3sgPoss]-Acc say-Neg-Past
 ‘What is the reason x s.t. no one said that Ali resigned for x?’
 b. *Sen [**kimse**-nin **niye** kitab-ı oku-**ma**-dığ-ın]-ı söyle-di-n?
 You anyone-Gen why book-Acc read-Neg-Nom-3sgPoss]-Acc say-Past-2sg
 ‘What is the reason x s.t. you said that no one read the book for x?’

The grammaticality of (31) shows that when *niye* is interpreted within its clause (local construal), the IE is obviated as in K/J. On the other hand, (32) shows that when *niye* is interpreted in the higher clause (non-local construal), the IE emerges, as in K/J. Thus, this systematic asymmetry between the behaviors of *niye* strongly suggests that *niye* is merged into [Spec,CP] as in K/J.¹³

Further, the EMH approach has an interesting consequence for the word order contrasts between *niye* and other *wh*-phrases in Turkish. In Turkish, *wh*-phrases cannot precede a subject, “except” ‘why’. This is illustrated in (33) (Akar 1990; 64-65).

- (33) a. *?**Nereye Ayse** git-ti?
 Where Ayse go-Past
 ‘Where did Ayse go?’

constraints on ‘why’. That is, ‘why’ c-selects a CP and s-selects a proposition as its sister. Thus, it is more reasonable to assume that ‘why’ is consistently merged with a CP it semantically modifies, rather than to argue that the base-position of ‘why’ varies without independent reasons.

¹² I am thankful to Ceyda Arslan and Jaklin Kornfilt for their judgment and transcriptions of the Turkish sentences.

¹³ Turkish NPI may also undergo long distance scrambling like K/J (25) and (26) (Jaklin Kornfilt and Ceyda Arslan p.c.). Hence, I argue that the word order in (31) (*kimse*<*niye*) is derived in the same way as in K/J: long distance scrambling of *kimse* over C.

- b. **Niye** **Sevim** Teyze Nergis-e kiz-di?
 Why Sevim Aunt Nergis-Dat get.angry-Past
 ‘Why did Aunt Sevim get angry at Nergis?’

The contrasts in (33) straightly follow from the EMH. Since *niye* is merged in [Spec,CP], it may precede the subject *Sevim* in (33a) (note also that *subj < niye* order may still be derived by Scrambling of the subject in Turkish). Other *wh*-phrases, on the other hand, must stay in the preverbal focus position due to Turkish focus structure. Therefore, they cannot precede the subject, as in (33b).

5. Altaic vs. Non-Altaic ‘why’: Systematic Divergence/Convergence

It has been known that ‘why’ in *in-situ* languages (K/J/T/C) behaves the same way in island contexts (Huang 1982, Nishigauchi 1990, Chung 1995, Arslan 1999). As far as the IE is concerned, however, Altaic (K/J/T) vs. Non-Altaic (C: Mandarin Chinese) *why*-constructions show systematic divergence. In this section, I demonstrate that such phenomena are, in fact, predicted by the EMH.

As illustrated in (34), *weishenme* ‘why’ in C may not follow an SBE even in local construal, in contrast to ‘why’ in K/J/T ((34a) is good in K/J/T).¹⁴ On the other hand, (35) shows that *weishenme* in long distance construal behaves the same way as ‘why’ in K/J/T ((35a) is also bad in K/J/T).

- (34) a. ***Meiyouren weishenme** cizhi?
 Nobody why resign
 ‘Why did nobody resign?’
 b. **Weishenme meiyouren** cizhi?
- (35) a. *Ni **zhi** renwei [Lisi **weishenme** cizhi]?
 You only think Lisi why resign
 ‘What is the reason x s.t. you only think Lisi resigned for x?’
 b. Ni renwei [Lisi **weishenme** cizhi]?
 You think Lisi why resign
 ‘Why_i do you think Lisi resigned t_i?’

The EMH provides an answer for this interesting divergence and converge between Altaic and Chinese *why-in-situ*. Under the EMH, ‘why’ precedes all the elements dominated by CP in the base structure (36a), and that elements may undergo long distance movement over ‘why’ to precede it (36b).

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

Suppose, however, that an *in-situ* language, unlike K/J/T, allows long distance movement only for very limited elements. Then, the EMH predicts that this

¹⁴ Other SBEs such as *zhiyou NP* ‘only NP’, *henshao* ‘few people’ behave the same way as *meiyou NP* (see Aoun and Li 1993, Cheng and Rooryck 2001, Guerin and Soh 2003 for examples and further discussion).

restriction should play a role in deciding the word orders with *why-in-situ* in the language. I argue that this is the case in Chinese.

In particular, I note the fact that Chinese allows less freedom in word order changing operations, in comparison to K/J/T: (i) Chinese does not allow long distance Scrambling (Soh 1998 for short Scrambling in C). (ii) Chinese allows long distance Topicalization, but only for a certain limited items.¹⁵ Therefore, if Chinese is subject to the EMH,¹⁶ we predict that an element may precede *weishenme* only if it may undergo A'-Topicalization (long distance) over C. This is illustrated in (37).

(37) [CP [XP_i]_{A'-topic} [CP *weishenme* t_i ...]]

In fact, this prediction is borne out and explains the discrepancy between Chinese vs. Altaic. A definite NP in Chinese may undergo long distance Topicalization (Huang 1982, Li 1996). Not surprisingly, a definite NP may precede *weishenme* (Lin 1992). More interestingly, however, SBEs in Chinese cannot undergo long distance Topicalization, as described in (38).

- (38) a. ***Meiyounen**, Zhangsan shuo [(tamen)hen congming]
 Nobody, Zhangsan said (they) very smart
 'Nobody_i, Zhangsan said that they_i are very smart'
 b. ***Zhiyou Lisi**, Zhangsan shuo [(ta) hen congming]
 Only Lisi, Zhangsan said (she) very smart
 'Only Lisi_i, Zhangsan said that she_i is very smart'

Under the (37), the EMH correctly predicts that SBEs in Chinese cannot precede *weishenme* in (34). In this respect, Chinese is crucially different from K/J/T. As seen in the previous sections, SBEs in K/J/T can undergo long distance movement ((25),(26), footnote 13), and thereby may precede 'why' with local construal. On the contrary, SBEs in Chinese cannot undergo long distance movement, so cannot precede 'why', either. In short, the divergence between Altaic vs Chinese *why*-constructions reduces to the fact that Chinese disallows long distance scrambling, unlike K/J/T.

One remaining issue is the convergence between Altaic vs. Chinese *why-in-situ* with non-local construal (see (35)). On the EMH, this emergence of uniform behaviors of 'why' in Altaic and Chinese is naturally explained by the simple assumption that these languages are subject to the same LF constraint, the IE. Since 'why' in non-local construal does move at LF both in Altaic and Chinese, it manifests the IE uniformly. The convergence between Altaics and Chinese is derived without further stipulation. This view is also desirable, given the uniform behavior of 'why' in other islands in *Altaic* and *Chinese*.

¹⁵ I abstract away from the issue of whether Topicalization involves movement or base-generation (refer to Li 1996, and references therein). For presentation purpose, I follow the movement analysis defended by Huang (1982). Our argument, however, does not hinge on a particular analysis on Topicalization. The restriction on Topic movement may well be translated into the restriction on binding *pro* from the base-generated Topic.

¹⁶ See also Lin (1992). For independent reasons from the discussion developed here, Lin (1992) argued that *weishenme* is base-generated in [Spec,CP].

6. Conclusion

This paper argues that ‘why’ in *in-situ* languages is directly merged into its potential checking position [Spec,CP] in the overt syntax (EMH). This proposal accounts for the various complex behaviors of ‘why’ in Altaic and Chinese, which cannot be attributed to the previous claims that ‘why’ is an exception to the IE. In particular, I showed that the EMH accounts for the distinctions between *why-in-situ* in Altaic (K/J/T) with local vs. non-local construal. The divergence between Chinese vs. Altaic in *why*-constructions follows from the restrictions on the word order changing operations in each language. The cross-linguistic convergence in the behaviors of ‘why’ with non-local construal is derived from the account that *why-in-situ* is uniformly subject to the IE.

References

- Akar, Didar (1990). *Wh-Questions in Turkish*. Unpublished MA thesis, Boğaziçi University.
- Aoun, Joseph and Yen-hui Audrey Li (1993). Wh-elements in situ: Syntax or LF? *Linguistic Inquiry* 24(2):199–238.
- Arslan Zekiye Ceyda (1999). *Approaches to Wh-Structures in Turkish*. Unpublished MA thesis. Bogazici University.
- Beck, Sigrid (1996). Quantified structures as barriers for LF movement. *Natural Language Semantics* 4:1–56.
- Beck, Sigrid, and Shin-Sook Kim (1997). On wh- and operator scope in Korean. *Journal of East Asian Linguistics* 6:339–384.
- Boskovic, Zeliko. (2000) Sometimes in SpecCP, Sometimes in-situ. In R. Martin, D, Michael and J. Uriagereka (eds.), *Step by Step*. Cambridge, MA: MIT Press.
- Bromberger, Sylvain (1985). What we don’t know when we don’t know why. Ms. MIT
- Cheng, Lisa and Johan Rooryck (2001). Types of Wh-in-situ, Ms, Leiden University.
- Cho, Eun (1998). Why, Contrastive Topic and LF Movement, *Japanese/Korean Linguistics* 8: 403-415
- Chomsky, Noam (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, Noam (1999). Derivation by Phase. *MIT Occasional Papers in Linguistics* 18. MITWPL.
- Chung, Daeho (1995). *On the Representation and Licensing of Q and Q-Dependencies*. Ph.D dissertation. University of Southern California.
- Fox, Danny and David Pesetsky (2003). Cyclic Linearization and the Typology of Movement, a handout distributed at Syntax Seminar, MIT 2003 Spring.
- Frasier, Lyn (1978) *On Comprehending Sentences: Syntactic Parsing Strategies*. Ph.D dissertation. University of Connecticut.
- Guerin, Valerie and Hooi Ling Soh (2003). Intervention Effect & Case Checking in Mandarin Chinese & French Wh-in situ, Paper presented at the 77th LSA.
- Hagstrom, Paul (1998). *Decomposing Questions*. Ph.D dissertation. MIT. Distributed by MITWPL.
- Hoji, Hajime (1985). *Logical Form Constraints and Configurational Structures in Japanese*, unpublished Ph.D. dissertation, University of Washington.
- Huang, C.T. James (1982). *Logical relations in Chinese and the Theory of Grammar*. Ph.D. dissertation, MIT. Distributed by MITWPL.
- Kim, Soo Won (1989). Wh-phrases in Korean and Japanese are QPs. In Phil Branigan, Jill Gaubling, Miori Kubo, and Kumiko Murasugi (eds.), *Papers from the Student conference in Linguistics, MITWPL 11*. Cambridge, MA: MITWPL.

- Kim, Shin-Sook (2002). Focus matters: Two types of intervention effect, Paper presented at *WCCFL 21*.
- Ko, Heejeong (2002). External-Merge of *why-in-situ*, Ms. MIT
- Kratzer, Angelika and Junko Shimoyama (2002). Indeterminate pronoun: The view from Japanese. Ms. available at www.semanticsarchive.net.
- Lee, Young-Sook (1993). *Scrambling as Case-Driven Obligatory Movement*. Ph.D dissertation. University of Pennsylvania.
- Lee, Ki-Suk and Satoshi Tomioka (2001). Intervention effects are topic effects: Wh-questions in Japanese and Korean, Paper presented at Japanese and Korean Linguistics 10, UCLA.
- Lee, Mina (2002). Why is “why” different?”, Paper presented at *CLS 38*.
- Li, Jen-i Jelina (1996). *Preverbal NP Positions in Mandarin Chinese*. unpublished Ph.D dissertation, University of Arizona.
- Lin, Jo Wang (1992). The Syntax of Zenmeyang ‘how’ and Weishenme ‘why’ in Mandarin Chinese, *Journal of East Asian Linguistics* 1: 293-331.
- Mahajan, Anoop (1990). *The A/A-bar distinction and movement theory*. Ph.D. dissertation, MIT. Distributed by MITWPL.
- Miyagawa, Shigeru (1997a). Wh chains and quantifier induced barriers. Ms. MIT.
- Miyagawa, Shigeru. (1997b). Against Optional Scrambling, *Linguistic Inquiry* 28: 1–25.
- Nishigauchi, Taisuke (1990). *Quantification in the theory of grammar*. Dordrecht: Kluwer.
- Pesetsky, David (2000). *Phrasal Movement and Its Kin*. Cambridge, Mass: MIT Press.
- Rizzi, Luigi (1999). On the position of “Int(errogative)” in the Left periphery of the clause. Ms. Università di Siena
- Rizzi, Luigi (1990). *Relativized minimality*. Cambridge, MA: MIT Press.
- Saito, Mamoru (1994). Additional-*wh* effects and the adjunction site theory. *Journal of East Asian Linguistics* 3:195–240.
- Saito, Mamoru (1985). *Some asymmetries in Japanese and their theoretical implications*. Ph.D. Dissertation, MIT. Distributed by MITWPL.
- Soh, Hooi Ling (1998). Object Scrambling in Chinese, Ph.D dissertation, MIT, Distributed by MITWPL.
- Sohn, Keun-Won (1995). *Negative Polarity Items, Scope and Economy*. Ph.D dissertation. University of Connecticut. Distributed by MITWPL.
- Takahashi, Daiko (1990). Negative Polarity, Phrase Structure, and the ECP, *English Linguistics* 7:129-146.
- Tanaka, Hidekazu (1997). Invisible Movement in Sika-Nai and the Linear Crossing Constraint, *Journal of East Asian Linguistics* 6: 143–188.
- Tsai, Wei-tien Dylan (1994). *On Economizing the Theory of A-bar Dependencies*. Ph.D Dissertation, MIT. Distributed by MITWPL.
- Watanabe, Akira (2000). Absorption: Interpretability and feature strength. Ms. University of Tokyo.

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