

Wh-Licensing in Korean, Japanese, Chinese, and English

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ABSTRACT

The Journal of Studies in Language 34.3, 475-489. This paper compares *wh*-phrases-in-situ in Korean, Japanese, and Chinese with their overly-moved counterparts in English. Recently, Abe (2017) takes an Agree-based Minimal Search approach, while Saito (2017) takes a covert movement approach, revealing how *wh*-elements in Japanese associate with the corresponding Q-particles. On the other hand, it has been argued that, like those in English, *wh*-expressions in Chinese undergo phrasal movement to the Spec of CP to be adequately licensed (among others, see also Pan 2014). However, Chinese differs from English considering where *wh*-expressions are actually realized. In keeping with the recent proposals on *wh*-movement and interpretation in these languages, this paper uses three newly recruited diagnostics to show that Korean/Japanese argument *wh*-phrases undergo overt Agree-based licensing, but Chinese and English counterparts undergo overt phrasal movement, with the tail of the *wh*-chain realized in the former language but its head realized in the latter language. (Dongguk University)

Keywords: *wh*-licensing, multiple *wh*-question, intervention effect, island conditions, universal QP, negative QP



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본인이 투고한 논문은 다른 학술지에 게재된 적이 없으며 타인의 논문을 표절하지 않았음을 서약합니다. 추후 중복게재 혹은 표절된 것으로 밝혀질 시에는 논문게재 취소와 일정 기간 논문제출의 제한 조치를 받게 됨을 인지하고 있습니다.

1. Introduction

There have been not a few attempts to account for the movement of *wh*-expressions which have shed lights on the way that they are licensed across different languages. Variations in *wh*-movement across languages are mainly classified into two types: *wh*-movement and *wh*-in-situ languages. In English, one of the typical languages exhibiting *wh*-movement, *wh*-expressions move to the initial position of a clause to take its scope, whereas in Korean, Japanese and Chinese, *wh*-expressions apparently stay in-situ where it is base-generated.

In this paper, three ways of testing the distributional aspects of *wh*-phrases in different contexts provide how *wh*-phrases associate with the corresponding Q-particles: (i) *wh*-phrases embedded in (strong) island contexts, (ii) either *wh*-phrases in weak islands produced by a negative quantifier or their scope interaction with a universal quantifier, and (iii) two or multiple *wh*-phrases in embedded clauses.

2. The Syntactic Way of Associating a Wh-Phrase with a Complementizer in Island Contexts

Korean and Japanese as *wh*-in-situ languages do not exhibit island sensitivity when a *wh*-argument is embedded in the complex NP island, as follows:

- (1) [Cheli-ka nwukwu-eykey ponayn] chayk-i hungmi iss-no?¹⁾
 Cheli-NOM who-DAT send book-NOM interesting be-Q
 ‘Lit. Book that who wrote is interesting?’
- (2) John-wa [Mary-ni nani-o ageta] hito-o sitteiru no?
 John-TOP Mary-DAT what-ACC gave person-ACC know Q
 ‘Lit. John knows [the person who gave what to Mary]?’

The acceptability of (1) with the *wh*-question morpheme *-no* of Kyeongsangnam-do Korean dialect shows that the *wh*-argument in the complex NP island can take a matrix scope. As an acceptable reply to (2), it can be answered with ‘John knows the person who gave a book to Mary.’ This is true of the Japanese *wh*-argument in the same island that can take a matrix scope as well. This indicates that a *wh*-argument in Korean and Japanese is not subject to the complex NP condition (CNPC).

In order to address the issue of how a *wh*-argument in an island context in Korean and Japanese is licensed, there are two approaches proposed: minimal Search (Abe 2017) and LF-movement whereby *wh*-expressions associate with Q-particles (Satio 2017). In the minimal Search approach, it is proposed that the closest C_Q searches for and licenses a *wh*-argument. On the other hand, in the LF-movement approach, it is proposed that a *wh*-expression in Japanese (and also Korean) covertly moves to have quantificational force from particles.

According to minimal Search, in Korean sentences like (1), the *wh*-argument *nwukwu-eykey* is licensed by the closest matrix C, *-no*. Since it is licensed by the closest matrix C, it marks the matrix scope without inducing island effects. In the same vein, the Japanese *wh*-argument *nani-o* in (2) is licensed by the closest C, *-no*. In other words, the matrix C_Q searches for the *wh*-argument *nani-o*, which in turn takes a matrix scope across the island context.

Like minimal Search, Saito's LF-movement approach seems to be able to explain the acceptability of (1) and (2) on the assumption that LF movement is insensitive to island conditions like the CNPC. But Abe's minimal Search and Saito's LF-movement make a different prediction concerning *wh*-island sensitivity, as in (3) and (4):

- (3) *Cheli-nun [Swuni-ka mwues-ul mek-ess-nunci] alkoiss-no?
 Cheli-TOP Swni-NOM what-ACC eat-PST-Q know-Q

1) Kyeongsangnam-do dialect, Southeastern Korean, has distinctive sentence-final morphemes which distinguish a yes-or-no question and a *wh*-question (Suh 1989). A sentence with the ender *-na* is always construed as a yes-or-no question, while a sentence with the ender *-no* is always construed as a *wh*-question. Since Kyeongsangnamdo dialect as a language for distinguishing whether an embedded *wh*-expression in island contexts can take a matrix scope or not comes in handy, the set of Korean data from this dialect is examined throughout this paper.

‘Lit. Cheli knows [what Swuni ate]?’

- (4) *John-wa [Mary-ga nani-o tabeta ka] okotteiru no?
 John-TOP Mary-NOM what-ACC ate Q know Q
 ‘John knows [what Mary ate]?’

Neither Korean nor Japanese allows the matrix reading of the embedded *wh*-expression. The sensitivity to the *wh*-island in the two languages cannot be accounted for by LF-movement analysis, but by the overt-syntax-based minimal Search analysis.²⁾

Now turning to Chinese, this language is also a *wh*-in-situ language, but it does not have an overt interrogative C. This indicates that *wh*-licensing in Chinese seems to be different from that in Korean and Japanese.

- (5) [Shei xie de shu] zui yougu?
 Who write DE book most interesting
 ‘Lit. Books that who wrote are the most interesting?’ (Huang 1982:526)

Since Chinese is insensitive to island conditions as well, *wh*-arguments in island context are able to mark a matrix scope. Unlike Korean and Japanese, however, because of the absence of a Q-marker, it is necessary for *wh*-arguments to take overt Move to mark a matrix scope out of island contexts. Considering the copy theory of movement in Chomsky (1995), in overt syntax Move yields a chain with (more than) two copies, which feeds LF for semantic representation and PF for phonetic representation after Spell-out. Bobaljik (2002) proposes two interfaces between LF and PF. The first interface is where the same position of a copy in a chain is both interpreted at LF and pronounced at PF; for example, the higher copy of a chain is both pronounced at the PF and interpreted at the LF. The other interface is where pronunciation and interpretation reply on different copies of a chain, like the following: lower copy pronunciation at the PF and higher copy interpretation at the LF. If the second interface applies to Chinese, it accounts for why *wh*-arguments in Chinese move in syntax, but they are pronounced in the tail position. According to Richards (1997), strong or weak features decide which of the copies is pronounced (PF does not decide which of the copies is pronounced). Then, it can be assumed that Chinese has a weak feature in the C head, which in turn makes *wh*-arguments pronounced in the tail position; therefore, even though *wh*-arguments take their matrix scope via overt movement, the fact that Chinese lacks a strong feature in the C head leads to the overt realization of the tail in the *wh*-chain.

Given this proposal, the *wh*-argument *shei* ‘who’ in (5) takes a matrix scope across a complex NP island via overt movement, and the tail of the *wh*-chain is overtly realized. This is different from the analysis of *wh*-scoping by Huang (1982), which accounts for *wh*-scoping in Chinese via LF-movement.

Unlike Korean/Japanese and Chinese, English as a *wh*-movement language takes overt Move to mark the scope of a *wh*-argument, with the overt realization of the head position in the *wh*-chain, but not its tail position. This is, unlike Chinese, due to the strong feature of the C head.

2) This paper focuses on *wh*-arguments in these languages, leaving the analysis for *wh*-adjuncts and their contrast with *wh*-arguments in *wh*-scoping for another paper where we will investigate how minimal Search applies to *wh*-adjuncts.

- (6) a. *What₁ does John know the person [that gave t₁ to Mary]?
 b. *What₁ is John angry [because Mary ate t₁]?

Being sensitive to island conditions, the sentences like (6) are ungrammatical when a *wh*-argument overtly moves out of any kind of island contexts. The *wh*-arguments what in (6a) and (6b), which were generated inside of the island contexts, move to the matrix Spec of CP across islands, which makes these sentences ruled out.

2.1 A *Wh*-Argument and Its Licensing in *Wh*-Island Contexts

As mentioned in the previous section, Korean and Japanese *wh*-arguments generally do not exhibit island sensitivity, but this generalization has an exception when a *wh*-argument embedded in a *wh*-island context takes a matrix scope, as in (7) and (8).

- (7) a. *Cheli-nun [Swuni-ka mwues-ul mek-ess-nunci] alkoiss-no?
 Cheli-TOP Swni-NOM what-ACC eat-PST-Q know-Q
 ‘Lit. Cheli knows [what Swuni ate]?’
 b. Cheli-nun [Swuni-ka mwues-ul mek-ess-nunci] alkoiss-na?
 Cheli-TOP Swni-NOM what-ACC eat-PST-Q know-Q
 ‘Lit. Cheli knows [what Swuni ate]?’

The difference of (7a) from (7b) lies in the scope relation that the *wh*-argument *mwues-ul* ‘what’ takes. Since the interrogative Q-marker *-no* must associate with *mwues-ul* ‘what’ to form a *wh*-question, the *wh*-argument generated in the *wh*-island must take scope out of the *wh*-island. Given the two approaches introduced in the previous section, i.e., minimal search and LF-movement, which one is more effective in accounting for a *wh*-island-internal *wh*-argument associating with a Q-marker?

First, in the minimal Search approach, a *wh*-argument is licensed by the closest Q-marker. In the sentence (7a), the Comp *-ci* ‘whether’ closest to the *wh*-argument *mwues-ul* ‘what’ licenses it and marks its scope. Put differently, since the *wh*-argument is already licensed by the closest Q-marker, taking a matrix scope over the *wh*-island gives rise to the ungrammaticality of (7a), as correctly predicted by the minimal Search approach. The upshot of this approach is that it accounts for the scope relation of *wh*-arguments via their overt association with the corresponding Q-particles.

The LF-movement approach, on the other hand, assumes that the *wh*-argument *mwues-ul* ‘what’ functions as an operator, and it moves covertly (via LF-movement) to the position where it can probe a quantificational particle, *-ci* ‘whether’. If the *wh*-argument *mwues-ul* ‘what’ that now lands at the edge of the *wh*-island probes the local *-ci* ‘whether’, then it will be licensed in this position and does not need to find another quantificational particle out of the *wh*-island. However, the assumption that the LF phrasal movement across the *wh*-island is sensitive to the presence of a quantificational particle needs theoretical justification.

The same reasoning applies to Japanese. The fact that *wh*-arguments in this language are only sensitive to *wh*-islands was initially noted in Lasnik and Saito (1984) and Nishigauchi (1990).

- (8) John-wa [Mary-ga nani-o tabeta ka] okotteiru no?
 John-TOP Mary-NOM what-ACC ate Q know Q
 ‘John knows [what Mary ate]?’

Since the *wh*-argument in Japanese can be licensed by the closest interrogative C via minimal Search, the matrix interrogative C in (8) minimally searches for a Q-feature, but it is unable to search for the embedded *wh*-argument as the embedded interrogative C carries a Q-feature. Kuroda (1965) provides a theoretical grounding for the minimal search approach, arguing that a *wh*-phrase in Japanese consists of both an indeterminate pronoun and the unvalued Q-feature which is valued by the Q-marker such as *-ka* or *-no*.

Likewise, the *wh*-island effect in (8) may be accounted for under the LF-movement approach. According to Saito (2017), it argues that a *wh*-argument is an operator, and it needs to move in a covert way to the position where it can probe a quantificational particle. Since the *wh*-argument *nani-o* probes the embedded quantificational particle *-ka*, it makes the former unreachable to the matrix interrogative C *-no* across the *wh*-island. Recall, however, that the sensitivity of LF phrasal movement to the quantificational particle needs to be theoretically motivated.

Based on the examples in (6), it was noted that *wh*-arguments in English are subject to island conditions (like CNPC). Likewise, the sentence in (9c) shows that a *wh*-argument in this language is sensitive to the *wh*-island condition.

- (9) a. Do you wonder who Mary saw at the rally?
 b. *Do you think that Mary saw who at the rally?
 c. *Do you wonder whether Mary saw who at the rally?
 d. ??Who/?which boy do you wonder whether Mary saw at the rally?

(Lasnik and Saito 1992:175)

The *wh*-argument *who* in (9) is base-generated as an object of the verb *saw* and overtly moves to the Spec of CP in the case of (9a). Bošković (2000) argues that this is because the complementizer has a strong *+wh*-feature, which requires that Merge/Move applies only in overt syntax. Thus, the *wh*-movement takes place overtly to check the strong *+wh*-feature of Comp once do-insertion applies. Without overt movement of the *wh*-argument, the sentence like (9b) is ruled out. (9c) has a *wh*-argument in the *wh*-island context, and the *wh*-argument without being moved to the Spec of CP makes the sentence ruled out. In addition, (9d) with overt movement is marginal owing to the *wh*-island effects, but it improves in acceptability when the *wh*-expression is D-linked.

Note also that there is a difference between an in-situ and an overtly-moved *wh*-phrase as in (9b-c) and (9d). When *wh*-movement does not occur as in (9b-c), the *wh*-phrase-in-situ is incompatible with the matrix polarity question marker, regardless of the presence of a *wh*-island. In (9d), however, the overt movement of the *wh*-phrase ensures that the entire sentence is construed as a *wh*-question.

Similarly to Korean and Japanese, Chinese as a *wh*-in-situ language is subject to the *wh*-island condition, but with different manifestations. (10a) and (10b) differ in terms of the presence/absence of the embedded Comp *shi-bu-shi* ‘whether’:

- (10) a. Ni xiang-zhidao Zhangsan mai-le shenme?
 You want-know Zhangsan buy-PERF what
 ‘Lit. You wonder what Zhangsan bought?’
 ‘*What do you wonder whether Zhangsan bought?’
- b. ??Ni xiang-zhidao Zhangsan shi-bu-shi mai-le shenme?
 You want-know Zhangsan be-not-be buy-PERF what
 ‘Lit. you wonder whether Zhangsan bought something/#what?’
 ‘??What do you wonder whether Zhangsan bought?’

(10a) is construed as an embedded *wh*-question, but not a matrix *wh*-question, which means that the sentence can be interpreted as a matrix yes-or-no question. The impossibility of the *wh*-argument taking a matrix scope indicates that Chinese is sensitive to the *wh*-island condition, and *shenme* ‘what’ is licensed by its overt movement to the embedded Spec of CP because the absence of a Q-marker calls for it, and the moved *wh*-argument is pronounced in the tail position of the *wh*-chain due to the absence of the strong feature in the head position of the chain. (10a) is apparently similar to (9b) in English. Even though *who* remaining in-situ in (9b) makes the sentence ruled out, its Chinese counterpart *wh*-argument *shenme* in-situ in (10a) is grammatical because the trace position of *shenme* of the *wh*-chain is pronounced after it overtly moves to the embedded Spec of CP.

With the embedded Q-marker *shi-bu-shi* ‘whether’, (10b) differs from (10a). (10b) is degraded because of the intervening Q-marker, but it is better in acceptability than (9c) in English with the similar structure. This is because the *wh*-argument in Chinese overtly undergoes Move like that in (9d) of English, but with its realization in the tail position of the *wh*-chain, thus being compatible with the matrix Comp unlike (9c) of English.

In what follows, the different strategies of *wh*-licensing for Korean, Japanese, Chinese, and English are to be tested further in the cases involving either scope reconstruction or negative QP intervention effects.

3. Scope Reconstruction of a Universal QP over a Wh-Phrase and Intervention Effects of a Negative QP

The intervention effect, which was coined originally to capture the dependency relation in split constructions (Obenauer 1976), was adopted later in weak island constructions (de Swart 1992; Szabolcsi and Zwarts 1993). The intervention effects provide a window for investigating the restrictions on *wh*-arguments moving out of strong islands. In other words, negative QPs inviting intervention effects are used to identify the *wh*-licensing strategies in Korean, Japanese, Chinese, and English, which were suggested in the previous section. Before taking a look into the intervention effects produced by a negative QP, scope relation between a *wh*-phrase and a universal QP is to be examined presently.

3.1. A Universal QP and *Wh*-Phrase Interaction

Recall that in section 2.1, the *wh*-argument embedded in the *wh*-island as in (9d) shows sensitivity to the *wh*-island condition in English. In the sentence (11), similar to (9d) but including a universal QP ‘every’, it is to be noted that the

wh-argument *who* only takes wide scope over the universal quantifier:

- (11) ??Who do you wonder whether every student saw at the rally?
 ‘who’ > ‘every student’; *‘every student’ > ‘who’

Assuming that the scope relation at hand can be captured via scope reconstruction, Longobardi (1987) suggests the following generalization. It goes: if an island blocks a *wh*-chain formed by *wh*-movement, scope reconstruction is not allowed anymore. Given this generalization, it is reasonable to suppose that in (11), the overt movement of *who* out of the island context takes place, which leads to blocking its scope reconstruction to its launching site, thus preventing *every student* from taking wide scope over the reconstructed *who*.

In light of this generalization, the impossibility of scope reconstruction w.r.t. the universal QP in Chinese also supports the overt movement of a *wh*-phrase.

- (12) a. Zhangsan xiangxin mei-ge xuesheung mai-le na-ben shu de shuofa?
 Zhangsan believe every-CL student buy-PERF which-CL book DE claim
 ‘Lit. Zhangsan believes the claim that every student bought which book?’ (Abe 2017:27)
- b. Ni xiang-zhidao meigeren shi-bu-shi dou kandao shenme?³⁾
 You want-know everyone be-not-be all saw what
 ‘Lit. You wonder whether everyone saw what?’ (Aoun and Li 1993:84)

In the sentence (12a), the universal QP *mei-ge xuesheung* ‘every student’ cannot take scope over the in-situ *wh*-argument phrase *na-ben shu* ‘which book’ when it is embedded in the complex NP island, since, as noted above, the *wh*-argument phrase in Chinese overtly undergoes Move, being insensitive to the island condition. Thus, the distributive answer for this question (i.e., with the universal QP taking wide scope over the apparently in-situ *wh*-phrase) is inappropriate, like ‘Zhangsan believes the claim that student A bought book A, student B bought book B, and student C bought Book C’.

According to Aoun and Li (1993), in configurations like (12b), the reading for the universal QP taking wider scope than the *wh*-argument is not permitted either because, as an acceptable answer to (12b), the distributive answer is not available. Such configurations like (12a&b) containing universal QPs with *wh*-arguments having matrix scope out of islands are taken to support the overt *wh*-movement licensing in Chinese, with the tail of the *wh*-chain being pronounced because if the Chinese *wh*-argument moved covertly it would have narrow scope below the universal QP.

Turning to Korean and Japanese, universal QPs precede *wh*-phrases within island contexts.

3) The following sentence is also acceptable:

- (i) Ni shi-bu-shi xiang-zhidao meigeren dou kandao shenme?
 You whether want-know everyone all saw what
 ‘Lit. Do you wonder whether everyone saw what?’

- (13) Cheli-nun [[motun namhaksayng-i mwues-ul cwuesstanun] yehaksayng-ul] mannanceki iss-no?
 Cheli-TOP every male-student-NOM what-ACC gave female-student-ACC met Q
 ‘Lit. Cheli met the female student that every male student gave what to?’

In the minimal Search approach, the distributive answer to (13) is expected to be allowed because the sentence does not involve *wh*-movement. This expectation is fulfilled. (13) may be answered as follows: ‘Cheli met the female student who A boy student gave flowers to, B boy student gave a book to, and C boy student gave a necklace to. The fact that unlike Chinese, the distributive answer is permitted in Korean indicates that minimal Search is the right strategy of accounting for *wh*-arguments, which can in turn effectively explain the scope reconstruction of Korean *wh*-phrases in situ w.r.t. universal quantifiers.

Abe (2017) claims that in Japanese, the universal QP *subete-no gakusei* ‘every student’ in the following sentence can take scope over the *wh*-argument *dono hon-o* ‘which book’. This means that the distributive answer is also permitted in Japanese:

- (14) John-wa [subete-no gakusei-ga dono hon-o yonda toitu] uwasa-o kiita no?
 John-TOP every-GEN student-NOM which book-ACC read Comp rumor-ACC heard Q
 ‘Lit. John heard the rumor that every student had read which book?’ (Abe 2017:27)

This fact also readily supports the minimal Search-based approach to *wh*-arguments in Japanese.

3.2 A Negative-QP-Forming Weak Island and a *Wh*-Phrase

This sub-section investigates the interaction between a *wh*-phrase and the weak island formed by a negative QP. According to the studies by Beck (1996) and Beck and Kim (1997), intervention effects arise when the LF movement of an in-situ *wh*-phrase is blocked by a weak island formed by an intervening QP. The following schematization epitomizes the intervention effects:

- (15) *[... wh_i ... [... negative QP ... [... t_i ...]]] LF movement

For example, in German the negative QP *niemanden* ‘nobody’ blocks LF movement of the in-situ *wh*-expression *wo* ‘where’, as in (16a):

- (16) a. *Wer hat niemanden wo angetroffen?
 Who has nobody where met
 b. Wer hat wo_i niemanden t_i angetroffen?
 Who has where nobody met
 ‘Who didn’t meet anybody where?’ (Beck 1996; Beck and Kim 1997)

In (16b), when the negative QP *niemanden* nobody is preceded by the *wh*-phrase *wo*, where the intervention effects do not arise since the preceding *wh*-phrase is not affected by the following negative QP.

The next Korean and Japanese sentences in (15) take on the same configuration as German ones, triggering intervention effects. In these examples, negative QPs precede *wh*-phrases:

- (17) a. *Amwuto mwues-ul sa-ci anh-ass-ni?
 Anyone what-ACC buy-Nm not.do-PST-Q
 ‘What did on one buy?’
 b. Mwues-ul_i amwuto t_i sa-ci anh-ass-ni?
 What-ACC anyone buy-Nm not.do-PST-Q
 ‘What did no one buy?’

- (18) a. *Daremo nani-o yom-ana-katta-no?
 Anyone what-ACC read-neg-PST-Q
 ‘What did no one read?’
 b. Nani-o_i daremo t_i yom-ana-katta-no?
 What-ACC anyone read-neg-PST-Q
 ‘What did no one read?’

(Tomioka 2007)

The negative QP *amwuto* and *daremo*, both of which mean ‘anyone’ in Korean and Japanese respectively, precede the *wh*-argument *mwues-ul* and *nani-o*, thus engendering intervention effects. Owing to the intervention effect arising from a weak island, the association of the *wh*-phrase with the matrix interrogative C is forbidden. While (17a) and (18a) containing preceding negative QP are unacceptable, (17b) and (18b) are remedied when the *wh*-phrase is overtly scrambled over the negative quantifier phrase; therefore, this contrast shows that Korean and Japanese are sensitive to weak islands formed by negative QP.

The following English examples are modified from Pesetsky (2000), which originally contain two *wh*-phrases:

- (19) a. Which book_i did no one give t_i to John?
 b. Which picture_i did very few children want to show t_i to Prof. Kim?

(adapted from Pesetsky 2000:61, (100a) and (102a))

The negative QP *no one* as an intervener precedes the position where the D-linked *wh*-phrase *which book* is base-generated, but now moved to the sentence-initial position. The intervention effects do not arise because *which book* moves overtly to the Spec of matrix CP across the negative QP intervener. No sensitivity to negative weak islands in English is taken to support the licensing of *wh*-arguments via overt *wh*-movement in English.

In a similar vein, Chinese does not show sensitivity to the weak island formed by a negative QP, as follows:

- (20) a. *Meiyouren gan gen shei dajia?*
 Nobody dare with who fight
 ‘Who does nobody dare to fight with?’
- b. *Henshaoren gan gen shei dajia?*
 Few person dare with who fight
 ‘Who do few people dare to fight with?’ (Huang 1982: 263-267)

Two different negative QPs *meiyouren* ‘nobody’ and *henshaoren* ‘few people’ create weak islands, and the *wh*-argument *shei* ‘who’ follows them, which makes the *wh*-argument be under the scope of the weak island. However, the negative QPs do not give rise to the intervention effects. No intervention effect in Chinese is expected since *wh*-arguments are licensed by overt *wh*-movement because of the absence of a Q-marker in Chinese. In a nutshell, its overt movement across the negative QP does not invite intervention effects. Recall that though the *wh*-argument is overtly moved, the tail position of the *wh*-chain is pronounced in Chinese because of the absence of the strong *wh*-feature.

4. Two *Wh*-Phrases and Their Licensing

Having laid out each strategy for licensing one *wh*-phrase in an island context so far, we are now going to investigate how two *wh*-phrases embedded in an island context are licensed.

Now let us start with Chinese data having two *wh*-arguments in a *wh*-island context. A *wh*-argument in a *wh*-island takes different scope depending on the absence/presence of the Q-marker *shi-bu-shi* ‘whether’. Without *shi-bu-shi* in the embedded Comp position, one of the two *wh*-argument generated in the *wh*-island can take a matrix scope, but with *shi-bu-shi* in the same position, the embedded *wh*-argument cannot take a matrix scope. The data in (21a-21b) illustrate a different scope of the *wh*-argument with/without the presence of the *shi-bu-shi* ‘whether’.

- (21) a. *Zhangsan xiang-zhidao [shei mai-le shenme]?*
 Zhangsan want-know who buy-PERF what
 ‘Lit. Zhangsan wonders who bought what?’ (Huang 1992)
- b. *??Zhangsan xiang-zhidao [shei shi-bu-shi mai-le #shenme]?*
 Zhangsan want-know who be-not-be buy-PERF what
- b'. *Zhangsan xian-zhidao [na-ge ren shi-bu-shi mai-le na-ge]?*
 Zhangsan want-know which person be-not-be buy-PERF which thing
 ‘Lit. Who does Zhangsan wonder whether he bought what/which?’ (matrix scope - obligatory)

Concerning an acceptable answer to the question (21a), it can be answered with ‘Zhangsan wonders what Lizi bought’. This means that in keeping with the analysis for *wh*-arguments in Chinese, one of the two *wh*-arguments, for example, the *wh*-argument *shenme* generated in the *wh*-island overtly moves to the Spec of embedded CP, whereas the other *wh*-argument *shei* ‘who’ overtly moves to the Spec of matrix CP, though both of them are realized in tail positions

of the *wh*-chain.

(21b) is identical to (21a), except for the presence of *shi-bu-shi* ‘whether’. Note that the observed improvement in the acceptability of (21b) in contrast to (21a) falls into place to reinforce the overt *wh*-movement to license *wh*-arguments in Chinese when they are D-linked (when the extractee out of an weak island is D-linked, *wh*-island effects do not arise; Pesetsky 1987; Rudin 1988). Accordingly, the D-linked *wh*-argument *na-ge* ‘which thing’ unlike *shenme* ‘what’ can take a matrix scope.

Now turning to two *wh*-phrases in a *wh*-island context in Korean, it is expected that in this language, the two *wh*-arguments generated within a *wh*-island context display island sensitivity:

- (22) *Cheli-nun [nwu-ka mwues-ul mek-ess-nun ci] alko iss-no?
 Cheli-TOP who-NOM what-ACC eat-PST Q know Q
 ‘Lit. Cheli knows whether who ate what?’

To investigate whether the embedded *wh*-argument can take a matrix scope, the *wh*-question marker *-no* in Kyeongsangnam-do dialect is used in the matrix clause. (22) with such a question marker is not acceptable. In relation to the two Q-markers in the embedded and the matrix Comp positions, the two *wh*-arguments generated in the embedded question clause associates with the closest embedded Comp Q-marker, complying with the Economy condition. The important thing to notice from (22) is that once minimal Search is established between the *wh*-argument and the local Q-marker, the *wh*-argument generated in the *wh*-island cannot associate with another non-local matrix Q-marker. An obvious difference between one *wh*-argument and two *wh*-arguments in a *wh*-island context is that like the former, the latter need to be licensed by the closest C, thus, minimal Search being applied in an unselective binding fashion. In this way, one unselective Q-marker is able to bind any variables introduced by *wh*-arguments, and therefore nothing else can bind the variables since they are already bound by the closest C.

The same account can be extended to two *wh*-arguments within a *wh*-island context in Japanese. Consider (23):

- (23) John-wa [dare-ga nani-o tabeta ka] sitteiru no?
 John-TOP who-NOM what-ACC ate Q know Q
 ‘John knows [who ate what]?’

In keeping with the minimal Search analysis we have advocated for *wh*-licensing in Japanese, it is expected that the embedded *wh*-argument *nani-o* ‘what’ (23) cannot take a matrix scope. The matrix C cannot associate with the *wh*-argument in the *wh*-island context because Japanese is also subject to the *wh*-island condition. *Nani-o* ‘what’ generated in the *wh*-island is required to associate with the closest C, *-ka* ‘whether’, as dictated by minimal Search.

It has been shown that as part of *wh*-licensing in English a *wh*-argument undergoes phrasal movement overtly to the landing site to mark its scope. But *wh*-licensing with two *wh*-phrases in English is attributed to the overt *wh*-movement strategy, but only one of the two *wh*-phrases moves overtly, while the other stays in-situ. The following examples also support the line of analysis explored up to now where an in-situ *wh*-phrase in English can be licensed by extending the same strategy.

- (24) a. Do you remember where John bought what?
 b. Do you remember what John bought where? (matrix scope in (24a) and (24b) - impossible)
 c. *Do you remember whether John bought what where?
 d. ?Where do you remember whether John bought what? (matrix scope of 'what' is possible)

In (24a-b), the in-situ *wh*-phrases *what* or *where* cannot take a matrix scope. They only take an embedded scope, associating with another *wh*-phrase now in the Spec of the embedded CP. They cannot take a scope covertly, associating with the matrix Comp, because the former are incompatible with the latter which is only construed as a yes-no question. Recall that in English, the scope of a *wh*-expression is determined at overt syntax. Keeping to this assumption, we suggest that *wh*-phrases in-situ take overt Move, but like in Chinese, not its head but its tail of the *wh*-chain is pronounced.

In the same vein, (24c) can also be taken as evidence supporting the overt *wh*-licensing in English. (24c) is ruled out because the *wh*-phrase cannot be associated with the matrix nor with the embedded Comp, both of which are construed as a yes-no question. However, (24d) is fine as the overtly fronted *wh*-adjunct *where* can provide an appropriate scope position for the other *wh*-phrase-in-situ within the *wh*-island. In other words, the *wh*-phrase in-situ takes overt Move, but its tail is realized in-situ.

4.1 *Wh*-Argument and *Wh*-Adjunct in the Embedded Clause and Their Licensing

In this section, it is to be demonstrated how each of the strategies for Korean, Japanese, and Chinese can be applied when both a *wh*-argument and the *wh*-reason adverbial are embedded in the *wh*-island. In Korean and Japanese, neither a *wh*-argument or the *wh*-adjunct in the same embedded question clause cannot take a matrix scope as in (25) and (26). As pointed out in the previous sections, both a *wh*-argument and a *wh*-adjunct in Korean and Japanese are subject to the *wh*-island condition, obligatorily associating with the closest C. The *wh*-adjuncts *way* and *naze* 'why' being embedded in the *wh*-island cannot associate with the matrix C because the *wh*-island intervenes and blocks the association between them, consequently the *wh*-adjuncts only taking an embedded scope.

- (25) Ne-nun [Cheli-ka mwues-ul way sa-ss-nunci] alko-iss-ni?
 You-TOP Cheli-NOM what-ACC why buy-PST-Q know-Q
 'Do you know why Cheli bought what?'
 (i) *'For what object x, you know why Cheli bought x?'
 (ii) *'For what reason x, you know what Cheli bought in reason x?'

- (26) Anata-wa [John-ga nani-o naze ka-tta-ka] shitteiru-no?
 You-TOP John-NOM what-ACC why buy-PST Q know-Q
 'Do you know why Cheli bought what?'
 (i) *'For what object x, you know why John bought x?'
 (ii) *'For what reason x, you know what John bought in reason x?' cf. Nishigauchi (1986, 1990)

However, Chinese shows a different pattern from Korean and Japanese when a *wh*-argument and a *wh*-adjunct are embedded in the *wh*-island, as follows.

(27) Ni xiang-zhidao [shei mai-le shenme]?

You wonder who buy-Asp what

a. 'What is the thing x such that you wonder who bought x?'

b. 'Who is the person x such that you wonder what x bought?'

(28) 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 1998:372)

Two permitted interpretations of (27) show that either the *wh*-argument *shei* 'who' or *shenme* 'what' in the embedded clause can take a matrix scope. This means that Chinese *wh*-arguments are required to be overtly moved to take its scope, but with an overt realization in the tail position of the *wh*-chain.

In (28), the *wh*-argument *shei* 'who' can take a matrix scope, while the *wh*-adjunct *weishenme* 'why' takes an embedded scope. The *wh*-adjunct *weishenme* 'why' in Chinese also takes overt Move, but it is sensitive to the presence of the *wh*-island, which in turn prohibits it from obtaining a matrix scope.

5. Conclusion

In this paper, how *wh*-expressions are licensed in Korean, Japanese, Chinese, and English have been discussed based on three diagnostics: (i) *wh*-phrases in island contexts in general, (ii) scope reconstruction of a *wh*-expression over a universal QP, and a *wh*-expression vis-à-vis a weak-island-forming negative QP, and (iii) two *wh*-phrases in a *wh*-island.

In order to address Korean and Japanese *wh*-licensing in an island context, the two recent approaches are considered: Agree-based minimal Search (Abe 2017) and LF phrasal movement approach (Saito 2017). Minimal Search can be effectively applied to all of the three tests, but LF-movement seems to fail to explain the licensing of a *wh*-argument embedded in a *wh*-island context. In the minimal Search approach, it is dictated that the closest C_Q searches for and licenses *wh*-arguments; therefore, *wh*-arguments in Korean and Japanese associate with the closest Comp via minimal Search. When a *wh*-argument is embedded in a complex NP island, it can take a matrix scope as the closest Comp element is the matrix Comp. But when a *wh*-argument occurs in a *wh*-island context, it can only take an embedded scope since between the two matrix and embedded Cs, it is the embedded C that is the closest to a *wh*-argument. Once it associates with the closest C, it is impossible for it to be 're-bound' with the non-local C. On the other hand, when the two *wh*-arguments are embedded in the *wh*-island context, they are licensed by the closest C in an unselective binding way via minimal Search.

In Korean and Japanese, since these two languages do not involve overt *wh*-movement, it is possible for a universal QP to take a scope over a *wh*-argument. When it comes to the weak island produced by a negative QP, both languages

show sensitivity to this weak island. When intervention effects are induced by a negative QP, *wh*-arguments are not able to take a scope over it to associate with the closest C.

Turning to Chinese and English, *wh*-arguments move to the Spec of CP overtly to mark their scope. The difference of English from Chinese is that English undergoes overt *wh*-movement with a realization of the head of a *wh*-chain. But Chinese undergoes overt *wh*-movement with a realization of the tail of a *wh*-chain.

As noted above, English is subject to the strong island condition, but not to the weak island condition. The insensitive of *wh*-phrases in this language to the weak island indicates that they move overtly across the weak island to mark its scope, circumventing a violation of the weak island condition. However, when two *wh*-phrases appear in the *wh*-island, one is realized in the head position of a *wh*-chain, with the other one being pronounced in the tail position of a *wh*-chain.

Likewise, Chinese *wh*-arguments are not subject to the weak island condition, thus they can take a matrix scope across the weak island formed by a negative QP. This supports the thesis that *wh*-arguments in Chinese also move overtly to mark their scope, but unlike in English, the tail position of a *wh*-chain is always pronounced because Chinese has a weak feature in the C head.

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