Another source of *wh*-island effects  
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Many recent studies on *wh*-island effects in *wh*-in-situ languages such as Chinese, Japanese and Korean have focused on the linguistic factors that can alleviate the *wh*-island effects, such as prosody (Ishihara 2002, Hirotani 2005, and Hwang 2011) and *wh*-scrambling (Takahashi 1993), centering around the configuration in (1).

(1) John-un [Mary-ka nwukwu-lul manassnum-ci] mwuless-eo?  
John-Top [Mary-Nom who-Acc met-(whether)Q] asked-Q?  
a. ‘Did John ask who Mary met t?’  
b. ??‘Who did John ask whether Mary met t?’

In this study, we introduce a syntactic structure which can strengthen *wh*-island effects. We explain it in terms of dependency locality effect (Gibson 2000) and the one-to-one relationship between licensor and licensee.

**Research question and prediction:** Nishigauchi (1990) argues that an embedded *wh*-phrase in (1) can have an embedded scope reading only, but when there is another *wh*-phrase in the embedded clause as in (2), the first *wh*-phrase can take matrix scope with heavy stress, violating the *wh*-island constraint.

(2) a. No *wh*-island effect for *wh*-phrase 1  
[Matrix … [Embedded… *wh*1 *wh*2 … Q ] … Q] ?  

b. No *wh*-island effect for *wh*-phrase 2  
[Matrix … [Embedded… *wh*2 *wh*1 t … Q ] … Q] ?

Impressionistically, when the embedded Q in (2) already associates with one *wh*-phrase, the other *wh*-phrase in the embedded clause seems to be allowed to associate with the matrix Q. Then, the following question arises: If there is a *wh*-phrase in the matrix clause (3), how will it affect the processing of *wh*-scope in the embedded clause? Since *wh*-phrases in the matrix clause should associate with the matrix Q, we expect that there will be a strong tendency for an embedded *wh*-phrase to associate with an embedded Q in the case of (3a).

(3) a.[Matrix … *wh* [Embedded… *wh* … Q] … Q] ?  

b.[Matrix … *wh* [Embedded… *wh* … DEC] … Q] ?

However, when the embedded complementizer is a declarative marker as in (3b), the embedded *wh*-phrase will be forced to take matrix scope because the matrix Q complementizer is the only available scope licensor of the *wh*-phrase.

**Experiment:** To investigate the influence of a *wh*-phrase in the matrix clause on *wh*-island effects, we conducted experiments (forced choice task) on two dialects in Korean: Seoul Korean (standard Korean) and Kyeongsang Korean. Kyeongsang Korean distinguishes different question types by sentence-final particles, -na (YNQ) and -no (WHQ), but Seoul Korean does not. In the Kyeongsang Korean experiment, -no (WHQ) was utilized due to matrix *wh*-phrases which cannot be licensed by a lower clause complementizer. We examined three different constructions depending on the location of a matrix *wh*-phrase as in (4). We used two different embedded complementizers, -tako (Dec) and -ci (Q), and two different types of *wh*-phrases, regular *wh*-phrases (e.g., ‘what’) and D-linked *wh*-phrases (e.g., ‘which dish’).
Four sets of fully crossed stimuli (3×2×2=12 types) were created. They were randomized with 124 fillers and distributed across four sets in a Latin square design. The participants (N=51 for Seoul Korean, N=50 for Kyeongsang Korean) were asked to choose one of the two given answers: one for an embedded scope reading and the other for a matrix scope reading.

**Results and Discussion:** The results in (5) show that when there is a matrix wh-phrase, the embedded wh-phrase is less likely to take matrix scope in general (logistic regression model, both (a) vs (b) and (a) vs (c): p < .001).

<table>
<thead>
<tr>
<th>Conditions</th>
<th>matrix scope answer of an embedded wh</th>
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<tbody>
<tr>
<td></td>
<td>Seoul Korean</td>
<td>Kyeongsang Korean</td>
<td></td>
</tr>
<tr>
<td>a. No matrix wh</td>
<td>...[wh]...]</td>
<td>79%</td>
<td>41%</td>
</tr>
<tr>
<td>b. Wh before embedded C</td>
<td>[wh [wh]...]</td>
<td>45%</td>
<td>24%</td>
</tr>
<tr>
<td>c. Wh after embedded C</td>
<td>[...[wh] wh]</td>
<td>46%</td>
<td>28%</td>
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When the embedded complementer was Q, the percentage of the matrix scope reading of an embedded wh-phrase dramatically decreased when there was a wh-phrase in the matrix clause. Surprisingly, even when an embedded wh-phrase could not associate with the embedded complementer (Dec), a matrix scope reading of the embedded wh-phrase was still often rejected when there was a wh-phrase in the matrix clause. This suggests that (i) a wh-phrase in the matrix clause triggers a strong wh-island effect and (ii) a question complementizer Q is preferred to associate with one wh-phrase, instead of multiple associations.

These results can be accounted for in terms of processing effects such as dependency locality (Gibson 2000). Since the distance between an embedded wh-phrase and a matrix Q is further than the distance between an embedded wh-phrase and an embedded Q, the cost of integrating an embedded wh-phrase and a matrix Q is expensive. Hence, this may bring the strong preference of local association between a wh-phrase and a Q. Theoretically, when an embedded complementizer is declarative, wh-phrases in an embedded clause should be licensed by a matrix Q and only a matrix scope reading is possible. Our experimental results, however, show that there still exists a strong local relationship between the dependents.

**Conclusion:** Our study found the influence of the presence of a wh-phrase in a matrix clause on wh-island effects. A wh-phrase in the matrix clause blocks a wh-phrase in an embedded clause from having a matrix scope reading regardless of the types of embedded complementizers even if the matrix scope reading is slightly improved when an embedded complementizer is a declarative. In other words, a wh-island in Korean can be triggered by a wh-phrase in the matrix clause.

**Reference**