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Pragmatics of LF intervention effects: Japanese and Korean Wh-interrogatives

Satoshi Tomioka

Department of Linguistics, University of Delaware, 42 East Delaware Avenue, Newark, DE 19711, USA

Abstract

This paper presents a pragmatic account for what have come to be known as logical form (LF) intervention effects, based on a wide range of data from Japanese and Korean. Despite their appearance, these effects are not due to structural constraints operative at LF but rather to a less-than-perfect realization of the information structure of interrogative sentences. The potential interveners, which seem to be a random collection of various expressions, are classified as Anti-Topic Items, since they cannot bear the topic marker -*wa/(n)un*. Although the non-Wh material in a Wh-question must belong to old information, the interveners fail to be interpreted as background material because of their Anti-Topicality when they precede Wh-phrases. The cancellation of the intervention effects with scrambling is derived from the prosodic phrasing that scrambling creates. Moving a Wh-element over an intervener places the intervener in the position of post-focus reduction—a prosodically reduced portion of the sentence. With post-focus reduction, the intervener becomes a part of old information. It will be shown that the proposed analysis not only accounts for core cases of intervention effects, but also makes correct predictions concerning the matrix-subordinate contrast in intervention effects and the special status of negative polarity items (NPIs).
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1. Intervention effects

Wh-interrogatives have been among the most popular topics in the generative linguistic literature, and their popularity is well-deserved. While the interpretation of a Wh-question stays more or less constant from language to language, its syntax shows a vast range of cross-linguistic variations. Wh-movement is a showcase of various syntactic constraints which have helped us develop a restrictive theory of grammar. Our understanding of Wh-questions made a significant

E-mail address: stomioka@udel.edu.

step forward in 1980s, when cross-linguistic perspectives were actively pursued; particularly illuminating were languages that do not exhibit overt Wh-movement. The timing of this development coincided with a growing number of studies on logical form (LF), the syntactic representation that feeds into the semantic translation. The tradition initiated by Huang (1982) posits invisible Wh-movement at the level of LF for those Wh-in-situ languages. The topic of this paper is a phenomenon known as the intervention effect, which has been claimed as providing proof of a constraint that specifically targets LF movement. The data are drawn from Japanese and Korean, which both manifest robust intervention effects.

Let us first give a brief description of intervention effects. There exist a certain group of expressions that are prohibited from c-commanding Wh-phrases at S-structure. This phenomenon was first noted, to our knowledge, by Hoji (1985) and has been extensively discussed by many researchers, including Beck (1996), Beck and Kim (1997), Tanaka (1997), and Hagstrom (1998). The expressions which exhibit LF intervention effects include negative polarity items (NPIs), certain quantificational NPs, and disjunctive NPs, as shown below.[1]

(1) a. ?*Daremo nani-o   yom-ana-katta-no   (Jp)
           anyone what-acc read-neg-past-Q
           'What did no one read?'
     b. ?*Amuto mues-ul ilkci-anh-ass-ni   (Kr)
           anyone what-acc read-neg-past-Q
           'What did no one read?'
     c. ?*John-sika   nani-o   yom-ana-katta-no (Jp)
           John-except what-acc read-neg-past-Q
           'What did no one but John read?'

(2) a. ??Daremo-ga   nani-o   yon-da-no   (Jp)
           everyone-nom what-acc read-past-Q
           'What did everyone read?'
     b. ??Nwukwuna-ka mues-ul ilk-ess-ni   (Kr)
           everyone-nom what-acc read-past-Q
           'What did everyone read?'
     c. ??Dareka-ga   nani-o   yon-da-no   (Jp)
           someone-nom what-acc read-past-Q
           'What did someone read?'
     d. ??Nwukwunka-ka mues-ul ilk-ess-ni   (Kr)
           someone-nom   what-acc read-past-Q
           'What did someone read?'

(3) a. ???[John-ka Bill]-ga nani-o   yon-da-no?   (Jp)
           John-or Bill-nom what-acc read-past-Q?
           'What did John or Bill read?'
     b. ?(?) [John-ina Bill]-i   mues-ul ilk-ess-ni   (Kr)
           John-or   Bill-nom what-acc read-past-Q
           'What did John or Bill read?'

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[1] In the following, 'Jp' stands for 'Japanese', 'Kr' for 'Korean'. The subscripts establish the identities of the scrambled items. 't' stands for a trace left by movement.

These sentences become acceptable when the Wh-phrases are scrambled over the offending interveners, as illustrated below.

(4) Scrambled version of (1)
   a. Nani-o_1 daremo t_1 yom-ana-katta-no
   b. Mues-ul_1 amuto t_1 ilkci-anh-ass-ni
   c. Nani-o_1 John-sika t_1 yom-ana-katta-no

(5) Scrambled version of (2)
   a. Nani-o_1 daremo-ga t_1 yon-da-no
   b. Mues-ul_1 nwukwuna-ka t_1 ilk-ess-ni
   c. Nani-o_1 dareka-ga t_1 yon-da-no
   d. Mues-ul_1 nwukwunka-ka t_1 ilk-ess-ni

(6) Scrambled version of (3)
   a. Nani-o_1 [John-ka Bill]-ga t_1 yon-da-no
   b. Mues-ul_1 [John-ina-Bill]-i t_1 ilk-ess-ni

   These contrasts have been interpreted to mean that the constraint responsible for the intervention effects targets movements selectively. The fact that scrambling of a Wh-element over an intervener is acceptable suggests that intervention effects are irrelevant for surface movement. LF Wh-movement, on the other hand, seems incapable of passing over those interveners. Most of the existing analyses, such as Hoji's (1985), Beck's (1997), Tanaka's (1997) and others', appeal to this discriminatory nature of the constraint. In Beck's (1997) and Beck and Kim's (1997) analysis, for instance, an intervener creates a quantifier-induced barrier at LF. Consequently, surface movement is allowed to cross over it, but LF movement cannot.

   However, there are a number of problematic facts for any kind of analysis based on LF configuration. First, grammatical judgments on these intervention effects are notoriously subtle, and the variability among native speakers is vast. Although there is no denying that the scrambled version is better than the unscrambled counterpart, some feel that the unscrambled examples are merely marginal, while others find them bad enough to label them as 'ungrammatical'. To make the situation more complicated, the interveners do not always behave alike. NPIs are by far the strongest interveners, and despite the discrepancies among native speakers, this special status of NPIs elicits no disagreement. Those of us who rely on native speakers' intuition for analyzing empirical data know how difficult it can be to obtain uniform judgment, and the existing analyses take the steps that are not uncommon when we encounter messy judgments: Make certain decisions (what is grammatical and what is not) based on one's own judgment, and proceed to theorization.

Disagreement in grammatical judgments is often noted but it is rarely treated as a target of explanation.

While this type of strategy may have proved successful in certain cases, the state of affairs in intervention effects is so complex that I do not think that we would benefit from such an approach. Unfortunately, if we pursue an account based on structural properties at LF, we are forced to take such a position. As far as I can see, structural accounts are based on the 'survival of the fittest' instinct, and there is not much room (if there is any at all) to accommodate subtle and gradient judgments.

Second, the intervention effects are much weaker in embedded contexts, as the following examples show.[2,3]

(7)   a.   ?(?) Kimi-wa [$_{CP}$ daremo nani-o   yom-ana-katta-to]   omotteiru-no   (Jp)
                 you-top   anyone what-acc read-neg-past-comp think-Q
                 'What do you think that no one read?'

       b.   ?(?) Ne-nun [$_{CP}$ amuto mues-ul ilkci-anh-ass-ta-ko]   sayngkakha-ni   (Kr)
                 you-top   anyone what-acc read-neg-past-dec-comp think-Q
                 'What do you think that no one read?'

       c.   ?(?) Kimi-wa [$_{CP}$ John-sika   nani-o   yom-ana-katta-to]   omotteiru-no   (Jp)
                 you-top   John-except what-acc read-neg-past-comp think-Q
                 'What do you think that no one read?'

(8)   a.   Kimi-wa [$_{CP}$ daremo-ga   nani-o   yon-da-to]   omotteiru-no   (Jp)
                 you-top   everyone-nom what-acc read-past-comp think-Q
                 'What do you think that everyone read?'

       b.   Ne-nun [$_{CP}$ nwukwuna-ka mues-ul ilk-ess-ta-ko]   sayngkakha-ni   (Kr)
                 you-top   everyone-nom what-acc read-past-dec-comp think-Q
                 'What do you think that everyone read?'

(9)   a.   Kimi-wa [$_{CP}$ [John-ka Bill]-ga nani-o   yon-da-to]   omotteiru-no   (Jp)
                 you-top   John-or Bill-nom what-acc read-past-comp think-Q
                 'What do you think that John or Bill read?'

       b   Ne-nun [$_{CP}$ [John-ina Bill]-i   mues-ul ilk-ess-ta-ko]   sayngkakha-ni   (Kr)
                 you-top   John-or Bill-nom what-acc read-past-dec-comp think-Q
                 'What do you think that John or Bill read?'

The problem for the LF-based analyses is clear. If an intervener that c-commands a Wh-element were to create an illegal LF configuration, then we would not expect any root-embedded contrasts of the kind shown above. It should be noted that NPIs show the least degree of improvement among the potential interveners in the embedded contexts, and that the scrambled order is still preferred there. This correlates with the aforementioned fact that NPIs are the strongest interveners. We will come back to this contrast in section 5.

Another complication is the difficulty to make all the interveners into one natural class. On the one hand, not all quantificational determiner phrases (DPs) yield the intervention effects. For

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[2] Hagstrom (1998) notes a similar effect. However, he generalizes that intervention effects disappear within syntactic islands. We find that cancellation effects are much more general.

[3] [$_{CP}$] indicates an embedded clause.

instance, *subete-no-/zenbu-no-NP, motun-NP* 'all (the) NP' and *hotondo-no-NP, taypwupwun-uy NP* 'most NP' are not interveners and can c-command Wh-phrases at S-structure without making the sentence deviant. On the other hand, similar effects are found even with non-quantificational DPs, such as *NP-mo, NP-to* 'NP also'.

(10)   a.   ??John-mo nani-o   yonda-no   (Jp)
                John-also what-acc read-past-Q
                'What did John also read?'
         b   ?*John-to   mues-ul   ilk-ess-ni   (Kr)
                John-also what-acc read-past-Q
                'What did John also   read?'
         c.   Nani-o$_1$ John-mo t$_1$ yonda-no   (Jp)

         d.   mues-ul$_1$ John-to t$_1$ ilk-ess-ni (Kr)   (Kr)

Probably the most surprising intervener is a nominative-marked subject in general (as opposed to a topic-marked subject). Although the effects are not as strong as in the previous examples, the nominative subject also does not like to c-command a Wh-element (cf. Watanabe, 1998 fn. 7).[4]

(11)   a.   John-wa / ??-ga nani-o   yon-da-no   (Jp)
                J-top   /   -nom what-acc read-past-Q
                'What did John read?'
         b.   John-un / ?-i   mues-ul ilk-ess-ni   (Kr)
                J-top   /   -nom what-acc read-past-Q
                'What did John read?'
         c.   Nani-o$_1$ John-ga t$_1$ yon-da no   (Jp)

         d.   Mues-ul$_1$ John-i t$_1$ ilk-ess-ni   (Kr)

These non-quantificational interveners also lose the intervention effects in embedded contexts, just like other interveners do, as shown below.

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[4] This effect is much stronger in Japanese than in Korean. Many Korean speakers find (11b) quite acceptable, whereas the Japanese counterpart is judged unnatural by most Japanese speakers. We are quite puzzled by this difference. Korean does show the same effects when the subject is a pronoun, as illustrated below.
(i)   a.   Ne-nun / ??-ka   mues-ul ilk-ess-ni
                you-top /   -nom what-acc read-past-Q
                'What did you read?'
         b.   Nu-nun / ??-ka   mues-ul ilk-ess-ni
                he-top /   -nom what-acc read-past-Q
                'What did he read?'
However, the question remains unanswered why there is such a difference between the two languages. Interestingly, Sim (2003) observes that in the multiple accusative construction in Korean, the first accusative NP can function as a topic, which is reminiscent of the *mini-topic* construction that Kuroda (1992) discusses (the naming is attributed to Susan Fischer).
(i)   Chelswu-ka   tambae-**lul**   malboro-**lul**   piu-ess-ta
         Chelswu-nom cigarette-**acc** Marlboro-**acc** smoke-past-decl
         'As for cigarettes, Chelswu smokes Marlboro.'
It is possible, then, that an NP with canonical (i.e., structural) case can optionally function as a topic in Korean, provided that the NP is not an ATI.

(12)   a.   Kimi-wa [$_{CP}$ John-mo nani-o yon-da-to] omotteiru-no   (Jp)
            you-top   John-also what-acc read-past-comp think-Q
            'What do you think that John also read?'

         b.   Ne-nun [$_{CP}$ John-to mues-ul ilk-ess-ta-ko] sayngkakha-ni   (Kr)
            you-top   John-also what-acc read-past-dec-comp think-Q
            'What do you think that John also read?'

(13)   a.   Kimi-wa [$_{CP}$ John-ga nani-o yon-da-to] omotteiru-no   (Jp)
            you-top   John-nom what-acc read-past-comp think-Q
            'What do you think that everyone read?'

         b.   Ne-nun [$_{CP}$ John-i mues-ul ilk-ess-ta-ko] sayngkakha-ni   (Kr)
            you-top   John-nom what-acc read-past-dec-comp think-Q
            'What do you think that everyone read?'

The facts we just reviewed put any account based on LF structure in a very difficult position. A desirable analysis of the intervention effects must account for the puzzles listed in (14).

(14)   a.   The fragility of native speakers' judgment.
         b.   The apparent absence of the attribute that separate possible interveners from non-interveners.
         c.   The effects of scrambling.
         d.   The effects of embedding.
         e.   The difference among interveners (NPIs vs. others)

I do not think that it is possible to solve all of (14a–e) by appealing to a syntactic constraint imposed on LF structure or LF movement, and that an important key lies in the information structure of Wh interrogatives in general.

2. Topicality in Wh-questions

Let us begin with two (relatively) uncontroversial assumptions about Wh-questions and topics. First, a Wh-interrogative sentence is partitioned based on the information structural properties, as argued in Krifka (2001): The non-Wh portion of a question is discourse-old (in the sense of Prince, 1981) or GIVEN (in the sense of Schwarzschild, 1999), whereas the Wh-element acts as the sentence focus. For instance, the question 'What did John read?' can be uttered only in the situation where the proposition of the form, 'John read x' is salient.[5] Second, a topic is what is being or has been talked about in the utterance context. Therefore, it is discourse-old or GIVEN. In Japanese and Korean, topics are overtly marked with *-wa* and *-(n)un* respectively.[6]

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[5] It is possible that some non-Wh element is focused. For instance:

(i)   What did [BILL]$_F$ read?

Such a question is felicitous only when a question of the form, 'What did x buy', is discourse-old or GIVEN. We exclude these cases from our analysis.

[6] This view was popularized by Susumu Kuno (e.g., Kuno, 1973) but was recently challenged by Kuroda (2005). One of Kuroda's main arguments is that a *wa*-phrase can be used as an answer to a Wh-question, which is often regarded as the sign of 'focus-hood'. Kuroda was very careful in making his point by eliminating non-exhaustive, partial answers, which he correctly identify as contrastive uses of *wa*. However, his crucial examples ((11) and (12) on p. 9), judged acceptable by Kuroda, do not get universal approval. All speakers that I consulted (including myself) still find them odd. The common feeling among us is that the sentences themselves are fine, but they do not really answer the question. At this point, I cannot offer anything more and leave this issue for future research.

The theoretical framework we adopt for the Topic-Focus articulation in this paper is a particular version of *Information Packaging* theory, namely Vallduví's (1992, 1995), which has emerged from several traditions of Topic-Focus pragmatics, such as Chafe (1976) and Prince (1981). Information Packaging is about organization of sentences based on what speakers know and what they assume hearers know at the time of utterance. In Vallduví's system, a sentence is partitioned into two major parts, a *focus* and a *ground*, and a ground is further divided into a *link* and a *tail*. Roughly speaking, a focus corresponds to a syntactic constituent which is interpreted as new information in the sentence. Old information (or information easily recoverable from the utterance context via accommodation) is confined within the constituent that corresponds to a ground. Of the two types of grounds, a link connects an utterance with the previous context by setting up a theme of the utterance, and a tail is the non-link part of the ground. More formally speaking, each of the three parts of information structure comes with a File Change Semantic instruction (cf. Heim, 1982:ch. 3). The file card corresponding to a link is about to be updated, whereas a focus contains the information to be added to the card that the link points to. Following Heycock (1994) and Portner and Yabushita (1998), we assume that a topic-marked phrase is a link. Using information packaging, we can analyze the contrast in Wh-questions like the following as a difference in information structure.

(15)   (repeated from (11))
         a.   John-wa / ?-ga   nani-o   yon-da-no   (Jp)
                J-top   /   -nom what-acc read-past-Q
                'What did John read?'
         b.   John-un / ?-i   mues-ul   ilk-ess-ni   (Kr)
                J-top   /   -nom what-acc read-past-Q
                'What did John read?'

The subject *John* is old or GIVEN by virtue of being marked for topic, which satisfies the condition in a Wh-question. The failure to mark the subject with the Topic marker leads to unnaturalness.

While a proper name and other referential expressions can be topic-marked, none of the other interveners can be combined with the topic-marker.[7]

(16)   Japanese   Korean
         a.   *daremo-wa   *amuto-nun
                 anyone-top   anyone-top
         b.   *daremo-wa   *nwukwuna-nun
                 everyone-top   everyone-top
         c.   *dareka-wa   *nwukwunka-nun
                 someone-top   someone-top
         d.   *[John-ka Bill]-wa   *[John-ina Bill]-un
                 John-or Bill-top   John-or   Bill-top
         e.   *John-mo-wa   *John-to-nun
                 John-also-top   John-also-top

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[7] (16c, d) are acceptable if they are interpreted as contrastive topics. They have distributional and semantic/pragmatic properties different from ordinary (thematic) topics and will be excluded from the discussion in this paper.

Incidentally, the quantificational expressions which do not block Wh-elements can be topic-marked. For instance, *subete-no gakusee-wa* (Jp)*, motun haksayng-un* (Kr), 'all students-top' and *hotondo-no gakusee-wa* (Jp), *taypwupwun-uy haksayng-un* (Kr) 'most students-top' are all possible combinations. We now have the natural class of interveners, and let us call these expressions 'Anti-Topic Items' (ATIs). Can we then re-formulate the intervention effects as an LF condition which prohibits an ATI from c-commanding a Wh-phrase? That is unlikely because of the improvement in embedded contexts, where the c-commanding relation between an ATI and a Wh-elementdoes not seem to matter. What is needed is a systematic analysis which accounts for the cancellation of intervention effects by scrambling and embedding, and an LF analysis would not do.

Before moving on to the effects of scrambling and embedding, let us briefly speculate why ATIs are incapable of being marked for topics. Since topicality presupposes familiarity, it is not hard to imagine why indefinite expressions, such as *dareka/nwukwunka* 'someone' are not suitable for topics. In file-card terms, a link chooses among the existing cards the one which is about to be updated. However, an indefinite NP requires that a new file card be introduced. These two requirements cannot be met simultaneously.

The problem of disjunctive NPs becomes easier to understand when we think of the file-semantic instruction that comes with a link. Since a disjunctive NP does not refer to a particular individual, there is no one card corresponding to a disjoined phrase. Hence, having a disjoined link means that the speaker is asking the hearer to update one of the two cards but does not specify which one. We are less certain why universal quantifiers and NPIs cannot be topics. These expressions cannot occupy the topic positions in Hungarian, which has a fixed position for a topic (cf. Szabolcsi, 1997), and they also cannot easily be fronted in English. In addition to these vague cross-linguistic correspondences, there may be a language-internal factor that makes these expressions ATIs. Kawashima (1994) argues that the Japanese universal quantifier and NPI, both of which take the form of *Wh + mo*, have the domain-widening effect that Kadmon and Landman (1993) propose for English *any*. For instance, consider the following dialogue which contains the free-choice *any*.

(17)   A: A cat chases mice.
        B: A sick one doesn't, right?
        A: Any cat chases mice.

The effect of *any* is that it widens the domain so that some entities previously considered as exceptions (i.e., sick cats) are now included in the domain. In Kawashima's proposal, the Japanese *Wh + mo* also induces domain widening. Such a theory would account for why *Wh + mo*, universal or NPI, cannot be topic-marked. Topicality requires familiarity, but domain widening brings into the domain those elements that have not been taken into consideration. In this sense, domain widening is incompatible with topic-marking.

Although I have suggested that each potential intervener has its own reason for being anti-topical, I do not deny the possibility that there may be a unifying property that makes these interveners anti-topical. Kim (2005) and Beck (2006) promote such an approach. They categorize potential interveners as focused or focus-sensitive expressions that need to be associated with Rooth's (1992) focus operator ∼. To the extent that being topical is often regarded as the polar opposite of being focused, this generalization is very promising. Indeed, such proto-typical focus-sensitive expressions as *only/even* NPs are ATIs in Japanese and Korean, and they induce intervention effects. The focus-sensitivity of NPIs has been independently

argued for (e.g., Krifka, 1995), and thus they can be treated on a par with other focus-sensitive NPs. Perhaps more difficult to justify are disjunctive NPs and existential quantifiers. It is not clear whether they must associate with the focus operator ∼.[8] All things considered, I find it quite appealing to name one property that unites them all. However, in my opinion it is still premature to conclude that the association with the ∼ operator is the one.

To sum up this section, we reached the generalization that those expressions which show intervention effects are ATIs. Each of them seems to have its own semantic-pragmatic reason why it cannot be marked with -*wa/-(n)un*. An ATI in Wh-questions must be confined within a ground, but the option of being part of a ground by virtue of being a link is not available for it. It is obvious, however, that we have yet to provide the complete answer to the puzzles of intervention effects. Specifically, the following questions must be answered.

(18)   a.   What kind of information structural properties does a nominative subject have?
        b.   Why does the scrambling of a Wh-element over an ATI help? What kind
              of impact does scrambling have on the information structure of an interrogative?
        c.   Why are there no significant intervention effects in embedded contexts?
        d.   Why are NPIs the strongest interveners?

In what follows, we will address these issues. We will start with the effects of scrambling.

3. Post-scrambled positions are phonologically reduced

In all of the previous analyses of intervention effects, cancellation by scrambling has been analyzed as a pre-emptive movement of some sort. The movement of a Wh-element over an intervener is applied in advance in the pre-Spell Out stage, so that the LF Wh-movement does not have to cross over the interveners. However, as we have shown in section 1 above, such an analysis, no matter how it is formulated, cannot account for the root-embedded contrast. Then, what is the role of scrambling? Why does it make a difference?

We argue that the cancellation of intervention effects by scrambling is likewise derived from its information structural properties. More concretely, scrambling places ATIs in the ground portion of a sentence. Unlike topicality, which has morphological marking, the effect of scrambling on information structure is phonological. We assume, following Nagahara (1994), the following two constraints for Japanese/Korean phrasal phonology.[9]

(18)   a.   FOCUS-LEFT-EDGE
              Left edge of focus = left intermediate phrase edge
        b.   FOCUS-TO-END
              No intervening intermediate phrase boundary between focused phrase and the
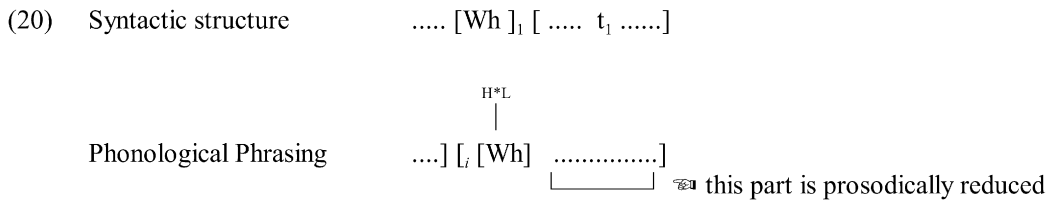   end of the sentence.

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[8] Although Beck's (2006) and Kim's (2005) characterization of potential interveners has obvious similarities with the one offered in this paper, their analyses are quite different. They depart from the traditional 'structural' account by adopting Hamblin semantics (Hamblin, 1973) or its recent resurrection by Kratzer and Shimoyama (2003), in which in-situ Wh-phrases are truly immobile. Nonetheless, these authors still do not anticipate the embedding effects described in section 1, or the non-subject effects described in section 5, above. For a more detailed discussion of this issue, see Tomioka (2007).

[9] Here, we follow Pierrehumbert and Beckman's (1988) phonological notation.

The *focus-left-edge* constraint requires that a focused constituent be put at the left edge of an intermediate phrase. In accordance with the *focus-to-end* constraint, there is no intermediate phrase boundary between the focused material and the end of the sentence, unless there is other focused material (i.e., a case of multiple-foci). Therefore, this constraint in effect enforces that the material that comes to the right of a focused constituent is prosodically reduced.[10] The result is the syntax-phonology mapping illustrated below.

(19) Syntax: [........ [   ]$_{focus}$ ....]#

                                        H*L
                                         |
      Phonology: [   ][$_i$]
                                         |_____| ☜ This part is prosodically reduced.
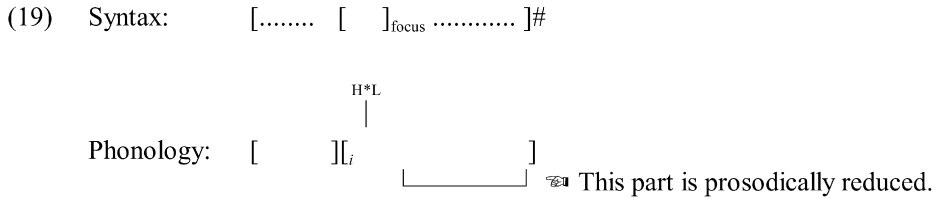
In an ordinary Wh-question, the Wh-phrase is focused. When the Wh-phrase is scrambled, it has the prosodic effect of shifting the intermediate phrase boundary to the left along with the scrambled Wh-element. As a consequence, the post-Wh material gets de-accented or prosodically reduced, as illustrated below.

(20) Syntactic structure   ..... [Wh]$_1$ [..... t$_1$ ......]

                                               H*L
                                                |
      Phonological Phrasing   ....] [$_i$ [Wh] ....]
                                                |_____| ☜ this part is prosodically reduced

The same observations are reported for Korean (e.g., for the Chonnam and Seoul dialects by Jun, 1993, and for the Northern Kyungsang dialect by Kenstowicz and Sohn, 1997).[11]

What is crucial in Wh-questions with ATIs is that scrambling of Wh-phrases puts the ATIs in the phonologically reduced part of the sentence. What does this reduction mean in terms of information structure? Recall that a ground, the old-information part of a sentence, consists of a link and a tail. We suggest that in Japanese and Korean, the subject becomes the link by being topic-marked, and the tail by being included in the prosodically reduced part. Intervention effects are cancelled by scrambling of Wh-phrases because it ensures that ATIs are part of the tail portion of the sentence. The material that comes on the left of a focused constituent does not experience a similar effect.

As a matter of fact, nominative subjects, as opposed to topic-marked subjects, are known to have some peculiar properties.[12] Kuno (1973) observed that a *ga*-marked subject with an individual predicate leads to an exhaustive interpretation, while no such effects are found with a *wa*-marked subject in Japanese. Moreover, the exhaustive reading is, though available, not obligatory with a stage-level predicate. These contrasts are exemplified by the following examples.

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[10] This trend of reduction has also been called *deaccenting* (Ishihara, 2002), *eradication* (Deguchi and Kitagawa, 2002), or *compression* (Hirotani, 2004).

[11] Kenesei and Vogel (1989) report the same tendency for Hungarian.

[12] We will only discuss Japanese examples in the rest of this section, due to space constraints, but all the observations made here are applicable to Korean as well, unless otherwise noted.

(21)   Individual-level predicate
     a.   John-ga   kasikoi
          John-nom smart
     Exhaustive reading: Of all the people relevant in the context, it is John who is smart.
     b.   John-wa kasikoi
          John-top smart
     Neutral reading: Speaking of John, he is smart.

     Stage-level predicate
     c.   John-ga   ki-ta
          John-nom come-past
     Neutral reading: There was an event of John's arrival
     Exhaustive reading: Of all the people relevant in the context, it is John who arrived.

For these contrasts, Heycock (1994) presents an account based on the same pragmatic framework that is adopted in this paper. She argues that a sentence needs both a focus and a link, with the latter being explicit or implicit. In (21c), the link can be a Davidsonian eventuality argument, and the rest of the sentence is then the focus. However, an individual-level predicate, like *be smart*, arguably lacks such an argument (cf. Kratzer, 1995), so this strategy is not available for (21a). The subject also fails to be the link: If it were the link, it would have been marked with *-wa*. Therefore, the nominative subject is necessarily interpreted as the focus, the result of which is the exhaustive implicature that is typically associated with focusing.

     Another interesting property of nominative subjects that is relevant to our discussion is (in)definiteness. In general, neither Japanese nor Korean marks definiteness of NPs morphologically in the same way as English does, and bare NPs, such as *kodomo* 'child', can be either definite or indefinite, depending on the utterance context. However, as Kuno (1973), among others, notes, topic-marking and its lack thereof influences the interpretation. For instance, consider the following mini-discourse.

(22)   Kodomo-zure-no   zyosei-ga arui-tei-ta.   Kodomo-#ga/-wa oogoe-de
     child-accompany-gen woman-nom walk-prog-past child-#nom/-top   loudly
     nai-tei-ta
     cry-prog-past
     'A woman with a child was walking. The child was crying loudly.'

Topicality presupposes familiarity, and the topic-marking in the second sentence of (22) is appropriate because *kodomo* has been mentioned in the first sentence. The infelicity of the nominative marking suggests that, when we have a choice of topic-marking, the nominative option is reserved for expressing new information.

     The pattern that emerges from our discussion so far and Heycock's analysis is the following.

(23)   Nominative subjects tend to be (a part of) focus unless they are included in the
      prosodically reduced portion.

In Nagahara's system, pre-focus material constitutes an independent intermediate phrase which most likely gets a secondary stress. Therefore, it cannot be totally prosodically reduced. In information structural terms, these facts translate to the generalization that material corresponding to a tail sits most comfortably in the position which follows a focused constituent. This tendency explains why a Wh-question is less than perfect when an ATI c-commands and hence

precedes, the Wh-element. Unlike referring expressions, ATIs do not have an option to be topic-marked. The only way to make them part of a ground is to put them in a tail, and the most efficient strategy is to place them to the right of a focused constituent (= a Wh-phrase).

4. Root-embedded contrast in topicality

One of the puzzles of intervention effects is the root-embedded asymmetry introduced in section 1, above. While such an asymmetry would be completely unexpected under any other syntactic approach, an information structural account like ours is able to predict the asymmetry. The topic-focus articulation is a notion applicable primarily to *utterances*, rather than to *sentences*. Although the need of subordinated topic-focus structures has been argued for (cf. Erteschik-Shir, 1997), we certainly do not need, or even want, to articulate the topic-focus distinction recursively for every level of embedding. Then, we should expect some root versus embedded asymmetries regarding information structure. Indeed, topic-marking in Japanese and Korean manifests interesting root-embedded contrasts. Here is a (non-exhaustive) list of the characteristics of Japanese topics.

(24)   a.   Matrix subjects tend to be the default topics.
         b.   If something other than the matrix subject is the topic, it linearly precedes the subject. If it is left in situ, it gets the contrastive interpretation.
         c.   Multiple topics are not totally prohibited but rather uncommon.
         d.   Embedded subjects are not topic-marked.[13]

These facts have been discussed extensively both in the generative grammatical and in the traditional grammatical frameworks (cf. Kuno, 1973; Kuroda, 1965, 1992 in the generative tradition). The most intriguing property is (24d). Recall, for instance, that the unnaturalness of a nominative proper name subject totally disappears in embedded sentences.

(25)   (repeated from (11))
         a.   John-wa/??-ga   nani-o   yon-da-no   (Jp)
             J-top   /   -nom what-acc read-past-Q
             'What did John read?'
         b.   John-un/?-i   mues-ul ilk-ess-ni   (Kr)
             J-top   /   -nom what-acc read-past-Q
             'What did John read?'

(26)   (repeated from (13))
         a.   Kimi-wa [$_{CP}$ John-ga   nani-o   yon-da-to]   omotte-iru-no   (Jp)
             you-top   John-nom what-acc read-past-comp think-Q
             'What do you think that everyone read?'
         b.   Ne-nun [$_{CP}$ John-i   mues-ul ilk-ess-ta-ko]   sayngkakha-ni   (Kr)
             you-top   John-nom what-acc read-past-dec-comp think-Q
             'What do you think that everyone read?'

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[13] According to a judgment often reported in the literature, topic-marking in embedded clauses is not so bad if the embedded clauses are complement CPs (of attitude verbs). In contrast, topic-marking within other embedded clauses, such as relative clauses, is significantly worse. This contrast is not so surprising if one believes in the 'quotation' theory of attitude verbs. If an embedded sentence is really an embedded quotation, the information structure might well survive under embedding.

As we have seen before, the improvement by embedding is also applicable to ATI subjects. An ATI cannot be topic-marked, so when it is in the subject position, it cannot be part of the ground of the sentence by virtue of being the link. However, topic-marking is more restricted in embedded contexts. In other words, embedded subjects, which do not enjoy the special status of being topics, can be put into the ground, in this case, the tail, without any structural manipulations like scrambling. In the previous section, however, we have argued that the material on the immediate left of a focused constituent is not well-suited as tail. In all the embedded examples we presented above, the Wh-phrases are still the focus. Then, how can subjects be part of a tail in the pre-Wh position when they are embedded? One may conjecture that the embedded subject can be prosodically reduced and be put into a tail more easily, because it linearly follows the matrix subject. However, the situation is more complex. Japanese and Korean are Pro-drop languages, and the matrix subject is not always phonologically realized. In such a case, the embedded subject often comes at the beginning of a sentence. Also, when the matrix subject is a complex NP containing an embedded sentence, the sentence begins with the embedded subject. In both cases, ATIs subjects are possible without Wh-scrambling, as shown below.

(27) a. pro [$_{CP}$ John-ga / daremo-ga   nani-o   yon-da-to]   omotte-iru-no   (Jp)
             John-nom everyone-nom what-acc read-past-comp think-Q
         'What do (you) think that John /everyone read?'
   b. pro [$_{CP}$ John-i/   nwukwuna-ka mues-ul ilk-ess-ta-ko]   sayngkakha-ni   (Kr)
             John-nom everyone-nom what-acc read-past-dec-comp think-Q
         'What do (you) think that John/everyone read?'

(28) a. [$_{NP}$ [$_{CP}$ John-ga   /daremo-ga   nani-o   yon-da] -koto]- ga mondai-na-no? (Jp)
             John-nom /everyone-nom what-acc read-past-fact-nom problem-be-Q
         'What is the thing such that it is problematic that John /everyone read it?'
   b. [$_{NP}$ [$_{CP}$ John-i   /nwukwuna-ka mues-ul ilk-ess-ta-nun]   -sasil]-i   (Kr)
             John-nom/everyone-nom what-acc read-past-dec-rel]-fact-nom
      munce-i-ni
      problem-be-Q
         'What is the thing such that it is problematic that John /everyone read it?'

Since we are unaware of any systematic work in sentence prosody which targets a root-embedded contrast of this kind, we cannot conclude that the phonological property of the first element in a sentence is different, depending on whether it belongs to the matrix or the subordinate clause.

   Although we cannot offer a systematic phonological account at this point, the information–structural differences between matrix and embedded subjects surface quite robustly, which suggests that we are at least on the right track. For instance, the root-embedded contrast of the neutral-exhaustive interpretations with individual-level predicates also disappears with embedding, as discussed extensively by Heycock (1994).

(29) a. Individual-level predicate
      Boku-wa [$_{CP}$ John-ga   kasikoi to]   omo-tte-iru
      I-top   John-nom smart   Comp think-prog-pres
         'I think that John is smart' (Neutral reading)

b. Stage-level predicate
Boku-wa [_{CP} John-ga ki-ta   to]   omo-tte-iru
I-top   John-nom come-past Comp think-prog-pres
'I think that John came' (Neutral reading)

The obligatory exhaustive interpretation disappears in (29a), thereby eliminating the contrast with the stage-level predicate example (29b). In addition, the indefiniteness requirement for nominative subjects is also lifted in embedded contexts.

(30)   Kodomo-zure-no   zyosei-ga   arui-tei-ta.   Kodomo-**ga** oogoe-de
          child-accompany-gen woman-nom walk-prog-past child-nom   loudly
          nai-tei-ta-node   totemo koma-ttei-ru   mitai-da-tta
          cry-prog-past-because very   troubled-prog-past look-cop-past
          'A woman with a child was walking. Because the child was crying loudly,
          she seemed to be having a hard time.'

The nominative subject *kodomo-ga* does not necessarily correspond to new information and can successfully be understood to be the child that was with the woman. Based on the data discussed above, I propose that the generalization (23) be revised as (31).

(31)   A nominative subject *that has a choice of being topic-marked* tends to be
          (part of the) focus unless it is included in the prosodically reduced portion.

Nominative subjects are interpreted as focus by virtue of not being marked for topic, and the general unavailability of topic-marking under embedding 'saves' the embedded subject position from being obligatorily interpreted as focus/new information. This is essentially Heycock's (1994) conclusion, and if she is on the right track, then the purely prosodic account we presented in the previous section is too simplistic. It seems that we need to incorporate the notion of 'competition' in formalizing the generalization stated above, and a constraint-based theory, such as Optimality Theory, may turn out to be useful. We will leave this issue as an open question.

5. Intervention effects with non-subjects

So far, our discussion has focused on the intervention effects created by ATI subjects. One of our key observations was the ATIs' inability to be marked for topic, and that fact was tied to a particular information–structural property of nominative subjects, a property that we invoked in order to explain intervention effects. The question that naturally arises now is what happens when an ATI is not a subject but still in the position where it c-commands a Wh-element. The result is a mixed bag. For most of the ATIs that we considered, intervention effects are non-existent or significantly weaker than in the cases where the ATIa are subjects.

(32) a. Ken-wa daremo-ni   nani-o   age-ta-no   (Jp)
        Ken-top everyone-dat what-acc give-past-Q
        'What did Ken give to everyone?'
   b. Chelsu-ka   nwukwuna-eke mues-ul cu-ess-ni   (Kr)
        Chelsu-nom everyone-dat   what-acc give-past-Q
        'What did Chelsu give to everyone?'

(33)   a.   (?)Ken-wa dareka-ni   nani-o   mise-ta-no   (Jp)
              Ken-top someone-dat what-acc show-past-Q
              'What did Ken show to someone?'

        b.   Chelsu-ka   nwukwunaka-eke mues-ul cu-ess-ni   (Kr)
              Chelsu-nom someone-dat   what-acc give-past-Q
              'What did Chelsu give to someone?'

(34)   a.   (?)Ken-wa Erika-ka Anna-ni nani-o   mise-ta-no   (Jp)
              Ken-top Erika-or Anna-dat what-acc show-past-Q
              'What did Ken show to Erika or Anna?'

        b.   Chelsu-ka   John-ina-Bill-eke mues-ul cu-ess-ni   (Kr)
              Chelsu-nom John-or-Bill-dat   what-acc give-past-Q
              'What did Chelsu give to John or Bill?'

We still find the scrambled versions of all the examples above slightly more natural. All the ATIs above must be confined within the ground portions of the sentences, and the best way to achieve that is to put them in the post-Wh positions. However, the failure to do so does not appear to be as harmful in these examples as in the ATI subject cases. So far, the facts are in accordance with our expectation. All the non-subject ATIs in (32)–(34) are in-situ, and according to (24b), they do not have an option of being topics. Such ATIs escape the focus requirement generalization (31), just as was the case with embedded subjects. The only exception is an NPI, as the significantly degraded examples in (35) show.

(35)   a.   ???Ken-wa dare-ni-mo nani-o   mise-naka-tta-no   (Jp)
              Ken-top who-dat-mo what-acc show-neg-past-Q
              'What didn't Ken show to anyone?'

        b.   ???Ken-wa Erika-ni-sika   nani-o   mise-naka-tta-no (Jp)
              Ken-top Erika-dat-except what-acc show-neg-past-Q
              'What didn't Ken show to anyone but Erika?'

        c.   ???Chelsu-ka   amu-eke-to mues-ul cuci-anh-ass-ni   (Kr)
              Chelsu-nom anyone-dat what-acc give-neg-past-Q
              'What didn't Chelsu give to anyone?'

This is the third time that we see NPIs singled out in terms of intervention effects. In section 1, it was noted that intervention effects are the strongest with NPIs, and that NPIs do not show as dramatic an improvement in embedded contexts as the other interveners do. Why are there such differences between NPIs and other ATIs?

    I speculate that the key to understand this puzzle is the fact that NPIs need licensers. In Japanese and Korean, an NPI, such as *daremo* and *amuto* 'anyone', must be licensed by a clause-mate negation. In addition to this syntactic locality condition, there seems to be a phonological locality condition for NPIs. Hirotani (2004) notes the phrasing tendency that puts NPIs in the intermediate phrase (or the major phrase) that includes their licensers. Now, consider (35a). The Wh-phrase *nani-o* 'what-acc' intervenes between the dative NPI *dare-ni-mo* 'who-dat-mo and the verb-neg complex *mise-naka* 'show-neg'. Since the Wh-phrase is focused, Nagahara's Focus-Left-Edge constraint imposes the intermediate phrase boundary immediately before the Wh-element, as shown below.

(36)   H*L

                                   g

    ... dare-ni-mo   [$_i$ [nani-o]$_F$ mise-naka-tta-no]

                                                    ▫ licenser

This phrasing, however, separates the NPI from its licenser beyond the intermediate phrase boundary. This hypothesis finds its support in focusing phenomena without a Wh-phrase as well. Consider the following Japanese discourse.

(37)   A: Daremo Erika-o   yob-ana-katta-sooda-ne.
                  anyone Erika-acc invite-neg-past-hear-Part
                  'I hear no one invited Erika.'
          B: Uun, chigau-yo.
                  no   wrong-Part
                  'No, it's not true.'
          a.   ?? Daremo KEN-o   yob-ana-katta-nda-yo
                  anyone KEN-acc invite-neg-past-cop-Part
                  'No one invited KEN.'
          b.   KEN-o   daremo yob-ana-katta-nda-yo.
                  KEN-acc anyone invite-neg-past-cop-Part
                  'No one invited KEN.'
          c.   Daremo yob-ana-no-wa   KEN-da-yo.
                  anyone invite-neg-nominal-top KEN-cop-Part
                  'It is KEN that no one invited.'

Perhaps (37c) is the most natural continuation. The 'correction' context often calls for the cleft-like structure. However, there is a contrast between (37a) and (37b). We believe that it can be accounted for by our current hypothesis: The focusing on the object puts an intermediate phrase boundary between the NPI and the negation (i.e., the verb + negative morpheme complex) in (37a), and the scrambling of the focused object creates a more desirable phonological structure.[14]

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[14] One anonymous reviewer feels that the contrast is minimal. Although I personally feel that the contrast is still significant, it is my understanding that the kind of 'correction' context that is depicted in (37) often repairs intervention effects more effectively than do other contexts. For instance, I found one speaker who also thinks that the contrast in (37) is very small. Interestingly, however, this speaker feels that intervention effects are also minimal in a 'correction' or similar situation. For instance, the last sentence of (i) more or less acceptable for her.
(i)   A: Daremo Erika-o   yob-ana-katta-sooda-ne.
            anyone Erika-acc invite-neg-past-hear-Part
            'I hear no one invited Erika.'
       B: Uun, chigau-yo.
            no   wrong-Part
            'No, it's not true.'
       A: Soo ? (??)Zyaa, daremo DARE-o yob-ana-katta-no?
            Really Then   anyone who-acc invite-neg-past-cop-Part
            'Really? Who did no one invite, then?'
The last sentence is a typical intervention sentence. While I find (37a) dubious, I consider it more noticeably degraded than the other *dare-o/daremo* word order. To sum up: Although there are some speaker variations on this matter, these variations seem at least consistent with the general trend of intervention effects in corrective contexts.

If our conjecture is correct, then typical intervention examples with NPIs, repeated below, have two reasons why they are not acceptable.

(38)   (Repeated from (1))
        a. ?*Daremo nani-o   yom-ana-katta-no   (Jp)
            anyone what-acc read-neg-past-Q
            'What did no one read?'
        b. ?*Amuto mues-ul ilkci-anh-ass-ni   (Kr)
            anyone what-acc read-neg-past-Q
            'What did no one read?'
        c. ?*John-sika   nani-o   yom-ana-katta-no   (Jp)
            John-except what-acc read-neg-past-Q
            'What did no one but John read?'

One reason is the NPIs' failure to be in the ground portion of the sentence, as I argued earlier. The second reason is the violation of the phrasing preference. In each of the examples above, the NPI is placed beyond the intermediate phrasal boundary from its licenser. This way of characterizing the intervention effects is indeed in accordance with our intuition. In general, the effects are stronger with the NPIs than with the others. It also explains why the improvement in embedded contexts is weaker with the NPIs. The relevant examples are repeated below.

(39)   (Repeated from (7))
        a. ?(?) Kimi-wa [$_{CP}$ daremo nani-o   yom-ana-katta-to]   omotteiru-no   (Jp)
              you-top   anyone what-acc read-neg-past-comp think-Q
              'What do you think that no one read?'
        b. ?(?) Ne-nun [$_{CP}$ amuto mues-ul ilkci-anh-ass-ta-ko]   sayngkakha-ni   (Kr)
              you-top   anyone what-acc read-neg-past-dec-comp think-Q
              'What do you think that no one read?'
        c. ?(?) Kimi-wa [$_{CP}$ John-sika   nani-o   yom-ana-katta-to]   omotteiru-no   (Jp)
              you-top   John-except what-acc read-neg-past-comp think-Q
              'What do you think that no one read?'

Being embedded, the NPIs in (39) escape the obligatory focus requirement stated in (31). However, they are still beyond the intermediate phrase boundaries, because the Wh-phrases, which are focused, intervene between the NPIs and the negation.

To sum up, the examination of non-subject interveners turned out to be quite revealing. We once again found a contrast between NPIs and the other interveners in these contexts, and I hypothesize, following Hirotani, that NPIs impose an extra phonological condition that can be satisfied by scrambling of Whs over NPIs.

6. Conclusion

In this paper, I have argued that intervention effects are not the result of a constraint on LF Wh-movement, but are derived from a less than perfect correspondence between syntactic structure and information structure. Our account has many advantages over the previous ones, all of which make use of structural constraints operative in LF. First, it provides a way to form a natural class of potential interveners. The expressions which participate in these effects cannot be combined

with the topic marker *wa/-(n)un*, hence they are called A(nti-)T(opic) I(tem)s. In a Wh-question, the non-Wh-portion must be contained within the ground portion of a sentence. Since an ATI cannot be part of a ground by virtue of being a link, it must belong to a tail. However, the pre-Wh position is not suitable for the ground portion of a sentence, and this mismatch between information structure and its grammatical realization gives rise to the intervention effects. The effect of scrambling is also information–structural. The scrambling of a Wh-element over an ATI creates a prosodic structure in which the ATI is confined within the prosodically reduced portion and becomes a part of a tail easily. The special status of NPIs as the strongest interveners is hypothesized as being the result of an additional constraint on NPIs, namely that they must belong to the same phonological unit (an intermediate phrase) that contains negation, their licenser. Although we still lack a systematic explanation of embedding effects, it is encouraging that the disappearance of intervention effects coincides with the loss of topic marking on the embedded subject.

The proposed analysis also predicts correctly that native speakers' judgments on intervention effects should be fragile. What goes wrong in the *Intervener ≫ Wh* order is essentially pragmatic. How a speaker judges intervention effects depends on how accommodating the speaker can be in dealing with pragmatic difficulties caused by a less-than-perfect realization of information structure. The analysis also has potential to solve the gradient judgment problem. As discussed earlier, intervention effects are weakened in embedded contexts, but many speakers still prefer scrambled versions in those contexts as well. The weakening is due to the fact that non-topic subjects go to the ground portion more easily in embedded contexts than in root contexts. However, the post-focus reduction operates in the same way under embedding, which means that the positions after a Wh-phrase are better environment for the tail material. This way, we can derive the 'ranking': The *Intervener ≫ Wh* order is better in embedded contexts than in root contexts, but still not as good as the *Wh ≫ intervener* order even under embedding. I am not by any means advocating this kind of strategy for all issues surrounding Wh-interrogatives (such as island constraints and the Empty Category Principles (ECP)). However, the complexity and subtlety in the intervention phenomena seems better treated by a system in which 'silver and bronze medalists' can be appropriately rewarded.

Although the current analysis of intervention effects is a pragmatic one, it has some important consequences for theoretical syntax. Intervention effects, along with LF Wh-island effects (cf. Nishigauchi, 1990; Watanabe, 1992), have been considered to be the strongest argument for the existence of LF Wh-movement in Japanese and Korean. The current account of intervention effects does not make any reference to LF movement, and within this view, intervention effects should no longer be regarded as evidence for the existence of LF Wh-movement in Japanese and Korean, although they do not necessarily refute it. In addition, it has been argued recently by a number of authors (e.g., Deguchi and Kitagawa, 2002; Ishihara, 2002; Hirotani, 2004; Tomioka, 1999; Hirotani, 2004) that LF Wh-islands do not exist in Japanese and Korean. The existence of Wh-islands in the two languages has been a controversial issue primarily because we cannot seem to come up with a uniform judgment. In the works cited above, it is shown that a Yes-no question and a Wh-question have distinct prosodic patterns (the exact characterization of the difference is not uniformly agreed upon among the researchers), and that the apparent Wh-island violations disappear, once the prosody is taken into consideration.[15]

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[15] K.-S. Lee (personal communication) adds interesting facts from the Kyungsang dialect of Korean. Unlike Standard Korean, this dialect employs different Q-morphemes for a Yes-no question and a Wh-question. When the Wh Q-morpheme is used in the matrix clause, an embedded Wh-element can take the matrix scope, circumventing a Wh-island. On the other hand, it does not take the matrix scope when the matrix Q-morpheme is the one proper to a Yes-no question.

In recent years, we have been witnessing a growing popularity of the view that in-situ Wh-phrases are (or at least can be) interpreted without movement (cf. Reinhart, 1993; Tsai, 1994; Cole and Hermon, 1998; Kratzer and Shimoyama, 2002). Such theories must be evaluated in larger contexts, but it is worth pointing out that the account for intervention effects offered in this paper is perfectly compatible with them.[16]

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[16] The only remaining piece of evidence for LF Wh-movement may be the island/ECP effects of the causal Wh *why* (*naze* in Japanese and *way* in Korean). Incidentally, there has been an interesting observation that, unlike the garden-variety Whs, the causal Wh does not show intervention effects in Japanese and Korean (cf. Cho, 1998; Miyagawa, 1997; Kuwabara, 1998; Lee, 2002).

(i)   a.   Taro-sika **naze** sono-hon-o   yom-ana-katta-no   (Jp)
           Taro-only **why** that book-acc read-neg-past-Q
           'Why is it that only Taro read that book?'   (Kuwabara, 1998:10)
      b.   Amuto **way** ku chayk-ul ilk-ci-ahn-ass-ni   (Kr)
           Anyone **why** that book-acc read-CI-neg-paast-Q
           'Why is it that noone read that book?'   (Ko, 2005:872)

The judgments on these examples are, once again, very subtle although they seem to be more uniform in Korean than in Japanese (cf. Ko, 2005). However one feels about those sentences, it is clear to the majority of native speakers that the scrambled versions of (ia), (ib) are still preferred. In other words, the intervention effects survive in the form of preference for *why* questions. I therefore believe that (ia, b) should not be characterized as instances of 'disappearance' of intervention effects. In Tomioka (2007), I raise this issue and give an account based on the pressupositional difference between a *why* question and other wh-questions.

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Satoshi Tomioka is a BA in Liberal Arts (1987) from International Christian University, Tokyo, and PhD in Linguistics (1997) from the University of Massachusetts at Amherst. Had teaching positions at Cornell University and the University of California at San Diego and a research position at Universität Tübingen. Has been teaching at the University of Delaware since 1999 and is currently associate professor of Linguistics. Past and present research topics include ellipsis, anaphora, plurality and distributivity, Wh-interrogatives, and contrastiveness.