Intervention Effects in Focus*

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The most recent trend in the studies of LF intervention effects makes crucial reference to focusing effects on the interveners, and this paper critically examines the representative analyses of the focus-based approach. While each analysis has its own merits and shortcomings, I argue that a pragmatic analysis that does not make appeal to syntactic configurations is better equipped to deal with many of the complex and delicate facts surrounding intervention effects.

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1 Introduction

Many languages exhibit what have come to be known as 'LF intervention effects', in which a certain kind of 'quantificational' expression (i.e., 'intervener') is prohibited from occupying surface positions that c-command a Wh-phrase. The following are some examples from Japanese.

(1) ?***Daremo*/?*Ken-***sika** nani-o yom-ana-katta-no?
Anyone/Ken-except what-ACC read-NEG-PAST-Q
'What did no one read?'

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(2) ??**Daremo**-ga/**??Dareka**-ga/???[Ken-**ka** Erika]-ga nani-o yon-da-no
everyone-NOM/someone- NOM/John-or-Bill- NOM what-ACC read-PAST-Q
'What did everyone/someone/Ken or Erika read?'

(3) ???Ken-**dake**-ga/???Ken-**mo** nani-o yon-da-no?
Ken-only- NOM/Ken-also what- ACC read-PAST-Q?
'What did only Ken/Ken also read?'

Although the judgments on these examples are by no means invariable or stable, there is a very clear contrast with the examples shown below, in which the Wh-phrases are scrambled over the offending interveners.

(4) Scrambled version of (1)
Nani-o$_1$ daremo/ Ken-sika t$_1$ yom-ana-katta-no

(5) Scrambled version of (2)
Nani-o$_1$ daremo-ga/dareka-ga/Ken-ka Erika-ga t$_1$ yon-da-no

(6) Scrambled version of (3)
Nani-o$_1$ Ken-dake-ga/Ken-mo t$_1$yon-da-no

Last twenty years or so have seen a considerable body of research on these intervention effects, including Hoji (1985), who originally discovered the effects in Japanese, S.-W. Kim (1990), Takahashi (1990), Beck (1996), Beck and S.-S. Kim (1997), Tanaka (1997), and Hagstrom (1998), among many others. The majority of the earlier analyses have made crucial use of the following ideas. First, they follow the tradition initiated by Huang (1982) that in-situ Wh-phrases move to Spec of CP at LF in all languages. Second, the intervention effects are claimed to be applicable only at LF so that it affects LF movement but not surface movement. Although the simplicity of this type of analysis is quite appealing, one important question was often left unanswered in

the earlier studies: Which ones are potential interveners, and which ones are not? While we can certainly make a list of interveners, it is surprisingly difficult to name a property that binds all the potential interveners as a natural class. Without knowing the exact nature of interveners, we cannot construct an explanatory analysis of the phenomenon. In this sense, I take it as a welcome change that some of the more recent work on intervention effects (e.g., Beck 2006, Kim 2002, 2005, Tomioka 2007a) takes this question as the starting point.

2 The Role of Focus in Intervention

2.1 Focus Operator ~ as an Intervener

At the beginning of this paper, I mentioned that a certain kind of 'quantificational' expression participates in intervention effects. Indeed, the term 'quantificational' has been popular as the description of interveners (e.g., Hoji 1985, Beck 1996, Beck and Kim 1997). Although it covers the majority of interveners, the term is misleading in two respects. On the one hand, there are expressions that are quantificational but do not act as interveners. In Japanese, for instance, *subete/zenbu-no NP* 'all NP' and *hotondo/daibubun-no NP* 'most NP' do not seem to induce relevant effects.[1] On the other hand, there are non-quantificational interveners, such as *NP-mo* 'NP-also/even'.

[1] This statement needs further clarification. Those quantifiers do not show intervention effects when they are topic-marked. With the nominative marker *ga*, they do show the effects. As far as I know, Shin Watanabe is the first one to connect intervention effects with the topic-nominative alternation (Watanabe 1998). His formulation is the following:

(i) A Japanese wh-question is ill-formed, when a non-wh NP marked with *ga* co-commands a wh-phrase in it. (Watanabe 1998, footnote 7 (ii))

Beck (2006) and Kim (2002, 2005) offer new insight on the identification of potential interveners. Their generalization states that potential interveners are the expressions that come with the focus operator ~ in the sense of Rooth (1992). Thus, the intervention effects are re-formulated as the result of a prohibition against the following structural configuration.

(7) * [Q-Op [$_{YP}$ ~ [[XP]$_F$ [Wh]] where ~ is Rooth's focus operator.

Building on the same generalization, however, Beck (2006) and Kim (2002, 2005) offer different analyses. For Beck, the intervention effects come about because of the interaction between Rooth's (1992) semantics of ~ and Hamblin's (1973) semantics of Wh-interrogatives, a truly in-situ theory of Wh-questions. The ordinary value of a focused XP is the usual denotation of XP while the focus value of XP is a set of semantic objects of the same type as the denotation of XP. Unlike ordinary expressions, Wh-expressions only have focus values (= the Hamblin set denotations) and lack ordinary values.[2] Thus, in a non-intervention situation as in (8), the constituent (YP) that is a sister of a Q(uestion) Operator inherits the property of having only one semantic value (i.e., a focus value).

(8) [Q-Op [$_{YP}$ ….. [Wh] …..]

[2] It should be noted, however, that a Wh-phrase can be contrasted with another Wh. For instance;

(i) I already know when Robin got married. I just want to know WHERE she got married.

Intuitively, the focus value of a contrasted Wh should be a set of Hamblin sets, but it is not clear how it should be calculated if a Wh-phrase lacks an ordinary value. Perhaps, one can assume that the focus value of the Wh is already elevated to the ordinary value by the Q-operator in (i), which makes the computation of the focus value possible. The question still remains, however, since the Japanese counterpart of (i) has the Wh in situ as usual.

The role of the Q-Operator is to elevate the focus value of YP to the ordinary value, which results in a set of propositions that constitute possible answers as the ordinary value of the question. Something goes wrong, however, in a configuration like (7) where a focus operator ~ intervenes between a Q-Op and an in-situ Wh. The operator ~ computes the focus value of its complement, but beyond it, the focus value is 'closed off', so to speak, and it would be a singleton set of the ordinary value of its sister, as shown in (9).

(9) $[_{YP} \sim \ [_{ZP} \ldots .]]$
a. The ordinary value of YP: $[\![YP]\!]^o = [\![ZP]\!]^o$
b. The focus value of YP: $[\![YP]\!]^f = \{[\![ZP]\!]^o\}$

Recall, however, that a Wh-phrase only has a focus value, and so does all the constituents containing a Wh-phrase prior to its combination with a Q-Op. This means that neither the focus nor the ordinary value is defined at the YP level in (7). Beck argues that this lack of definedness is the source of intervention effects. Of course, there is nothing wrong when a Wh-phrase is scrambled over the ~ operator, as in (10).

(10) $[\text{Q-Op } [[\text{Wh}]_1 \quad [_{YP} \sim \ [\ [\text{XP}]_F \ \ t_1 \ ]$

In (10), both the focus and the ordinary values of YP are well-defined (with respect to assignment function g).

Although Kim's (2002, 2005) solution also appeals to focus as the source of intervention effects, it is essentially syntactic. Assuming that a Wh-phrase is inherently focused, she argues that a Q-Op and an in-situ Wh have both a Wh-feature and a focus feature. Furthermore, a Q-Op and an in-situ Wh must be in AGREE relation in the sense of Chomsky (2000). This relation is disturbed

when there is an intervening element which also has a focus feature. The necessary AGREE relation can be established by the scrambling of the Wh-phrase over the offending intervener. (11ab) show how Kim's system works.

(11) a. * [Q-OP $_{[WH, F]}$ [$_{[F]}$ ~ [Wh $_{[WH, F]}$]
└——— No AGREE ! ———┘

b. [Q-Op $_{[WH, F]}$ [[Wh]$_{1[WH, F]}$ … [$_{[F]}$ ~ t_1 …]
└—— AGREE ——┘

Although it was motivated by a different generalization, my characterization of interveners in Tomioka (2007a), which originates in Lee and Tomioka (1999), shares with Beck's and Kim's the idea that focus-related nature of interveners is at the core of intervention effects. The main observation is that all of the potential interveners in Japanese and Korean resist the morphological topic marking (i.e., *wa* in Japanese and *(n)un* in Korean) while the non-interveners, whether they are quantificational or referential, can have the topic morphology. Based on this generalization, I called potential interveners A(nti)-T(opic) I(tem)s and argued that the anti-topicality of intervener leads to intervention effects through the following steps. First, I assume, following Krifka (2001), that in an ordinary Wh-question, the Wh-phrase is focused while the rest belongs to the background. Second, topics belong to the background (cf. Kuno 1973 among others), but an ATI cannot be in the background by virtue of being Topic-marked. Thus, an ATI must find some other way to be in the background. Third, familiarity in discourse is often associated with a particular prosodic pattern, labeled as 'deaccenting' (Tancredi 1992, Fox 1999), 'phonological reduction' (Rooth 1992b), 'eradication' (Deguchi and Kitagawa 2002), or 'compression' (Hirotani 2004). It generally refers to the reduction of prosodic prominence of various sorts (pitch, duration, stress, etc.). It has been noted by many scholars (e.g., Pierrehumbert and Beckman 1988, Nagahara

1994, Ishihara 2002, 2004 among others) that the location of prosodic reduction in Japanese is intimately related to the location of focus. In particular, focusing in Japanese leads to a prosodic pattern in which high pitch accent is placed on the focused material and pitch accents of the material which linearly follows the focus are reduced. (12) illustrates the correspondence between the prosodic pattern and the syntactic structure.

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

Phonology: [[ ] ← This part is reduced.
P(itch) P(rominence)

This phonology-syntax correspondence has significant impact on wh-scrambling. Since a wh-phrase is focused, scrambling of it leads to the extension of the reduced portion to the left. When scrambling of a wh-phrase 'jumps over' an intervener in intervention contexts, the intervener is newly placed in the reduction portion, as shown in (14).

(14) Syntactic structure with Wh-scambling ..... [Wh]$_1$ [[Intv] ..t$_1$ ...]

Phonological phrasing ..... [Wh Intv .....] ← This part is reduced
PP

Since not being in the background means being (part of) focus, (12d) can be re-stated as 'the source of intervention effects is an ATI being (part of) focus'. In this sense, all of the three analyses treat focus as a key ingredient. Nonetheless, the notion of focus is not identical among the three authors, and I will raise this issue in the following sub-section.

2.2 Are All Foci the Same?

Both in Beck's and Kim's analyses, the presence of a ~ operator is intimately tied to the intervention effects. Although Beck primarily concerns with focus-sensitive expressions, such as *only*, Kim (2005) mentions, citing the Korean counterpart of the Japanese sentence (13), that an instance of free focus or sentence focus also induces an intervention effect.

(13) ???[KEN]$_F$ –ga nani-o yon-da-no?
Ken - NOM what- ACC read-PAST-Q
'What did KEN read?'

Then, the potential interveners are categorized into two sub-types: (i) expressions that serve as sentence foci, and (ii) focus-sensitive expressions, such as *only*, *even*, *also*. These two types are not the same. While the presence of ~ in the first type depends on the context when the sentence is uttered, the very semantics of the second type requires it no matter where and when it appears. The following example illustrates this point.

(14) A: Dave only eats MEAT.

B: Oh, no. You got that wrong. (It's) ERIC *(that) only eats meat*.

In the last sentence of B, The subject *Eric* is focused, and the rest belongs to the background or the old information. Nonetheless, the meaning of *only* requires the presence of a ~ operator.

This type of example is well-known, but I would like to point out that, in default cases, focus sensitive expressions are also (part of) sentence foci as well.

To see this point more clearly, let us consider the standard meaning of focus-sensitive operators (cf. Rooth 1985).

(15) a. Only ERIC left early.

b. Even ERIC left early.

c. ERIC also left early.

(16) a. The presupposition of (15a): Eric left early.
The assertion of (15a): No one but Eric left early.

b. The presupposition of (15b): Someone other than Eric left early, and Eric was the least likely person to leave early.
The assertion of (15b): Eric left early.

c. The presupposition of (15b): Someone other than Eric left early.
The assertion of (15b): Eric left early.

The underlined parts of the presuppositions in (16) indicate that the VP meaning in (15a-c) is considered as part of old information. Under the assumption that every sentence must contain some constituent that serves as new information (cf. Vallduvi 1992), this in turn means that focus operators plus their focus-associates constitute new information. Obviously, something more complicated has to be done to deal with cases like (14), where a focus sensitive expression belongs to the background.

At this point, I would like to raise the following question: Do focus sensitive items induce intervention effects simply because of their semantics or because they are often sentence foci as well? The data to be discussed in the next section indicate that the relevant notion is sentence focus, rather than semantic sensitivity to focus.

3 Matrix Subject Condition in Intervention Effects

One of the key discoveries in Tomioka (2007a) is that intervention effects are the most prominent in Japanese and Korean when the interveners are the matrix subjects. All the sentences in (1)-(3), for instance, have the interveners as the matrix subjects. When this 'matrix subject' condition is not met, the effects are either non-existent or significantly weaker.

(17) Embedded Subject Interveners

a. Kimi-wa [$_{CP}$ daremo/dareka/Ken-ka Erika/-ga nani-o yon-da
you-TOP everyone/someone/Ken or Erika-NOM what- ACC read-PAST-
-to] omotte-iru-no
-C think-be-Q
'What do you think that everyone/someone/Ken or Erika read?'

b. Kimi-wa [$_{CP}$ [Ken-mo/Ken-dake-ga nani-o yon-da-to]
you-TOP Ken-also/Ken-only- NOM what-ACC read-PAST-C
omotte-iru-no
think-be-Q
'What do you think that Ken also / only Ken read?'

(18) Dative-Marked Indirect Object Interveners

a. Ken-wa daremo/dareka/Ken-ka Erika/-ni nani-o mise-ta-no
Ken-TOP everyone/someone/Ken or Erika-DAT what-ACC show-PAST-Q
'What did Ken give to everyone?'

b. Ken-wa Erika-ni-mo/-dake nani-o mise-ta-no
Ken-TOP Erika-DAT-also/only what-ACC show-PAST-Q
'What did Ken show also/only to Erika?'

(19) Dative/Accusative-Marked 'Raised' Object Interveners in Causatives

a. Ken-wa daremo/dareka/Anna-ka Erika/-ni nani-o
Ken-TOP everyone/someone/Anna or Erika/-DAT what-ACC
yom-ase-ta-no
read-CAUSE-PAST-Q
'What did Ken make everyone/someone/Anna or Erika read?'

b. Ken-wa Erika-dake-(o) doko-ni ik-aseta-no
Ken-TOP Erika-or Anna-ACC where-LOC go-CAUSE-PAST-Q
'Where did Ken make Erika or Anna?'

The matrix subject condition in intervention effects has curious correspondence with a particular information structural property of matrix subjects in Japanese.

(20) Obligatory Focus Generalization for Non-topic Subjects
A matrix subject is interpreted as (part of) sentence focus when it is not marked with the topic marker *–wa*.

There are a few facts that exemplify the generalization in (20). Kuroda (1965) observed that a *ga*-marked subject with an individual-level predicate leads to the exhaustive interpretation while no such effects are found with a *wa*-marked subject.[3] As is well-known, the exhaustivity implicature is often associated with focusing (cf. Krifka 1993). While Japanese lacks systematic definite marking and a bare common noun can be either definite or indefinite, a bare common noun subject with *ga* is necessarily understood be indefinite (cf., Portner and Yabushita 1998, Tomioka 2007b). Importantly, neither of these properties is found with embedded subjects or non-subjects (cf. Heycock 1994, Tomioka 2007b).

[3] When the predicate is stage-level, the sentence can be interpreted either as the exhaustive or as what Kuno (1973) calls the 'neutral description' interpretation. The second meaning is often described as the entire sentence being focused. Thus, even in the second interpretation, the nominative subject is a part of focus.

I do not believe that it is accidental that the matrix subject condition applies both to intervention effects and to obligatory focus interpretation. My interpretation of the correlation is that intervention effects come about when interveners are sentence foci. The presence of a ~ operator that c-commands a Wh-phrase does not necessarily lead to intervention effects.

4 Possible Amendments

Since the pragmatic approach that I advocated in Tomioka (2007a) was tailored specifically for the facts about matrix subjects, it has obvious advantage over its competitors. Although I will not repeat the detailed account that has already been given in Tomioka (2007a), the gist of it is that the obligatory focus interpretation does not apply to ATIs that are not matrix subjects. Thus, they can be more readily in the background even when they are not in the post-focus reduction part.

Despite this obvious advantage, the facts in the previous section do not necessarily refute the two alternatives. Of the two analyses, Kim's analysis is easier to fix. The only thing that needs to be done is to abandon the assumption that the presence of ~ automatically leads to the presence of a focus feature. Once we restrict assigning a focus feature only to sentence foci, a focus sensitive expression that is already in the background does not induce intervention effects. The most straightforward modification that can be made to Beck's analysis is LF movement. When the intervener is not a sentence foci, the in-situ Wh can undergo covert shifting at LF, the result of which is a kind of configuration that does not cause intervention effects. If such a movement can be independently motivated, it will also solve the problem for Kim's analysis as well. Thus, the key to success for this modification is to find a good reason for the contrast of the following kind.

(21) a. [Wh $_1$ [~ [INTV $_{[+FOCUS]}$ t_1]]]
└— LF movement * —┘

b. [Wh $_1$ [~ [intv $_{[-FOCUS]}$ t_1]]]
└— LF movement OK —┘

LF movement over a focused intervener is prohibited while taking the focus property away from the intervener makes the movement licit. Are there any other instances of LF movement that is susceptible to the focus feature of an intervening material? So far as I know, there aren't any. For instance, quantifier scope seems insensitive to the focus difference.

(22) a. Ken-wa [Erika-ni-DAKE]$_F$ hotonodo-no hito-o syookai-sita.
Ken-TOP Erika-DAT-only majority-GEN people-ACC introduce-PAST
'Ken introduced most people only to ERIKA.'

b. Ken-wa Erika-ni-dake [HOTONDO]$_F$ -no hito-o syookai-sita.
Ken-TOP Erika-DAT-only majority-GEN people-ACC introduce-PAST
'Ken introduced MOST people only to Erika.'

c. [KEN-ga]$_F$ Erika-ni-dake hotonodo-no hito-o syookai-sita.
Ken-NOM Erika-DAT-only majority-GEN people-ACC introduce-PAST
'KEN introduced most people only to Erika.'

With respect to the relative scope of *only* and *most* is concerned, all the three examples in (22) are identical. The *only* > *most* scope reading is overwhelmingly prominent whereas the other reading is absent or considerably weak. It appears that the strength of the reverse scope reading may be a bit different among native speakers, but (i) the *most* > *only* scope becomes instantly available when the direct object is overtly scrambled over the indirect object, which punctuates the weakness of that scope reading in the canonical word order, and (ii) more crucially, we do not find the pattern we are looking for: Not assigning a sentence focus to the focus sensitive expression *Erika-ni-dake,* as in (22b) or (22c), does not seem to encourage the reverse scope interpretation.

If we are not to adopt the LF movement amendment to Beck's theory, perhaps we may consider as an alternative the kind of approach that Beck abandons, namely a selective binding system of focus association (e.g., Wold 1996). The basic idea is that a ~ operator is not as blind as it initially appears. It does not make use of all possible focus values in its scope but is rather associated only with a constituent that is co-indexed with it. Although I acknowledge that Beck's criticisms are valid, I am inclined to think that the selective binding approach has some advantages as well. First, it is intuitively attractive to suppose that a focus sensitive expression in the background keeps the old association intact and does not expand to new association. Otherwise it would not be considered a part of old information. In this sense, it is expected not to play a role in intervention effects. Second, Beck's system already has a selective binding component in the association between a Wh-phrase and a Q-operator. The selectivity derives the well-known Baker ambiguity (Baker 1970). However, it has been noted that the Baker ambiguity itself is sensitive to focusing. As shown below, focusing on the in-situ Wh phrase is a necessary condition for its matrix scope (the *reduced italics* indicate phonological reduction).

(23) a. WHO *asked who bought what* ? Only the embedded scope for *what*

b. WHO *asked who bought*WHAT? The matrix scope for *what* possible

The contrast in (23) suggests that the Baker ambiguity is not a simple matter of selective binding. It remains to be seen whether it is technically possible to incorporate selectivity into the semantics of ~ without evoking the problems that Beck points out.

5 More Things to Consider

5.1 Post-Wh Focusing

While the three analyses that have been considered in this paper are to some extent similar in their ways of accounting for the basic intervention facts, they are dramatically different in their interpretations of Wh-scrambling. One the one hand, Beck's and Kim's analyses are still 'structural' in the sense that scrambling creates LF configurations that are legitimate. In Tomioka (2007a), on the other hand, assigning a focused status to non-Wh expressions is generally prohibited, and the improvement effects of scrambling are by-products of giving rise to post-focus phonological reduction. Therefore, the three analyses make different predictions for surface structure like the following.

(24) [….Wh_1 [INTV $_{[+FOCUS]}$] t_1]

For Beck and Kim, the structure above would not cause any problem since the Wh-phrase is moved over the ~ operator. For my account, this is expected to be unacceptable. The improvement by scrambling is a result of ensuring the intervener to be a part of the background. By focusing the intervener in that position, however, this improvement effect should be cancelled.

With this difference in mind, let us look at some data in which interveners are placed below Wh-phrases but are nonetheless focused. The results are generally in favor of the pragmatic approach I proposed, but there are some unexpected complications. For many interveners, giving them focused status after Wh-scrambling indeed brings back intervention effects. Here are some relevant examples.

(25) a. ?*NAni-o [daREMO]$_F$ *yom-ana-katta-no*?
what-ACC anyone read-NEG-PAST-Q

b. NAni-o *daremo yom-ana-katta-no*?
what-ACC anyone read-NEG-PAST-Q
'What did no one read?'

(26) a. ???NAni-o [DAREka-ga]$_F$ *yon-da-no*?
what-ACC someone- NOM read-PAST-Q

b. NAni-o *dareka-ga yon-da-no*?
what-ACC someone- NOM read-PAST-Q
'What did someone read?'

For expressions with focus-sensitive particles, such as *dake* 'only' and *sae* 'even', however, the results are not straightforward. First of all, there is not a uniform pitch accent pattern when such expressions are focused. Either the part that is associated with the particle gets prominence or else the particle itself receives a pitch peak.

(27) a. ERIka-dake-ga / Erika-daKE-ga ki-ta
ERIKA-only- NOM Erika-ONLY- NOM come-PAST
'Only Erika came.'

b. ERIka-sae / Erika-SAe ki-ta
ERIKA-even Erika-EVEN come-PAST
'Even Erika came.'

Although both pitch patterns are possible, they seem to behave differently in intervention contexts. According to my judgment, putting prosodic prominence on the focus-associates is significantly worse than the other pitch pattern. Not surprisingly, the total reduction is acceptable, just as is the case with other interveners.

(28) a. NAni-o Erika-daKE-ga / ??ERIka-dake-ga *kat-ta-no*?
what-ACC Erika-ONLY- NOM / ERIKA-only- NOM buy-PAST-Q

b. NAni-o *Erika-dake-ga* *kat-ta-no*?
what-ACC Erika-only- NOM buy-PAST-Q
'What did only Erika buy?'

(29) a. NAni-o Erika-SAe / ??ERIka-sae *kat-ta-no*?
what-ACC Erika-EVEN / ERIKA-even buy-PAST-Q

b. NAni-o *Erika-dake-ga* *kat-ta-no*?
what-ACC Erika-only- NOM buy-PAST-Q
'What did even Erika buy?'

This kind of contrast is unexpected for all the three analyses under consideration but for different reasons. (28a) and (29a) should be acceptable for Beck and Kim, no matter which accent pattern is chosen. Therefore, the degradation with *ERIka-dake/sae* is surprising. What is unexpected for my pragmatic account is the fact that focusing on the focus particles is acceptable in the post-Wh positions.

All in all, the facts about post-Wh focusing provide additional support for the pragmatic approach, rather than the structural approach. The prosodic patterns of focus-sensitive particles remain as a puzzle, however, and more careful investigation is called for.

5.2 NPI Interveners

While the grammaticality judgment on intervention effects is notoriously variable and unstable, there are a few things that every native speaker is in agreement about. One is the scrambling effect that we have already discussed. The other concerns the types of interveners. For all speakers, Negative Polarity

Items (NPIs), such as *daremo* 'anyone' and *Erika-sika* 'anyone/no one except Erika', are the strongest interveners, as noted in Tomioka (2007a). Not only do NPIs induce the strongest intervention effects in the basic cases (e.g., (1ab) are worse than the examples in (2) and (3)), but their effects also persist even in embedding and with non-subjects.

(30) a.??Kimi-wa [$_{CP}$ daremo nani-o yom-ana-katta-to] omotteiru-no
you-TOP anyone what-ACC read-NEG-PAST-comp think-Q
'What do you think that no one read?'

b.?? Kimi-wa [$_{CP}$ John-sika nani-o yom-ana-katta-to] omotteiru-no
you-TOP John-except what-ACC read-NEG-PAST-comp think-Q
'What do you think that no one read?'

(31) a.???Ken-wa dare-ni-mo nani-o mise-naka-tta-no
Ken-TOP who-DAT-also 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
Ken-TOP Erika-DAT-exceptwhat-ACC show-NEG-PAST-Q
'What didn't Ken show to anyone but Erika?'

This special status of NPIs is not accounted for under any existing analyses. In Tomioka (2007a), I suggest that the peculiarity of NPIs requires a 'hybrid' approach that has an additional component that is specifically tailored for NPIs. Hirotani (2004) notes the phrasing tendency that NPIs are in the intermediate phrase (or the major phrase) that includes their licensers. Now, consider (31a). 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, an intermediate phrase boundary is inserted immediately before the Wh, as shown below.

(32)

H*L
|
... dare-ni-mo [$_i$ [NAni-o]$_F$ mise-naka-tta-no]
↑ licenser

The prosodic pattern in (32) goes against the aforementioned phrasing preference, which affects the acceptability negatively. Whether this particular account is correct or not, it exemplifies a strategic proto-type that I believe is needed: A constraint/principle that governs the basic cases of intervention effects is coupled with an additional one that targets NPIs.

6 Conclusion

The main purpose of this paper is to give a kind of progress report on our understanding of intervention effects. I believe that we now have firmer grasp of the nature of intervention effects than before. The influence of focus and/or related informational structural properties is at the core of this phenomenon. As Beck (2006) and Kim (2005) point out, the relevance of focus in intervention effects seems to hold in a number of languages that are not typologically related, which gives support for the overall scheme of things. As an advocate of a pragmatic account based on information structure of Wh-interrogatives, I am naturally more inclined to find a structural account of focus, such as Beck's or Kim's, less attractive than its alternative. I am not overly optimistic, however, that we will or should have one *carte blanche* solution, structural or otherwise, that takes care of all aspects of intervention effects. In this paper, I have given microscopic views of intervention effects from a Japanese point of view, and in light of the complexity and subtlety of the intervention phenomena, I am led to conclude that a focus-based account (of one's choice) should be augmented by

some auxiliary constraint(s) to straighten out the wrinkles that the main account leaves behind.

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