

## CHAPTER 7

# LICENSING OF MULTIPLE NEGATIVE POLARITY ITEMS

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### 1. INTRODUCTION

It has generally been assumed that any number of Negative Polarity Items (NPIs) can be licensed by a single Neg in English, as indicated by the fact that sentences such as the following are acceptable:

- (1) He **didn't** give *anybody anything* at *any* place at *any* time.

This is partly true for Korean and Japanese, as illustrated in the following examples:

(2) Korean

- a. *Amu-to amu-kes-to sa-ci anh-ass-ta.*  
anybody anything buy-ing Neg-do-Past-Decl  
'(Lit.) Anybody didn't buy anything; Nobody bought anything.'
- b. *Amu-to amu-tey-to ka-ci anh-ass-ta.*  
anybody anywhere go-ing Neg-do-Past-Decl  
'(Lit.) Anybody didn't go anywhere; Nobody went anywhere.'

(3) Japanese

- a. *Dare-mo nani-mo kaw-anakat-ta.*  
anybody anything buy-Neg-Past  
'(Lit.) 'Anybody didn't buy anything; Nobody bought anything.'
- b. *Dare-mo doko-ni-mo ik-anakat-ta.*  
anybody anyplace-to go-Neg-Past  
'(Lit.) Anybody didn't go anywhere; Nobody went anywhere.'

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\* We are indebted to Sook Lee for the acceptability judgments on the Korean sentences used in this paper. We will use the Yale romanization system for Korean sentences consistently, regardless of whether they are our own or quoted from papers that we refer to.

There are, however, sentences which show that licensing of multiple NPIs is not always unconstrained in these languages:

(4) Korean

- a. *?Amu-to i kes-pakkey ilk-ci anh-ass-ta.* (Sells 2001)  
 anyone this thing-except read-ing Neg-do-Past-Decl  
 'Everyone read only this.'
- b. *\*Han salam-to cumal-ey pan nacel-pakkey ilha-ci ani ha-yess-ta.*  
 single person weekend-on half-day-only work-ing-Neg Do-Past  
 'Even a single person didn't work any more than half a day on the weekend.'

(5) Japanese<sup>1</sup>

- a. *?Dare-mo syuumatu-ni hanniti-sika hatarak-anakat-ta.*  
 anyone weekend-on half-day-only work-Neg-Past  
 '(Lit.) Anyone didn't work any more than half a day on weekends;  
 Nobody worked any more than half a day on weekend.'
- b. *\*Hitori-mo syuumatu-ni hanniti-sika hatarak-anakat-ta.*  
 single-person weekend-on half-day-only work-Neg-Past  
 '(Lit.) Even a single person didn't work any more than half a day on  
 the weekend; Not a single person worked any more than half a day  
 on the weekend.'

In Section 2 of this paper, we first review Sells' (2001) account of the acceptability of Korean sentences such as (2) versus the awkwardness, marginality, or unacceptability of sentences such as (4). In Section 3 we present sentences whose acceptability status cannot be accounted for under Sells' account. In Section 4, we present our own account of multiple NPI licensing, which is based on the assumption that a Neg in Japanese and Korean can license only one NPI, and that the NPI thus licensed in turn licenses those to its right. In Section 5, we briefly show that this account may be applicable, to some extent, to NPIs in English.

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<sup>1</sup> Marginal/unacceptable Japanese sentences involving multiple NPIs such as (4a, b) were discussed in the oral presentation of Kuno, S., "O/Ga Alternation, NPI Licensing, Verb Raising and Scrambling", the Tenth Japanese-Korean Linguistics Conference, UCLA, October 13-15, 2000, but were not included in the written version of the paper because of page limitations.

## 2. SELLS' (2001) ANALYSIS

Sells (2001) presents an ingenious account of the contrast between the acceptable (2a, b) and the unacceptable (4a, b) that is based on three fundamental assumptions. First, he assumes that there are speakers for whom *amu* type negative-sensitive expressions are ambiguous between a negative polarity interpretation (as in 'I didn't see *anyone*') and a free-choice interpretation (as in '*anyone* can do it').<sup>2</sup> According to him, free-choice *amu*-NPs are non-quantificational. He assumes that (4a) is acceptable or nearly so only on the interpretation whereby *amu-to* is a free-choice expression. Thus, according to him, what (4a) means is 'no matter what person x you pick, x read only this', yielding an interpretation of the sentence involving a universal quantifier, as in 'Everyone read only this'.<sup>3</sup> Since (6) below is unacceptable, Sells assumes that the *amu-to* with this free-choice interpretation is also a negative-sensitive expression.

- (6) \**Amu-to* i kes-ul ilk-ess-ta.  
 anyone this thing-Acc read-Past-Decl  
 '(Intended Meaning) No matter which person x you pick, it is the case  
 that x read this thing.'

The second assumption that Sells makes is that there is an intervention effect involving NPIs, which he assumes arises in specific syntactic configurations and blocks certain interpretations. For example, observe the following sentences from Sells (2001):

- (7) a. \**Amu-to* **mwues-ul** sa-ci **anh-ass-ni?**  
 anyone what buy Neg-Past-Q  
 'What did no one buy?'  
 b. *Mwues-ul* *amu-to* sa-ci **anh-ass-ni?**  
 what anyone buy Neg-Past-Q

<sup>2</sup> Sells (2001) motivates this assumption on the basis of Horn (2000)'s account of why the English counterpart *any* functions both as an NPI and a free-choice generic indefinite.

<sup>3</sup> A similar observation was made for the Japanese NPI *dare-mo* 'anyone' in the oral presentation of Kuno (2000):

- (i) *??Dare mo* syuumatu ni hanniti *sika* benkyoosi-**na**-i.  
 anyone week-end on half-day only study-Neg-Present  
 a. Predicted Interpretation: '\*No one studies only half a day on weekend.'  
 b. Actual Interpretation: 'No matter which person x you pick, it is not the case that x studies any more than half a day on weekend; Everyone works only half a day on weekend.'

- 'What did no one buy?'
- (8) a. Nwukwu-ka *amu-to* chotayha-ci **anh**-ass-ni?  
 who-Nom anyone invite Neg-Past-Q  
 'Who did not invite anyone?'
- b. \**Amu-to* **nwukwu-ka** chotayha-ci **anh**-ass-ni?  
 anyone who-Nom invite Neg-Past-Q  
 'Who didn't invite anyone?'

Sells assumes that (7a) and (8b) are unacceptable because a *wh*-expression intervenes between an NPI and a Neg, but (7b) and (8a) are acceptable because there is no intervening *wh*-expression between the two. This constraint, which he attributes to Beck and Kim (1997) and Sohn (1995), can be stated as follows:

- (9) *Beck and Kim (1997)'s and Sohn (1995)'s Intervention Constraint:*  
 If the subject is a Negative-Sensitive Item (NSI), which needs to be licensed by negation, a *wh*-phrase cannot intervene in the surface order between negation and the NSI.

Sells (2001) generalizes this constraint in the following way:

- (10) *Sells' Intervention Constraint:* A quantificational element may not intervene hierarchically between a negative polarity item N and negation which scopes over N.<sup>4</sup>

The third assumption Sells makes is that at some level of representation, Neg is either a sibling of V, or a sibling of S. He assumes that Neg's S-mates are under the scope of Neg:

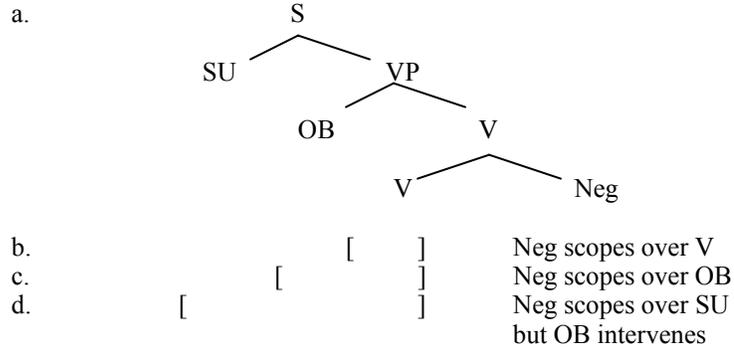
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<sup>4</sup> The acceptability of sentences such as the following shows that Sells' attempt to generalize Beck and Kim (1997)'s and Sohn (1995)'s constraint by making it applicable to non-*wh* quantificational expressions as well is ill-motivated.

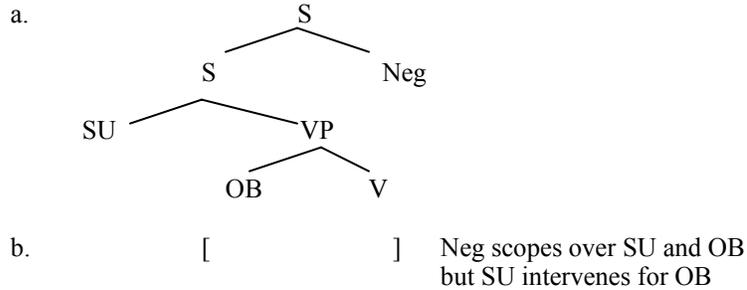
- (i) a. Inswu-*pakkey motun* muncey-lul phul-ci ani ha-yesss-ta.  
 only all problem solve Neg -Past-Decl  
 'Only Insu solved every problem.'
- b. Inswu-*pakkey* chayk-ul *mani* ilk-ci ani ha-yess-ta.  
 only book many read-ing Neg do-Past-Decl  
 'Only Insu didn't read many books.'

In Section 3.2, we will show that even Beck and Kim's and Sohn's constraint cannot be maintained.

(11) Low Negation and Its Scopes



(12) High Negation and Its Scopes

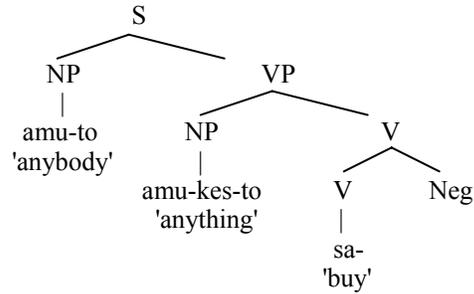


Y intervenes between X and Z if Y is in a closer command relation to Z than X is.

Now let us see how Sells accounts for the acceptability status of (2a) and (4a) and for their semantic interpretations. Observe that (2a) can have the low-negation structure shown in (11) or the high negation structure shown in (12). Observe also that *amu-to* 'anyone' and *amu-kes-to* 'anything' are each ambiguous between a negative polarity interpretation and a free-choice interpretation, and that since free-choice *amu*-NPs are non-quantificational, they do not block NPI licensing even if they intervene between Neg and NPIs:

- (13) *Amu-to amu-kes-to sa-ci anh-ass-ta.* (=2a)  
 anybody anything buy-ing Neg-do-Past-Decl  
 '(Lit.) Anybody didn't buy anything; Nobody bought anything.'

## a. Low Negation



b amu-to amu-kes-to Neg

b1. \*NPI NPI Neg  
not licensed licensedN.B. The Intervention Constraint blocks the licensing of *amu-to* 'anybody' as an NPI.b2. NPI Free-Choice Neg  
licensed

'No matter what thing x you pick, nobody bought it.'

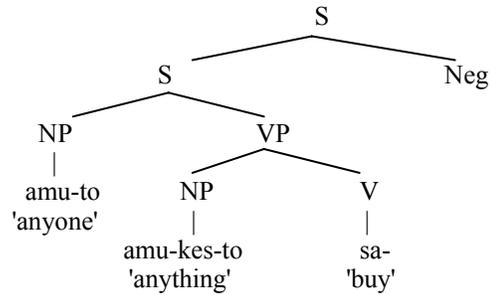
b3. Free-Choice NPI Neg  
licensed

'No matter what person x you pick, x didn't buy anything.'

b4. Free-Choice Free-Choice Neg

'No matter what person x you pick, and no matter what thing y you pick, x didn't buy y.'

## (14) a.. High Negation Structure



- b. amu-to amu-kes-to Neg
- b1. NPI \*NPI Neg  
 licensed not licensed  
 N.B. The Intervention Constraint blocks the licensing of *amu-kes-to* 'anything' as an NPI.
- b2. NPI Free-Choice Neg  
 licensed  
 'No matter what thing x you pick, nobody bought x.'
- b3. Free-Choice NPI Neg  
 licensed  
 'No matter what person x you pick, x didn't buy anything.'
- b4. Free-Choice Free-Choice Neg  
 'No matter what person x you pick, and no matter what thing y you pick, x didn't buy y.'

As shown above, both the low negation structure and the high negation structure yield an "NPI-*amu-to* - Free-choice-*amu-kes-to*" interpretation and a "Free-choice *amu-to* and NPI-*amu-kes-to*" interpretation of the sentence. Note that the analytical framework under discussion does not allow a semantic representation in which both *amu-to* and *amu-kes-to* receive NPI interpretations.

The unacceptability of (5b) is accounted for in Sells' framework in the following way:

- (15) \**Han salam-to cwumal-ey pan nacel-pakkey ilha-ci ani ha-yess-ta.*  
 (=4b)

single person weekend-on half-day-only work-ing-Neg Do-Past  
 'Even a single person didn't work any more than half a day on the weekend'

- a. Low Negation

han salam-to pan nacel-pakkey Neg

\*NPI NPI Neg  
 not licensed licensed

N.B. The Intervention Constraint blocks the licensing of *han salam-to* 'even a single person' as an NPI.

## b. High Negation

NPI	*NPI	Neg
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licensed	not licensed	
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N.B. The Intervention Constraint blocks the licensing of *pan nacel-pakkey* 'only half a day' as an NPI.

A free-choice non-quantificational interpretation is available neither to *han salam-to* 'even a single person' nor to *pan nacel-pakkey* 'only half a day'. Therefore, (4b) does not have a representation that does not violate the Intervention Constraint. Hence Sells' analysis correctly predicts the unacceptability of (45b).

## 3. PROBLEMS WITH SELLS' ANALYSIS

## 3.1. Problems with Beck and Kim (1997)'s and Sohn (1995)'s Intervention Constraint

As shown in Section 2, Sells' analysis crucially depends upon the assumption that the Intervention Constraint of Beck and Kim (1997) and Sohn (1996) is valid. But observe the following sentences:

(16) a.  $\sqrt{(/??)}$ Ney -uy pan haksayng *amu-to* i cwung **enu** muncey-lul  
           your class student anyone these among which question  
           **mos** phul-ess-ni?  
           can-Neg solve-Past-Q  
           'Which problem among these couldn't any of the students in your  
           class solve?'

b.  $\sqrt{(/??)}$ Ney-uy pan haksayng *han salam-to* i cwung **enu**  
           your class's student single person these among which  
           muncey-lul **mos** phul-ess-ni?  
           question can-Neg solve-Past Q  
           'Which problem among these couldn't even a single student in your  
           class solve?'

In each of the above sentences, a *wh*-expression intervenes between an NPI and a Neg. Many speakers consider these sentences perfectly acceptable. There are some speakers who consider them awkward or marginal, but for all speakers, these sentences are much better than predicted by the Intervention

Constraint. This casts serious doubt on any account of multiple NPI sentences based on the Intervention Constraint.<sup>5</sup>

It is not amiss to ask here why (16a, b) are much more acceptable than (7a, 8b) in spite of the fact that these two pairs of sentences have the same syntactic structure.<sup>6</sup> (7a) and (8b) are repeated below for ease of reference

- (17)(7a) \**Amu-to mwues-ul sa-ci anh-ass-ni?*  
 Anyone what buy Neg-Past-Q  
 'What did no one buy?'  
 (8b) \**Amu-to nwukwu-ka chotayha-ci anh-ass-ni?*  
 anyone who-Nom invite Neg-Past-Q  
 'Who didn't invite anyone?'

In order to answer the above question, it is necessary to examine the two possible scopal interpretations of these sentences: the NPI wide-scope interpretation and the *wh*-word wide-scope interpretation. We attribute the unacceptability of (7a) on the *amu-to* wide-scope interpretation to the semantics of *-to* 'also'. Observe first the semantics of (18):

- (18) *Insu-to i kes-ul sa-ci anh-ass-ta.*  
 also this thing buy-ing Neg-do-Past-Decl  
 'Insu, too, didn't but this.'

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<sup>5</sup> The following sentences, which are the Japanese counterparts of (16), are also acceptable.

- (i) a. √*Kimi-no kurasu-no gakusei-no dare-mo dono mondai-ga toke-nakat-ta-no?*  
 you 's class 's student 's anyone which question solve-can-Neg-Past Q  
 'Which problem couldn't any of the students in your class solve?'  
 b. √*Kimi no kurasu no gakusei no hitori-mo dono mondai ga toke-nakat-ta no?*  
 you 's class's student's single-person which problem solve-can-Neg-Past-Q  
 'Which problem couldn't even a single student in your class solve?'

This shows that the Intervention Constraint proposed by Beck and Kim (1997) and Sohn (1995) does not exist for Japanese either.

<sup>6</sup> As discussed in Section 2, Sells assumes that *amu*-type negative sensitive items are ambiguous between negative polarity interpretation and free-choice non-quantificational interpretation. (7a) and (8b) do not violate the Intervention Constraint on the free-choice non-quantificational interpretation of *amu-to*: 'No matter what person *x* you pick, what did *x* not buy?'. There does not seem to be any explanation for the unacceptability of these sentences in Sells' analysis. Also, in (7a) and (8b), it should be possible for High Negation to license the S-initial NPI on the NPI interpretation without going through the *wh*-phrase object. So it is not clear how these sentences are ruled out in Sells' theoretical framework.

What (18) implies is that there is a set of people about whom it has already been established that 'x didn't buy this' holds, and it asserts that the same holds for Insu:

- (19) Young-joo didn't buy this. Soo-Yeon didn't buy this. .... Insu, too, didn't buy this.

Note that the predicate has to remain the same, as shown by the fact that the following discourse is unacceptable.

- (20) Young-joo didn't buy a book. \*Soo-Yeon, too, didn't buy a magazine ...  
\*Insu, too, didn't buy a tie.

Let us assume that the *-to* that appears in NPIs such as *amu-to* 'anything' and *amu-kes-to* 'anything' is the same *-to* as the one shown in (18). The NPI *amu-to* wide-scope interpretation of (7a) would imply that for each person, there are different things that he/she did not buy. This interpretation is inconsistent with the semantics of *-to* 'also', as shown in (20). Hence the unacceptability of (7a) on the *amu-to* wide-scope interpretation.<sup>7</sup>

The *wh*-expression wide-scope interpretation of (7a) is consistent with the semantics of *-to* 'also' because the predicate remains the same for all members of the set of people under discussion. However, this is a nonsensical question to ask out of the blue because there are infinitely many correct answers to the question -- there are infinitely many things that no one under discussion bought:

- (21) Young-joo didn't buy a casino on sale in Las Vegas, a used NASA spaceship, a Russian nuclear submarine, etc. etc... Soo-Yeon, too, didn't buy them. ...Insu, too, didn't buy them.

On the other hand, as the set of items over which *wh*-expression ranges becomes more and more restricted, questions of the type of (7a) on the *wh* wide-scope interpretation become easier and easier to construe. Thus arises the acceptability of the sentences in (16). In other words, out of the blue, the *wh*-expressions in (7a) are too unrestricted to make the *wh*-wide scope interpretation meaningful.<sup>8</sup> What this implies is that (7a) should become

<sup>7</sup> The same explanation for the unacceptability of the Japanese counterpart of (7a) on the NPI-wide scope interpretation is found in Kuno and Takami (2002).

<sup>8</sup> The above observation applies to the English counterpart of (7a):

- (i) What didn't anyone buy?

The sentence on the *what*-wide scope interpretation would make sense only in the context in which it is known that there was a set of things (most likely a one-member set) that everyone was expected to

acceptable if placed in a context which delimits the range of the *wh*-expression. That this is indeed the case can be seen by the acceptability of the following discourse:

- (22) Speaker A: There were things that the students in the class were supposed to buy in preparation for the graduation trip to Europe, but they found out after they got on the plane that there were things that none of them had bought.  
 Speaker B: √*Amu-to mwues-ul sa-ci anh-ass-ni?*  
 Anyone what buy Neg-Past-Q  
 'What did no one buy?'

It remains to discuss here why (7b) and (8a), repeated below for ease of reference, are acceptable without overt contexts such as (22A):

- (23)(7b) **Mwues-ul** *amu-to* sa-ci **anh-ass-ni?**  
 what anyone buy Neg-Past-Q  
 'What did no one buy?'
- (8a) **Nwukwu-ka** *amu-to* chotayha-ci **anh-ass-ni?**  
 who-Nom anyone invite Neg-Past-Q  
 'Who did not invite anyone?'

We hypothesize that it is easier to relate sentence-initial *wh*-expressions than non-initial ones to a restriction provided in prior discourse.<sup>9</sup> Thus it is much easier to assume the presence of restricting contexts of the type of (22A) for the *wh*-expressions in (23) than for those in (17). This provides a straightforward explanation for why fronted English *wh*-phrases do not pattern like (7a, 8b): In sentence-initial position, English *wh*-phrases are more readily associated with a restricting context provided by prior discourse.<sup>10</sup>

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buy but didn't. (Note that without such context, there are infinitely many correct answers.) This context is not difficult to supply, however (for example a store manager asking a clerk about the results of the after-Christmas sale). We will discuss later why it is easier to supply such contexts for (i) than for (7a, 8b).

<sup>9</sup> This is in accordance with the general word-order principle given below:

From-Old-to-New Principle: To the extent that is syntactically allowable, it is best to place older information before newer information.

What the principle predicts is that it is easier for the hearer to assume that fronted unrestricted *wh*-expressions such as *mwues* 'what' and *nwukwu* 'who' are in fact restricted by prior context when they appear at sentence-initial position.

<sup>10</sup> This predicts contrasts like the following for English:

- 
- (i) What didn't anyone buy? (= sentence (i) in fn8)  
(ii) \*What didn't anyone give to whom?  
(iii) What didn't anyone give to which customer?  
Answer: No one gave the cucumbers to Mrs. Jones, no one gave the catsup to Mr. Smith...

What is at issue here are the interpretations of the sentences whereby *wh*-expressions have wide scope over *anyone*. We attribute the acceptability of (i) to the fact that the *wh*-expression appears at sentence-initial position, and is thus interpretable as restricted by prior context. We attribute the unacceptability of (ii) to the fact that the righthand *wh*-expression *whom* is unrestricted, but cannot be interpreted as restricted by prior context because of its sentence-final position. In contrast, (iii) is restricted in prior context because of the use of *which*.

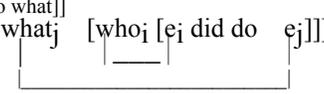
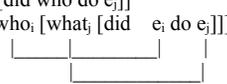
It might be argued that (16a) and (16b) are acceptable or nearly so because they are not subject to the Intervention Constraint on account of the fact that the *wh*-expressions in these sentences are non-quantificational. Pesetsky (1987: 108) claims that "D(iscourse)-linked" *wh*-expressions are non-quantificational. He bases this conclusion on the contrast between the unacceptable (ivb) and the acceptable (v):

- (iv) a. Who did what?  
b. \*What did who do?  
(v) What did which of these boys do?

Pesetsky (1987) assumes that *wh*-expressions *in situ* undergo Raising in LF, where they are adjoined to the largest S'. He attributes the contrast between the acceptable (iva) and the unacceptable (ivb) to his Path Containment Condition, which can be informally represented as follows:

- (vi) Pesetsky's Path Containment Condition: The paths connecting the original locations of quantificational expressions and the raised positions should not cross.

Observe the following LF-representations of (iva) and (ivb):

- (vii) a. Who did what? (= iva)  
b. S-structure: [who<sub>i</sub> [e<sub>i</sub> did do what]]  
c. LF-representation: [what<sub>j</sub> [who<sub>i</sub> [e<sub>i</sub> did do e<sub>j</sub>]]]  

- (viii) a. \*What did who do? (= ivb)  
b. S-structure: [what<sub>j</sub> [did who do e<sub>j</sub>]]  
c. LF-representation: [who<sub>i</sub> [what<sub>j</sub> [did e<sub>i</sub> do e<sub>j</sub>]]]  


According to Pesetsky, (vii) is acceptable because the path from the original location of *who* to its syntactically raised position is embedded in the path from the original location of *what* and its LF-raised location. In contrast, (viii) is unacceptable because the path from the original location of *what* to its syntactically raised position crosses the path from the original location of *who* to its LF-raised position. Pesetsky then observes that (v) is acceptable, and attributes its acceptability to the following hypothesis:

- (ix) D(iscourse)-linked *wh*-expressions are non-quantificational and need not undergo Raising in LF.

### 3.2. Problems with Sells' Free-Choice Analysis

In Section 3.1, we showed that the NPI Intervention Constraint, which Sells' analysis is crucially dependent upon, cannot be maintained. In this subsection, we show that there are multiple NPI sentences which cannot be accounted for even under the assumption that the Intervention Constraint works. As already mentioned, there are NPIs of the form of *han ...-to* 'one ... too' that are not amenable to a free-choice non-quantificational interpretation. Observe the following sentences:

- (24) a. *Hansalam-to*o-ci      **anh**-ass-ta.  
 One person come-ing Neg-do-Past Decl  
 'Not even a single person came. Nobody came.'  
 b. \**Han salam-to* ow-ass-ta.  
 one person come-Past-Decl

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According to this hypothesis, there is an LF-representation of (v) that contains only one path:

- (x) a. What did which of these boys do?  
 b. S-structure: [what<sub>i</sub> [did which of these boys do e<sub>j</sub>]]  
 c. LF-representation: [what<sub>i</sub> [which of these boys did do e<sub>j</sub>]]

It might be argued that (ix) applies to Korean also, making the *wh*-expressions in (16a, b) non-quantificational, and thus disqualifying them from functioning as intervening quantificational NPs.

There are two problems with the above account of the contrast between (16) and (17). First, Pesetsky's Path Containment Condition does not apply to Korean, as shown below:

- (xi) a. Nwukwu-ka mwues-ul ha-yess-ni?  
 who what do-Past-Q  
 'Who did what?'  
 b. Mwues-ul nwukwu-ka ha-yess-ni  
 what who do-Past-Q  
 '(Lit.) What did who do?'

Therefore, it is difficult to find an independent motivation for (ix) in Korean. But even more seriously, as shown in Kuno (1988), Pesetsky's account of the contrast in acceptability among (iva), (ivb) and (v) is untenable because of the acceptability of sentences of the following type:

- (xii) Which of the games did [which of these boys]<sub>i</sub> play with his<sub>i</sub> classmates?

The pronoun *his* in the above sentence can readily receive an interpretation as bound by *which of the boys*. In order to avoid violation of the Path Containment Condition, this *wh*-expression must remain *in situ*. On the other hand, in order for the pronoun to receive a bound-variable interpretation, the *wh*-expression must be raised. This dilemma is irresolvable unless one abandons either (i) Pesetsky's D-linking analysis, or (ii) the assumption that all quantificational expressions must be raised in LF. Either way, this leaves the potential objection to our account of the contrast between (16) and (17) on the basis of Pesetsky's D-linking analysis without much merit.

- '\*Even one person came.'
- c. *Han*haksayng-to o-ci        **anh**-ass-ta.  
 one student        come-ing    Neg-do-Past-Decl  
 'Not even a single student came.'
- d. \**Han* haksayng-to **ow**-ass-ta.  
 one student        come-Past-Decl  
 '\*Even a single student came.'

These NPIs are not amenable to a free-choice interpretation because of their meaning '(not) even a single x'.

Now, observe that sentences that contain two such NPIs are perfectly acceptable to most speakers.<sup>11</sup>

- (25) a. √*Han salam-t han mati-to mal ha-ci ani* ha-yess-ta.  
 single person    single-word    speak-ing    Neg-do-Past-Decl  
 'Not even a single person said even a single word.'
- b. √*Uli kacok-un, han salam-to han pen-to hayoy-ey ka-n cek-i*  
 my family        single person    single time abroad-to go experience  
**eps-ta.**  
 Neg-have-Decl  
 'In my family, not even a single person has been abroad even once.'

According to Sells' analysis, in the low negation structure of (25a), for example, Neg assigns an NPI interpretation to the right-hand NPI, but not to the left-hand NPI because of the Intervention Constraint. Likewise, in the high negation structure of the sentence, Neg assigns an NPI interpretation to the left-hand NPI, but not to the right-hand NPI. That is, one NPI in this sentence fails to be licensed regardless of whether Neg is a sibling of V or a sibling of S in the semantic representations of the sentence. Since the NPIs in this sentence cannot have a free-choice non-quantificational interpretation, Sells' analysis incorrectly predicts that the sentence will be unacceptable. The same is true for (25b).

<sup>11</sup> The Japanese counterparts of these sentences are also acceptable or nearly so depending upon the speaker:

- (i) a. √/?*Hitori-mo hitokoto-mo iw-anakat-ta.*  
 single-person single-word    say-Neg-Past  
 'Not a single person said even a single word.'
- b. √/?*Ano sensei wa hitori-no gakusei-ni-mo itido-mo yasasi-i kotoba-o*  
 that teacher    single    student-to    single-time kind    word  
 kake-ta    koto-ga **na-i.**  
 say-Past    experience Neg-have-Present  
 'That teacher hasn't even once said a kind word even to a single student.'

## 4. AN ALTERNATIVE ANALYSIS

In the preceding section, we have shown that it is not possible to maintain Sells' analysis of multiple NPI sentences in Korean. In this section, we present an alternative analysis, which is based on our hypothesis (i) that Neg can license only one S-mate NPI, and (ii) that the NPI thus licensed in turn can license NPIs to its right under certain conditions.

Let us first observe that the relative order of NPIs matters.<sup>12</sup>

- (26) a.  $\sqrt{\text{Inswu-pakkey han mati-to-tul mal ha-ci ani ha-yess-ta.}}$   
           only single word –Plural say-ing Neg do-Past-Decl  
           'No one except for Insu said even a single word.'  
       b. \**Han salam-to Inswu-wa-pakkey manna-ci ani ha-yess-ta.*  
           single person with-only meet-ing Neg. do-Past-Decl  
           '(Intended Meaning) Not a single person met anyone other than  
           Insu.'

Observe that while *pakkey* 'only' precedes *han...-to* 'even a single...' in (26a), the order is reversed in (26b). (26a) is acceptable, but (26b) is unacceptable and is nearly unintelligible. There does not seem to be anything wrong with the semantics of the sentences, as shown by the fact that their English counterparts are perfectly acceptable. Therefore, the difference in acceptability between (26a) and (26b) must be due to nonsemantic constraints on NPI licensing peculiar to Korean. Intuitively, it seems that *pakkey* 'only' is a stronger NPI than NPIs of the type *han...-to* "even a single...", and that a weaker NPI cannot precede a stronger NPI.

Likewise, observe the following sentences.

<sup>12</sup> The Japanese counterparts of these sentences are considerably worse than the Korean sentences:

- (i) a. ??*Taroo-sika hitokoto-mo iw-**anakat**-ta.*  
           only single-word say-Neg-Past  
           'No one other than Taro said even a single word.'  
       b. \*\**Hitori-mo Taroo-ni-sika aw-**anakat**-ta.*  
           single-person to only meet-Neg-Past  
           '(Intended Meaning) Not a single person met anyone other than Taro.'

This might be related to the fact observed by A.H. Kim (1997) that while Korean *pakkey* 'except' can co-occur with *amu-to* expressions, Japanese *sika* 'only' cannot co-occur with NPIs such as *dare-mo* 'anyone' and *nani-mo* 'anything':

- (ii) a. *Swuni-pakkey amu-to o-ci anh-ass-ta.*  
           except anyone come-ing Neg-Past-Decl  
           'Except for Suni, no one came; Only Suni came.'  
       b. \**Taroo-sika dare-mo ko-nakat-ta.*  
           only anyone come-Neg-Past  
           '(Intended Meaning) Except for Taro, no one came; Only Taro came.'

- (27) a.  $\surd$ Na-nun Inswu-wa-pakkey amu kes-to malha-ci **ani** ha-yess-ta.  
 I with-only anything say-ing Neg do-Past-Decl  
 'I didn't discuss anything except with Insu.'
- b. \*Na-nun amu kes-to Inswu-wa-pakkey malha-ci **ani** ha-yess-ta.  
 I anything with-only say-ing Neg do-Past-Decl  
 'I didn't discuss anything except with Insu.'

(27a) is acceptable, but (27b) is unacceptable. Here again, it is intuitively felt that *pakkey* 'only' is a stronger NPI than *amu-kes-to* 'anything', and that (27b) is unacceptable because a weaker NPI precedes a stronger NPI.

Observe next the following sentences:

- (28) a. *Han salam-to amu-kes-to* malha-ci **ani** ha-yess-ta.  
 single person anything say-ing Neg do-Past-Decl  
 'Not even a single person said anything.'
- b. \*Coh-un il-i amu-kes-to *han salam-eykey-to* ilena-ci.  
 Good thing anything one person-to happen-ing  
**ani** ha-yess-ta  
 Neg-do-Past-Decl  
 'No good things happened to even a single person.'

It is intuitively felt that the *amu-...-to* type NPIs are even weaker than the *han ...-to* type NPIs, and that (28b) is unacceptable because a weaker NPI precedes a stronger NPI.

The above observations suggest that the following principles are at work in Korean multiple NPI sentences:

- (29) A. The Intervention Constraint of the type proposed by Beck and Kim (1997) and Sohn (1975) does not exist for NPI licensing.
- B. There are three types of NPIs in Korean depending upon how strong their NPI status is:  
 NPI Hierarchy: Strong <-----> Weak  
*Pakkey-Type* > *Han...-to-Type* > *Amu- ...-to Type*
- C. A Neg can license only a single NPI.
- D. An NPI can be indirectly licensed by an NPI to its left if it is at the same level as, or lower than, the left-hand NPI in the NPI hierarchy.
- E. *Amu-to* 'anyone' appearing as a clause-mate of Neg can receive a universal quantifier-like interpretation, with a slight reduction in the degree of acceptability. *Amu-kes* 'anything' cannot receive such an interpretation.

We now show how the above principles work. First, observe (30):

- (30) a. √Inswu-***pakkey*** *han mati-to-tul* mal ha-ci **ani** ha-yess-ta. (=26a)  
 only single word -Plural say-ing Neg do-Past-Decl  
 'Only Insu said even a single word.'
- b. √Inswu-***pakkey*** *han salam-kwa-to han mati-to-tul* malha-ci **ani**  
 only single person-with single word-Plural say-ing Neg  
 ha-yess-ta.  
 do-Past-Decl  
 'Only Insu said even a single word to even a single person.'<sup>13</sup>
- c. √Inswu-***pakkey*** *amu-kes-to* malha-ci **ani** ha-yess-ta.  
 only anything say-ing Neg do-Past-Decl  
 'Only Insu said anything to anyone.'
- d. √Inswu-***pakkey*** *amu-kes-to amu-kwa-to* malha-ci **ani** ha-yess-ta.  
 Only anything anyone-to say-ing Neg do-Past-Decl  
 'Only Insu said anything to anyone.'
- e. √***Han salam-to*** *han mati-to-tul* malha-ci **ani** ha-yess-ta.  
 single person single word-Plural say-ing Neg do-Past-Decl  
 'Not even a single person said even a single word.'
- f. √***Han salam-to*** *amu-kes-to* malha-ci **ani** ha-yess-ta.  
 single person anything say-ing Neg do-Past-Decl  
 'Not even a single person said even a single word.'

In each of the above sentences, the NPI that is the strongest and is Neg-licensed is represented in bold italicized letters. These sentences are all acceptable because the other NPIs in the same sentences are not stronger than the Neg-licensed ones.

Observe next the following sentences:

- (31) a. \****Han salam-to*** Inswu-wa-***pakkey*** manna-ci **ani** ha-yess-ta. (=26b)  
 single person with-only meet-ing Neg. do-Past-Dc  
 '(Intended Meaning) Not a single person met anyone other than Insu.'
- b. \*Coh-n il-i *amu-kes-to* puca-eykey-***pakkey*** ilena-ci  
 good thing anything rich-people-to-only happen-ing  
**ani** ha-n-ta.  
 Neg-do-Present-Decl  
 'No good things happen except to rich people.'

<sup>13</sup> The Japanese counterparts of these sentences are unacceptable:

- (i) \*Taroo ***sika*** *hitokoto-mo* iw-***anakat***-ta.  
 Only single-word say-Neg-Past  
 '(Lit.) Only Insu said even a single word.'

- c. \*Na-nun *amu kes-to* Inswu-wa-**pakkey** malha-ci  
 I anything with-only say-ing  
**ani** ha-yess-ta. (=27b)  
 Neg do-Past-Decl  
 'I didn't say anything except to Insu.'
- d. Coh-n il-i **amu-kes-to** *amu-eykey-to* ilena-ci ani ha-n-ta.  
 good thing anything anyone-to happen-ing Neg-do-Present-Decl  
 'No good things happen to anyone.'

In (31a, b, c), *han salam-to* 'even a single person' and *amu-kes-to* 'anything' remain unlicensed because they appear to the left of the Neg-licensed *Inswu-wa-pakkey* 'only with Insu', *puca-eykey-pakkey* 'only to the rich' and *Inswu-wa-pakkey* 'only with Insu'. Hence the unacceptability of these sentences. In contrast, (31d) is acceptable because the Neg-licensed *amu-kes-to* 'anything' can license the righthand NPI *amu-eykey-to* 'to anyone'.

Now, compare (31b, c) with the following:

- (32) a. ?*Amu-to* i kes-**pakkey** ilk-ci **anh-ass-ta.** (= 25a: Sells 2001)  
 anyone this thing-except read-ing Neg-do-Past-Decl  
 'Everyone read only this.'
- b. \*Na-nun *amu kes-to* Inswu-wa-*pakkey* malha-ci **ani** ha-yess-ta.  
 I anything with-only say-ing Neg do-Past-Decl  
 'I didn't discuss anything except with Insu.'

In (32a), *amu-to* 'anyone' remains unlicensed just like *amu-kes-to* in (31b). But as stated in (29E), *amu-to* 'anyone' that is a clause mate of Neg can be re-interpreted as a universal quantifier, with a slight reduction in the degree of acceptability of the sentence. This explains the "?" status of (32a). In contrast, (32b) is unacceptable because *amu kes-to* 'anything', as stated in (29E), cannot be reinterpreted as a universal quantifier.

Lastly, observe the following sentence:

- (33) ?/?/\*Inswu-**pakkey** Swuni-wa-*pakkey* manna-ci **ani** ha-yess-ta.  
 only with only meet-ing Neg do-Past-Decl.  
 '(Intended Meaning) Only Insu met only Suni.'<sup>14</sup>

The sentence is predicted to be acceptable because, according to (29D), the

<sup>14</sup> The Japanese counterpart of this sentence has the same acceptability status:

- (i) \*Taroo-*sika* Hanako-ni-*sika* aw-**anakat-ta.**  
 only to-only see-Neg-Past  
 'Only Taro met only Taro. (Other people met Taro and others.)'

left-hand *pakkey* ‘only’ should be able to indirectly license the right-hand *pakkey* ‘only’, but it is judged as awkward, marginal, or unacceptable depending upon the speaker. One might be tempted to stipulate that a single Neg can license only one token of *pakkey* ‘only’, since it is the strongest NPI. The marginality or unacceptability of the following sentence shows that this approach does not work:

- (34) ??/\*Inswu-*pakkey* [Swuni-*pakkey* ttokttokha-ci **ani** ha-ta]-ko  
                   only                  only bright-be-ing Neg do-Decl]-ko  
                   sayngkakha-ci **ani** ha-n-ta.  
                   think-ing          Neg do-Present-Decl  
                   ‘Only Insu thinks that only Suni is bright.’<sup>15</sup>

Observe that the main clause *pakkey* ‘only’ is licensed by the main clause Neg, and the embedded clause *pakkey* ‘only’ by the embedded clause Neg. Therefore, there should not be anything wrong with the sentence, but it is judged as marginal or unacceptable by most speakers. We assume that the awkwardness, marginality or unacceptability of sentences such as (33) and (34) results from the general computation difficulty in processing sentences that contain more than one token of an expression meaning ‘(not) any more/other than’, and that there is nothing syntactic about it.

## 5. CONCLUDING REMARKS

In this paper, we have presented what we believe to be three provocative ideas about multiple NPI licensing in Korean: (i) a Neg can license only one NPI; (ii) there are different types of NPIs depending upon how strong their NPI status is; and (iii) an NPI can be indirectly licensed by an NPI to its left as long as it is not a stronger NPI than the left-hand NPI.

We suggest that some or all of the above three ideas might also apply to multiple NPI licensing in English. We stated at the beginning of this paper that a Neg can support any number of Negative Polarity Items in English, and illustrated it with the following example:

- (35) He didn’t give *anybody anything* at *any* place at *any* time. (=1)

<sup>15</sup> The Japanese counterpart of (34) is also nearly unintelligible:

- (i) ??/\*Taroo-*sika* [Hanako-*sika* rikoo-de **na**-i] to omot-te i-**na**-i.  
                   only                  only bright-being Neg that think-ing be-Neg-Pres  
                   ‘Only Taro thinks that only Hanako is bright.’

It seems that some of the constraints on multiple licensing of NPIs in Korean apply to English, albeit to a lesser degree. Observe the following sentences:

- (36) a. John didn't introduce *any* of his friends to *anyone*.  
 b. ????John didn't introduce *any* of his friends to a *single colleague*.  
 (37) a. John didn't introduce a *single* friend of his to *anyone*.  
 b. John didn't introduce a *single* friend of his to a *single* colleague.

Among the four sentences given above, only (36b) is awkward. This fact can perhaps be accounted for by assuming (iv) that the NPI status of the expression *a single x* is stronger than that of *any*, (v) that a Neg licenses an NPI that is closest to it, (vii) that an NPI can be indirectly licensed by an NPI to its left, but (viii) that awkwardness results when a weaker NPI is used to license a stronger NPI.

Let us explore these ideas by examining the closest English counterpart to Korean *pakkey* 'only', exceptive *but* NP, as in (38):

- (38) a. John didn't talk with (\*none) but a few students.  
 b. John talked with (none) but a few students.

We suggest that there are two types of *but* NP: the NPI pattern in (38a), and the negative NP pattern in (38b), where *none* is optionally realized.<sup>16</sup>

Evidence that the second pattern involves a negative NP comes from the fact that (*none*) *but* can license an NPI to its right without clausal negation:

- (39) John introduced but a few friends to anyone.

The pattern of *but* NP is typical of English: English NPIs generally have corresponding negative NPs:

- (40) a. John didn't buy a single book.  
 b. John bought not a single book.  
 (41) a. John doesn't give a damn about what his friends think.  
 b. John gives not a damn about what his friends think.

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<sup>16</sup> In the negative NP pattern, *none but* NP is preferred to *but* NP by many speakers, and is obligatory in subject position:

(i) \*(None) but John came.

For many speakers, bare *but* NP as a negative NP has an archaic flavor even in non-subject position.

What is distinctive about *(none) but* NP is that the negative element *none* may be covert. Korean and Japanese, in contrast, lack negative NPs altogether. Note that in terms of the NPI hierarchy in (29B), negative NPs are maximally strong: they can license any NPI to their right.

With this background, we are now in a position to compare NPI *but* NP to Korean *pakkey* ‘only’:

- (42) a. \*John didn’t introduce *any* of his friends to *but a few* colleagues.  
 b. \*John didn’t introduce *a single* friend of his to *but a few* colleagues.  
 c. ??/\*John introduced *but a few* friends to *but a few* colleagues.

In (42a, b) the presence of clausal negation ensures that *but a few colleagues* is an NPI. The unacceptability of (42a, b) can be accounted for by assuming that *but a few x’s* is a ‘stronger’ NPI than *any* or *a single x*, as was the case with Korean *pakkey* ‘only’. We assume that the marginality or unacceptability of (42c) results from the general computation difficulty in processing sentences that contain more than one token of an expression meaning ‘(not) any more/other than’.

So far we have shown that (29) applies in part to English multiple NPI contexts as well. However the precise placement of different NPI types on the hierarchy in (29B) appears to differ in English and Korean. We saw in (42b) that *a single* NP cannot precede NPI *but* NP. However the reverse order is also not perfect:

- (43) ??John didn’t introduce but a few colleagues to a single friend of his.

This contrasts with (39), where we saw that NPI *but* NP may precede NPI *any*. Note now that negative *none but* NP in the order of (43) is almost perfect:

- (44) (?)John introduced none but a few colleagues to a single friend of his.

We speculate that the contrast between (43) and (44) is due to the closeness of *but* NP and *a single* NP on the NPI hierarchy, and the presence in English of the negative *(none) but* NP strategy. When two items are close on the hierarchy, the higher of the two must be overtly marked as ‘strong’ if it can be; in English this can be done by selecting the negative NP variant of *(none) but* NP.

The above account of English multiple NPI sentences is only speculative at this point. The presence of negative NPs interacting with NPIs gives English a dimension not present in Korean or Japanese. But the partial overlap with the patterns observed in Korean provides a highly suggestive direction for future research.

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