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# Licensing and Semantics of *Any* Revisited

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## 1 Introduction

There are two major issues concerning the syntax and semantics of *any* in English:<sup>1</sup> First, what is the correct characterization of its licensing environments? Second, what is its semantics, in particular, is it a quantifier or not? Despite some disagreements among authors, the prevalent view is that there are two *any*'s which are homophonous and exhibit distinct distributions: One is negative polarity item *any* ( $\text{any}_{\text{NPI}}$ ) which occurs in the so-called downward entailing environments as characterized by [Ladusaw 1979],<sup>2</sup> and is identified as an existential quantifier, cf. (1). The other is free choice *any* ( $\text{any}_{\text{FC}}$ ) which typically occurs in generic sentences, and is identified as a universal quantifier, cf. (2). (See [Ladusaw 1979], [Carlson 1980], [Carlson 1981], [Linebarger 1987], [Progovac 1988], [Laka 1990].)

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<sup>1</sup>This paper has greatly benefited from discussions with Dong-In Cho, M rvet Enc, Michael Hegarty, Sabine Iatridou, Rhang Lee, Michael Niv, Ellen Prince, Beatrice Santorini, and the participants of the Fifth International Symposium on Korean Linguistics held at Harvard University. I am particularly grateful to Sabine Iatridou for encouraging me to pursue this topic, for providing me with critical materials, and for extended discussions on many occasions. All errors and mistakes are, of course, my own.

<sup>2</sup>[Baker 1970] and [Linebarger 1987] characterize the environments in which  $\text{any}_{\text{NPI}}$  occurs in terms of explicit/implicit negation. Which characterization we adopt does not affect the argument in this paper, however.

- (1) a. I didn't see *any students*.  
 b. If John hears *any noise*, he complains.  
 c. Before he bumped into *anyone*, John left the party.
- (2) a. *Any student* can do this.  
 b. John eats *anything*.  
 c. Pick *any card*.

It is implicit in this classification that there is a one-to-one mapping between the nature of the licensing environment and the semantics of *any*, i.e. downward entailing and existential quantifier on the one hand, and generic and universal quantifier on the other.

In this paper I refute the standard classification of *any* licensing environments and its semantics based on data from both Korean and English. In section 2 I argue that the standard classification of *any* licensing environments needs to be reclassified such that the scope of a clausemate negation and the counterfactual *before* form one group, and all the others, another group, as represented below:

Classification		
Standard		New
	[ Immediate scope of negation ]	
	[ 'before'-clauses ]	Type A
NPI	[ Other affectives ]	
	[ (conditional, question, etc.) ]	Type B
FC	[ modal/generic ]	

In section 3 I claim that *any* is neither an existential nor a universal quantifier. Instead, the quantificational force of *any* is uniformly derived from the SCALE PRINCIPLE as argued in [Fauconnier 1975a], [Fauconnier 1975b], and [Fauconnier 1978].

## 2 Reclassification of *any* licensing environments

In this section I argue for a reclassification of *any* licensing environments in which the scope of clausemate negation and the counterfactual *before*<sup>3</sup> form one group, and all the others, including conditionals and generic sentences, form another group. This reclassification is based on the distribution of two types of *any* in Korean, and licensing of affirmative polarity item and the scope behavior of *some* in English.

<sup>3</sup>M rvet Enc (in personal communication) points out to me that the Turkish counterpart of *before* contains an explicit negative morpheme in it.

## 2.1 Korean Data

The Korean counterpart of the English *any N* is realized in two morphological forms, *amwu N-to* and *amwu N-lato* (*-to* form for the former, and *-lato* form for the latter hereafter).<sup>4</sup> The distributions of the two forms are disjoint in principle, even though either form can occur if a position is within the scope of both the *-to* and the *-lato* form licensing operators.

### 2.1.1 Distribution of *amwu N-to*

The *-to* form occurs (a) within the scope of clausemate negation, as in (3); (b) in a clause whose predicate is inherently negative such as *epta* ‘not exist’ and *moluta* ‘not know,’ as in (4); (c) in the infinitival complement clause of a negated matrix verb, as in (6); and (d) in a counterfactual *ceney* ‘before’ clause, as in (6).<sup>5</sup>

(3) Clausemate negation

na-nun **amwu umsik-to/\*lato** mekci an-assta  
 I-TOP any food-even eat-NMZ NEG-PAST  
 ‘I didn’t eat any food.’

(4) Inherently negative predicate *epta* ‘not exist’

selap-sokey **amwukes-to/\*ilato epta**  
 drawer-in anything not exist  
 ‘There is nothing in the drawer.’

(5) Infinitival complement clause of a negated matrix verb

**amwu-to/?lato** ikes-ul ha-l-kes kat-ci an-ta  
 anyone this-ACC do-MOD-NMZ likely-NMZ neg-do  
 ‘No one is likely to do this.’

(6) In a counterfactual *before* clause

na-nun [**amwu-hako-to/?lato** macwuchi-ki-ceney] phathi-lul ttenassta  
 I-TOP anyone-with-even bump into-NMZ-before party-ACC left  
 ‘I left the party before bumping into anyone.’

<sup>4</sup>It seems possible to replace *amwu* by *nwukwu* (personal communications with Dong-In Cho and Rhang Lee, among others), which is ambiguous between a wh-word and an existential quantifier, without any change in meaning.

<sup>5</sup>[Heinamakki 1972] discusses the semantics of counterfactual and temporal *before* in detail. Consider sentences (a) and (b) below (taken from Heinamakki):

- a. Before Sue punched anyone, she was miserable.  
 b. Before Sue punched anyone, she left the party.

According to Heinamakki, (a) *presupposes* that ‘Sue punched someone,’ while (b) entails the negation of the *before* clause, namely, ‘Sue did not punch anyone.’ A *before* clause which is presupposed, as in (a), is called temporal *before*, and a *before* clause, the negation of which is entailed by the sentence containing it, as in (b), is called counterfactual *before*.

### 2.1.2 Distribution of *amwu N-lato*

The *-lato* form occurs both in the rest of the any<sub>NPI</sub> licensing environments and in the any<sub>FC</sub> licensing environments.

Any<sub>NPI</sub> licensing environments other than those discussed above include (a) conditionals, as in (7); (b) questions,<sup>6</sup> as in (8); and (c) a relative clause headed by a universal quantifier, as in (9):

- (7) Conditional  
 ney-ka **amwu umsik-ilato/\*to** meknunta-myen senmwul-ul cwukeyssta  
 you-NOM any food-even eat-if present-ACC will give  
 'If you eat anything, (I) will give you a present.'
- (8) Question  
 phathi-eyse **amwu-hako-lato/\*to** iyakihayss-ni  
 party-LOC anyone-with-even spoke-QM  
 'Did you talk to anyone at the party?'
- (9) Relative clause headed by a universal quantifier  
 [e<sub>i</sub> *amwu-lato/\*to* salanghaypo-n] salam<sub>i</sub>-un nwukwuna ipyel-uy  
 anyone have loved-REL person-TOP everyone break up-GEN  
 kothong-ul anta  
 pain-ACC know  
 'Everyone who loved anyone knows the pain of breaking up.'

Any<sub>FC</sub> licensing environments include (a) generic sentences, as in (10), and (b) imperative sentences, as in (11).<sup>7</sup>

- (10) A generic sentence  
 Minho-nun **amwu chayk-ilato/\*to** ilknunta  
 Minho-TOP any book-even read  
 'Minho reads any books.'
- (11) An imperative sentence  
**amwukes-ilato/\*to** kola capa-la  
 anything choose-IMP  
 'Choose anything.'

<sup>6</sup>A few people who participated in the Fifth International Symposium on Korean Linguistics (January 1993) informed me that they accept the *-to* form in a non-negated question, even though most speakers do not accept such an instance.

<sup>7</sup>The *-lato* form in these environments has a reading equivalent to free choice *any* in English. However, there is another lexical item in Korean which seems to be better qualified as a free choice item, namely, *amwu N-na*. *Amwu N-na* occurs in all the environments in which the *-to* or the *-lato* form occurs, and has only the free choice reading.

### 2.1.3 Overlapping Cases

Even though the licensing environments for the *-to* and the *-lato* forms are disjoint in principle, if a position is under the scope of both the *-to* form and the *-lato* form operators, either form can occur, as illustrated below.<sup>8</sup>

- (12) clausemate negation + conditional  
**amwukes-to/ilato** meki-ci **an-umyen**, kumpang cichiko malkesita  
 anything-even eat-NMZ neg-if soon tired end up  
 ‘If (you) don’t eat anything, you will soon end up tired.’
- (13) counterfactual *before* + generic (which induces the temporal reading of *before*)  
 Minhunun [pro **amwu-hako-to/lato** iyakiha-ki-ceney] enceyna miso-lul  
 Minhunun-TOP anyone-with talk to-NMZ-before always smile-ACC  
 ci-e pointa  
 show  
 ‘Minho always shows a smile before talking to anyone.’

To summarize so far, the Korean counterpart of *any*-phrases is realized in two morphological forms, namely, the *-to* and the *-lato* forms. The distributions of the two forms are disjoint in principle, and are summarized below. However, if a position is under the scope of both the *-to* and the *-lato* form operators, either form can occur.

*Amwu N-to*: Scope of clausemate negation and counterfactual *before*;

*Amwu N-lato*: Scope of temporal *before*, conditionals, questions, generic sentences

## 2.2 English Data

If we assume that the difference in the morphology of the two forms of *amwu*-phrases in Korean reflects the difference in the nature of their licensing environments, and the nature of the two groups of licensing environments is constant cross-linguistically, we would expect that the two groups of *amwu*-licensing environments exhibit different properties in English as well. This expectation is indeed borne out, as I discuss below.

<sup>8</sup>[Progovac 1988] notes that Serbo-Croatian also has two distinct realizations of *any N*, i.e., a *ni*- and an *i*- form. However, there are some differences between Korean and Serbo-Croatian: (i) the *ni*- form occurs only under the scope of clausemate negation, not in counterfactual *before*-clauses, (ii) the *i*- form occurs in all *any*<sub>NPI</sub> licensing environments, but not in the *any*<sub>FC</sub> licensing environments, (iii) the *ni*- and *i*- forms are in strictly complementary distribution in the sense that if a position is in the scope of both a *ni*- form licensor (i.e. clausemate negation) and an *i*- form licensor, only the *ni*- form can occur.

### 2.2.1 Licensing of affirmative polarity items

Some lexical items such as *pretty*, *far*, *still*, *already* typically occur in affirmative sentences, as in (14) and (15):<sup>9,10</sup>

- (14) a. John did *pretty* well on the exam.  
 b. \*John didn't do *pretty* well on the exam.
- (15) a. John is *far* taller than his uncle.  
 b. \*John isn't *far* taller than his uncle.

When we consider the occurrence of affirmative polarity items in other *any* licensing environments (both any<sub>NPI</sub> and any<sub>FC</sub>), we find that a counterfactual *before*-clause patterns with negative sentences, as opposed to all others. That is, counterfactual *before*-clauses do not permit an occurrence of affirmative polarity items, while other environments do.

- (16) a. ?\*Before John managed to do *pretty* well on the exam, the proctor called time.  
 b. ?\*Before John became *far* taller than his uncle, he stopped growing.
- (17) a. I was surprised that John did *pretty* well on the exam.  
 b. I was surprised that John is *far* taller than his uncle.
- (18) a. If John does *pretty* well on the exam, his mom will be happy.  
 b. If John grows *far* taller than his uncle, his mom will be happy.

The contrast in acceptability between (14)b, (15)b, and (16)a,b on the one hand, and (17) and (18) on the other, indicates that counterfactual *before* and clausemate negation have properties in common which disallow an occurrence of affirmative polarity items, as opposed to all other *any* licensing environments.

### 2.2.2 Scope behavior of *some*

When the existential quantifier *some* occurs in a negative sentence, it has a strong preference for taking wide scope over negation, cf. [Kroch 1974], [Ladusaw 1979, 92]. For example, the highly preferred scope interpretation of *some* in (19)a is the one given in (19)b, and the interpretation given in (19)c is very weak or absent for many speakers.

<sup>9</sup>As illustrated by the acceptability of (a) and (b) below, only *clausemate* negation constrains an occurrence of affirmative polarity items.

- a. I don't think John *already* handed in his homework.  
 b. I don't believe that John is *far* better in math than Mary.

<sup>10</sup>There are some contexts in which the constraint on the affirmative polarity item licensing is violated. They include the so-called polarity reversal environments which are discussed in [Baker 1970], and illustrated in (b):

- a. \*Someone isn't *still* holed up in this cave.  
 b. You *can't convince* me that someone isn't still holed up in this cave.

Baker (fn. 2) also notes that an occurrence of affirmative polarity items in negative sentences is fine as an emphatic denial of a preceding speaker's assertion. For example, (d) is acceptable as an emphatic denial of (c):

- c. The Sox *have already* clinched the pennant.  
 d. The Sox *haven't already* clinched the pennant.

For the present discussion I abstract away from these special contexts.

- (19) a. John didn't talk to *some* students.  
 b. There are some students whom John didn't talk to.  
 c. It is not the case that there are some students whom John talked to.

*Some* occurring in a counterfactual *before*-clause exhibits a similar behavior. That is, *some* has a strong preference for taking wide scope over *before* (which may be construed as the entailed negation). The highly preferred scope interpretation of (20)a is the one represented in (20)b. The interpretation given in (20)c is very weak or almost absent.<sup>11</sup>

- (20) a. Before John talked to *some* students, the class started.  
 b.  $\exists x(\text{student } x)(\text{before John talked to } x)$ , the class started.  
 c. Before [ $\exists x(\text{student } x)(\text{John talked to } x)$ ], the class started.

Also, *some* occurring in negative and counterfactual *before*-clauses cannot be paraphrased by *any*. The reader can verify this by comparing (19)a and (20)a with (21)a and (21)b.

- (21) a. John didn't talk to *any* student.  
 b. Before John talked to *any* student, the class started.

When *some* occurs in other *any*<sub>NPI</sub> licensing environments, however, either wide or narrow scope interpretation is possible, and the narrow scope *some* can be paraphrased by *any*, as illustrated in (22) and (23):

- (22) a. I was *surprised* that *some* students came to the party.  
 b. I was *surprised* that *any* student came to the party.  
 (23) a. *If some* students come to the party, I will be happy.  
 b. *If any* student comes to the party, I will be happy.

### 2.2.3 Any *N* vs. At least one *N*

Another fact, which is similar to the scope behavior of *some* and distinguishes the two groups of *any*-licensing environments, involves the possibility of paraphrasing *any N* by the non-specific reading *at least one N*. *Any N* occurring in *any*-licensing environments other than clausemate negation and counterfactual *before*-clause can be paraphrased by the non-specific *at least one N*, as illustrated in (24) and (25):

- (24) a. If you read any newspaper, you are well-informed.  
 b. If you read at least one newspaper, you are well-informed.  
 (25) a. I am surprised that John talked to anyone at the party.  
 b. I am surprised that John talked to at least one person at the party.

<sup>11</sup>When a *before* clause is ambiguous between temporal and counterfactual, *some* occurring in that clause may take either wide or narrow scope, as illustrated in (a) below (The example is due to Ellen Prince (in personal communication)).

a. Before John gets into a fight with some colleagues, he always gives in.

The availability of both wide and narrow scope interpretation of *some* in (i) exactly parallels (13), in which the generic operator induces the temporal reading of *ceney* 'before,' in addition to the counterfactual reading, and therefore either *amwu N-to* or *amwu N-lato* may occur.



On the other hand, *any N* occurring within the scope of clausemate negation and counterfactual *before* cannot be paraphrased by non-specific *at least one N*.

- (26) a. I didn't talk to anyone at the party.  
b. I didn't talk to at least one person at the party.
- (27) a. Before he bumped into anyone he knew, John left the party.  
b. Before he bumped into at least one person he knew, John left the party.

In (26)b and (27)b, *at least one person* tends to have a specific reading and take wide scope over the negation or *before* just like the quantifier *some* in the same context.

In section 3, I argue that the semantics of *any*-phrases is derived exactly in the same manner as *even*-phrases in general. It is interesting to note that the *any*-phrases in (24) through (27) can all be equally well paraphrased by *even*-phrases, as shown in (28):

- (28) a. If you read (even) a single newspaper, you are well-informed.  
b. I am surprised that John talked to (even) a single person at the party.  
c. I didn't talk to (even) a single person at the party.  
d. Before he bumped into (even) a single person he knew, John left the party.

### 2.3 The new classification

The distribution of *amwu N-to* and *amwu N-lato* in Korean and various facts in English including affirmative polarity item licensing, scope behavior of *some* and paraphrasability of *any N* by the non-specific *at least one N*, indicate that the standard classification of *any* licensing environments needs to be reconsidered. More specifically, they suggest the following new classification:

- Group I: Scope of clausemate negation and counterfactual *before*;  
Group II: Other  $\text{any}_{\text{NPI}}$  licensing environments + generic sentences

An immediate question that arises is what characterizes the two groups of environments. Although I have no definite answer for this question at the moment, presuppositionality seems to be the relevant notion: a proposition under the immediate scope of negation and counterfactual *before* can never be presupposed, while a proposition under the scope of other *any* licensing operators can. However, it is not clear to me whether the various facts in English discussed above, i.e. licensing of affirmative polarity items and scope behavior of *some*, are related to the presuppositionality of the proposition under the scope of various *any* licensing operators,<sup>12</sup> and I leave this question open for future research.

<sup>12</sup>There are several differences in the distribution of *-to* and *-lato* phrases in general (i.e. when *-to* and *-lato* are not suffixed to *amwu*), which are summarized below:

- a. The *-lato* form may only be affixed to NPs which can be used attributively (i.e. predicative NPs), whereas *-to* form may be affixed to any NP.  
b. The *-lato* form cannot occur in negated clauses (unless the sentence contains *-lato* form licensing operators such as modals, questions), whereas *-to* form can occur in negated as well as affirmative clauses.  
c. The *-lato* form requires certain licensing operators such as question, conditional, modal, generic, etc.

It seems to me that an understanding of the differences between *-to* and *-lato* phrases in general will help us with answering the question of what characterizes the two groups of *any*-licensing environments.

### 3 Semantics of *Any*

Despite their morphological difference, the semantics of the two suffixes *-to* and *-lato* are the same and equivalent to that of *even* in English. Drawing upon the well known fact that *even*-phrases are interpreted quantificationally in appropriate contexts (i.e. contextually polarized items along with quantificational superlatives in [Fauconnier 1975b]'s terms), I argue that (a) the semantics of *amwu N-(la)to* is derived exactly in the same manner as *-(la)to*-phrases in general, and (b) *any* is neither a universal nor an existential quantifier. Instead, its quantificational force is induced by the SCALE PRINCIPLE as proposed by [Fauconnier 1975a], [Fauconnier 1978] (see also [Krifka 1990]).

I first outline the semantics of *even* in so far as it is relevant to the present discussion. I then apply the semantics of *even* to the analysis of *amwu N-(la)to*, assuming that the semantics of *-(la)to* is the same as that of *even*. Finally I discuss the implications of my analysis of *any*, and provide further evidence for it.

#### 3.1 *Even* and the Scale Principle

The semantics of *even* has been much discussed (cf. [Horn 1969], [Fauconnier 1975a], [Rooth 1985]) in relation to its polarity-item-like behavior: In an appropriate context, an *even*-phrase receives a quantifier-like interpretation. However, if a given sentence is negated, it loses its quantificational force, cf. [Fauconnier 1975b]'s 'weak polarity principle.'

Under the assumption that Chomsky is the least likely person not to understand Aspects, *even Chomsky* in (29)a is paraphrased by a quantificational expression, as in (29)b (The examples are from [Fauconnier 1975a]).

- (29) a. Even Chomsky doesn't understand Aspects.  
b. No one understands Aspects.

If we negate (29), however, as in (30), the sentence is infelicitous.

- (30) # Even Chomsky understands Aspects.

Similarly, under the assumption that 'the faintest noise' is the least likely kind of noise to bother my uncle, *even the faintest noise* in (31)a receives a universal quantificational reading, and (31)a can be paraphrased as in (31)b.

- (31) a. Even the faintest noise bothers my uncle.  
b. Every noise bothers my uncle.

Negation of the sentence, however, deprives the *even* superlative of its quantificational force, and again the sentence sounds odd, as shown in (32).

- (32) # Even the faintest noise doesn't bother my uncle.

I assume that the quantificational force of *even*-phrases in (29)a and (31)a is derived from the semantics of *even*, more specifically, from the SCALE PRINCIPLE which I summarize below. The semantics of *even* that I assume in this paper is given in (33).

- (33)  $even'(x,P)$  [where  $x$  is the associate of *even* and  $P$  is the proposition schema obtained by abstracting over the *even*-phrase]

Assertion:  $P(x)$

Presupposition:  $\exists y (y \neq x \text{ and } P(y))$

likelihood scale  $\sigma$ , with linear order  $>_{\sigma}$  defined as follows:

$x_2 >_{\sigma} x_1$  iff  $P(x_2)$  is more likely to hold than  $P(x_1)$ .

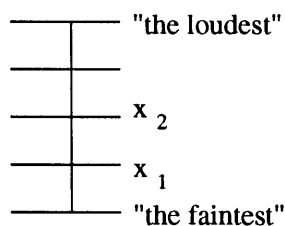
Implicature:  $\forall y (y >_{\sigma} x) P(y)$

As [Fauconnier 1975a] and [Fauconnier 1975b] argue, the function of *even* is to signal the existence of a pragmatic scale, with respect to the context of utterance. The scale is constructed on the basis of the proposition schema  $P(x)$  in such a way that:

**Scale Principle:** if  $x_1$  is lower than  $x_2$  on the scale, then  $P(x_1)$  implicates  $P(x_2)$ .

**Corollary:** If  $P$  holds for the lowest element on the scale, it holds (by implicature) for all elements on the scale, i.e. assuming that  $\alpha$  is the lowest element on the scale,  $P(\alpha)$  implicates  $\forall x P(x)$ , cf. conventional implicature in (33).

For example, given the sentence (29)a, a scale is constructed over the domain of noise, which is associated with the proposition schema  $P(x) = x \text{ bothers my uncle}$ .



Since the lowest end of the scale is *the faintest noise* and the proposition schema  $P(x)$  holds for the lowest end of the scale, the sentence implicates ' $\forall x$  (noise  $x$ )( $x$  bothers my uncle).'

Concerning my assumption that the quantificational reading of *even the faintest noise* in (31)a comes from the semantics of *even* rather than an inherent property of the superlative per se, the availability of the quantificational reading of the superlative without *even* in (34) poses an apparent problem.<sup>13</sup>

- (34) *The faintest noise* bothers my uncle.

In fact, [Fauconnier 1975a] argues that it is the superlative which triggers the existence of a scale in (34).<sup>14</sup> However, Korean provides strong evidence for the claim that it is the abstract

<sup>13</sup>The superlative *the faintest noise* in (34) is ambiguous between the literal reading and the quantificational reading. In the former case, the sentence can be naturally followed by a discourse like *but somehow, louder noises do not bother him*, and in the latter case, the sentence can be roughly paraphrased by *every noise bothers my uncle*.

<sup>14</sup>[Fauconnier 1975a, 371] briefly entertains the hypothesis that the quantificational reading of the superlative in (34) is due to the *even*-deletion rule stated below:

a. *Even* is deleted before a superlative.

Fauconnier rejects this hypothesis on the ground that 'even + superlative' cannot be modified by *absolutely/just*

morpheme *even* which induces the quantificational force of the superlative. A bare superlative in Korean is interpreted only literally, as in (35).

- (35) *kacang humiha-n soli-ka kwui-ey kesulinta*  
 most faint-MOD sound-NOM ear-LOC is bothersome  
 'The faintest noise bothers me/\*Any noise bothers me.'

For a superlative to have a quantificational interpretation, it has to be suffixed by the morpheme *-to* or *-lato*, as in (36).

- (36) *kacang humiha-n soli-to/lato kwui-ey kesulinta*  
 most faint-MOD sound-EVEN ear-LOC is bothersome  
 'Even the faintest noise bothers me.'

The contrast in interpretation between (35) and (36) suggests that it is the semantics of *even* which gives rise to the universal quantificational reading of the superlative in (31)a, and that the quantificational reading of the superlative without an overt *even* in (34) might be ascribed to the presence of the abstract morpheme *even*.

### 3.2 Semantics of *amwu N-(la)to*

Based on the fact that *-to* or *-lato* is obligatorily suffixed to the Korean counterpart of *any N*, I argue that the semantics of *amwu N-lato* and *amwu N-to* is uniformly derived in the same manner as *-(la)to* 'even'-phrases in general.

The properties which are particular to the analysis of *amwu N-(la)to* are as follows:

- The proposition schema associated with a scale has to contain the licenser of an *amwu*-phrase.
  1. *amwu N-to*: clausemate negation or the complementizer *-ceney* 'before'
  2. *amwu N-lato*: various operators, e.g. generic, question, conditional, etc.
- Once a scale is constructed, *amwu* always designates the lowest point of an arbitrary scale, cf. analysis of *any* in [Fauconnier 1975a, 373].
- Since the proposition schema holds for the lowest point of the scale, it holds for all other points on the scale, inducing the quantificational force of *amwu N-(la)to*.

Examples (37) through (42) illustrate the derivation of the universal implicature of sentences containing *amwu N-(la)to*.

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while a superlative without *even* can, as shown in (b) and (c) below:

- b. Tommy will eat *absolutely/just* the most awful food.  
 c. Tommy will eat *?\*absolutely/\*just* even the most awful food.

However, as Fauconnier himself judges, modification of 'even + superlative' by *absolutely* is not as bad as modification by *just*. Furthermore, the unacceptability of modification of by *just* might be due to the repetition of two focus-inducing elements, i.e. *just* and *even*, which have conflicting semantics.

- (37) **na-nun amwu umsik-to/\*lato mekci an-assta**  
 I-TOP any food-even eat NEG-PAST  
 'I didn't eat any food.'
- (38) 1. The associate of *-to* 'even' is *amwu umsik*.  
 2. Proposition schema: I didn't eat x.  
 3. A scale  $\sigma$  whose elements are kinds of food.  
 4. *Amwu* designates *e*, the lowest element of this scale, e.g. the most delicious food.  
 5. Assertion: I didn't eat *e*.  
 6. Implicature:  $\forall x x >_{\sigma} e$  (I didn't eat x)
- (39) **na-nun amwu chayk-ilato/\*to iklul swu issta**  
 I-TOP any book-even can read  
 'I can read any book.'
- (40) 1. The associate of *-lato* 'even' is *amwu chayk*.  
 2. Proposition schema: I can read x.  
 3. A scale  $\sigma$  whose elements are kinds of book.  
 4. *Amwu* designates *e*, the lowest element of this scale, e.g. the most difficult book.  
 5. Assertion: I can read *e*.  
 6. Implicature:  $\forall x x >_{\sigma} e$  (I can read x)
- (41) **ney-ka amwu umsik-ilato/\*to meknunta-myen, senmwul-ul cwukeyssta**  
 you-NOM any food-even eat-if present-ACC will give  
 'If you eat any food, (I) will give you a present.'
- (42) 1. The associate of *-lato* 'even' is *amwu umsik*.  
 2. Proposition schema: if you eat x, I will give you a present.  
 3. A scale  $\sigma$  whose elements are kinds of food.  
 4. *Amwu* designates *e*, the lowest element of this scale, e.g. the most delicious food.  
 5. Assertion: If you eat *e*, I will give you a present.  
 6. Implicature:  $\forall x x >_{\sigma} e$  (if you eat x, I will give you a present)

As can be seen in (42)2, the proposition schema associated with a scale can be a complex open proposition. If we take the subpart of the whole clause as the proposition schema, namely, the protasis of the conditional, we get a different reading for the sentence, which is illustrated in (43).

- (43) 1. The associate of *-lato* 'even' is *amwu umsik*.  
 2. Proposition schema: you eat x.  
 3. A scale  $\sigma$  whose elements are kinds of food.  
 4. *Amwu* designates *e*, the lowest element of this scale, e.g. the most awful food.  
 5. Assertion: If you eat *e*, I will give you a present.  
 6. Implicature: if  $\forall x x >_{\sigma} e$  (you eat x), I will give you a present.

I claim that the analysis of *any N* is parallel to the analysis of *amwu N-(la)to* sketched above. In fact, [Fauconnier 1975a] has already proposed such an analysis. The following is from [Fauconnier 1975a, 373]:

Now if we interpret the function of *any* as being the indication of a low point on an arbitrary scale, the logical and syntactic properties will follow from the scale principle . . . That is, we take *any noise* in (5)

(5) My uncle can hear any noise.

to represent all the low points on the scales that could be associated with *my uncle can hear x*. The interpretation of *any* will thus result in strong universal quantification, since no matter what scale is chosen, the sentence will be true for the low point on that scale and therefore for all other points.

### 3.3 Implications

My analysis of *any* implies that there are not two *any*'s, i.e.  $any_{NPI}$  which is an existential quantifier, and  $any_{FC}$  which is a universal quantifier. In fact, *any* is not a quantifier at all.<sup>15</sup> Instead its quantificational force is derived from the scale-based inference triggered by an abstract morpheme *even*. This proposal explains several differences between *any*-phrases and other quantifier phrases, which remain puzzling if we assume that *any* is a quantifier.

First, even though the so-called  $any_{FC}$  has been identified as a universal quantifier, people have noted that the truth conditions for  $any_{FC}$  are not the same as that of other universal quantifiers.

- (44) a. *Any* doctor will tell you that smoking is unhealthy.  
b. *Every* doctor will tell you that smoking is unhealthy.

[Vendler 1967] argues that (44)a should not have the same truth-conditions as (44)b, but that the assertion of (44)a should constitute something like a bet that any doctor that one picks out will tell you smoking is unhealthy, without committing the speaker to the truth of (44)b. The same reasoning applies to (45)a and (45)b.

- (45) a. Pick *any* card.  
b. Pick *every* card.

Second, a universally quantified phrase such as *everyone* and *all the people* can occur as the argument of the predicate *scatter*, as illustrated in (46)a, while an *any*-phrase cannot, as shown in (47).

- (46) a. The strong wind could scatter *everyone* around the island.  
b. The strong wind could scatter *all the people* around the island.  
(47) #The strong wind could scatter *anyone* around the island.

Third, as [Hornstein 1984] argues, quantifiers such as *every* and *some* are subject to

<sup>15</sup>See also [Kadmon and Landman 1990] and [Hornstein 1984] for the view that *any* is not a quantifier and there is only one *any*.

the 'leftness condition'<sup>16</sup>, while *any* is not, just like names.<sup>17</sup> This is illustrated in (48) and (49).

- (48) a. \*That *he* might be sent to the front doesn't bother *every good soldier*.  
 b. \*That *he* might be sent to the front doesn't bother *someone*.
- (49) a. That *he* might be sent to the front doesn't bother *any good soldier*.  
 b. That *he* might be sent to the front doesn't bother *Bill*.

Finally, there is some evidence that the quantificational force of an *any*-phrase involves a scale, while that of other quantifiers does not. Compare (50)a and (50)b.

- (50) a. He didn't read any of the books. Not even the shortest one.  
 b. #He didn't read each of the books. Not even the shortest one.  
 c.  $\forall x(\text{book } x) \neg(\text{he read } x)$ .

The logical form of the first clause of (50)a and (50)b can be both schematically represented as in (50)c. Nevertheless, only (50)a can be naturally followed by *not even the shortest one*. This indicates that only the *any*-phrase in (50)a is associated with a scale.

## 4 Summary

In this paper, I argue for a reclassification of *any* licensing environments based on the distribution of *amwu N-to* and *amwu N-lato* in Korean, and several facts in English including the licensing of affirmative polarity items, the scope behavior of *some*, and the paraphrasability of *any N* into the non-specific *at least one N*. I also argue that the semantics of *amwu/any*-phrases is derived in the manner parallel to that of *-(la)to/even* phrases in general, and that the quantificational force of *any* is uniformly induced by the SCALE PRINCIPLE triggered by *-(la)to/even*.

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<sup>16</sup>The leftness condition says that a variable cannot be coindexed with a pronoun to its left, cf. [Chomsky 1976].

<sup>17</sup>I refer the reader to [Hornstein 1984, 22-36] for other facts illustrating the difference between *any* and universal quantifiers.

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