

# Relative Quantifier Scope and Object Shift\*

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Lee, Chang-Su. 2002. **Relative Quantifier Scope and Object Shift**. *Korean Journal of English Language and Linguistics* 2-1, 97-121. Aoun and Li (1989) and Hornstein (1995) suggest that the cross-linguistic contrast in quantifier scope between English and East Asian languages is attributed to the parametric difference in the base subject position, viz. VP-internal position in English and Spec IP in East Asian languages. This paper argues that their suggestion is untenable, and that the cross linguistic contrast in question is due to the parametric difference that English permits and East Asian languages do not permit (overt) object shift.

## 1. Introduction

As is well-known, there is an important difference between English and East Asian languages (Korean, Japanese, and Chinese) regarding the ambiguity of sentences with multiple quantifiers.

- (1) a. Some student admires every professor.  
b. etten haksang-i motun kyosu-lul chanyanghanta.  
some student-Nom every professor-Acc admires  
'Some student admires every professor.'

The English sentence (1a) may have two readings. Under one reading, it is true if for each professor there is a student who admires him or her ( $\forall > \exists$ ). Under the other reading, it is true

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\*I would like to thank two anonymous reviewers for helpful comments and suggestions. Of course, all remaining errors are mine.

if there is one student who admires every professor ( $\exists > \forall$ ). In East Asian languages such as Korean, no similar ambiguity obtains. The Korean sentence (1b) only has the second reading of (1a), which can be directly inferred from the quantifiers' overt c-command relation ( $\exists > \forall$ ).

Huang (1982) argues that in East Asian languages such as Chinese, in contrast to English, LF scope is isomorphic to SS c-command relations of quantifiers. Under the framework of QR (quantifier raising) approach, Aoun and Li (1989) explain the cross-linguistic contrast as in (1) by relying on the assumption that English has VP-internal subjects while East Asian languages have subjects base-generated in Spec IP (the Subject Position Parameter). Hornstein (1995) adopts the same suggestion in accounting for the cross-linguistic contrast in question even though he proposes a rather different approach. Hornstein's main proposal is that there is no QR and relative quantifier scope is essentially a function of A-movement.

This paper argues that the cross-linguistic contrast in quantifier scope ambiguity noted in (1) is not due to the difference of base subject position, as argued in Aoun and Li (1989) and Hornstein (1995), but due to the difference of object shift. Specifically, this paper makes the following two points. First, in East Asian languages like Korean and Japanese, the subject is not base-generated in Spec IP, but overtly moves to this position from the VP-internal subject position just like in English. Second, the object in English moves overtly while it is not the case in East Asian languages like Korean and Japanese (the Object Shift Parameter). The first point proves that we cannot be dependent upon the Subject Position Parameter in accounting for the cross-linguistic contrast in quantifier scope ambiguity noted in (1). This paper exploits the second point in developing an alternative account for the cross-linguistic contrast of (1).

The organization of this paper is as follows. In section 2, a

short review on the cross-linguistic contrast in quantifier scope ambiguity is presented. In section 3, some pieces of evidence are provided against the Subject Position Parameter and in favor of the Object Shift Parameter. In section 4, based on the Object Shift Parameter, an alternative account is suggested for the cross-linguistic contrast in quantifier scope between English and East Asian languages. In the last section, the summary and the conclusion are presented.

## 2. A Short Review

In sentences with basic word order, East Asian languages show a rigid scope relation between quantifiers.

- (2) a. etten yeca-ka          motun namca-lul anta.<sup>1</sup> (Korean)  
       some woman-Nom every man-Acc knows  
       ‘Some woman knows every man.’ ( $\exists > \forall$ ,  $*\forall > \exists$ )
- b. dareka-ga          subete-no hon-o yonda. (Japanese)  
       someone-Nom all-Gen book-Acc read  
       ‘Someone read all the books.’ ( $\exists > \forall$ ,  $*\forall > \exists$ )
- c. yaoshi liangge ren zhaodao meige xiansuo ~ (Chinese)  
       If two men found every clue

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<sup>1</sup>In contrast to the observed generalization, the following Korean sentence shows scope ambiguity.

- (i) motun namca-ka etten yecha-lul cohahanta.  
       every man-Nom some woman-Acc likes  
       ‘Every man likes some woman.’ ( $\forall > \exists$ ,  $\exists > \forall$ )

According to Ahn (1990), the semantic ambiguity of (i) does not come from the scopal interaction of QNPs. The source of the semantic ambiguity of (i) correlates with Partee’s (1987) observation that indefinites may be interpreted and used as referential expressions. If an NP is referential, its scope is wider than any other QNPs, as a name’s scope is. To avoid this kind of unwanted non-scopal interpretation, I deliberately use the sentence as in (2a), in which an indefinite QNP takes the subject position.

'If two men found every clue ~' ( $\exists > \forall, * \forall > \exists$ )

In all the examples in (2), the subject QNP unambiguously takes scope over the object QNP. In English, however, QNPs in the same clause typically allow differential scope interpretations as noted in (1a).<sup>2</sup>

Observing this contrast between English and Chinese, Huang (1982) suggests that, in Chinese, SS c-command relations of quantifiers directly determine LF scope interpretation. Aoun and Li (1989), however, reject Huang's suggestion by noting that there are constructions that permit non-SS scope order in Chinese.

(3) yaoshi liangge xiansuo bei meigeren zhaodao ~

If two clues by everyone found

'If two clues were found by everyone ~' ( $\exists > \forall, \forall > \exists$ )

Chinese passive sentences such as (3) permit scope ambiguities.<sup>3</sup>  
In other words, the sentence (3), unlike (2c), may have another

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<sup>2</sup>In English, there are constructions that show the rigid SS scope order.

(i) John gave someone everything. ( $\exists > \forall, * \forall > \exists$ )

In English double object constructions, the scope is frozen in that only the surface scope reading is available. I will not discuss this matter in this paper.

<sup>3</sup>As predicted, the passive sentences in Korean and Japanese also permit scope ambiguities.

- (i) a. etten senmul-i motun kyosa-eykey ponay-ci-ess-ta. (Korean)  
 some present-Nom every teacher-to was sent  
 'Some present was sent to every teacher.' ( $\exists > \forall, \forall > \exists$ )  
 b. dareka-ga dono-mati-ni-mo syootais-are-ta. (Japanese)  
 someone-Nom every-town-Loc-also was invited  
 'Someone was invited to every town.' ( $\exists > \forall, \forall > \exists$ )

reading where each person found two different clues respectively.

To account for the cross-linguistic contrast of (1) and the scope ambiguity of the Chinese passive sentences as in (3), Aoun and Li (1989) suggest the following three proposals.

- (4) Subject Position Parameter: The base subject position is Spec VP in English while it is in Spec IP in Chinese.
- (5) Minimal Binding Requirement: Variables must be bound by the most local potential A'-binder.<sup>4</sup>
- (6) Scope Principle: A quantifier A has scope over a quantifier B if A c-commands a member of the chain containing B.

Under these three proposals, English has the LF structure (7a) while Chinese has the structure (7b) in simple transitive sentences.

- (7) a. [<sub>IP</sub> QNP<sub>1</sub> [<sub>IP</sub> vbl<sub>1</sub> ... [<sub>VP</sub> QNP<sub>2</sub> [<sub>VP</sub> NP-t<sub>1</sub> ... vbl<sub>2</sub>]]]]] (English)
- b. [<sub>IP</sub> QNP<sub>1</sub> [<sub>IP</sub> vbl<sub>1</sub> ... [<sub>VP</sub> QNP<sub>2</sub> [<sub>VP</sub> ... vbl<sub>2</sub>]]]]] (Chinese)

Since, in (7a), QNP<sub>2</sub> c-commands a member of the chain containing QNP<sub>1</sub>, viz. NP-t<sub>1</sub>, English can have the interpretation where the object QNP has scope over the subject QNP. The absence of a VP-internal subject trace in (7b) makes it impossible for the object QNP to have wider scope than the subject in Chinese. On the other hand, the Chinese passive sentence (3) permits scope ambiguity because it has the LF structure (8), which has an NP trace c-commanded by the VP-adjoined QNP.

- (8) [<sub>IP</sub> QNP<sub>1</sub> [<sub>IP</sub> vbl<sub>1</sub>... [<sub>VP</sub> QNP<sub>2</sub> [<sub>VP</sub> bei vbl<sub>2</sub> [<sub>VP</sub> ... NP-t<sub>1</sub>]]]]]]

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<sup>4</sup>In fact, the Minimal Binding Requirement forbids phrase markers with multiply fronted and stacked quantifiers. Thus, LF cannot have structures such as (i).

- (i) Q<sub>1</sub> Q<sub>2</sub> [...]

Hornstein (1995) proposes that relative quantifier scope is not the byproduct of QR but a property of A-chains. His proposal starts from the following four assumptions.

- (9) Only a single link in an A-chain is interpreted at the CI (Conceptual-Intentional) Interface.
- (10) Relative quantifier scope is grammatically reflected at LF, after the requisite deletion, in terms of asymmetric c-command.
- (11) A strong quantifier must be outside the VP-shell at the CI interface.<sup>5)</sup>
- (12) Movement is copying and deletion.

Besides these assumptions, Hornstein (1995) adopts Aoun and Li's (1989) Subject Position Parameter in order to account for the cross-linguistic contrast in quantifier scope between English and East Asian languages.

Under this approach, the LF structures of simple transitive sentences in the two types of languages, before deletion, are as follows.

- (13) a. [<sub>Ag<sub>S</sub></sub> subject ... [<sub>Ag<sub>O</sub></sub> object ... [<sub>VP</sub> subject V object]]]
  - (English)
- b. [<sub>Ag<sub>S</sub></sub> subject ... [<sub>Ag<sub>O</sub></sub> object ... [<sub>VP</sub> V object]]]
  - (East Asian languages)

The only way that makes the subject QNP be in the scope of the object QNP is to retain the lower copy of the subject QNP which is below the upper copy of the object QNP. Seeing (13a), we can easily conclude that English has a chance to do it because there is a VP-internal copy of the subject, which is below the upper copy of the object QNP. However, this option

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<sup>5</sup>This assumption comes from Diesing's (1992) Mapping Principle.

is not available in East Asian languages because there is no copy of the subject in VP-internal position, as (13b) makes clear. As for passives, the situation is somewhat different. In this case, East Asian languages also have a trace of the object, raised to the subject position by passive operation, just like in English.

- (14) a. yaoshi liangge xiansuo bei meigeren zhaodao ~  
       If two clues by everyone found  
       b. [<sub>AgRS</sub> object ...[<sub>AgRO</sub> object ...[<sub>VP</sub> bei-subject [<sub>VP</sub> V object]]]]

In (14b), besides the option of retaining one of the object copies above the prepositional agent NP, there is another option in which the other copies of the object except the lowest are deleted. This allows the prepositional agent NP to c-command the object and thereby take scope over it.<sup>6</sup> Hence, the Chinese passive sentence (14a) comes to be ambiguous.

### 3. From Subject Position To Object Shift

#### 3.1. Against the Subject Position Parameter

As reviewed in the previous section, Aoun and Li (1993) and Hornstein (1995) crucially depend on the Subject Position Parameter (4) in accounting for the cross-linguistic contrast in scope ambiguity. As Szabolsci (2001:631) points out, there arises

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<sup>6</sup>Under the conventional definition of c-command, the c-domain of the agent is confined to PP in (14b). However, there is evidence proving that the c-domain of an NP within a PP can be extended over the PP.

- (i) a. The accreditation of no college ever takes longer than 3 years.  
       b. \*The accreditation of every college ever takes longer than 3 years.

In (ia), a negative polarity item *ever* is licensed by the negative quantifier *no* even though it is contained within a PP. This sentence critically contrasts with (ib), where no negative element exists to license *ever*. Then the conventional definition of c-command should be revised. For the detailed discussion on this matter, see Hornstein (1995:118-122).

an important question how natural it is to assume that languages differ as to whether they have VP-internal subjects. In this subsection, we present four arguments against the Subject Position Parameter, three of them conceptual and the other empirical.

First, if we assume that East Asian languages have no VP-internal subjects following the Subject Position Parameter, the function of the specifier position of VP remains accidentally as a gap only in East Asian languages, an unwelcomed result.

Second, the Subject Position Parameter makes it impossible to adopt the generally accepted principle (15), which is from Larson (1988:382).

- (15) If  $\alpha$  is a predicate and  $\beta$  is an argument of  $\alpha$ , then  $\beta$  must be realized within a projection headed by  $\alpha$ .

Since the Subject Position Parameter predicts that the external argument is theta-marked in Spec IP in East Asian languages while in Spec VP in English, the principle cannot be maintained only in the case of East Asian languages, an unsatisfactory result.

Third, following Chomsky (1995), if we assume that parameter values are identified with the formal features of functional heads, which control derivational operations, the Subject Position Parameter is dubious. Furthermore, under Baker's (1988) Uniformity of Theta Assignment Hypothesis,<sup>7</sup> we can hardly imagine a situation in which syntactically realized thematic structures are different among languages, which will cause a problem in accounting for the universal characteristics of language acquisition.

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<sup>7</sup>*The Uniformity of Theta Assignment Hypothesis*: Identical thematic relationships between items are represented by identical structural relationships.



The last argument against the Subject Position Parameter comes from floating quantifiers in Korean and Japanese. As is well-known, in Korean and Japanese, a floating numeral quantifier marks the position where its associate is base generated. Bearing this in mind, observe the following sentences. (16b) is from Ura (1996:197).

- (16) a. ?haksayng-i ecey sey-myeng pizza-lul mukesta.  
 students-Nom yesterday 3-CL pizza-Acc ate  
 'Three students ate pizza yesterday.'
- b. gakusei-ga kinoo futa-ri sakana-o kutta.  
 students-Nom yesterday 2-CL fish-Acc ate  
 'Two students ate fish yesterday.'

Assuming that time adverbials like *ecey* and *kinoo* are adjoined to the outer projection of the VP-shell,<sup>8)</sup> the well-formedness of (16a) and (16b) indicates that the subject moves overtly up to Spec IP (or Spec TP in the Agr-less sentence structure system of Chomsky 1995) in Korean and Japanese, contra the Subject Position Parameter.

### 3.2. Establishing the Object Shift Parameter

In this subsection, we present some arguments proving that the object moves overtly in English while not in Korean and Japanese. If these arguments are on the right track, we may conclude that it is not the Subject Position Parameter but object shift that distinguishes the two types of languages, viz. English and East Asian languages.

Postal (1974), Johnson (1991), and Koizumi (1993) argue that the direct object moves overtly in English.<sup>9)</sup> Among the many

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<sup>8)</sup>See Miyagawa (1989) and Fujita (1993).

<sup>9)</sup>Assuming that English is an object shift language, the word order of English transitive sentences suggests that the verb moves over the

arguments for the existence of (overt) object shift in English, the following one is prominent. If the object does not move overtly as assumed in Chomsky (1993, 1995), the ECM object should be in situ at overt syntax. But, as originally noted in Postal (1974:146), the ECM object may occur to the left of a matrix adverbial, which is unexpected under the no object shift approach to English.

- (17) a. I believe Nixon incorrectly to be interested in ending the war.  
 b. I have found Bob recently to be morose.

Another frequently quoted example for the existence of object shift in English comes from Lasnik and Saito (1992:328).

- (18) a. ?\*The DA proved [that the dependants were guilty] during each other's trials.  
 b. ?The DA proved [the dependants to be guilty] during each other's trials.  
 c. The DA accused the dependants during each other's trials.

Lasnik (1999:176-186) makes an elaborate argument for the proposal that feature movement to a high position never suffices for Binding, and the configuration before Spell-Out determines Binding potential. Assuming this proposal, the sentences in (18) clearly show that the object moves overtly in English. In (18a), the embedded subject *the dependants* cannot be raised to a higher

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shifted object position. Actually Koizumi (1993) presents elaborate discussion on this kind of short verb movement in English. On this matter, we may posit an extra projection over the shifted object position, as argued in Koizumi (1993), or we may speculate that head movement like V-raising may fall within the phonological component following Chomsky (1999).

position in the matrix clause, and so it cannot c-command the reciprocal pronoun, hence Condition A violation. On the other hand, in (18b), the ECM object can rescue the reciprocal pronoun from Condition A violation just as the normal object in (18c) does. It means that the ECM object moves overtly up to the matrix object position, and that the position is high enough to c-command the VP-adjoined PP.

In contrast to the English data presented in (18), the following ill-formed Korean sentences show that object shift is not available in Korean.<sup>10)</sup>

- (19) a. \*na-nun [John<sub>1</sub>-i hyencang-e issessta-ko] caki<sub>1</sub>-uy  
 I-Nom -Nom scene-at were-COMP self-Gen  
 caipan-eyse cungmyenghayssta.  
 trial-in proved  
 'I proved that John was at the scene in himself's trial.'
- b. \*na-nun [John<sub>1</sub>-ul ywucoila-ko] caki<sub>1</sub>-uy  
 I-Nom -Acc to be guilty-COMP self-Gen  
 caipan-eyse cungmyenghayssta.  
 trial-in proved  
 'I proved the John to be guilty in himself's trial.'
- c. \*na-nun John<sub>1</sub>-ul caki<sub>1</sub>-uy caipan-eyse pinanhayssta.  
 I-Nom -Acc self-Gen trial-in blamed.  
 'I blamed John in himself's trial.'

The ill-formedness of (19a) reduces to Condition A violation, just like (18a), since the embedded subject cannot be raised to higher position to c-command the reflexive pronoun. But in the other two examples, the reflexive pronouns cannot be rescued from Condition A violation unlike in (18b) and (18c). It strongly suggests that, in Korean, the object cannot move overtly not only in an ECM construction but also in a simple transitive

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<sup>10</sup>Coindexing is used to mark coreference.

construction, in contrast to English.<sup>11)</sup>

Additionally, the following grammatical sentences in (20), which involve no Condition C effect of an R-expression, indicate that there is no object shift in Korean.<sup>12)</sup>

- (20) a. na-nun [John<sub>1</sub>-i hyencang-e issessta-ko] John<sub>1</sub>-uy  
 I-Nom -Nom scene-at were-COMP -Gen  
 caipan-eyse cungmyenghayssta.  
 trial-in proved  
 'I proved that John was at the scene in John's trial.'
- b. na-nun [John<sub>1</sub>-ul ywucoila-ko] John<sub>1</sub>-uy  
 I-Nom -Acc to be guilty-COMP -Gen  
 caipan-eyse cungmyenghayssta.  
 trial-in proved  
 'I proved John to be guilty in John's trial.'
- c. na-nun John<sub>1</sub>-ul John<sub>1</sub>-uy caipan-eyse pinanhayssta.  
 I-Nom -Acc self-Gen trial-in blamed.  
 'I blamed John in John's trial.'

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<sup>11</sup>Following Yang (1984), one might argue that the ill-formedness of the sentences in (19) is due to the subject-orientedness of the Korean reflexive pronoun *caki*, which is irrelevant to object shift. The following examples, however, show that the antecedent of *caki* is not confined to the subject.

- (i) a. na-nun John<sub>1</sub>-ul caki<sub>1</sub> cip-ulo ponayssta.  
 I-Nom -Acc self home-to sent  
 'I sent John to himself's home.'
- b. na-nun John<sub>1</sub>-eykey caki<sub>1</sub> os-ul cwuessta.  
 I-Nom -to self cloth-Acc gave  
 'I gave John himself's cloth.'

<sup>12</sup>In Korean, R-expressions are hardly acceptable as anaphors. Thus the following sentence in (i) is unacceptable, due to Condition C violation, if the second occurrence of *John* is coreferential with the first one.

- (i) \*John<sub>1</sub>-i John<sub>1</sub>-ul pinanhayssta.  
 -Nom -Acc blamed  
 'John blamed John.'

In the sentences in (20a), there is no Condition C effect since the first occurrence of *John* is not high enough to c-command the second occurrence of *John*. Especially, the well-formedness of (20b-c) clearly shows that, in Korean, the object does not move overtly not only in an ECM construction but also in a simple transitive construction, in contrast to English.

Kuroda (1983) and Miyagawa (1989) observe that, in Japanese, the object cannot be permuted in between the surface position and the base position of the subject, as shown in the following sentence, cited from Ura (1996:221).

- (21) \*<sub>[TP</sub> *gakusei-ga*<sub>1</sub> *hon-o*<sub>2</sub> [<sub>vP</sub> *t*<sub>1</sub> *san-nin* [<sub>VP</sub> *t*<sub>2</sub> ] ] *katta*].  
 students-Nom book-Acc 3-CL bought  
 'Three students bought a book.'

Recall that a floating numeral quantifier marks the base position of its associate in Korean and Japanese (cf. 3.1). The numeral quantifier *san-nin* mark the subject's (*gakusei-ga*) base position, viz. Spec *vP*. Then the ill-formedness of (21) clearly shows that the object nominal *hon-o* cannot be raised overtly up to Spec AgrO (or up to an outer Spec of *vP* in the Agr-less sentence structure system of Chomsky 1995). The same point is confirmed in a similar ill-formed Korean example in (22).<sup>13)</sup>

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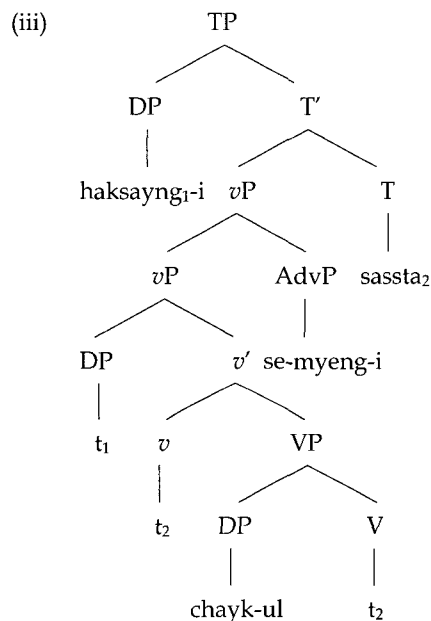
<sup>13</sup>An anonymous reviewer raises a question as to the grammatical status of the sentences like (i) involving a nominative case-marked numeral quantifier, which seemingly shows that object shift is available in Korean.

- (i) *haksayng-i chayk-ul se-myeng-i sassta*.  
 students-Nom book-Acc 3-CL-Nom bought  
 'Three students bought a book.'

There might be two options to derive the sentences like (i), without relying on object shift. First, as suggested in Kwon (1991), the sentence (i) might be derived from (iia) by applying object scrambling and then subject scrambling.

- (ii) a. haksayng-i se-myeng-i chayk-ul sassta.  
 b. chayk-ul haksayng-i se-myeng-i sassta. (object scrambling)  
 c. haksayng-i chayk-ul se-myeng-i sassta. (subject scrambling)

The other option is to assume that a case-marked numeral quantifier is an adverb. Under this assumption, the sentence (i) might have the phrase structure as follows.



Following Otani and Whitman (1991), let us assume that the verb moves overtly in East Asian languages. Then, in (iii), the case-marked numeral quantifier, which is an adverb by assumption, is right adjoined to *vP*, and so intervenes between the base object position and the raised verb, displaying the surface word order of (i). Among the two options, the first one is hard to be adopted since it is not so easy to answer the question why (22) cannot be derived in a similar way. The following examples, however, shows that the second option is more promising.

- (iv) a. John-i phyenci-lul se-thong-ul ilkessta.  
 -Nom letter-Acc 3-CL-Acc read  
 'John read three letters.'  
 b. phyenci-ka John-eykey se-thong ilkhiessta.  
 letter-Nom John-Dat 3-CL be read  
 'Three letters were read by John.'  
 c. \*se-thong-i John-eykey phyenci-ka ilkhiessta.

- (22) \*<sub>[TP</sub> haksayng-i<sub>1</sub> chayk-ul<sub>2</sub> [<sub>VP</sub> t<sub>1</sub> se-myeng [<sub>VP</sub> t<sub>2</sub>]] sassta].  
 students-Nom book-Acc 3-CL bought  
 'Three students bought a book.'

Considering the contrast between (17-18) and (19-22), we can conclude that English and East Asian languages such as Korean and Japanese (maybe including Chinese) are different not in the subject's base position but in object shift. We close this section with proposing the Object Shift Parameter.<sup>14)</sup>

- (23) Object Shift Parameter: English is an object shift language while East Asian languages such as Korean and Japanese (maybe including Chinese) are non object shift languages.

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- (v) A: John-i eti-lul/-lo kass-ni?  
 -Nom where-Acc/-to went-Q  
 'Where did John go?'  
 B: John-i Seoul-ul/-lo kasse.  
 -Nom Seoul-Acc/-to went  
 'John went to Seoul.'

The ill-formedness of (ivc) shows that a case-marked numeral quantifier cannot undergo Passivization in Korean, and so it does not have an argument status. The example (v) shows that an adverb can be apparently case-marked in Korean, and it suggests that the second option is not so untenable. Anyway, if one of the two options is available in Korean, the sentence (i) would not be a counter-example to our proposal.

<sup>14</sup>Due to my short knowledge of Chinese, the relevant Chinese data are not provided in this subsection. But I speculate that Chinese may be a non object shift language since Chinese patterns like Korean and Japanese in scopal interpretation of quantifiers as will be shown in section 4.

#### 4. An Alternative Analysis

In this section, an alternative account is presented for the cross-linguistic contrast in quantifier scope ambiguity between English and East Asian languages. Following Hornstein (1995) in essential respects, we assume that quantifier scope is a function of A-movement. Hence, our account is based on the following assumptions of Hornstein (1995). First, movement is copying and deletion. Second, any link of an A-chain can be deleted and all but one must be. Third, relative quantifier scope is determined in terms of asymmetric c-command. But we differ from Hornstein (1995) in an important respect. Based on the discussion of section 3, we crucially exploit the Object Shift Parameter (23) rather than the Subject Position Parameter (4), contra Aoun and Li (1989) and Hornstein (1995).

Consider the basic contrast between the two language types again. As we have observed in the previous discussion, QNPs in the same clause allow scope ambiguity in English while not in East Asian languages.

- (24) a. Some student admires every professor. (English)  
       ( $\exists > \forall$ ,  $\forall > \exists$ )
- b. etten yeca-ka        motun namca-lul anta. (Korean)  
           some woman-Nom every man-Acc knows  
           'Some woman knows every man.' ( $\exists > \forall$ ,  $*\forall > \exists$ )
- c. dareka-ga        subete-no hon-o yonda. (Japanese)  
           someone-Nom all-Gen book-Acc read  
           'Someone read all the books.' ( $\exists > \forall$ ,  $*\forall > \exists$ )
- d. yaoshi liangge ren zhaodao meige xiansuo ~ (Chinese)  
           If two men found every clue  
           'If two men found every clue ~' ( $\exists > \forall$ ,  $*\forall > \exists$ )

Since English is an object shift language by assumption, the LF



structure for (24a), before deletion, is (25).

$$(25) [_{TP} QNP_{SUBJ} \dots [_{vP} QNP_{OBJ} [_{vP} QNP_{SUBJ} \dots [_{VP} V QNP_{OBJ}]]]]$$

If the upper copy of the subject QNP survives, it has scope over the object QNP since every member of the object QNP is below it ( $QNP_{SUBJ} > QNP_{OBJ}$ ). On the other hand, the reverse scope interpretation obtains when the upper copy of the object QNP, which is in the outer Spec of  $vP$ , survives and the upper copy of the subject QNP is deleted ( $QNP_{OBJ} > QNP_{SUBJ}$ ). Hence, scope ambiguity arises in English.

However, no similar ambiguity is allowed in East Asian languages, as illustrated in (24b-d). It is a direct consequence of the Object Shift Parameter in our analysis. Since East Asian languages do not permit object shift, the abbreviated LF structure for (24b-d) before deletion would be like (26).

$$(26) [_{TP} QNP_{SUBJ} \dots [_{vP} QNP_{SUBJ} \dots [_{VP} V QNP_{OBJ}]]]$$

It (26), the object QNP is c-commanded by every member of the subject QNP. So it is impossible to get an interpretation in which the object QNP enjoys scope over the subject QNP in East Asian languages. Hence, no scope ambiguity obtains in a simple transitive construction in East Asian languages.

Now turn to the problematic passive data in which there is no cross-linguistic contrast.

(27) a. Someone is loved by everyone. (E)

$$(\exists > \forall, \forall > \exists)$$

b. yaoshi liangge xiansuo bei meigeren zhaodao ~ (C)

If two clues by everyone found

'If two clues were found by everyone ~' ( $\exists > \forall, \forall > \exists$ )

c. etten senmul-i motun kyosa-eykey ponay-ci-ess-ta. (K)

some present-Nom every teacher-to was sent  
 'Some present was sent to every teacher.' ( $\exists > \forall$ ,  $\forall > \exists$ )  
 d. dareka-ga dono-mati-ni-mo syootais-are-ta. (J)  
 someone-Nom every-town-Loc-also was invited  
 'Someone was invited to every town.' ( $\exists > \forall$ ,  $\forall > \exists$ )

As noted in Aoun and Li (1989), Chinese passives appear to permit scope ambiguities as in (27b). As illustrated in (27c-d), Korean and Japanese also permit scope ambiguities in passives just like in English. In passives, it is not an issue whether the object moves overtly or not since the internal argument uniformly moves up to Spec TP in the two types of languages. Even though, in fact, English and East Asian languages have superficially different LF structures for passives, they share the same hierarchical LF structure.

- (28) a. [<sub>TP</sub> QNP<sub>1</sub> ... [<sub>VP</sub> [<sub>VP</sub> V QNP<sub>1</sub> ] P-QNP]] (English)  
 b. [<sub>TP</sub> QNP<sub>1</sub> ... [<sub>VP</sub> P-QNP [<sub>VP</sub> V QNP<sub>1</sub> ]]]  
 (East Asian languages)

In both (28a) and (28b), the P-QNP c-commands the VP-internal copy of QNP<sub>1</sub>, and is c-commanded by the upper copy of QNP<sub>1</sub>. This allows the sentences in (27) to be scopally ambiguous.

As discussed above, our account based on the Object Shift Parameter correctly predicts that there would be no cross-linguistic contrast in quantifier scope ambiguity where parametric difference in object shift is not involved. Bearing this in mind, consider the following examples.

- (29) a. Someone seems to have attended every rally. (E)  
 ( $\exists > \forall$ ,  $\forall > \exists$ )  
 b. yaoshi liangge ren keneng kando meigren ~ (C)  
 If two men likely see everyone

- 'If two men is likely to see everyone  $\sim$ ' ( $\exists > \forall$ ,  $*\forall > \exists$ )  
 c. nukuwnka-ka motun salam-ul manan tus hata. (K)  
 someone-Nom every person-Acc meet seems.  
 Someone seems to have met every person.'  
 ( $\exists > \forall$ ,  $*\forall > \exists$ )

When the embedded clause includes multiple quantifiers and the subject is raised from it, there emerges cross-linguistic contrast as shown in (29). This is naturally explained in our analysis. In the embedded clause of the English example (29a), there is a subject QNP's copy in Spec *v*P which is c-commanded by the shifted object in the outer Spec of *v*P. This allows the object QNP to have scope over the subject QNP, contra overt word order. However, this option is not available in East Asian languages such as Chinese and Korean since the object QNP does not move overtly as assumed by the Object Shift Parameter. Hence, no scope ambiguity obtains. On the other hand, when there is no quantified object in the embedded clause, we do not witness cross-linguistic contrast in quantifier scope between the two types of languages. Consider the following examples, among which (30b) is quoted from Ahn (1990:181).

- (30) a. Some picture seemed to everyone to be ugly. (E)  
 ( $\exists > \forall$ ,  $\forall > \exists$ )  
 b. nukuwnka-ka enu elun-eyke-na khun inmwul-i  
 someone-Nom which senior-to-ever big figure-Nom  
 toy-l tus hata. (K)  
 become seems  
 'Someone seems to every senior to become a great figure.'  
 ( $\exists > \forall$ ,  $\forall > \exists$ )

It is not surprising in our analysis that there is no cross-linguistic contrast in (30). Since object shift is irrelevant in

the context of (30), the two types of languages show the same pattern in permitting scopal ambiguity. In both (30a) and (30b), the prepositional QNP can take scope over the subject QNP, contra overt word order, since there is a subject QNP's copy in the embedded clause.

The same logic can be extended to the following peculiar contrasts in Korean and Japanese, which are noted by Ahn (1990:222) and Yatsushiro (1996:324-325) respectively.

(31) *Korean*

- a. *chohun sosik hana-ka motun cipang-ulopwute*  
 good news one-Nom every province-from  
*tochakhayssta. (unaccuastive)*  
 arrived  
 'A piece of good news arrived from every province.'  
 ( $\exists > \forall$ ,  $\forall > \exists$ )
- b. *chohun sosik hana-ka motun cipang-ulo phecye*  
 good news one-Nom every province-from spread  
*nakassta. (unergative)*  
 went out  
 'A piece of good news spread out to every province.'  
 ( $\exists > \forall$ ,  $*\forall > \exists$ )

(32) *Japanese*

- a. *dareka-ga dono-heya-ni-mo tuita. (unaccuastive)*  
 someone-Nom every-room-Loc-also arrived  
 'Someone arrived at every room.' ( $\exists > \forall$ ,  $\forall > \exists$ )
- b. *dareka-ga dono-isu-ni-mo suwatta. (unergative)*  
 someone-Nom every-chair-Loc-also sat  
 'Someone sat on every chair.' ( $\exists > \forall$ ,  $*\forall > \exists$ )

As shown in (31a) and (32a), the scope relation between the quantificational elements is flexible in unaccusative constructions. On the other hand, as shown in (31b) and (32b), the

quantificational elements in unergative constructions do not produce similar scope ambiguity. These contrasts are successfully explained in our analysis. Given the assumption that postpositional locative phrases are adjoined to VP, the abbreviated LF structures for the a-examples and the b-examples, before deletion, would be like (33) and (34) respectively.

(33) [TP QNP<sub>1</sub> ... [VP P-QNP [VP V QNP<sub>1</sub>]]] (unaccusative)

(34) [TP QNP<sub>1</sub> ... [vP QNP<sub>1</sub> ... [VP P-QNP [VP V]]] (unergative)

Since the QNP<sub>1</sub> is raised from the VP-internal position, as shown in (33), in unaccusative constructions, the reverse scopal interpretation with respect to word order is possible along with the rigid scopal interpretation. The unergative construction differs from the unaccusative construction in that the subject originates in Spec of vP. This makes every member of QNP<sub>1</sub> be higher than the postpositional QNP in (34), hence no scopal ambiguity obtains.

Explanatory power of our analysis is also confirmed in explaining the following contrast of Japanese noted by Takahashi (1995:13-14).

(35) a. dareka<sub>1</sub>-o daremo-ga t<sub>1</sub> semeta.

someone-Acc everyone-Nom blamed

'Someone, everyone blamed.' ( $\exists > \forall$ ,  $\forall > \exists$ )

b. daremo<sub>1</sub>-o darek-ga [CP John-ga t<sub>1</sub> semeta to]

everyone-Acc someone-Nom -Nom blamed COMP

omotteiru.

thinks

'Everyone, someone thinks that John blamed.'

(\* $\forall > \exists$ ,  $\exists > \forall$ )

In (35a), the so-called clause internal scrambling of the object

QNP over the subject QNP gives rise to scopal ambiguity. In contrast, the so-called clause external long scrambling in (35b) does not induce similar scopal ambiguity; the subject QNP takes wider scope than the object QNP, which is scrambled from the embedded clause. Saito (1992) and Takahashi (1996) provide evidence that clause external long distance scrambling is a species of A'-movement while clause internal scrambling is a sort of A-movement. If their suggestion is on the right track, the above contrast in (35) receives a natural account under our analysis. Our analysis predicts that quantifier scope is parasitic on A-chain. Then the clause internally scrambled object QNP in (35a), viz. *dareka-o*, has a chance to c-command any link of the subject QNP, and so it can enjoy wider scope than the subject QNP. Of course, in (35a), the reverse scopal interpretation is possible since the upper copy of the subject QNP c-commands the lower copy of the object QNP, which is marked as  $t_i$ . In (35b), however, the upper link of the object QNP, which is clause externally long scrambled to the matrix sentence, cannot participate in the process of determining relative scope since it is in an A'-position. Hence, no scopal ambiguity occurs in (35b).

## 5. Summary and Conclusion

In a simple transitive sentence with multiple quantifiers, English exhibits scopal ambiguity while a rigid scope relation emerges in East Asian languages, which reflects the superficial word order between quantifiers. This cross-linguistic contrast is explained on the basis of the Subject Position Parameter in Aoun and Li (1989) and Hornstein (1995). However, the Subject Position Parameter has some conceptual and empirical problems. This paper propose that the cross-linguistic contrast in question is best analyzed under the assumption that the object moves overtly in English while it is in its base position at overt syntax

in East Asian languages, viz. the Object Shift Parameter. Combining with Hornstein's (1995) assumption that scopal interpretation is a function of A-movement, the Object Shift Parameter successfully accounts for the cross-linguistic contrast in question. Besides, our analysis correctly predicts that there would be no cross-linguistic contrast in quantifier scope ambiguity where parametric difference in object shift is not involved, passives and raising constructions with intransitive embedded clauses. Our analysis can also explain the peculiar contrast in scopal ambiguities, shown in Korean and Japanese, between unaccusatives and unergatives, noted by Ahn (1990) and Yatsushiro (1996). Takahashi (1995) observes that clause internal scrambling induces scopal ambiguity while clause external long scrambling does not in Japanese. This contrast is naturally explained in our modified A-movement approach to quantifier scope since it is assumed that an A'-link cannot participate in the process of determining scopal interpretation. If our approach is on the right track, it would be added support for the proposal that there is no QR.

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