

S'-DELETION VS. RAISING: EVIDENCE FROM KOREAN*

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Within GB Theory, the traditional notion of raising-to-object is eliminated in favor of a device which reduces a barrier. While most of the facts that motivated the rule of raising-to-object can be explained by the exceptional government relation between the matrix predicate and the complement subject, there is evidence in Korean that the 'raised' NP must belong to the matrix clause at the S-structure level, and thus that the S'-Deletion hypothesis is untenable. Two arguments are provided for the raising hypothesis based on quantifier floating and long-distance scrambling of adjuncts.

1. Introduction

Since Chomsky (1981), the so-called Subject-to-Object Raising (SOR, hereafter) construction has been reanalyzed as involving S'-Deletion, as dictated by the Projection Principle as well as by some theoretical assumptions about theta-role assignment and the nature of D-structure (Chomsky 1982: 5, 1986: 90-91 etc.). That is, predicates such as *believe* and *consider* s-select a proposition, and the LF structure of 'raising' sentences presu-

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List of Abbreviations:

Nom	Nominative	Acc	Accusative	Dat	Dative
Gen	Genitive	Loc	Locative	Top	Topic
Dcl	.....	Declarative	Hon	.....	Honorific	Pl	.....	Plural
Clas	.....	Classifier						

The Yale system is used in Romanizing Korean data. Irrelevant details are ignored in the gloss.

ably reflects this property directly (Chomsky 1981: 32–33, but cf. Williams 1983: 307). Thus, the LF representation of (1a) would look roughly like (1b):

- (1) a. I consider John to be a fool.
 b. I [_{VP} consider [_S John to be a fool]]

Given the Projection Principle, then, there cannot be a syntactic level in which *John* occupies an argument position in the matrix clause.

Technically, the Projection Principle and the raising (i.e. movement) analysis can both be maintained by positing an empty object position at D-structure to which the caseless embedded subject moves. However, given the assumption that a verb must theta-mark the position which it subcategorizes (Chomsky 1981: 37 etc.), the raising analysis cannot be maintained, since the empty object position is a subcategorized non-theta position at the D-structure level: subcategorized because it is a matrix object position, and a non-theta position because this is the position where pleonastic elements can occur.

Most of the facts that were previously explained by the Raising analysis have been accounted for by postulating a rule which deletes the S'-node (a barrier) between the matrix predicate and its complement, though this issue has not been actively discussed recently for non-European languages.¹ In this paper, I provide two pieces of evidence from Korean which suggest that the NP that is either exceptionally case marked or raised (call it 'raisee,' for convenience' sake) must belong to the matrix clause at the S-structure level, and thus that the Raising analysis cannot be simply replaced by S'-Deletion.

Section 2 discusses one possible argument based on a fact similar to what Kuno (1976) observed, followed by a counterargument. Section 3 provides two (separate but related) arguments based on syntactic phenomena associated with quantifier floating and long-distance scrambling of adjuncts, which

¹ Lee (1984) discusses the possibility of making the Raising analysis compatible with other assumptions of the Government and Binding theory. Saito (1985: 202–205) and Kang (1986: 62–63) briefly discuss the SOR construction. Yoon (1986: 232) seems to be assuming the S'-Deletion (or exceptional Case marking) analysis for Korean.

Kuno (1976: 24–29) offers five arguments for the Raising analysis of the Japanese counterpart of (1a), etc.: case marking of the raisee, adverb placement (cf. section 2 below), word-order inversion, quantifier scope, and reflexivization. Of these, it is not obvious whether the quantifier scope test can be applied to Korean, given the diverse judgment among the speakers I contacted. The other arguments are all applicable to Korean as they are. These facts, however, could also be explained under the S'-Deletion hypothesis, though I will not discuss all of them below.

I don't think can be so easily dismissed. A brief discussion of the implication of the observed fact follows.

2. Adverb Placement Argument

Consider the following:²

- (2) a. phansa-nun *cuksek-eyse* [_{S'} John-i mwucoy-ila-ko] senenhayssta.
 judge-Top the spot-Loc Nom innocent-be-Comp pronounced.
 'The judge pronounced on the spot that John was innocent.'
 b. *phansa-nun [_{S'} John-i *cuksek-eyse* mwucoy-ila-ko] senenhayssta.
- (3) a. phansa-nun [_{S'} John-ul mwucoy-ila-ko] senenhayssta.
 Acc
 'The judge pronounced John to be innocent on the spot.'
 b. phansa-nun John-ul *cuksek-eyse* mwucoy-ila-ko senenhayssta.

The argument goes as follows: the adverb (*italicized*) in the above sentences can only be associated with the matrix verb, since it is odd to say *John is innocent on the spot (immediately)*. As (2b) shows, a matrix adverb cannot be positioned in the complement clause. When S'-Deletion (or SOR) applies, however, the adverb can be placed after the embedded subject, as in (3b). It is unlikely that the adverb, which is generated in the matrix clause, moves down into the complement clause (If it did, it would violate the requirement that traces be bound.). Therefore, it is reasonable to assume that *John-ul* in (3b) (hence in (3a), too, by implication) is in the matrix clause at some level. By (some version of) the Projection Principle, then, there must be an object position in the matrix clause at all levels.

This argument, however, is at best inconclusive, because the possibility

² For the purpose of this paper, I ignore the problems of the overt complementizer remaining after the putative rule of S'-Deletion, and the presence of an overt tense marker in the complement clause of the raising sentences. The former raises the obvious question of precisely how the S-structure of such sentences should be represented; the latter would cast doubt upon the claim that the Tense element of INFL assigns structural [+Nominative] case to the subject in Korean, for then the embedded subject will be assigned two structural cases. This latter remark assumes that sentences like the following are grammatical, as they are in my dialect:

na-nun John-ul elisek-essta-ko mit-essta.
 I-Top Acc foolish-Past-Comp believe-Past
 'I believed John to have been foolish.'

remains that the S-structure of (3b) is like (4) below:

- (4) phansa-nun [_{VP} John-ul_i [_{VP} cuksek-eyse [_S t_i mwucoy-ila-ko] senenhayssta]]]

Given that Korean allows long-distance scrambling (as Saito (1985) argues for Japanese), nothing prevents the embedded subject *John* from adjoining to the matrix VP after S'-Deletion and Case assignment.³ The question then is why the subject in (2b) cannot be assumed to have scrambled in the same way. According to Saito (ibid.), nominative case in Japanese is 'contexturally' or 'inherently' determined by virtue of occurring as an NP of S [NP, S], but not assigned by either VP or INFL. If so, a subject is not expected to scramble, because if they did, the resulting trace would not be assigned (structural) case in violation of the condition requiring variables to be case-marked.

It is easy to show that subjects (in the sense of Saito 1982, 1986 etc.) can sometimes scramble. Observe the following:

- (5) a. John_i-eykey(-nun) casin_i-i twulyepta.
 Dat Top self-Nom fearful
 'John fears himself.'
 b. casin_i-i John_i-eykey(-nun) t_i twulyepta.
 (6) a. Zarathustra_i-ka casin_i-eykey ilehkey malhayssta.
 Nom self-Dat thus said
 'Zarathustra said thus to himself.'
 b. *Casin_i-i Zarathustra_i-eykey(-nun) ilehkey malhayssta.
 'Self said thus to Zarathusta.'

Details aside, it is clear that in (5b), *casin* 'self' must be taken to have scrambled to the sentence-initial position, for if the surface word order were identical to the D-structure order, (5b) should be ruled out for the same reason that (6b) is, i.e., by some version of Principle C of Chomsky's (1981)

³ See Saito (1985) for discussions of possible adjunction sites for scrambling in Japanese. That (4) is a legitimate structure in Korean is uncontroversial, since long-distance scrambling of an object is in general allowed in Korean, as illustrated below:

- a. John-i [s Mary-ka ku chayk-ul hwumchyessta-ko] mitnun_a.
 nom Nom the book-Acc stole-Comp believe
 'John believes that Mary stole the book.'
 b. ku chayk_i-ul John-i [s Mary-ka t_i hwumchyessta-ko] mitnun_a.
 'That book_i, John believes that Mary stole t_i'.

Binding Theory. It follows then that at least in some cases, a nominative-marked nominal can scramble.

In addition, Takezawa (1987) provides some interesting facts from Japanese which show that, in the so-called dative subject construction, the basic word order must be Np-Dat Np-Nom, based on the weak crossover effect parallel to what has been discussed in Saito & Hoji (1983), Saito (1985), etc. Though I will not elaborate on his data here, his argument could be easily applied to Korean.

Nevertheless, the problem still remains that, for some reason, the embedded subject in (2a) cannot scramble over the matrix adverb, a fact that should be accounted for independently of one's position as to how the sentences in (3) can be best analyzed. So, whether Saito's explanation of nonscramblability of subject is tenable or not, the fact observed above remains neutral with respect to the choice between Raising vs. S'-Deletion hypotheses.

3. Evidence from Quantifier Floating and Scrambling of Adjuncts

This section brings up more challenging problems for the S'-Deletion hypothesis. The first argument comes from the case markers of the floated quantifiers in simplex and complex clauses, and the second one is based on interaction between quantifier floating and scrambling of adjuncts.

3.1. Quantifier Floating

There are three different positions in which a quantifier can occur with respect to the position of the noun it quantifies: prenominal (7a), postnominal (7b), or floated (7c) positions:⁴

- (7) a. sey haksayng-i wassta.
 three student-Nom came
 'Three students came.'
- b. haksayng seys-i wassta.
 student three-Nom came

⁴ For details concerning syntactic relations among the three sentences in (7), see Shibatani (1977), Gerdts (1987), Choi (1986), and references cited there. In Choi (1986), I discussed the case markers of the floated quantifiers in detail within the framework of Relational Grammar, which I do not repeat here.

- c. haksayng-i seys (-i) wassta.
 student-Nom three(-Nom)

Below we will be concerned only with the floated quantifiers such as those illustrated in (7c), limiting the discussion to the universal quantifier *motwu* 'all'. One characteristic of such floated quantifiers in Korean is that they can optionally have a case marker, either nominative or accusative. In simplex sentences, the case marker of a floated quantifier must agree with that of the noun it quantifies, which we will refer to as 'antecedent,' following O'Grady (1982) etc., as shown below:⁵

- (8) a. haksayng-tul-i motwu-ka wassta.
 student-Pl-Nom all-Nom came
 'Students all came.'
 b. *haksayng-tul-i motwu-lul wassta.
 Nom Acc
- (9) a. emeni-ka haksayng-tul-ul motwu-lul chotayhayssta.
 mother-Nom student-Pl-Acc all-Acc invited
 'Mother invited all of the students.'
 b. *emeni-ka haksayng-tul-ul motwu-ka chotayhayssta.
 Acc Nom

From this, we obtain the following generalization, to which I know of no counterexample:⁶

⁵ We are concerned only with those cases in which the antecedent is either in the nominative or in the accusative case, excluding from consideration sentences like (i) below, where the antecedent has a Topic marker:

- (i) haksayng-tul-un sey-myeng (-i) wassta.
 student-Pl-Top three-Class (-Nom) came.
 'As for students, three (of them) came.'

In such cases, we can assume that there is an empty category in the subject position that is coindexed with the topic.

Hereafter, the optionality of overt case marking of quantifiers is not indicated in the data.

⁶ Strictly speaking, this is not an exceptionless generalization. There are sentences like (ib) below, where we have a dative-marked quantifier associated with an accusative-marked NP:

- (i) a. emeni-nun ai-tul-ul motwu-lul senmwul-ul cwuessta.
 mother-Top child-Pl-Acc all-Acc present-Acc gave
 'Mother gave a present to all of the children.'

- (10) If both a floated quantifier and its antecedent belong to the same minimal clause, their case marking must agree.

In certain complex sentences, however, the case markers may be different. (See Gerdts (1987) for more examples.) Consider the following:

- (11) a. emeni-nun ai-tul_i -ul motwu-lul [_S PRO_i yelsimhi
 mother-Top child-Pl-Acc all -Acc hard
 kongpwuha-tolok] seltukhayssta.
 study -Comp persuaded
 'Mother persuaded all the children to study hard.'
 b. emeni-nun ai-tul_i -ul [_S PRO_i motwu-ka yelsimhi
 child-Pl-Acc all-Nom hard
 kongpwuha-tolok] seltukhayssta.
 study-Comp persuaded

That the quantifier in (11a) is contained in the matrix clause and that the quantifier in (11b) lies within the complement clause is so obvious that it might seem unnecessary to prove it. (How else could they get the appropriate case marker, whether case is assigned contextually (Saito 1985), structurally by a projection of V (Kang 1986), or by a projection of INFL or V according to the X'-Transparency convention (Yim 1985)?) Just to nail this down, however, consider the following scrambled version of (11):

- (12) a. *emeni-nun motwu-lul [_S PRO_i yelsimhi kongpwuha-tolok]_j
 mother-Top child-Pl-Acc hard study-Comp
 ai-tul_i -ul t_j seltukhayssta.
 child-Pl-Acc persuaded
 b. emeni-nun [_S PRO_i motwu-ka yelsimhi kongpwuha-tolok]_j
 all-Nom
 ai-tul_i -ul t_j seltukhayssta.
 child-Pl-Acc

Within the minimal clause, a quantifier can never precede its antecedent, as

- b. ?emeni-nun ai-tul-ul motwu-cykey senmwul-ul cwuessta.
 mother-Top child-Pl-Acc all-Dat present-Acc gave

When the case marker of the quantifier is either nominative or accusative, however, there is no exception to (10), and it is these two case markers with which we are concerned below. I am indebted to Professor Ho-min Sohn for the above examples.

the following sentences show:

- (13) a. (= (8a)) haksayng-tul-i motwu-ka wassta.
 student-Pl-Nom all-Nom came
 ‘Students all came.’
 b. *motwu-ka haksayng-tul-i wassta.
- (14) a. (= (9a)) emeni-ka haksayng-tul-ul motwu-lul chotayhayssta.
 mother-Nom student-Pl-Acc all-Acc invited
 ‘Mother invited all of the students.’
 b. *emeni-ka motwu-lul haksayng-tul-ul chotayhayssta.

The ungrammaticality of (12a) is expected if the quantifier and its antecedent are clausemates; the grammaticality of (12b) suggests that the quantifier is ‘bound’ (in the sense of O’Grady (*ibid.*)) by the PRO rather than the matrix object.

Furthermore, observe the contrast between the following two sentences:

- (15) a. [_S PRO_i yelsimhi kongpwuha-tolok]_j emeni-nun
 hard study-Comp mother-Top
 ai-tul_i -ul motwu-lul *t_j* seltukhayssta.
 child-Pl-Acc all-Acc persuaded
 b. * [_S PRO_i yelsimhi kongpwuha-tolok]_j emeni-nun
 ai-tul_i -ul motwu-ka *t_j* seltukhayssta.
 -Acc Nom

If the nominative-marked quantifier lies within the embedded clause in (11b) as indicated, the ungrammaticality of (15b) follows, because then (15b) is an instance of rightward scrambling, which would violate the binding condition on traces. (See Saito(1985) for details.) If the quantifier were in the matrix clause, however, there is no reason why (15b) should be ungrammatical, given that scrambling of clausal complements is allowed as in (15a).

The above discussion should be sufficient to convince us that the generalization in (10) is correct, and so is (16) below, its logical equivalent:

- (16) If a floated quantifier and its antecedent do not agree in case marking, they are not clausemates (or else the sentence is ungrammatical).

With this in mind, consider the following sentences with or without

Raising / S'-Deletion:

- (17) a. *sensayngnim-un* [_{S'} *haksayng-tul-i* *motwu-ka* *chakhata-ko*]
 teacher-Top student-Pl-Nom all-Nom good-Comp
tancenghayssta.
 judged
 'The teacher judged that the students were all well-behaved.'
- b. *sensayngnim-un* *haksayng-tul-ul* *motwu-lul* *chakhata-ko*
 teacher-Top student-Pl-Acc all-Acc good-Comp
tancenghayssta.
 judged
 'The teacher judged all the students to be well-behaved.'
- c. *sensayngnim-un* *haksayng-tul-ul* *motwu-ka* *chakhata-ko*
 student-Pl-Acc all-Nom
tancenghayssta.

Note that in (17c), the quantifier is marked nominative, whereas its antecedent is marked accusative. (For the purpose of the discussion in this paper, we need not know exactly how case or case markers should be determined.) From the grammaticality of (17c) and the generalization (16), it follows that the quantifier and its antecedent in (17c) are not within the same minimal clause. This leads us to conclude that *haksayng-tul-ul* 'student-Pl-Acc' in (17c), and hence raiseses in general, must be in the matrix object position at some level, and therefore, by the Projection Principle, there must be an object A-position at all syntactic levels.

There may be a possible way out, though. Suppose, for example, that nominative case in Korean is 'optionally' assigned, as argued in Kang (1986). Then, the exceptional case marking could also apply optionally, i.e., in such a way that it may affect none, only one, or more than one of those NPs that have the 'potential' of being assigned nominative case, depending on whether or not the NP is in fact assigned the nominative case. This would enable us to account for the case markers of the antecedent and the quantifier in (17) above, while maintaining the S'-Deletion hypothesis with some necessary adjustments (especially concerning the issue of what kind of NPs can be exceptionally case-marked).^{7,8}

⁷ Here, we are ignoring an apparent paradox involved in accounting for sentences in which both the NP and its quantifier are accusative-marked in terms of Kang's case marking system. In his system, the only way an NP can be assigned accusative case is by occurring as a sister of V⁰ (pp. 107-110 etc.), and there is no limit on the number of such sisters. Though he does not

Whatever such an analysis may eventually look like, it would have to claim that there is no structural difference among the sentences in (17) other than the existence of an *S'*-node. The structure of (17b), in particular, may look roughly like (18b), parallel to (18a), a possible structure of (17a):

- (18) a. *sensayngnim-un* [_S [_S *haksayng-tul-i* [_S *motwu-ka*
 teacher-Top student-Pl-Nom all-Nom
 chakhata]] -ko] *tancenghayssta*.
 good -Comp judged
- b. *sensayngnim-un* [_S *haksayng-tul-ul* [_S *motwu-lul*
 teacher-Top student-Pl-Acc all-Acc
 chakhata-ko]] *tancenghayssta*.
 good-Comp judged.

make this latter point explicit, it is clear that it must be the case, given his flat VP-internal structure and the fact that there can in principle be an unlimited number of accusative-marked NPs within the minimal clause, in the sense that we cannot claim there can be, say, at most six or seven such NPs per clause. For instance:

nay-ka ku mwune-lul tali-lul hana-lul kkuth pwupwun-ul
 I-Nom the octopus-Acc leg-Acc one-Acc end part-Acc
cokum-ul callassta.
 a bit-Acc cut

'I cut a small portion of the edge of one of the legs of the octopus.'

On the other hand, the only way for more than one NP to be assigned nominative case is by *not* occurring as sisters. (See the structure in (28) on p. 29, for example.) Thus, it would not be possible to provide a consistent account of (17a - c) on the basis of Kang's case marking system. For the moment, we can simply assume that in some modified system, such a paradox does not arise.

* Note also that the first nominative-marked NP in some type of multiple nominative construction can 'raise', as observed by Kuno (1978: 249) for Japanese. For instance:

- (i) a. *na-nun* [_S *Mary-ka maumssi-ka kopta-ko*] *mitessta*.
 I-Top Nom heart-Nom good-Comp believed
 'I believed that Mary was kind-hearted.'
- b. *na-nun Mary-lul maumssi-ka kopta-ko mitesta*.
 Acc
 'I believed Mary to be kind-hearted.'
- c. **na-nun Mary-lul maumssi-lul kopta-ko mitesta*.
 Acc Acc

There is no observed case where more than one NP is accusative-marked in Raising construction involving non-quantifier NPs, as (c) illustrates.

The word order inversion test parallel to (12) or (15) above is inapplicable to the Raising / S'-Deleted construction because preposing of complement clauses in such sentences always results in ungrammaticality in Korean. (cf. Kuno 1976: 35) For example:

- (19) a. *sensayngnim-un haksayng-tul-ul chakhata-ko mitessta.*
 teacher-Top student-Pl-Acc good-Comp believed
 'The teacher believed the students to be good.'
 b. **sensayngnim-un chakhata-ko haksayng-tul-ul mitessta.*
 teacher-Top good-Comp students-Pl-Acc believed

It should be noted here that this fact itself does not give us evidence as to the choice between the two hypotheses under consideration. Under the SOR hypothesis, the ungrammaticality of (19b) follows from a general constraint on traces, i.e., the condition requiring a trace to be bound, as the following (possible) representation of its S-structure shows:⁹

- (19b)' [_{S'} [_{Top} *sensayngnim_i-un*] [_S [_S [_S *t_j chakhata-ko*]_k [_S *pro_i haksayng-tul_j-ul t_k mitessta*]]]]]

Note that the trace *t_j* in the above is not c-commanded (hence not bound) by the NP it is coindexed with.

Under the S'-Deletion hypothesis, on the other hand, (19b) would be a violation of the 'verb-final' constraint, which bans scrambling of any constituent into a position after the predicate of the clause.¹⁰

Thus, (18b) seems a conceivable structure for (17b), though I doubt that

⁹ We assume with Saito (1985) that scrambling of a constituent to the sentence-initial position is an adjunction to the S-node. The representation of the topic node is based on Chomsky (1981: 140 fn. 27). However, nothing crucial in this paper hinges upon the correctness of these assumptions.

¹⁰ See Saito (1985: 202-244) for some relevant discussions. As for the SOR construction in Japanese, Saito (*ibid.*: 202-205) assumes that it is in fact an obligatory control construction. Since he does not provide an explanation for the syntactic differences between raising and control (alias Equi) constructions noted in Kuno (1976: 33-39) including the word-order restriction observed above (e.g., (12b) vs. (19b)), I cannot evaluate his claim. Also, since Saito himself uses the (non)occurrence of a resumptive pronoun in the complement subject position as evidence in determining the feature of the empty category, i.e., trace or *pro* (cf. pp. 195-222, especially his (109) on p. 222 and the discussion), the fact that a resumptive pronoun is disallowed in the SOR construction but allowed in the complement subject position of *persuade*-type predicates (cf. Kuno 1976: 35-36) should suggest that the empty category in SOR construction is a trace rather than a *pro*.

anyone would indeed claim such an analysis at the expense of all the accompanying ad hoc devices to ensure the appropriate case marking of the quantifier and its antecedent. In any case, the fact observed in the following section argues against any such analysis of sentences like (17b), by showing that the accusative-marked quantifier lies outside of the minimal clause containing the complement predicate.

3.2 Quantifier Floating and Scrambling of Adjuncts

This section presents an additional piece of evidence leading to the conclusion that the raisee occupies a position in the matrix clause, based on quantifier floating and long-distance scrambling of adjuncts in connection with what we have observed in the previous section.

3.2.1 Facts

3.2.1.1 Floated Quantifiers and Adjuncts

Haig (1980) observes that in Japanese, no 'primary NP' (a direct or indirect object) can be inserted between the subject and its quantifier, whereas oblique NPs (adjuncts) can freely occur in the same position. His observation can be schematically represented as follows:

- (20) a. *DO* (SUBJ) (OBL) *O*
 b. *SUBJ* (OBL) *O*
 c. **SUBJ* (OBL) *DO O*
 d. **SUBJ* (OBL) *IO O*

I believe the same restrictions generally hold in Korean, though I suspect that they are pragmatic rather than syntactic conditions, contra Saito (1985: 51-53). Of these, what is relevant to our discussion below is the fact that, within the minimal clause, there is no restriction on adjuncts intervening between an NP (subject or object) and its quantifier, as indicated in (20a,b). Some examples are given below:

- (21) a. *haksayng-tul-i sey-myeng-i ecey wuli cip-ey*
 student-Pl-Nom three-Clas-Nom yesterday our house-Loc
iywu-to eps-i wassta.
 reason-even without came
 'Three students came to my house yesterday without any reason.'
 b. *haksayng-tul-i ecey wuli cip-ey iywu-to eps-i*
 student-Pl-Nom yesterday our house-Loc reason-even without

- sey-myeng-i wassta.
 three-Clas-Nom came
- (22) a. John-i nal-mata kiswuksa-eyse iywu-to eps-i
 Nom day-each dorm-Loc reason-even without
 socwu-lul twu-pyeng-ul masinta.
 whiskey-Acc two-bottle-Acc drink
 'John drinks two bottles of whiskey in the dorm everyday without
 any reason.'
- b. John-i socwu-lul nal-mata kiswuksa-eyse iywu-to eps-i
 Nom whiskey-Acc day-each dorm-Loc reason-even without
 twu-pyeng-ul masinta.
 two-bottle-Acc drink.

3.2.1.2 Long-distance Scrambling of Adjuncts

The second fact to note is that, while clause-internal scrambling of adjuncts is relatively free, long-distance scrambling of adjuncts is much more restricted, as in Japanesc. (cf. Saito 1985: 172-186) Compare the following sentences with (21) and (22) above, respectively:

- (23) a. *???* ecey_i Bill-i [_S haksayng-tul-i t_i wuli cip-ey
 yesterday Nom student-Pl-Nom our house-Loc
 wassta-ko] sayngkakhanta.
 came-Comp think.
 'Yesterday_i, Bill thinks that students came to my house t_i.'
- b. *???* wuli cip-ey_i Bill-i [_S haksayng-tul-i (ecey) t_i
 our house-Loc Nom student-Pl-Nom yesterday
 wassta-ko] sayngkakhanta.
 came-Comp think
 'To my house_i, Bill thinks that students came t_i (yesterday).'
- c. *?/** iywu-to-eps-i_i Bill-i [_S haksayng-tul-i t_i (wul cip-ey)
 reason-even-without Nom student-Pl-Nom our house-Loc
 wassta-ko] sayngkakhanta.
 came -Comp think
 'Without any reason_i, Bill thinks that students came (to my house)
 t_i.'

As discussed by many (Huang 1982, Saito 1985, Aoun etc. 1987, among others), there are certain differences among adjuncts in their syntactic behavior depending on their types, i.e., whether the adjunct denotes location,

time, reason, or method. Saito (ibid.: 174) refers to the type of adverbial phrase as in (23c) above as ‘true adjunct’ as opposed to such adverbial phrases as in (23a, b), noting that both in English and in Japanese, long-distance preposing of ‘true adjuncts’ results in considerably worse sentences than those in which temporal or place adverbials are long-distance preposed. While I agree that the first two sentences in (23) are better than (23c), they are still far from perfect to me, if not ungrammatical. In any case, what is crucially relevant to the argument below is the fact that, regardless of the types of adjunct involved, long-distance scrambling of an adjunct into a position between a quantifier of the matrix sentence and its antecedent invariably results in complete ungrammaticality, as illustrated below:

- (24) a. *haksayng-tul-i ecey_i motwu-ka [_S Bill-i t_i wuli cip-ey
 student-Pl-Nom yesterday all-Nom Nom our house-Loc
 wassta-ko] malhayssta.
 came-Comp said
 ‘Yesterday, the students all said that Bill came to my house t_i.’
- b. *haksayng-tul-i wuli cip-ey_i motwu-ka [_S Bill-i (ecey)
 student-Pl-Nom our house-Loc all -Nom Nom yesterday
 t_i wassta-ko] malhayssta.
 came-Comp said
 ‘To my house_i, the students all said that Bill came t_i (yesterday).’
- c. *haksayng-tul-i iywu-to eps-i_i motwu-ka [_S Bill-i t_i
 student-Pl-Nom reason-even without all -Nom Nom
 (wuli cip-ey) wassta-ko] malhayssta.
 our house-Loc came-Comp said
 ‘Without any reason_i, the students all said that Bill came (to my
 house) t_i.’

It is not clear what makes such long-distance scrambling impossible. Sentences (24a) and (24c) are grammatical if the adverb is interpreted to modify the matrix predicate. One may take this fact as evidence for the position that the unacceptability of such sentences in the intended meaning is due to some pragmatic disambiguation constraint. In (24b), however, the possibility of the adverb modifying the matrix predicate is blocked, because the post-position used there, which marks a goal or a ‘static’ location, cannot modify the matrix verb which denotes a non-directional action. Thus, even when there is no chance of ambiguity, an embedded adverb cannot be placed between a matrix NP and its floated quantifier.

The same is true when accusative-marked quantifiers are involved:

- (25) a. na-nun haksayng-tul-ul_i motwu-lul [_S, PRO_i *yenge-lo*
I-Top student-Pl-Acc all-Acc English-by
malha-tolok] seltukhayssta.
talk-Comp persuaded
'I persuaded all of the students to talk in English.'
b. *na-nun haksayng-tul-ul_i *yenge-lo*_j motwu-lul [_S, PRO_i *t*_j
malha-tolok] seltukhayssta.

While the observed fact itself merits further research, it is sufficient for our immediate purpose to notice that the relevant constraint, syntactic or pragmatic, is sufficiently rigid.

The two facts observed in this section are summarized below:

- (26) i. Within the minimal clause, any adjunct(s) can intervene between an NP and its floated quantifier.
ii. No adjunct can scramble across a clause boundary into a position between an NP and its quantifier, where both belong to the higher clause.

3.2.2 Argument

Now observe the following sentences:¹¹

- (27) a. sensayngnim-un *cuksek-eyse* [_S, haksayng-tul-i motwu-ka
teacher-Top the spot-Loc students-Pl-Nom all-Nom
kyosil-eyse-man chakhata-ko] tancenghayssta.
class-Loc -only good-Comp judged
'On the spot (immediately), the teacher judged that the students were all well-behaved only in the classroom.'
b. sensayngnim-un *cuksek-eyse* [_S, haksayng-tul-i *kyosil-eyse-man*
teacher -Top the spot-Loc students-Pl-Nom class-Loc -only
motwu-ka chakhata-ko] tancenghayssta
all-Nom good-Comp judged

¹¹ In (28) below, I deliberately omit the matrix adverb we observe in (27), for the presence of too many adverbs renders the sentence harder to process when SOR occurs. The embedded adverb in (27) is left out in (29) for the same reason. This, however, will not affect the argument below.

- (30) a. *sensayngnim-un* [_S [_S *haksayng-tul-i* [_S *motwu-ka*
 teacher-Top student-Pl-Nom all-Nom
kyosil-eyse-man chakhata]] -ko] *tancenghayssta.*
 class-Loc-only good-Comp judged
- b. *sensayngnim-un* [_S *haksayng-tul-ul* [_S *motwu-lul*
 teacher-Top student-Pl-Acc all-Acc
kyosil-eyse-man chakhata-ko]] *tancenghayssta.*
 class-Loc-only good-Comp judged

The contrast between (27b) and (29b), however, shows that (30b) in particular cannot be the structure from which (29b) is derived, because if it were, the fact that clause-internal scrambling of the adverb in this particular case results in total ungrammaticality would remain a mystery. On the other hand, the grammaticality of (29a) suggests that the adverb and the quantifier both belong to the embedded clause. Compare (29a) with the following, in which the adverb is scrambled over the antecedent of the quantifier:

- (31) **sensayngnim-un kyosil-eyse-man haksayng-tul-ul motwu-ka*
 teacher-Top class-Loc-only student-Pl-Acc all-Nom
chakhata-ko tancenghayssta.
 good-Comp judged
 'The teacher judged the students all to be well-behaved only in the classroom.'

It is not obvious why (31) is considerably worse than other sentences involving long-distance scrambling of a place adverbial (cf. (23b)). Nevertheless, it seems clear that the ungrammaticality / total unacceptability of (31) is due at least in part to the adverb's crossing of a clause boundary. This will be true only if there is a clause boundary between *haksayng-tul-ul* and the rest of the sentence. The contrast between (29a) and (31) therefore proves that the raising construction is not an exception to the generalization stated in (16), repeated below:

- (16) If a floated quantifier and its antecedent do not agree in case marking, they are not clausemates (or else the sentence is ungrammatical).

This, in return, confirms the argument presented in 3.1 by providing independent evidence against an analysis which could otherwise save the S'-Deletion hypothesis.

In brief, the ungrammaticality of (29b) can be given a natural account only if we assume that the clause boundary lies between the matrix predicate and the accusative-marked quantifier, as indicated below:

- (32) *sensayngnim-un haksayng-tul_i-ul *kyosil-eyse-man*_j motwu-lul
 teacher-Top student-Pl-Acc class-Loc-only all-Acc
 [s e_i t_j chakhata-ko] tancenghayssta.
 good -Comp judged

By the Extended Projection principle (Chomsky 1982: 10), then, there must be some empty category in the subject position of the complement clause, marked *e* above, which is perhaps coindexed with either *haksayng-tul* or the quantifier, or both, depending on the analysis of floated quantifiers in general. Now, if we assume that predicates such as *tancenghata* 'judge' etc. do not assign a theta-role to their object but that predicates like *chakhata* '(is) good' do to their subject, as is semantically plausible,¹² then it follows

¹² The verb *tancenghata* 'judge' cannot take an independent nominal object without a sentential or phrasal complement, though the English gloss does not reflect this property well:

- (i) *sensayngnim-i haksayng-tul-ul tancenghayssta.

teacher -Nom student-Pl-Acc judged

'The teacher considered/judged the studnets.'

The absence of expletives like *it* or *there* in Korean makes it difficult to show that the object position of *persuade*-type predicates is s-selected by the predicates whereas this is not so with *believe*-type predicates. However, there is an apparent semantic contrast between the two types. Consider the following pairs of sentences:

- (ii) a. na-nun sooni_i-eykey/-lul/ e_i ttena-tolok] seltukhayssta.

I -Top -Dat/-Acc leave-Comp persuaded

'I persuaded Sooni to leave.'

- b. na-nun Sooni -eykey/-lul seltukhayssta.

'I -Top -Dat/-Acc persuaded

'I persuaded Sooni.'

- (iii) a. na-nun ku somwun_i-ul [e_i kecis-ila-ko] mitessta.

I -Top the rumor -Acc false-be-Comp believed

'I believed the rumor to be false.'

- b. na-nun ku somwun-ul mitessta.

I -Top the rumor-Acc believed

'I believed the rumor.'

The complement clause in the (a)-sentences above is absent in the corresponding (b)-sentences. With control predicates, it seems to hold without exception that the truth of the (a)-type sentence implies the truth of the corresponding (b)-type sentence. With *believe*-type predicates, this is not necessarily true, as is apparent from (ii) above, and in some cases, the (b)-type

between an NP and its quantifier, where both belong to the higher clause.

An obvious question then is why the embedded subject and the quantifier must move when they are accusative-marked, unlike in English. Perhaps because there is a language-specific filter in Korean which bans an accusative-marked NP from occupying a subject position, to which a theta-role (by the VP) and a 'contextual' nominative case are also assigned (cf. Saito 1985), resulting in case conflict.¹³ The trace of the relevant movement, however, has only one structural case, i.e., accusative, since contextual case is assigned only to overt NPs.

While invoking such an ad hoc device is obviously undesirable, it may seem less so than giving up either the Projection Principle or the assumption that there is no subcategorized non-theta position. However, there is evidence that the restriction stated in (26-ii) holds only if the NP and/or its quantifier are/is in an A-position in the higher clause. Compare (34b) below with (29b) and (33):

- (34) a. ku kica-nun [S [S kyengchal-i iywu-to epsi
 the reporter-Top police -Nom reason-even without
 haksayng-tul-ul motwu-lul kkulekassta-ko]] mitessta.
 student-PI-Acc all-Acc took-Comp believed
 'The reporter believed that the policeman took all of the students
 without any reason.'
- b. ku kica-nun [S [S haksayng-tul_i-ul [S iywu-to epsi_j
 [S motwu_k-lul [S kyengchal-i t_i t_j t_k kkulekassat-ko]]]]]
 mitessta.

Assume that (34b) is obtained by (clause-internal) scrambling of the embedded object, its quantifier, and the adverb in some appropriate order. Now, notice that there is no structural difference between (34b) and (33) as far as the adjoined constituents are concerned. But only (33), or the corresponding sentence (29b), is ill-formed. (In fact some effort is needed to understand (34b), due to the preposing of too many constituents, but it is perfectly acceptable to me.) Therefore, anyone who claims that the ungrammaticality / total unacceptability of (29b) is due to its structure as represented in (33)

¹³It would be necessary to assume that such case conflict results only if a given NP is in a theta-position because an accusative-marked NP can obviously adjoin to an S-node by scrambling.

will have to take up the burden of explaining the grammaticality of (34b).

A comparison of (34b) and the sentences in (24) and (25b) which initially motivated the generalization stated in (26-ii) obviously suggests that what is relevant is not just crossing of any clause (S) boundary. Note that in (24) and (25b), the antecedent of the floated quantifier is either in the subject or in the object position within the matrix clause. (Or, some may argue that it is the quantifier that is the subject or object, and its antecedent is in the 'focus' position, an issue which we have consistently put aside in this paper as not directly relevant.) In the light of this fact, the generalization in (26-ii) will have to be restated as follows:

- (35) No adjunct can be long-distance preposed into a position between an NP in an A-position (or linked to such a position via chain)¹⁴ and its quantifier.

(I will not try to give a formal definition of the term 'long-distance preposing' as used here. It will be sufficient to note that the traditional use of the term (cf. Saito (1985) and references cited there) excludes clause-internal scrambling of the sort indicated in (33) or (34b) above.) From (35) and the ungrammaticality of (29b), then, it follows that the position occupied by the raisee in the SOR construction is indeed an object position (hence an A-position).

Furthermore, the adverb in (34b) cannot be understood as modifying the matrix predicate, unlike in (24a), (24c), and (25b) for example, where the sentence is grammatical if the adverb is interpreted as modifying the matrix verb. To make the point clearer, consider the sentences in (36) below in

¹⁴The provision in the parentheses is to accommodate cases in which the argument NP(s) is / are scrambled. In such cases, the sentence is also unacceptable, like its non-scrambled counterpart. To take an example, compare the following sentences with (25) above:

- (i) a. haksayng-tul_i-ul motwu_j-lul na-nun t_i t_j [_S PRO_i *yenge-lo* malha-tolok]
 student-Pl-Acc all-Acc I-Top English-by talk-Comp
 seltukhayssta.
 persuaded
 'I persuaded all of the students to talk in English.'
 b. *haksayng-tul_i-ul *yenge-lo*_k motwu_j-lul na-nun t_i t_j [_S PRO_i t_k malha-tolok]
 seltukhayssta.

Recall that (35) is not intended to be a fully formulated constraint. It is sufficient for our purpose to recognize that the fact described by (35) is true regardless of one's position as to the analysis of the raising construction.

which the chance of ambiguity is excluded by the choice of the adverb:

- (36) a. *ku kica-nun ku sinmwun-eyse* [_S [_S *kyengchal-i*
the reporter-Top the newspaper-Loc police -Nom
haksayng-tul-ul motwu-lul kkulekassta-ko]] *potohayssta.*
student-Pl-Acc all-Acc took -Comp reported
'The reporter reported in the newspaper that the policeman took
all of the students.'
- b. **ku kica-nun haksayng-tul_i-ul ku sinmwun-eyse motwu_j-lul*
[_S *kyengchal-i t_i t_j kkulekassta-ko*] *potohayssta.*
- c. **haksayng-tul_i-ul ku sinmwun-eyse motwu_j-lul ku kica-nun*
[_S *kyengchal-i t_i t_j kkulekassta-ko*] *potohayssta.*

Thus, when the embedded object and its quantifier are either internally scrambled (36b) or long-distance preposed (36c), the matrix adverb cannot be placed between them. The precise reason for this need not concern us here. What is of importance is the fact that no such restriction is observed when matrix arguments (subject or object) are involved, given that within the minimal clause, any adverb can intervene between an NP and its quantifier (cf. (26-i) above). To take just one example:

- (37) a. *ku-nun tan han-mati-lo maul salam-tul_i-ul motwu-lul*
he-Top only one-word-by village person-Pl-Acc all-Acc
[*PRO_i caki phyen-ey se-tolok*] *seltukhayssta.*
self's side-Loc stand-Comp persuaded
'With just one word, he persuaded all of the village folks to stand
on his side.'
- b. *ku-nun maul salam-tul_i-ul tan han-mati-lo motwu-lul*
[*PRO_i caki phyen-ey se-tolok*] *seltukhayssta.*

Thus, if the accusative-marked NP and its quantifier in the SOR construction are adjoined constituents as indicated in (33), such sentences will be as unacceptable as (36b) or (36c) when a matrix adverb is inserted between the raisee and its quantifier. This prediction, however, is not borne out, as shown, for example, in (28b) above. An additional example is given below:

- (38) *sensayngnim-un haksayng-tul_i-ul iywu-to epsi*
teacher-Top student-Pl -Acc reason-even without
motwu-lul [e_i kecismalcangi-ila-ko] mitessta.
all-Acc liar-be -Comp believed

'Without any reason, the teacher believed all of the students to be liars.'

The grammaticality of sentences like (28b) and (38) therefore adds to the evidence that the raisee in the SOR construction is a constituent in an A-position in the matrix clause at the level where scrambling of the embedded adverb takes place, not an embedded constituent adjoined to some higher node.

In sum, the arguments in sections 3.1 and 3.2 reveal that the raisee occupies a position in the matrix clause. The discussion in this subsection shows us that the position is an A-position. Taken together, the facts observed in this section provide strong evidence in favor of the SOR hypothesis over the S'-Deletion hypothesis.

4. Implication of the Korean Facts

In the above, we observed some facts bearing on the choice between two possible hypotheses about what has been traditionally known as the Subject-to-Object Raising construction in Korean. The ultimate decision will, of course have to, be made on the basis of a much wider variety of evidence, as well as theory-internal considerations. Suppose for the moment that we decide, on the basis of the evidence discussed above, to choose the SOR hypothesis and reject the S'-Deletion hypothesis as currently conceived. Then, either the Projection Principle of the sort advocated in Chomsky (1981, etc.) or, the assumption that there cannot be subcategorized non-theta positions must be abandoned for Korean. Suppose furthermore that we choose the latter option for Korean, keeping the Projection Principle either intact or with some conceptual modifications. Then, there is hardly any reason to reject the same analysis in English, since we would not expect the theta-marking properties of such predicates as *believe*, *consider*, etc. to vary wildly across languages.

Radford (1981:330-331) remarks, after a discussion of the circularity of the S'-Deletion or Kayne's 'zero-complementizer' hypothesis:

...it may be that certain facts of language are so idiosyncratic and unpredictable that it is not possible to provide a principled (noncircular) account of them.

As observed by Eckman (1977), however, the SOR construction is so common across languages that if a language has any kind of raising at all, it will have SOR. (See especially the table in (4) on p.197, which shows that, among a dozen languages examined, none is without SOR.) Thus, if a linguistic theory can only provide a circular account of such a commonly attested construction, it is very likely that something is wrong with the theory.

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