

Along the line of Chomsky(1977, 1982, 1986a), Browning(1987) proposes that certain constructions involve covert \bar{A} -movement resulting in \bar{A} -chains headed by null categories commonly referred to as "null operators." Under this type of null operator constructions fall so-called "OWM ("On WH-movement") constructions" including relative clauses, purpose clauses, degree clauses, adjectival complements, clefts and comparatives. As in Chomsky(1977), it seems reasonable to assume that the null operator analysis may be further extended to topicalization. According to this analysis, the D-structure of (1) may be represented as in (4) in compliance with the phrase structure rules in (3), which are proposed by Chomsky(1977).

- (3) a. $\bar{S} \rightarrow \text{TOP } \bar{S}$
 b. $\bar{S} \rightarrow \text{COMP } \left\{ \begin{array}{c} \bar{S} \\ \bar{S} \end{array} \right\}$

- (4) $[\bar{S} [\text{ku chayk-un}] [\bar{S} \text{ COMP } [_s \text{ John-i Op}_j \text{ ilk-ess-ta}]]]$

The null operator Op_i moves to COMP, which maps (4) into the S-Structure (5):

- (5) $[\bar{S} [\text{ku chayk-un}] [\bar{S} \text{ Op}_j [_s \text{ John-i } t_j \text{ ilk-ess-ta}]]]$

Along with Chomsky's(1982) assumption, it is not necessary to impose the requirement that the topic expression base-generated under TOP is coindexed, prior to LF, with the null operator that forms an A-chain with its trace; for example, that in (5) *ku chayk* is coindexed with Op_j . Thus, the LF representation derived from (5) is (6):

- (6) $[\bar{S} [\text{ku chayk-un}] [\bar{S} \text{ Op}_j [_s \text{ John-i } t_j \text{ ilk-ess-ta}]]]$

Chomsky(1982) further proposes that the rule of Predication, applying to (not prior to) the LF representation (6), identifies *i* and *j*, yielding the LF' representation (7):¹⁾

1) Chomsky(1982) proposes that the bijection Principle suggested by Koopman & Sportiche(1982), an effect of which is to rule out the sentences that would yield a weak crossover violation, applies at LF prior to the application of the rule of Predication. Some evidence in support of this proposal is provided by the suppression of

(7) [_S [ku chayk_i-un] [_S Op_i [_S John-i t_i ilk-ess-ta]]]

(7) is assumed to be the representation that contributes to the interpretation of (1).

I call the analysis just reviewed above the null operator hypothesis (henceforth, the NOH) in that it posits a null operator in COMP position, as distinct from the other hypotheses for topicalization, which we will also outline in turn below.

Let us then consider what I call the topic movement hypothesis (henceforth, the TMH), which is the same approach as adopted by Baltin(1982) and Lasnik & Saito(1988) among others.

According to this approach, topicalization involves adjunction to S rather than base-generation of a topic expression with a covert *wh*-movement of the null operator. Thus, the D-structure of (1) is represented as in (8) under the TMH:

(8) [_S John-i ku chayk-ul ilk- ess - ta]

There is no expression base-generated in a topic position but rather *ku chayk*, when it is topicalized, directly moves from object position to topic position by adjunction to S. Thus, the S-structure of (1) is like (9), which is mapped from (8) by Move- α

(9) [_S [ku chayk_i-un] [_S John-i t_i ilk-ess-ta]]]

Notice that I will leave open, for convenience, the change of Case-markers in-

weak crossover effects in relative constructions. compare (i) with (ii):

(i) the man_i who_j his_j mother loved t_j best

(ii) *who_j did his_j mother love t_j best

The difference in grammaticality between (i) and (ii) may be accounted for by the rule ordering fixed between the Bijection Principle and the rule of Predication. Suppose now that relative clause structures are interpreted in terms of the rule of Predication, as suggested. This allows the LF representation (iii) corresponding to (i):

(iii) [the man_i] [who_j his_j mother loved t_j best]

The Bijection Principle applies at this step of derivation, where the identification of indices does not happen just yet. Thus, there is no violation of the Bijection Principle in (i), as opposed to (ii). The rule of Predication now maps (iii) into (iv):

(iv) [the man_i] [who_j his_j mother loved t_j best]

The representation (iv), an LF' representation, in the respective senses of Huang(1982) and Chomsky(1982), then contributes to the semantic interpretation of (i).

volved in Korean topicalization, that is, the change of objective marker *ul* into topic marker *un* in (9), for example.

The TMH is similar to the NOH in that both postulate a syntactic movement in topicalization although it goes without saying that the moved element in the TMH is overt while that in the NOH covert. A conspicuous difference between them is that the former involves no predication, under which an identification of indices arises at LF', while the latter does.

Let us now consider a rather peculiar approach to topicalization, as quite distinct from the two hypotheses explored above in that it postulates no syntactic movement in topicalization at all. This is called the base-generation hypothesis (henceforth, the BGH) in our terms. Under the BGH, as assumed in Kang(1986), the topic constructions in Korean are analyzed to be rather similar to the left dislocation constructions in English. Kang(1986) proposes that the topic expressions in Korean, like *ku chayk* in (1), must be base-generated under the leftmost TOP node and hence an empty resumptive pronoun (*pro* in the sense of Huang (1982)) appears in the S-internal argument position associated with the topic expressions. Thus, both D-structure and S-structure of (1) are represented alike, as shown in (10), which is in comparison with an example of English left dislocation in (11):

(10) [§ *ku chayk*_i-un [§ *John-i pro_i ilk-ess-ta*]]

(11) [§ (as for) the book_i [§ *John read it_i*]]

There is no movement in (10) and (11), and furthermore the topic expressions are assumed to be base-generated in the sentence-initial topic position both in (10) and (11). Besides, (10) and (11) are also alike in that they allow a resumptive pronoun \bar{A} -bound by each of the topic expressions, apart from whether it is covert or not.

2. In this section, I will construct an argument against the BGH in favor of the syntactic movement approaches on which the NOH and the TMH are depending. Some evidence in support of this argument is provided by a range of is- and effects that arise from certain topic constructions in Korean.

Let us first consider the contrast in grammaticality between the following exa-

mples.

- (12) a. [John_i-un [Tom-i [Mary-ka t_i salangha-n-ta-ko]_s mit - nun-ta]]
 John-Top Tom-Nom Mary-Nom t_i loves -Dec-COMP believe-pres-Dec
 '(As for) John, Tom believes that Mary loves'
- b. *[John_i-un[Tom-i [[Mary-ka t_i salangha-n-ta-nun]_s sasil-ul]NP
 John-Top Tom-Nom Mary-Nom t_i loves -Dec-COMP fact-Acc
 mit -nun -tə]]
 believe-pres-Dec
 *(As for) John, Tom believes the fact that Mary loves'

The contrast between (12a) and (12b) implies that Korean topicalization is subject to the CNPC as in its English equivalents. It follows that the ill-formedness of (12b) is absolutely due to the violation of the CNPC, since the unique difference in structure between (12a) and (12b) is that (12b), unlike (12a), contains the complex NP construction (i.e., [_{NP} \bar{s}], across which the NOH and the TMH assume that a syntactic movement takes place. It is highly unlikely that the contrast between (12a) and (12b) is attributed to an ad hoc condition on the interpretation of an empty resumptive pronoun stipulated under the BGH:

Let us now explore how Korean topicalization interacts with the ECP.

- (13) a. ?[ku-chayk_i-un [Mary-ka [[John-i ku tosekwan-ese t_i ilk - ess
 the book-Top Mary-Nom John-Nom the library in t_i read-past
 ta - nun]_s somuw-m - ul]_{NP} tul - ess - ta]]
 Dec-COMP rumor - Acc hear-past - Dec
 '(As for) the book, Mary heard the rumor that John read in the library.'
- b. *[ku tosekwan-i-un [Mary-ka [[John-i t_i ku chayk-ul ilk - ess -
 the library -Top Mary-Nom John-Nom t_i the book-Acc read-past-
 ta - nun]_s somuw-n - ul]_{NP} tul - ess - ta]]
 Dec-COMP rumor - Acc hear - past - Dec
 *(As for) the library, Mary heard the rumor that John read the book.'

The contrast between (13a) and (13b) shows the phenomenon of complement-noncomplement asymmetry, which Chomsky(1986b) assumes falls under the ECP. According to the ECP, the complement of a verb can undertake long-distance movement, as long as it does not violate the subjacency, since its trace is properly governed by the verb, whereas the adjunct movement is sharply restricted by the ECP, since its trace should be antecedent governed. As required, the ECP makes a correct prediction as to the contrast in acceptability between (13a) and (13b). In short, there is no violation of the ECP in (13a), since the trace t_i associated with the topic expression *ku chayki* occurs in the complement position, where it is properly governed by the verb *ilk*. Thus, (13a) satisfies the ECP although it violates a weak subjacency in that the movement involved in it is assumed to cross one barrier in the sense of Chomsky(1986b).²⁾ Note that Chomsky(1986b) suggests a L-marked CP (=S) becomes a barrier if assigned an oblique Case by N.³⁾ Accordingly, the S that is the complement of the N *somuwon* in each example in (13) turns out as a barrier, since it is assigned an oblique Case by *somuwon*. On the other hand, (13b) gives rise to the violation of the ECP, since t_i , unlike in (13a), should be antecedent-governed; it is adjunct trace, and nevertheless the antecedent-government to the trace is blocked by the barrier S just defined above. However, there is no way to account for the complement-noncomplement asymmetry shown in (13) under the BGH. This provides another

2) Chomsky(1986b) proposes that the basic principle of bounding theory is that every link (α_i, α_{i+1}) of a chain $(\alpha_1, \dots, \alpha_n)$ must meet the Subjacency Condition:

(i) If (α_i, α_{i+1}) is a link of a chain, then α_{i+1} is subjacent to α_i .

This version of the Subjacency Condition is based on the numerical concept of subjacency, defined as follows:

(ii) β is n -subjacent to α iff there are fewer than $n+1$ barriers for β that exclude α .

What (i) based on (ii) implies for means that the degree of acceptability of a sentence may be determined depending on how many numbers of barriers are crossed by movement. In brief, in (i), "subjacent" means l-subjacent: that is, in a well-formed chain with a link (α_i, α_{i+1}) , α_{i+1} must be l-subjacent to α_i , and O-subjacency yields a still more acceptable structure. However, crossing two barriers should yield a considerable decrement in acceptability in a relevant reason Chomsky (1986b:30) assumes.

3) Chomsky(1986b) defines the concept of barrier in (i) in terms of BC as in (ii), which is, in turn, defined on the basis of the notion of "L-marking" in (iii).

(i) r is a barrier for β iff (a) or (b):

a. r immediately dominates δ , δ a BC for β ;

b. r is a BC for β , $r \neq \text{IP}(=S)$.

(ii) r is a BC for β iff r is not L-marked and r dominates β .

(iii) Where α is a lexical category, α L-marks β iff β agrees with the head of r that is θ -governed by α .

piece of evidence that the approaches like the NOH and the TMH are adopted over the BGH.

Let us now consider a phenomenon of the so-called strong crossover, which is assumed to be due to the movement in topicalization.

- (14) a. [John_i-un [_{t_i} [Mary-ka *ku*_ilul salangha- n - ta - ko]
 John-Top *t* Mary-Nom he- Acc love - pres - Dec - COMP
 malha - ess - ta]]
 say - past - Dec
 'JOHN_i said that Mary loved him_i.'
- b. *[John_i-un [*ku*_i-ka [Mary-ka _{t_i} salangha - n - ta - ko]
 John-Top he-Nom Mary-Nom *t* love - pres - Dec - COMP
 malha - ess - ta]]
 say - past - Dec
 **'(As for) John_i, he_i said that Mary loved *t_i*.'

What the contrast in grammaticality between (14a) and (14b) implies for is that *t_i* in each example should be defined as variable, which is locally \bar{A} -bound as well as is A-free within the c-domain of the head of its chain in accordance with the principle(C) of the binding theory. If so, the unacceptability of (14b) falls under the effect of the principle(C) of the binding theory, since *t_i* in (14b), unlike in (14a), is locally A-bound by the matrix subject *ku_i* within the c-domain of the head of its chain, which may be either the topic expression *John_i* supposed in adjunction to the matrix S by the TMH or the null operator *Op_i* postulated to move to the matrix COMP by the NOH. Hence, (14b) gives rise to the violation of the principle(C) of the binding theory,⁴⁾ whereas (14a) satisfies that principle; *t_i* in (14a) locally A-bound by *John_i* or *Op_i*, just described above. Thus, the strong

4) Notice that (14b) may have another plausible interpretation in which there is no violation of the principle(C) of the binding theory. In short, it is a sort of resumptive pronoun construction: that is, *t_i* in (14b) is *pro*, not variable, bound by *he_i* that is a resumptive pronoun rather associated with the topic expression *John_i*. (14b), if it is in the resumptive pronoun construction, is absolutely grammatical, as different from the non-resumptive pronoun construction just exploited in this paper. An empirical difference between the resumptive and the non-resumptive pronoun constructions in (14b) is that the former has not a pause between the topic expression *John_i* and the resumptive pronoun *he_i* whereas the latter has a slight pause between the topic expression and the other part of the sentence.

crossover phenomenon empirically proved to appear in Korean topicalization as in (14), which conforms to the binding theory as in Chomsky's(1981, 1982, 1986a) assumption, gives the third piece of evidence that we reject the BGH in favor of the movement approaches like the NOH and the TMH. If t_i is *pro*, as suggested in the BGH, then there is no violation of the binding theory either in (14a) or in (14b) and hence we have no effective way to account for the contrast in acceptability between (14a) and (14b) without stipulating an ad hoc condition on the interpretation of *pro*. Notice that pro_i if t_i is pro_i , is A-free in its governing category in compliance with the principle(B) of the binding theory, where the governing category for pro_i is defined as the matrix S in (14a) and the embedded S in (14b) respectively, along the lines of Chomsky(1981, 1986a) and Huang(1982).

3. Let us now return to the final issue which has been put aside so far: the de-section On the of the rule of Predication would be to find an empirical data about which they make different predictions from each other. As observed in section 1, the crucial difference between the two hypotheses is that the NOH has recourse to the rule of Predication that is assumed to be a sort of index-equation principle applied to LF, after the Bijection Principle, for the connection of the topic expression, with the other part of the topic construction,⁵⁾ whereas in the TMH, the topic expression itself is an operator that directly \bar{A} -binds the variable which is the trace resulting from topic movement. Therefore, it is reasonable to expect that the crucial evidence to decide between them follows from the difference they show with regard to the role of indexing.

At this juncture, let us consider the following examples: (15a) is Korean and (15b) is its English counterpart.

- (15) a. * ku_i -uy emeni -ka nuwkuw $_i$ -lul salangha - ni?
 he-Gen mother-Nom who - Acc love - Q

5) The part that is predicated of the topic expression in topic constructions is an open sentence in the sense that it contains a free variable, that is, a variable the reference of which is not determined yet. Chomsky(1982)proposes that the open sentence is not available at the level of semantic interpretation and hence should be closed up by fixing the reference of the free variable before the semantic interpretation. It is the rule of Predication that determines the reference of the free variable at LF.

b. *Who_i does his_i mother love t_i?

As is well-known, the unacceptability of (15b) is due to the violation of the weak crossover, the effect of which, as Koopman & Sportiche(1982) observe, reduces to the subpart of the Bijection Principle, defined as follows:

- (16) There is a bijective correspondence between variables and \bar{A} -positions.

This principle requires that the relation between operators and variables be one-to-one. Hence, the unacceptability of (15b) now falls under the effect of the Bijection Principle; in (15b) not only *his_i* but also *t_i* is \bar{A} -bound by the operator *who_i*.

Along the line of Koopman & Sportiche(1982), Chomsky(1982) assumes the Bijection Principle applies at LF. If the assumption is correct, it means that we can capture the parallelism between (15a) and (15b) under the effect of the Bijection Principle; according to Huang(1982), the LF representation of (15a) is shown in (17) under the assumption that all *wh*-phrases in the languages, that have no *wh*-movement at S-structure like Korean and Chinese, move to COMP at LF.

- (17) [nuwkuw_i [ku_i-uy emeni-ka t_i(-lul) salangha-ni]]

In (17), as in (15b), the operator *nuwkuw_i* \bar{A} -binds two variables, *ku_i* and *t_i*. Hence, it gives rise to the violation of the Bijection Principle as well.

We can find this kind of parallelism, which follows from the Quantifier Raising (=QR). Let us consider the following examples, each of which is annotated with its LF representation.

- (18) a. *ku_i-uy emen_i - ka nuwkuwna_i-lul salangha - n - ta.
 he-Gen mother-Nom everyone - Acc love - Pres-Dec
 LF: [nuwkuwna_i [kui-uy emen_i-ka t_i(-lul) salangha-n-ta]]
 b. *His_i mother loves everyone_i.
 LF: [everyone_i[his_i mother loves t_i]]

Note that (18b) is the English counterpart for (18a). As required, both examples

in (18) violate the weak crossover as determined by the Bijection Principle; in the LF representation of each example, two variables, ku_i (or his_i) and t_i , are \bar{A} -bound by one operator, $mwkuwna_i$ (or $everyone_i$), just raised by the QR.

As a result, I conclude that in Korean, as in English, the Bijection Principle applies at LF. Bearing this conclusion in mind, let us now return to the issue to decide between the NOH and the TMH concerning topicalization in Korean.

Consider the following example.

- (19) John-un ku_i -uy emeni_i - ka t_i salangha - n - ta.
 John-Top he-Gen mother-Nom t love - pres-Dec
 '(As for) John_i his_i mother loves t_i.'

Based on the NOH and the TMH, the LF representation of (19) appears as in (20) and (21) respectively:

- (20) [John_j-un [Op_j [ku_j-uy emeni-ka t_j salangha-n-ta]]]

- (21) [John_j-un [ku_j-uy emeni-ka t_j salangha-n-ta]]

If the TMH is on the right track, then (19) should turn out ungrammatical, since its LF representation (21), just alike in (17), violates the Bijection Principle. However, this prediction is incorrect; (19) is completely grammatical. On the other hand, the NOH makes correct prediction about the grammaticality of (19) with respect to the Bijection Principle; (20), the LF representation derived from (19) under the NOH, satisfies this principle as different from the case of the TMH. In (20), unlike in (21), the operator Op_j \bar{A} -binds only one variable that is its own trace t_j . However, suppose that the index equation, that is, $i = j$, takes place at LF' for the interpretation as shown in (19). This would give rise to the violation of the Bijection Principle, as in the case of (21), since Op_j comes to \bar{A} -bind both ku_i and t_j in (20) under $i=j$. Thus, we assume, along the line of Chomsky(1982), that this sort of index equation for the semantic interpretation of topic constructions in Korean takes place at LF' by the application of the rule of Predication after the Bijection Principle. See footnote I for the motivation of the rule ordering that the rule of Predication applies after the Bijection Principle at LF. Consequently, the rule of Predication maps LF into another level of syn-

tactic representation, LF', in the sense of Huang(1982). The LF' representation of (19) is shown as follows:

(22) [John_i-un [Op_i [ku-uy emeni-ka t_i salangha-n-ta]]]

The Bijection Principle no longer applies to (22) and hence there is no violation of this principle in (22).⁶⁾ Thus, (19) is grammatical, as different from the examples in (15) and (18).

Note that Chomsky(1982), along with Williams'(1980) assumption, roughly defines the rule of Predication as follows:⁷⁾

(23) The open sentence, which contains a free variable in it, must be predicated of a c-commanding NP.

It follows that (23), applying to the LF representation, identifies the reference of the free variable with that of the c-commanding NP, resulting in the index equation at LF' just observed above.

As is clear from the above discussion, the NOH makes correct prediction about the grammaticality of (19), which seemingly violates the Bijection Principle, but the TMH does not. Thus, (19) gives crucial evidence that the NOH is adopted over the TMH with respect to topicalization in Korean.

6) Given that LF' is derived LF by the rule of Predication, the strong crossover phenomena as shown in (14) might not fall under the principle(C) of the binding theory; according to the NOH, the S-structure and the LF representation of (14b) are shown as in (i):

(i) [John_i-un [O_i] [ku-ka [Mary_j-ka t_j salangha-n-ta-ko] alha-ese-ta]]

Suppose that the binding theory applies at the S-structure or even at LF (see Chomsky(1986a)). There would be no violation of the principle(C) of the binding theory and hence (14b) should be grammatical, as opposed to our early observation in section 2. Thus, Chomsky(1982: fn.11) tentatively assumes that something like the Projection Principle applies to the binding theory, as it does to θ -theory. If so, the binding theory applies at LF' as well as at the S-structure and LF. It follows that the principle(C) of the binding theory rules out (14b) at LF', as expected.

7) According to Chomsky(1986a), the identification of indices between the free variable and the c-commanding NP is rather resulted from the effect of the strong binding condition defined as follows:

(i) A variable is strongly bound.

Note that a variable x is strongly bound if either (a) or (b): (a) x is locally bound by an overt operator; (b) the null operator locally binding x is bound by an argument.

4. So far in this paper. I have constructed arguments to select among three competing hypotheses concerning topicalization based on Korean topic constructions. They are the NOH, the TMH and the BGH. The first argument I give in section 2 provides three pieces of evidence that the NOH and the TMH are superior to the BGH, based on empirical data which show that Korean topicalization obeys various constraints relevant to Move- α : the CNPC (i.e., the subjacency), the ECP, and the strong crossover as determined by the principle(C) of the binding theory. In section 3, I construct an argument against the TMH in favor of the NOH depending on the fact that Korean topicalization does not obey the weak crossover, which subsumes under the effect of the Bijection Principle.

In conclusion, it comes to light that the NOH automatically accounts for a range of grammatical phenomena found in Korean topic constructions that the alternatives, namely, the TMH and the BGH, cannot handle without further problems.

Appendix :

Needless to say, I have, so far, not touched on counter-examples against the NOH, raised by Baltin(1982) on the one hand, and by Kang(1986) on the other hand. In brief, Baltin(1982) demonstrates that the TMH is preferable to the NOH for English topic constructions, whereas Kang(1986) gives evidence that Korean topic constructions can be explained only under the BGH rather than the movement approaches such as the NOH and the TMH.

In this appendix, I will make two kinds of suggestion in support of the NOH. One will show that most pieces of counter-evidence against the NOH, raised by Kang(1986) for Korean topicalization, may disappear under the analysis of so-called "double-subject constructions" in Korean. The other will show that the TMH, argued for by Baltin(1982) for English topicalization, may be also needed for the phenomena of "scrambling" in Korean rather than for Korean topicalization.

In Kang(1986), the following types of examples are presented as counter-evidence against the movement approaches for Korean topicalization:

- (1) Mary_i-nun John-i e(-uy) elkwul-i yeppu - ta - ko sayngkakha -
 Mary-Top John-Nom (-Gen) face-Nom pretty - Dec-COMP think

n - ta.

pres-Dec

'(As for) Mary, John thinks that (her) face is pretty.'

- (2) Mary_inun e_i(-ka) salangha-ten namphyen - i cwuk-ess - ta.
 Mary-Top (-Nom) love Rel husband - Nom die- past - Dec
 '(As for) Mary, her husband who she loved died.'

As is illustrated in Kang(1986), given that *Mary_i* moves from the position of *e_i* in accordance with the movement approaches like the NOH and the TMH in each case of the above examples, both sentences should turn out ungrammatical, since (1) falls under the case where the Subject Constraint is violated and (2) gives rise to the violation of the CNPC. It results from (1) and (2) that the NOH and the TMH are rejected in favor of the BGH. However, this conclusion seems too hasty; another plausible analysis is in order. Let me suggest that (1) is rather derived from such a structure as in (3), not from (3)', as opposed to Kang(1986).

(3) [_S John-i [_S [_S Mary-ka [_S elkwul-i yeppu]-ta]-to] sayngkakha-n-ta]

(3)' [_S John-i [_S [_{NP} Mary-uy elkwul]-i yeppu]-ta]-ko] sayngkakha-n-ta]

Note that (3) is as fully acceptable as (3)'. In Korean, most of intransitive predicates have been argued, in the literature, to permit more than one subject position, as in the embedded clause of (3).⁸⁾ If so, it seems reasonable, in accordance with the GB framework, to assume that (3) is not derived from (3)' but rather independently represented as in (4).

(4) [_S John-i [_S Mary_i-ka [_S [_{NP} pro_i (-uy) elkwul]-i yeppu]-ta]-ko]
 sayngkakha-n-ta]

As required, *pro_i* is identified the closest subject *Mary_i* in (4), as in the sense of Huang(1982).⁹⁾ Notice that given the assumption that (3) is derived from (3)',

8) See Park(1982) and Kang(1986) for further discussion.

9) Huang(1982) proposes the *pro*-drop principle as follows:

(i) A *pro* must be identified by its closest SUBJECT.

there arises a violation of the Subject Constraint. Nevertheless, we know that the genitive NP contained in the subject NP of intransitive predicates may take *pro* as its counterpart in "double subject constructions" in Korean, shown in (5) as well.

- (5) a. Mary-uy namphyen - i cwuk - ess - ta.
 Mary-Gen husband -Nom die - past - Dec
 'Mary's husband died.'
- b. Mary_i-ka pro_i(-uy) namphyen - i cwuk - ess - ta.
 Mary-Nom pro(-Gen) husband - Nom die - past - Dec.

Given that (4) serves as the base-structure from which (1) is derived, the Subject Constraint is not violated at all in such derivation, as different from Kang's (1986) prediction. The S-structure of (1) is represented as in (6), under the NOH.

- (6) [_S Mary_i-nun [_S Op_i [_S John-i [_S t_i [_S t_i [_{NP} pro(-uy) elkwul]-i-ta]-ko]
 sayngkakha-n-ta]]]]

According to the NOH, the null operator *Op_i* can freely move from the embedded subject position to the matrix COMP unless it crosses no barrier. Thus, it comes to light that the NOH can also make correct prediction concerning (1) with recourse to the analysis of "double subject constructions" in Korean. Otherwise, it would violate the Subject Constraint, as Kang(1986) observes.

Let us now explore how (2), the case that the CNPC is violated, is accounted for under the NOH. It seems not absurd to suggest that (2) is also derived from a type of "double subject construction," as shown in (7), rather than a single subject construction, as in (7)', which is insisted on in Kang(1986).

- (7) [_S Mary_i-ka [_S [_{NP} [_S pro_i(-ka) salangha-ten] namphyen]-i cwuk-ess]-ta]
- (7)' [_S [_{NP} [_S Mary-ka salangha-ten] namphyen]-i cwuk-ess-ta]

As observed in Kang(1986), if (2) is assumed to be derived from (7)' by extraction of *Mary* from the embedded subject position to the topic position, then it would give rise to the violation of the CNPC; it crosses [_{NP} [_S . On the other

hand, given the assumption that (2) is rather derived from (7), there is no violation of the CNPC resulted from (2). The S-structure of (2) is represented as in (8) under the NOH.

- (8) [_S Mary-nun [_S Op_i [_S t_i [_S [_{NP} [_S pro_i (-ka) salangha-ten] namphyen]-i cwuk-ess]-ta]]]

As a matter of course, one might ask whether the "double subject" analysis is really plausible for (2). The answer is "Yes," however. Because the sentence (9), whose counterpart in "double subject construction" is nothing but (7), is available along with (7)' in normal discourse.

- (9) [_S [_{NP} Mary_i-uy [_S pro_i (-ka) salanha-ten] namphyen]-i cwuk-ess-ta]

Given the analysis of "double subject constructions" for (2), the well-formedness of (2) falls under the NOH, without reference to Kang's(1986) proposal.

Let us now return to the issue raised by Baltin(1982). Baltin(1982) presents (10) as a counter-example against the NOH.

- (10) He is a man to whom liberty we could never grant.

If the topic expression were under \bar{S} , (10) would be ungrammatical, since *to whom* moves across two barriers, that is, [_S [_S], as Baltin(1982) proposes. It follows that (10) gives evidence that the TMH is adopted over the NOH; if *liberty* is assumed to be adjoined to the embedded S, then *to whom* may move to the embedded COMP without crossing any barrier.

Along the line of Baltin(1982), I assume that the TMH is available for English topicalization although it is not for Korean one. Nevertheless, it seems plausible to invoke the TMH for a different kind of topicalization in Korean that has been not dealt so far in this paper, namely, scrambling, as shown in (11).

- (11) ku chayk-ul John-i ilk - ess - ta.
the book-Acc John-Nom read-past - Dec
'The book, John read.'

I assume that *ku chayk-ul* directly moves from the object position to the sentence-initial position by adjunction to S in compliance with the analysis of the TMH. If this assumption is correct, then the phenomena of weak crossover appearing in scrambling, unlike in topicalization, may be accounted for by the TMH approach. Let us consider the following examples.

- (12) a. ?? John_i-ul ku_i-uy emen_i - ka salangha - n - ga.
 John-Acc he-Gen mother-Nom love - pres-Dec
 'John_i, his_i mother loves t_i.'
- b. ?? nwukwunai-ul kui-uy emeni - ka salangha - n - ta.
 everyone-Acc he-Gen mother-Nom love - pres-Dec
 'Everyone_i, his_i mother loves t_i.'

In contrast with (19) in section 3, the sharply less acceptability of (12a) is naturally assumed to be due to the violation of the weak crossover, alike in (12b), that arises from the direct extraction of *John-ul* over *kuemeni* to the pre-S position by adjunction to S, according to the analysis of the TMH. Consequently, it is demonstrated that English topicalization is rather in parallel with Korean scrambling with respect to the analysis of the TMH than with Korean topicalization.

cf) Top = Topic marker

Nom = Nominative Case marker

Acc = Accusative Case marker

Gen = Genitive Case marker

Dec = Declarative sentence ending

Q = Question sentence ending

Rel = Relative sentence ending

Pres = present tense

past = past tense

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