Base-generated Resumptive Pronouns in Korean Relative Clauses

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Lee, Sang-Oh(1995), Base-generated Resumptive Pronouns in Korean Relative Clauses Linguistics, vol 3. This paper aims at exploring the possibilities of syntactic explanation for the resumptive pronouns occurring in Korean relative clauses. When we assume that Move- α is not involved in Korean, the empty category occurring in the relative construction can be regarded as base-generated pro as was proposed in Saito(1985). Thus we have posed a base-generation assumption on the resumptive pronoun in relative construction in Korean. The base-generated pro and resumptive pronoun exhibit the same kind of interpretation between coreferential reading and bound variable reading bound by head-NP at S-structure. The resumptive pronouns occurring in Korean relative clause could be accounted for by Huang's(1982) extended notion of 'cyclic-c-command' with the parameterized option.

I. Introduction

he ultimate purpose of this paper is to explore the possibilities of syntactic explanation for the resumptive pronouns occurring in Korean relative clauses. Some properties of resumptive pronouns in

Korean will be discussed with their possibilities of occurrence alternating with empty resumptive pronouns (pro) in certain positions in relative constructions. Furthermore, they will be accounted for by modifying the extended notion of 'c-command', i.e., 'cyclic c-command' proposed by Huang(1982).

II. Base-generated Resumptive Pronoun

It was generally shown that wh-relatives in English are realized by the rule of wh-movement and non-wh-relatives are realized by that of PRO-movement1 or Empty Operator Movement.2

Consider, however, relative clause constructions with resumptive pronouns as follows:

- (1) a. The man who(m), don't believe the claim that anyone saw him;
 - b. The man who_i(*whom_i) I don't believe the claim that he_i saw anyone.

The relative clauses in (1) contain no overt gaps. And the traces (gaps) in place of the pronouns violate the Subjacency Condition, if they are produced by movement, as shown in (2) below:

- (2) a. The man [S] who(m); [S] I don't believe [NP] the claim [S] that [S] anyone saw [S] that [S] anyone
 - b. The man [S] who; [S] I don't believe [NP] the claim [S] that [S] that [S] that anyone [S]

This problem shows a piece of counter-evidence to the movement approach to relativization.

In order to overcome this problem, we might consider a non-movement approach to relativization. The non-movement approach has to assume that the relative pronoun and the resumptive pronoun are generated and coindexed in the base. Consider the following example.

- (3) The man [who_i they think that if Mary marries him_i then everyone will be happy]
- In (3), the relative pronoun who_i inherits Case from the resumptive pronoun him_i at S-structure. The resumptive pronoun him_i is A'-bound by the operator who_i at LF and assigned a value by an antecedent that A-binds it by

the rule of Predication 3

Consider (4) for another strong argument for the non-movement approach to relativization

- (4) a. Caesar was not the man [c. O: [t. to accept a defeat]]
 - b. John is the man $[g \cdot O_i \mid g \mid t_i]$ to do the job]]
 - c. Bill was the last [s O, [s t, to arrive at the scene]]

The Case of subject relativization poses a problem. If movement is involved in the derivation of the construction, then the trace of the empty operator, t_i, is in a Caseless position, which should lead to ungrammaticality according to the Case theory.

Suppose that movement did not apply. That is, the empty operator, O_i, and the variable t must be base-generated, then, the embedded VP assigns a θ -role to t_i, and the variable t_i is bound by the empty operator and the value of the variable t_i is determined by the rule of Predication.

Kuno(1973) also notes that overt resumptive pronouns are possible in Japanese clauses as in (5).

(5) ?[NP [s watasi-ga kare;-no namae-o wasurete simatta] okyakusan;] I-nom he-gen name-acc have-forgotten ?'the guest who I have forgotten his name'

In (5), if a gap is produced, in place of the overt pronoun, the corresponding sentence will be perfectly grammatical as in (6).

(6) [NP [s watash-ga e; namae-o wasurete simatta] okyakusan;] I-nom name-acc have-forgotten 'the guest who I have forgotten his name'

From these facts, Saito(1985) proposes that the relativization in Japanese need not involve movement. Then, a question can be raised as to the gap e_i in (6). How is the gap produced? This question relates to Perlmutter's(1972) argument that there is good reason to believe that gaps in relative clauses need not be produced by movement in Japanese. The assumption that Japanese has phonetically null pronouns, nothing prevents them from appearing in relative clauses if Japanese is a pro-drop language in the sense that in this language it need not have phonetic content. Thus, e_i in (6) can be base-generated pro and hence, it need not be a trace of movement. That is, we can say that e_i in (6) is a resumptive pronoun (i.e., empty resumptive pronoun) although it is not overt.

III. Resumptive Pronouns in Korean and Their Interpretation

When we assume that Move- α is not involved in Korean, the empty category occurring in the relative construction can be regarded as basegenerated pro as was proposed in Saito(1985). Saito(1985) proposes that the empty category coindexed with the head noun is pro and it has some similar characters with English resumptive pronouns in some respects. In Korean, resumptive pronouns can be formed in some different positions in relative constructions.

In this chapter, we will discuss the characters of such resumptive pronouns which are assumed to be generated in the base and gaps (pro) which are also assumed to be base-generated alternating with overt resumptive pronouns. In discussing the characters, the interpretive aspects will be considered between the coreferential interpretation and the bound variable interpretation.

3.1 Distribution of Resumptive Pronouns in Korean and Their Interpretation

First of all, let us consider some relative constructions in which resumptive pronouns can possibly occur:

- (7) a. Ki-kai Younghee-lil mannatta-ko Changho-ka somun naen Chulsui he-nom Younghee-acc met-comp Changho-nom rumored Chulsu 'Chulsu that Changho rumored that he met Younghee'
 - b. pro_i Younghee-lil mannatta-ko Changho-ka somun naen Chulsu_i pro-nom Younghee-acc met-comp Changho-nom rumored Chulsu 'Chulsu whom Changho rumored that pro met Younghee'
- (8) a. Ki-kai shiljikja-ka toiossl-ttae Changho-ka silpohaetton Chulsui he-nom jobless person-nom became when Changho-nom was sad Chulsu 'Chulsu that Changho was sad when he became a jobless person'
 - b. pro_i shiljikja-ka toiossl-ttae Changho-ka slpohaetton Chulsu_i
 pro-nom jobless person-nom became when Changho-nom was sad Chulsu 'Chulsu that Changho was sad when pro became a jobless person'

- (9) a. Chulsu-ka kɨnyu-lɨl; mannatta-ko Changho-ka somun naen Yunghee: Chulsu-nom she-acc met-comp Changho-nom rumored Yunghee 'Yunghee that Changho rumored that Chulsu met her'
 - b. Chulsu-ka pro: mannatta-ko Changho-ka somun naen Yunghee: Chulsu-nom pro met-comp Changho-nom rumored Yunghee 'Yunghee that Changho rumored that Chulsu met pro'
- (10) a. Chulsu-ka kinyu-lil; chingohaessl-ttae Changho-ka kippohatton Yunghee: Chulsu-nom she-acc hated when Changho-nom was pleased Yunghee 'Yunghee that Changho was pleased when Chulsu hated her'
 - b. Chulsu-ka pro; chingohaessl-ttae Changho-ka kippohatton Yunghee; Chulsu-nom pro hated when Changho-nom was pleased Yunghee 'Yunghee that Changho was pleased when Chulsu hated pro'

These four constructions contain the resumptive pronouns k (he) and knyu (she) in (7-8) and (9-10) respectively. Instead of the resumptive pronouns, however, pros (empty resumptive pronouns) obviously can occur in those positions. Those are the examples of resumptive pronouns being allowed to occur in subject and object positions in subordinated clauses, but not in simplex relative clauses (11-12) and in matrix relative clauses (13-17) as below:

- (11) a. *Ki;-ka Yunghee-lil mannan Chulsu; he-nom Yunghee-acc met Chulsu 'Chulsu that he met Yunghee'
 - b. pro; Yunghee-lil mannan Chulsu; pro Yunghee-acc met Chulsu 'Chulsu that pro met Yunghee'
- (12) a. *Chulsu-ka kɨnyu;-lɨl mannan Yunghee; Chulsu-nom she-acc met Yunghee 'Yunghee that Chulsoo met her'
 - b. Chulsu-ka pro; mannan Yunghee; Chulsu-nom pro met Yunghee 'Yunghee that Chulsoo met pro'

- (13) a. *Chulsu-ka Yunghee-lil mannatta-ko ki_i-ka somun naen Changho_i
 Chulsu-nom Yunghee-acc met-comp he-nom rumored Changho
 'Changho that he rumored that Chulsu met Yunghee'
 - b. Chulsu-ka Yunghee-lil mannatta-ko pro_i somun naen Changho_i
 Chulsu-nom Yunghee-acc met-comp pro rumored Changho
 'Changho that pro rumored that Chulsu met Yunghee'
- (14) a. *Chulsu-ka shiljikja-ka toiossl-ttae ki_i-ka slpohaetton Changho_i
 Chulsu-nom jobless person-nom became when he-nom was sad Changho
 'Changho that he was sad when Chulsu became a jobless person'
 - b. Chulsu-ka shiljikja-ka toiossl-ttae pro_i slpohaetton Changho_i
 Chulsu-nom jobless person-nom became when pro was sad Changho
 'Changho that pro was sad when Chulsu became a jobless person'
- (15) a. *Chulsu-ka kɨkot_i-etaehae kippohaet-ton chinkɨp_i Chulsu-nom it-about was pleased-RO promotion 'The promotion that Chulsu was pleased about it'
 - b. Chulsu-ka pro_i kippohaet-ton chinkp_i
 Chulsu-nom pro was pleased-RO promotion
 'The promotion that Chulsu was pleased pro'
- (16) a. *Yunghee-ka ki_i-eke chaek-il chun Chulsu_i Yunghee-nom he-to book-acc gave Chulsu 'Chulsu that Yunghee gave a book to him'
 - Yunghee-ka pro_i chaek-il chun Chulsu_i
 Yunghee-nom pro book-acc gave Chulsu
 'Chulsu that Yunghee gave a book pro'
- (17) a. *Yunghee-ka koki_i-eso norae-lil pulrutton cafe_i Yunghee-nom there-at song-acc sang cafe
 The cafe that Yunghee sang a song at there
 - Yunghee-ka pro_i norae-lil pulrutton cafe_i
 Yunghee-nom pro song-acc sang cafe
 'The cafe that Yunghee sang a song'

However, in the following relative clauses, overt resumptive pronouns are

possible, even though they are occurring in simplex clauses.

- (18) ?Nae-ka ki:-i chaek-il ch'ijopori-n Chulsu: I-nom he-gen book-acc tore-RO Chulsu 'Chulsu that I tore his book'
- (19) ?Nae-ka kinyu:-i sonmul-il kojolha-n Yunghee: I-nom she-gen present-acc rejected-RO Yunghee 'Yunghee that I rejected her present'

This fact may be concerned with the fact that the resumptive pronouns in (18) and (19) are more deeply seated than those in (15-17).

Now let us replace the head nouns in (7-14) in those constructions above with the quantified expressions motinamiatl (every man) or motinguial (every woman), to see whether bound variable interpretation of the resumptive pronouns are allowed or not.

- (20) a. Ki;-ka Yunghee-lil mannata-ko Changho-ka somun naen motnnamjatl; he-nom Younghee-acc met-comp Changho-nom rumored every man 'every man that Changho rumored that he met Younghee'
 - b. pro; Yunghee-lil mannata-ko Changho-ka somun naen motnnamjatl; pro Younghee-acc met-comp Changho-nom rumored every man 'every man that Changho rumored that pro met Younghee'
- (21) a. Ki;-ka shiljikja-ka toiossl-ttae Changho-ka slpohaetton motnnamjatl; he-nom jobless person-nom became when Changho-nom was sad every man 'every man that Changho was sad when he became a jobless person'
 - b. pro; shiljikja-ka tojossl-ttae Changho-ka slpohaetton motnnamiatl: pro jobless person-nom became when Changho-nom was sad every man 'every man that Changho was sad when pro became a jobless person'
- (22) a. Chulsu-ka kɨnyu;-lɨl mannatta-ko Changho-ka somun naen motnyujatl; Chulsu-nom she-acc met-comp Changho-nom rumored every woman 'every woman that Changho rumored that Chulsu met her'
 - b. Chulsu-ka pro; mannatta-ko Changho-ka somun naen motnyujatl; Chulsu-nom pro met-comp Changho-nom rumored every woman 'every woman that Changho rumored that Chulsu met pro'

- (23) a. Chulsu-ka kɨnyu_i-lɨl chɨngohaesslttae Changho-ka kippohaetton motnyujatl_i

 Chulsu-nom she-acc hated when Changho-nom was pleased every woman 'every woman that Changho was pleased when Chulsu hated her'
 - b. Chulsu-ka pro_i chingohaesslttae Changho-ka kippohaetton motnyujatl_i
 Chulsu-nom pro hated when Changho-nom was pleased every woman 'every woman that Changho was pleased when Chulsu hated pro'
- (24) a. *Ki_i-ka Yunghee-lil mannan motnnamjatl_i he-nom Yunghee-acc met every man 'every man that he met Yunghee'
 - b. pro_i Yunghee-lil mannan motnnamjatl_i pro Yunghee-acc met every man 'every man that pro met Yunghee'
- (25) a. *Chulsu-ka kɨnyuɨ-lɨl mannan motnnamjatlɨ
 Chulsu-nom she-acc met every man
 'every man that Chulsoo met her'
 - b. Chulsu-ka pro_i mannan motnnamjatl_i
 Chulsu-nom pro met every man
 'every man that Chulsoo met pro'
- (26) a. *Chulsu-ka Yunghee-lɨl mannatta-ko kɨ¡-ka somun naen motnnamjatl¡
 Chulsu-nom Yunghee-acc met-comp he-nom rumored every man 'every man that he rumored that Chulsu met Yunghee'
 - b. Chulsu-ka Yunghee-ll mannatta-ko pro_i somun naen motnnamjatl_i Chulsu-nom Yunghee-acc met-comp pro rumored every man 'every man that pro rumored that Chulsu met Yunghee'
- (27) a. *Chulsu-ka shiljikja-ka toiossl-ttae ki_i-ka slpohaetton motnnamjatl_i

 Chulsu-nom jobless person-nom became when he-nom was sad every man 'every man that he was sad when Chulsu became a jobless person'
 - b. Chulsu-ka shiljikja-ka toiossl-ttae pro_i slpohaetton motnnamjatl_i
 Chulsu-nom jobless person-nom became when pro was sad every man 'every man that he was sad when Chulsu became a jobless person'

In those constructions allowing resumptive pronouns (7-10), they were permitted to have coreferential readings coindexed with the head nouns. Also in the constructions (20-23) containing quantified head nouns in place of names or specific expressions, the bound variable interpretations of the resumptive pronouns are allowed, if only they permit the resumptive pronouns in those positions mentioned above. Thus, no difference seems to be present between two different interpretations at a certain syntactic level (S-structure) which determines those readings.

In English, however, a pronoun can be construed as bound to a quantified NP only if it can be interpreted as referentially dependent upon a name in place of the quantified NP. According to Huang's (1982) observation, the well-formedness of (28) entails that of (29) in English, and the illformedness of (30) also entails that of (31).

- (28) John, loves his, mother.
- (29) Everyone; loves his; mother.
- (30) *John; loves him;.
- (31) *Everyone; loves him,

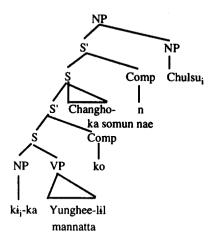
Thus, it can be said that conditions on definite pronoun anaphora are also those on pronouns as bound variables. In this regard, the Korean resumptive pronouns permitted to occur in relative constructions with those two different kinds of head noun (names & OPs in (7-10) and (20-23)) seem to be subject to the same kind of well-formedness condition.

3.2 Cyclic-c-command and Resumptive Pronoun

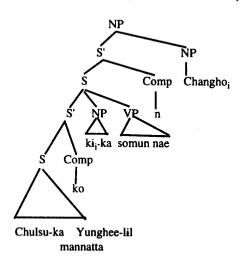
Now, let us go back to the Korean facts shown in (7-19). The following questions arise: Why do the constructions (7-10) permit the resumptive pronouns to occur while the constructions (11-17) don't? And why are they marginally permitted to occur in (18-19)?

It is clear that a principle based on the superficial notion of 'precedence' cannot function for the set of facts we have presented. When the hierarchical notion of 'c-command' is involved here, it is generally said that the pronoun cannot c-command its antecedent. Even though this generalization applies to the resumptive pronouns occurring in those constructions, it still fails to account for the occurrence of them in those constructions. Then let us apply the generalization to the resumptive pronouns in (7a) and (13a):

(7) a. Kij-ka Younghee-lil mannatta-ko Changho-ka somun naen Chulsuj



(13) a. *Chulsu-ka Yunghee-ll mannatta-ko ki_i-ka somun naen Changho_i



Since both pronouns in (7) and (13) cannot c-command its antecedent respectively, both sentences should be grammatical with respect to the generalization. Thus it obviously fails to account for those sentences.

Huang(1982) proposes the notion of 'cyclic-c-command' in terms of the notions 'cyclic node' and 'c-command' as follows:

- (32) Cyclic-c-command (Chinese)
 - A cyclic-c-command B if and only if:
 - a. A c-commands B. or
 - b. If C is the minimal cyclic node (NP or S') that dominates A but is not immediately dominated by another cyclic node, then C c-commands B.
- (33) Pronoun cannot cyclic-c-command its antecedent.

With those two notions, Huang(1982) accounts for the coreferentiality of resumptive pronouns occurring in Chinese relative constructions.

- (34) wo sung-le ta_i yiben shu de neige ren_i
 I send-ASP he one book DE that man
 'the man that I gave a book to'
- (35) wo ba ta; da-le yidun de neige ren;

 I BA he hit-ASP once DE that man
 'the man that I gave a beating to'

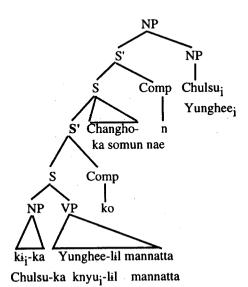
In (34) and (35), the minimal node that contains the resumptive pronoun 'he' is that S' of the relative clause itself. However, this S' is immediately dominated by another cyclic node, namely the NP node containing both the relative and the head, Therefore, it is the NP node that is relevant for C in (32b). But, this NP does not c-command the antecedent of the resumptive pronoun since the NP properly contains the node of the head. Therefore, the resumptive pronoun does not cyclic-c-command its antecedent. Thus the constructions involving the resumptive pronouns (34-35) are predicted to be grammatical with the notions of 'cyclic-c-command' (32) and the condition (33). In short, Huang's(1982) extended notion of 'cyclic-c-command' accounsts for possible occurrence of the resumptive pronouns in Chinese relative constructions.

It remains to account for the Korean resumptive pronouns especially for the possibility and impossibility of their occurrence. And it is also natural to ask whether it is possible to reduce the question to a syntactic explanation. In accounting for the resumptive pronouns in Korean, I would like to modify the notion of 'cyclic-c-command' by eliminating the restrictive condition in (32b) ('~but is not immediately dominated by another cyclic node') for the general explanation of the allowance/disallowance of resumptive pronouns in Korean facts.

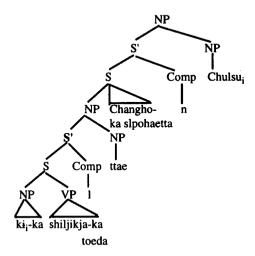
- (36) Cyclic-c-command (Korean)
 - A cyclic-c-command B if and only if:
 - a. A c-commands B, or
 - b. If C is the minimal cyclic node (NP or S') that dominates A, then C commands B.
- (37) Pronoun cannot cyclic-c-command its antecedent.

Then, the restrictive condition in (32b) can be 'parameterized' as to the option of choice between Chinese and Korean. Now let us see how the modified notion of 'cyclic-c-command' and the condition (37) work, and how they predict the possibility of occurrence of resumptive pronouns.

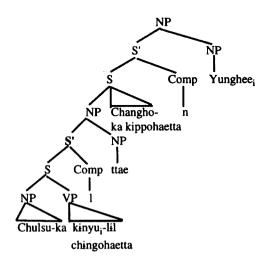
(38) Ki_i-ka Younghee-lil mannatta-ko Changho-ka somun naen Chulsu_i (=7a) Chulsu-ka kinyu_i-lil mannatta-ko Changho-ka somun naen Yunghee_i (=9a)



(39) Ki;-ka shiljikja-ka toiossl-ttae Changho-ka slpohaetton Chulsu; (=8a)

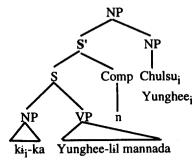


(40) Chulsu-ka kɨnyu;-lɨl chɨngohaessl-ttae Changho-ka kippohatton Yunghee; (=10a)



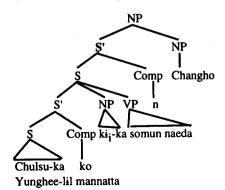
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(41) *Ki_i-ka Yunghee-lil mannan Chulsu_i (=11a) *Chulsu-ka kinyu_i-lil mannan Yunghee_i (=12a)

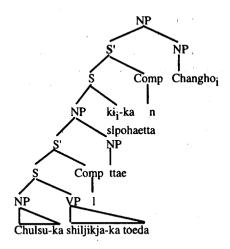


Chulsu-ka kinyui-lil mannada

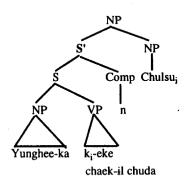
(42) *Chulsu-ka Yunghee-lil mannatta-ko ki_i-ka somun naen Changho_i (=13a)



(43) *Chulsu-ka shiljikja-ka toiossl-ttae ki;-ka slpohaetton Changho; (=13a)

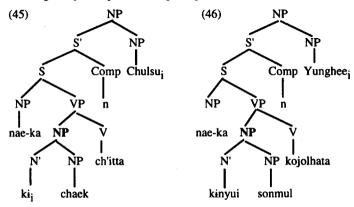


(44) *Yunghee-ka ki;-eke chaek-il chun Chulsu; (=16a)



According to the definition of 'cyclic-c-command' in (36), the node marked by bold letter in each tree diagram (38-44) is the minimal cyclic node (NP or S') that dominates the pronoun. Then, the node S', does not c-command its antecedent in (38-40) respectively. Thus, the antecedent is doomed to be not cyclic-c-commanded by the pronoun according to the definition. Accordingly, by the condition on the coreferentiality of the pronoun (37), those constructions (38-40) containing the resumptive pronouns are well-formed, and they are permitted to occur in those positions. However, the respective minimal cyclic node dominating the pronoun in (41-44) c-commands its antecedent, violating (37). Thus those constructions (41-44) do not permit the resumptive pronouns to occur while (38-40) do.

Finally, let us consider the resumptive pronouns in (18) and (19), which were marginally acceptable comparing with those in (15-17).



In (45) and (46) respectively, the first minimal cyclic node dominating the pronoun k (he) and knyu (she) is the NP marked by bold letter which cannot c-command the antecedent of the pronoun. Subsequently, the pronoun cannot cyclic-c-command its antecedent, according to the definition in (36). Thus, by the condition in (37), those two constructions above can be acceptable though marginal (cf. (15-17)). This shows that the more deeply seated resumptive pronouns, even in the same simplex relative clauses, are quite more permissible than the less deeply seated ones.

Thus far, in this section, we have seen that the permissible range of resumptive pronouns in Korean relative clauses can be accounted for by the structural syntactic notions.

IV. Resumptive Pronoun as a Syntactic Variable

In a preceding discussion, we have seen that overt resumptive pronouns and empty resumptive pronouns do not bring any interpretational difference between coreferential reading and bound variable reading bound by the head NP of the relative constructions: When they are bound by names or specific referential NPs, they are commonly interpreted as coreferential, while bound by the quantified NPs, bound variables. In other words, resumptive pronouns are regarded as the syntactic variables in Korean in that they share some properties with gaps. If both a pronoun and a gap can be coindexed with their antecedents at S-structure, then it again argues against a movement analysis of extraction sentences containing gaps since the simplest and most general analysis is the one in which both operator-gap and operatorresumptive pronoun structures are base-generated. This might confirm the fact that the resumptive pronouns alternating with the gaps do not occur as part of a strategy to avoid island constraints.

Then, let us consider the levels of interpretation of Korean resumptive pronouns. What we can conclude from those facts in Korean is that the binding of resumptive pronouns results from operations in the syntax and not from an interpretive rule at LF. Furthermore, the Korean facts fail to argue for a distinction between D-structure and S-structure, as they give no evidence of Move-a. Similarly, if resumptive pronouns and gaps are bound variables at S-structure, sentences with resumptive pronouns do not argue for a distinction between S-structure and LF.

In English, however, resumptive pronouns are not interpreted as operatorbound variables as in Korean. Consider the following examples presented by Chao and Sells(1983).

(47) a. I'd like to meet the linguist that Mary couldn't remember if she had seen. / him before. b. I'd like to meet every linguist that Mary couldn't remember if she had seen ___/ *him before.

The only difference between the two examples in (47) lies in the head NP of the relative clauses, the linguist or every linguist. The argument goes as follows: Assume that him cannot be bound variable (while the gap can, and must be). This will explain why (47b) is bad with the pronoun, for every linguist is the kind of noun phrase (a quantificational one) that only participates in bound variable anaphora. Now for (47a) with the pronoun, we can say that him happens to pick out some individual, and that the linguist also happens to pick out that same individual; there is no actual binding, but rather by some kind of accidental 'coreference.'

V. Conclusion

Chao and Sells(1983) propose that languages may be distinguished by what they call the "resumptive pronoun parameter (RPP)." Thus, languages like Korean, as we have seen, have the value [+RP] and allow pronouns as syntactic variables, and languages like English have the minus value, [-RP], disallowing this option. This approach is, however, litter more than a restatement of the problem without providing a truly explanatory account derived from some general properties or directly derived from principles of UG.

In conclusion, under the movement analysis of given constructions, within the framework of the GB theory, it is not possible to state the generalization simply: Pronouns are inserted in the base while trace results from movement rules; referential indices of pronoun and trace, therefore, are assigned by different processes; trace but not the pronoun is subject to the ECP and so on. Thus we have posed a base-generation assumption on the resumptive pronoun in relative construction in Korean. The base-generated pro and resumptive pronoun exhibit the same kind of interpretation between coreferential reading and bound variable reading bound by head-NP at S-structure. Furthermore, the resumptive pronoun occurring in Korean relative clause could be accounted for by the notion of 'cyclic-c-command' with the parameterized option.

Notes

- 1. The PRO-movement analysis is proposed by Chomsky and Lasnik(1977). We can derive the phrase (ia) from the D-structure (ib).
 - (i) a. the man I saw
 b. [NP the man [S' [Comp]][S I saw PRO]

By applying PRO-movement, which moves the abstract PRO to COMP, (ii) is produced.

(ii) [NP] the man [S'] [Comp] PRO_i [S] [S] saw ti [S]

As in wh-movement analysis, the rule of control is required to

indicate that the head noun and the relative pronoun designate the same thing, which is expressed by indexing, as in (iii).

- (iii) [the man; [S' [Comp. PRO;][S I saw t;]]]
- 2. Chomsky(1982) derives sentence (ia) by applying empty Operator movement from D-structure (ib):
 - (i) a. the man $[\varsigma, O; [\varsigma]$ I saw $[\varsigma, O; [\varsigma]$ b. the man [c. [c I saw O]

This analysis that the empty operator is in the D-structure position and subsequently moves to COMP by empty Operator Movement. Then, the trace of the empty operator automatically satisfies the LF Licensing Condition for variables: A variable must be bound by an operator. And the interpretation of relative clause construction is realized by coindexing the head noun and the relative pronoun. through a rule of control as in (ii).

- (ii) [the man; $[\varsigma, O; [\varsigma]]$ saw t;]]]
- 3. See Williams(1980)

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