

AN ARGUMENT FOR DISCONTINUOUS VP'S IN KOREAN*

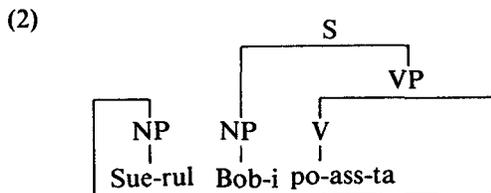
William O'Grady

This paper is concerned with the nature of the syntactic representations which must be assigned to Korean sentences in which a complement of the verb has been 'fronted' (by 'scrambling'). Drawing on facts about the interpretation of the pronominal element *ku*, it is suggested that the surface structures of such sentences include a discontinuous VP consisting of the verb and its nonadjacent complement. The implications of this for a configurational theory of grammatical relations are discussed.

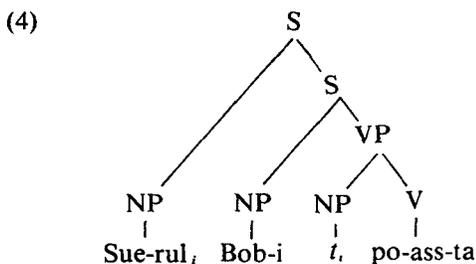
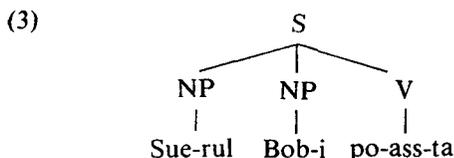
1. Introduction

The purpose of this paper is to construct an argument for the existence of discontinuous VPs in Korean based on the interpretation of the pronominal element *ku*. The logic of my approach will follow that adopted in earlier work (O'Grady 1985a, b), where I presented arguments for the same conclusion based on the interpretation of the anaphor *caki* 'self' and the scope of the quantifiers *motwun* 'all' and *etten* 'some'. In the case of all of these phenomena, the crucial observation is that significantly simpler principles can be formulated if it is assumed that 'OSV' sentences such as (1) have syntactic representations such as (2), in which the direct object is a sister of the nonadjacent verb, rather than structures of the type found in (3) or (4). (For purposes of expository convenience, I use a line drawn beneath the string of words to connect nonadjacent sisters.)

- (1) Sue-rul Bob-i po-ass-ta.
Sue Ac Bob N saw
'Bob saw Sue.'



*A version of this paper was presented to the Sogang Linguistics Circle in December of 1985. The judgments used here are based on the data appearing in O'Grady (1984). This data was originally provided to Sook Whan Cho and then checked with a group of twenty native speakers of Korean. I am grateful to Professor Cho for her invaluable help with this work.



The latter two structures have each been proposed in recent work on Japanese, (3) by Farmer (1984) and (4) by Saito (1984). The structure in (2) has been independently proposed by I. Lee (1985).

The logic of my approach will be as follows. I will begin by outlining a simple constraint on the interpretation of *ku* which draws on the notions of precedence and containment. Using 'nonscrambled' (SOV) sentences, I will show that this constraint is superior to restrictions formulated in terms of c-command, the crucial notion in Chomsky's (1981) Binding Theory. I will then consider the problems which OSV patterns present for the Korean binding theory and will show that the constraint I have proposed can be extended to these cases without complication provided that we assume that there can be discontinuous VPs. Finally, I will suggest that the postulation of discontinuous VPs has independent advantages for the characterization of grammatical relations in Korean and other languages.

2. A Constraint on the Interpretation of *ku*

It is commonly proposed that the interpretation of pronouns in human language is subject to some version of the c-command constraint formulated by Reinhart (1981). (I assume that X c-commands Y if the first node above X dominates Y.)

(5) *The C-Command Constraint*

A pronoun may not c-command its antecedent.

Assuming that the C-Command Constraint applies to a level of representation (say S-structure) which includes a VP constituent, it correctly differentiates among the following sentences.

- (6) *_S [Ku-ka, John-uy_i chinkwu-rul po-ass-ta.]
 he N John Gen friend Ac saw
 'He saw John's friend.'
- (7) John-uy_i chinkwu-ka [_{VP} ku-rul, po-ass-ta.]
 John Gen. friend N him Ac saw
 'John's friend saw him.'
- (8) ?_{NP} [Ku-uy_i chinkwu-ka] John-ul_i po-ass-ta.
 his Gen friend N John Ac saw
 'His friend saw John.'

In (6) the pronoun c-commands its antecedent (*John*) since the first node above it (S) also dominates the lexical NP. In (7), in contrast, the first node above the pronoun is the VP, which does not dominate the intended antecedent. Similarly, in (8) the first node above the pronoun is the NP corresponding to the subject phrase, which does not include the coindexed antecedent. There is therefore no violation of the C-Command Constraint in either of (7) or (8), and they are acceptable on the intended interpretation.

A problem with the C-Command Constraint for Korean arises because of sentences such as (9-12).

- (9) Nay ka [_{VP} John-uy, cim-ul ku-eykey_i paytalhay-ju-ass-ta.]
 I N John Gen luggage Ac him Dat delivered
 'I delivered John's luggage to him.'
- (10) *Nay-ka [_{VP} ku-eykey, John-uy_i cim-ul paytalhay-ju-ass-ta.]
 I N him Dat John Gen luggage Ac delivered
 'I delivered to him John's luggage.'
- (11) Nay-ka [_{VP} John-uy, say haksayng-eykey ku-rul, sokayhay-ju-ass-ta.]
 I N John Gen new student Dat him Ac introduced
 'I introduced John's new student to him.'
- (12) *Nay-ka [_{VP} ku-rul_i John-uy, say haksayng-eykey
 I N him Ac John Gen new student Dat
 sokayhay-ju-ass-ta.]
 introduced
 'I introduced to him John's new student.'

On the usual assumption that the verb and its subcategorized complements (e.g. its direct and indirect objects) are immediately dominated by the same node (say VP), all four of these sentences would be in violation of the C-Command Constraint. Significantly, however, only (10) and (12) — in which the pronoun precedes its antecedent — are unacceptable. Refining a suggestion first made in O'Grady (1984), I propose that the interpretation of *ku* is subject to the principle in (13) rather than the C-Command Constraint.

(13) *The Precedence Constraint (PC)*

A pronoun cannot precede an antecedent in its phrasal category.

Let us take an element's 'phrasal category' to be the smallest maximal projection (S, NP or VP) containing it. Thus the phrasal category for the pronoun in the cases we have been considering corresponds to the phrase contained in labeled brackets in our example sentences — S where the pronoun is a subject (e.g. (6)), VP where it is an object (e.g. (7)) and NP where it is a genitive modifier (e.g. (8)). The relevant contrasts now follow in a straightforward way. Reconsider first sentences (6-8). Of these sentences, only the first violates the PC since the subject pronoun precedes an antecedent in its phrasal category (S). In (7), the pronoun *follows* an antecedent outside its phrasal category (VP) while the pronoun in (8) precedes an antecedent which lies outside its phrasal category (the subject NP). The latter two sentences do not violate the PC and are therefore acceptable.

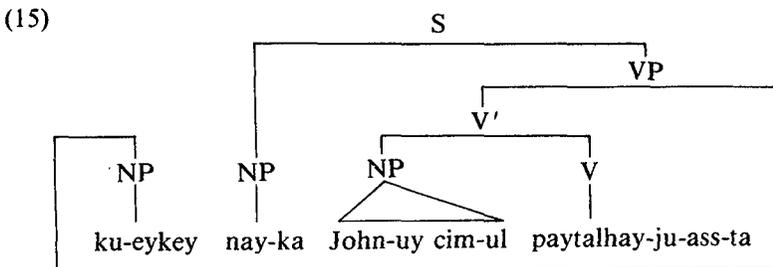
Now reconsider sentences (9-12). In all four sentences, the pronoun is a complement of the verb and therefore takes VP as its phrasal category. The PC therefore predicts, correctly, that the sentences in which the pronoun precedes an antecedent which also lies within VP will be ungrammatical. Thus (10) and (12), but not (9) and (11), are unacceptable on the intended reading.

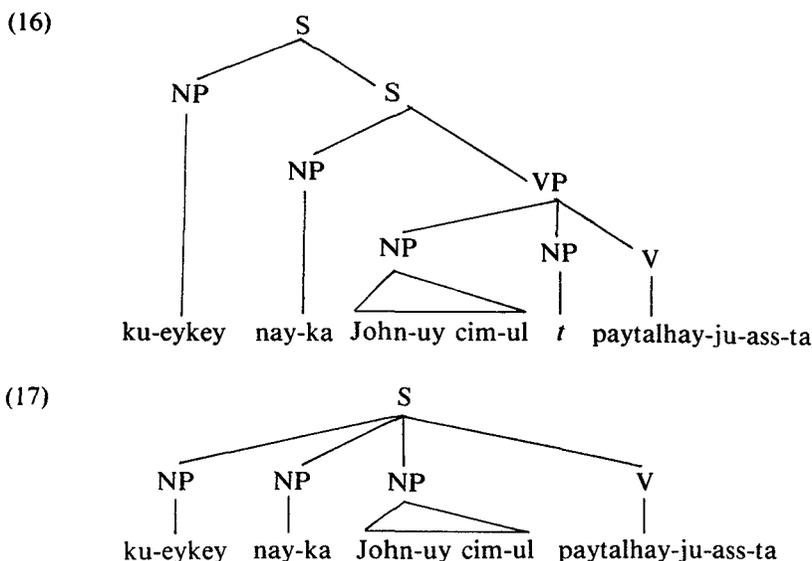
3. Binding in Scrambled Sentences

Let us return now to the question of the appropriate structure for sentences in which a complement of the verb has been 'scrambled' leftward over the subject. Consider first a sentence such as (14), a variant of (9) and (10) above.

- (14) *Ku-eykey, nay-ka John-uy, cim-ul paytalhay-ju-ass-ta.
 him Dat I N John Gen luggage Ac delivered
 'To him I delivered John's luggage.'

As things now stand, the PC will rule out this sentence if it is assigned any of the following representations.





The representation in (15) includes the type of discontinuous VP for which I wish to argue. The structure in (16), on the other hand, assumes that scrambling involves ‘Chomsky-adjunction’ to S by a movement rule that leaves a trace within the VP. Finally, the representation in (17) assumes that Korean sentences have a ‘flat’ structure, with all argument phrases attached directly to S (presumably in the base component).

All three representations allow successful application of the PC. In (15), for example, the intended anaphoric dependency is ruled out by the fact that the pronoun precedes an antecedent in the discontinuous VP which serves as its phrasal category. In (16) and (17), on the other hand, the pronoun would take S as its phrasal category. However, because it still precedes an antecedent within that category, the PC will block the anaphoric dependency.

The crucial test for the three representations we are considering comes from sentences such as (18) and (19).

- (18) Caki(casin)-rul, John-i, piphanhay-ass-ta.
 Self Ac John N criticized
 ‘Self, John criticized.’

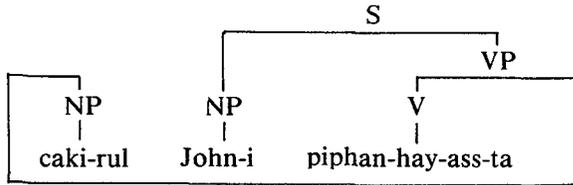
- (19) [?]Ku-eykey_i, John-uy_i chinkwu-ka malhay-ass-ta.
 him Dat John Gen friend N spoke
 ‘To himself, John spoke.’

Sentence (18) is fully acceptable. While sentences such as (19) are perhaps marginal, they are considered far better than structures such as (20) and I will take the view that they do not violate a grammatical principle.

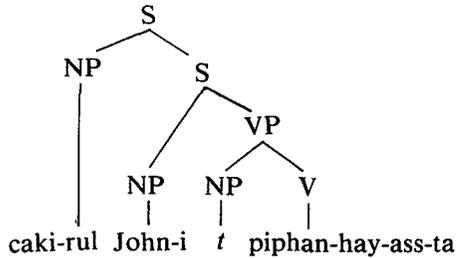
- (20) *Ku-ka, John-uy, chinkwu-eykey malhay-ayss-ta.
 he-N John Gen friend Dat spoke
 'He spoke to John's friend.'

Consider now the representations which the three approaches to syntactic structure we are considering would assign to a sentence such as (18) or (19).

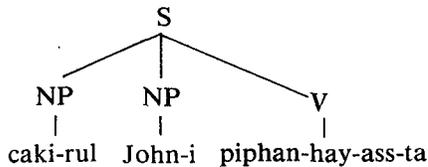
(21)



(22)

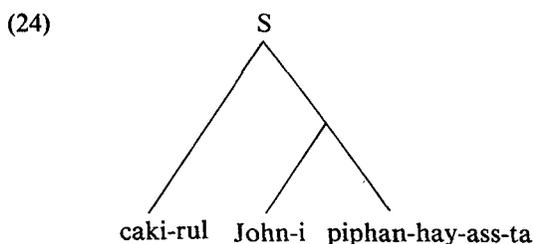


(23)



In the first of these representations, the phrasal category of the pronoun is the discontinuous VP. Since the pronoun's intended antecedent does not lie within this phrase, coreference is permitted by the PC (which only prohibits patterns in which the pronoun precedes an antecedent in its phrasal category.) Significantly, the structures in (22) and (23), which do not include a discontinuous VP constituent, do not fare as well. In both of these structures the pronoun would have S as its phrasal category. Since it precedes an antecedent within this category, the sentence is wrongly predicted to be ungrammatical.

A similar problem arises with a fourth syntactic representation which has occasionally been proposed for OSV structures (see, for example, K. Lee (1982: 503)). This fourth structure is characterized by a direct combinatorial relation between the verb and the adjacent subject, resulting in a phrase which then combines with the direct object.



Since the phrasal category of the pronoun in (24) would be S, this representation leads to the incorrect prediction that an anaphoric dependency should be impossible in such cases. It therefore suffers from the same flaw as the structures in (22) and (23).

It is worth noting at this point that the PC cannot be made compatible with the analysis implicit in (22-24) by assuming that anaphoric dependencies are determined in a structure which does not show the effects of scrambling. According to this proposal, the anaphoric dependencies in a sentence such as (18) or (19) would be realized in SOV structures such as (18') and (19'), which clearly comply with the PC.

(18') John-i, caki(casin)-rul, piphhan-hay-ass-ta.
 John N self Ac criticized

(19') John-uy, chinkwu-ka ku-eykey, malhay-ass-ta.
 John Gen friend N him Dat spoke

The problem for this proposal stems from sentences such as (25) and (26).

(25) *Ku-eykey, nay-ka John-uy, cim-ul paytalhay-ju-ass-ta.
 him Dat I N John Gen luggage Ac delivered
 'To him I delivered John's luggage.'

(26) *Ku-rul, nay-ka John-uy, say haksayng-eykey sokayhay-ju-ass-ta.
 him Ac I N John Gen new student Dat introduced
 'To him I introduced John's new student.'

If the 'neutral' order for Korean is S DO IO V, (25) will be matched with the structure in (27) (identical to (9) above). If, on the other hand, the 'neutral' order is S IO DO V, then (26) will be matched with (28), identical to (11) above.

(27) Nay-ka [_{VP} John-uy, cim-ul ku-eykey, paytalhay-ju-ass-ta.]
 I N John Gen luggage Ac him Dat delivered
 'I delivered John's luggage to him.'

(28) Nay-ka [_{VP} John-uy, say haksayng-eykey ku-rul, sokayhay-ju-ass-ta.]
 I N John Gen new student Dat him Ac introduced
 'I introduced John's new student to him.'

However, since the anaphoric dependencies in (27) and (28) cannot be blocked, we make the wrong predictions for their scrambled variants. This problem does not arise if we have the PC apply to surface structure and assume the type of discontinuous VPs I have been proposing.

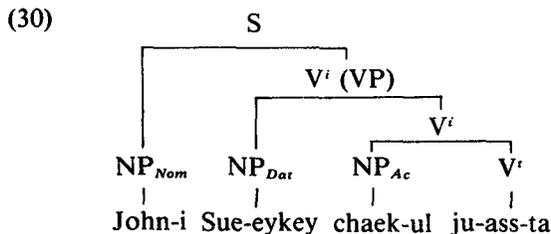
To summarize, then, it would seem that the principle which is required for binding relations in basic (nonscrambled) sentences can be extended without revision or refinement to other word order patterns if we assume that the verb's complements are part of the VP regardless of where they occur in the sentence. This in turn entails that in cases where a complement of the verb occurs to the left of the subject, the VP will be discontinuous. As noted at the outset, I have shown elsewhere that this conclusion also receives support from the facts surrounding the interpretation of the reflexive element *caki* as well as the quantifiers *motwun* and *etten*. In the next section of this paper, I consider still another advantage of this proposal.

4. The Representation of Grammatical Relations

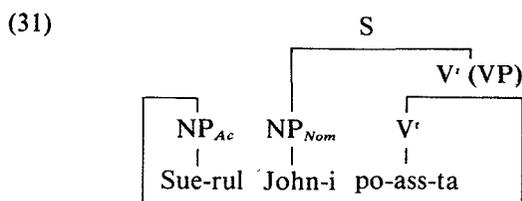
Thus far I have ignored the question of how the type of syntactic representations which I have proposed might be formed. I will now address this issue by proposing that syntactic structure is generated by a categorial grammar, a 'bottom-up' system which combines words to create phrases and phrases to yield a sentence. For the purposes of this discussion, the following combinatorial rules are relevant.¹

- (29) a. V' combines with NP_{Ac} to give V'
 b. V' combines with NP_{Dat} to give V'
 c. V' combines with NP_{Nom} to give S

If we further assume that by convention the maximal V' is labeled VP, we can use these combinatorial statements to form syntactic representations of the following sort.



¹The following abbreviations are used here: V' = intransitive verb, V' = transitive verb, Nom = nominative, Ac = accusative, Dat = dative.



An interesting consequence of these representations is that they allow us to define the grammatical relations of subject and object as follows.²

- (32) *Direct Object*: the NP which combines with V' to give V'
Indirect Object: the NP which combines with V' to give another V'
Subject: the NP which combines with V' to give S

Notice that if we make use of the syntactic representations motivated by the coreference facts (i.e. syntactic representations which can include discontinuous VPs), the proposed relational definitions are applicable *at surface structure* to all word order patterns. Thus the direct object (marked by the accusative suffix) combines with the V' to give a V' in both (30) and (31) while the subject (marked by the nominative ending) combines with VP (the maximal V') to give S in both sentences. This would appear to remove objections to configurational definitions of grammatical relations for languages which allow the verb and its complements to be noncontiguous in surface structure.

To conclude, then, we have seen that the simplest constraint on the interpretation of pronouns in Korean rules out anaphoric dependencies in cases where the pronominal element precedes an antecedent in its phrasal category. This constraint can then be used to deduce the existence of discontinuous VP constituents in the case of structures where a complement of the verb precedes the subject in surface structure (e.g. the common OSV pattern). This in turn opens the way for a configurational characterization of grammatical relations in terms of combinatorial relations in surface structure irrespective of the word order pattern, a desirable result.

²Similar proposals for the definition of subject and direct object have been made by Dowty (1982) and O'Grady (in press).

REFERENCES

- Dowty, David (1982) 'Grammatical Relations in Montague Grammar,' in P. Jacobsen and G. Pullum, eds., *The Nature of Syntactic Representation*, Boston, Reidel.
- Farmer, Ann (1984) *Modularity in Syntax*, Cambridge, MA, MIT Press.
- Lee, Ik Hwan (1985) Paper presented at the Harvard Workshop on Korean Linguistics, to appear in the proceedings.
- Lee, Kiyong (1982) 'On Case Shifting,' *Linguistic Journal of Korea* 7, 497-517.
- O'Grady, William (1984) 'The Syntax of Korean Anaphora,' *Language Research* 20, 121-37.
- _____ (1985a) 'Anaphora and Discontinuous Constituents in Korean,' paper presented at the Harvard Workshop on Korean Linguistics, to appear in the proceedings.
- _____ (1985b) 'Discontinuous Constituents in a Free Word Order Language,' paper presented at the Chicago Conference on Discontinuous Constituents, to appear in the proceedings.
- _____ (in press) *Principles of Grammar and Learning*, Chicago, University of Chicago Press.
- Reinhart, Tanya (1981) 'Definite NP Anaphora and C-command Domains,' *Linguistic Inquiry* 12, 605-36.

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