

# Lexical Functional Grammar and Control in Korean

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## 1. Introduction

According to Bresnan(1982), control can be defined as a relation of referential dependence between an unexpressed subject (the controlled element) and an expressed or unexpressed constituent (the controller); the referential properties of the controlled element, including possibly the property of having no reference at all, are determined by those of the controller.

- (1) a. At the moment, the goal of the police is to try to prevent a riot.
- b. At the moment, the goal is to try to prevent a riot.

In (1a), the unexpressed subject of *try* is controlled by *the police*, and the unexpressed subject of *prevent* is controlled by the(unexpressed) subject of *try*. In (1b), the unexpressed subject of *try* lacks an antecedent, which is often called *arbitrary control*.

There are two major classes of control in LFG. One is called functional control and the other anaphoric control. In functional control, the controlled element is the SUBJ function and the controlled clauses are designated by the open grammatical functions XCOMP and XADJ. Since XCOMP and XADJ lack their overt SUBJ in C-structure, the SUBJ of XCOMP and XADJ must be controlled by some GF which is referentially identical. The controlling GF is a sister of XCOMP or XADJ. The control relation

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is expressed by a control equation, a functional schema which equates the F-structures of the controller and the controlled element. When the controlled element is the SUBJ of XCOMP, functional control relation is induced lexically because the control equation of the form  $(\uparrow \text{GF}) = (\uparrow \text{XCOMP SUBJ})$  is specified in the lexical item. On the other hand, when the SUBJ of XADJ is the controlled element, we have constructionally induced functional control. Its control equation is part of a C-structure rule annotation because XADJ, which is a non-subcategorizable GF, is not introduced by being subcategorized for by a predicate, but by being specified in a C-structure rule.

Anaphoric control is different from functional control in that it does not involve the sharing of F-structure. That is, functional control entails identity of F-structures of the controller and controlled elements, while anaphoric control entails mere identity of reference (i.e., only referential dependence). Anaphoric control is a specific case of anaphoric binding<sup>1</sup> where a pronominal element with no phonetic form (zero pronoun) is referentially dependent on its antecedent. In what follows, each case of control phenomena as found in Korean is discussed in some detail.

## 2. Functional Control

### 2.1. Lexically Induced Functional Control

As noted above, lexically induced functional control is the relation that holds between some antecedent and the "missing subject" in XCOMP. A typical case of XCOMP is the controlled infinitival complement of verbs like *try*, and *persuade*.

- (2) a. John tried to work hard.  
 b. John persuaded Mary to work hard.

These are the unmarked cases of functional control. Their control relation can be predictable in the following lexical items.

- (3) a. try        V  $(\uparrow \text{PRED}) = \text{'try } \langle\langle \text{SUBJ} \rangle\rangle \langle\langle \text{XCOMP} \rangle\rangle \text{'}$   
 b. persuade V  $(\uparrow \text{PRED}) = \text{'persuade } \langle\langle \text{SUBJ} \rangle\rangle \langle\langle \text{OBJ} \rangle\rangle \langle\langle \text{XCOMP} \rangle\rangle \text{'}$

<sup>1</sup> Anaphoric control is itself part of a large theory of anaphoric binding, which includes the binding of overt pronouns and reflexives.

The control relation between the controller and the missing subject in XCOMP can be ascertained from the following universal rule:

(4) Lexical Rule of Functional Control

Let  $L$  be a lexical form and  $F_L$  its grammatical function assignment. If  $XCOMP \in F_L$ , add to the lexical entry of  $L$ :

$(\uparrow OBJ2) = (\uparrow XCOMP SUBJ)$  if  $OBJ2 \in F_L$ ; otherwise

$(\uparrow OBJ) = (\uparrow XCOMP SUBJ)$  if  $OBJ \in F_L$ ; otherwise

$(\uparrow SUBJ) = (\uparrow XCOMP SUBJ)$  if  $SUBJ \in F_L$ .

That is, the XCOMP of a lexical form is functionally controlled by the OBJ2 if there is one, otherwise by the OBJ if there is one, otherwise by the SUBJ. This rule of unmarked lexical control is interpreted as a redundancy rule; that is, the rule obligatorily expands an eligible lexical entry which lacks a control equation, but it blocks if the otherwise eligible lexical entry already has a control equation. For example, this rule (4) specifies that the controllers of the predicative complements of *try* and *persuade* in (3) are the SUBJ and OBJ, respectively, but this rule is blocked by the lexically marked control equation for *promise* in (5).

(5) a. John promised Mary to work hard.

b.  $(\uparrow PRED) = \text{'promise } \langle\langle \text{SUBJ} \rangle \rangle \langle \text{OBJ} \rangle \langle \text{XCOMP} \rangle \text{'}$

$(\uparrow SUBJ) = (\uparrow XCOMP SUBJ)$

Owing to the fact that functional control is lexically specified, it will have the following properties: local, unique, and obligatory.<sup>2</sup>

Let us take some Korean examples.

(6) a. John-i [hakkyo-ey ka] lyuko han-ta.

Nom school-Loc go Comp do-Pres

<sup>2</sup> It is local due to a constraint on the syntax of functional equation, known as 'Functional Locality', which only allows at most two attribute-names to appear in any equation; this means one can specify  $(\uparrow XCOMP SUBJ)$  but not  $(\uparrow XCOMP XCOMP SUBJ)$  in a functional control equation. Secondly, it is unique because the controller is uniquely determined in the lexical rule of functional control. Finally, it is obligatory due to the completeness. If the functional controller is omitted from a sentence in which functional control obtains, the F-structure value of both the controller and the controlled subject will be missing, producing an incomplete F-structure.

‘John tries to go to school.’

- b. John-i [hakkyo-ey ka] ko sip-ta.  
Comp wish-Pres

‘John wishes to go to school.’

- c. John-i [hakkyo-ey ka] zi an-nunta  
Comp not-Pres

‘John does not go to school.’

The complements in (6) are untensed, and they are non-finite clauses whose complementizer is *(lyu)ko* or *zi*. Lexical NPs cannot appear in the subject position of the complement.

- (7) a. \*John-i [Mary-ka hakkyo-ey ka] lyuko han-ta.  
b. \*John-i [Mary-ka hakkyo-ey ka] ko sip-ta.  
c. \*John-i [Mary-ka hakkyo-ey ka] zi an-nunta.

In short, they have the open grammatical function; that is, XCOMP. The lexical form of the intentional verb *ha-ta*<sup>3</sup> and *sip-ta* is like that of the verb *try* in (3a). That is, their grammatical function assignment is {SUBJ, XCOMP}. Since SUBJ and XCOMP are members of the sets of GFs subcategorized for by the verb, the universal rule (4) introduces the third control equation ( $\uparrow$  SUBJ) = ( $\uparrow$  XCOMP SUBJ).

The aspectual verbs *sicakhata* “begin”, *kaesokhata* “continue” and *cungtan-hata* “stop” are another examples of functional control verbs controlled by subject.

- (8) a. John-i [kongpuha] ki (-lul) sicakha-essta.  
Nom study Comp(-Acc) begin Past  
SUBJ XCOMP

<sup>3</sup> The complementizer ‘(lyu)ko’ is very important to determine the control relation because the matrix predicate ‘hata’ does not have the meaning “try” except the meaning “do”. Therefore, the verb ‘hata’ with the complementizer ‘(lyu)ko’ in (6a) is called the intentional verb ‘hata’ to distinguish the following one:

- (a) John-i [Mary-ka hakkyo-ey ka] tolok ha-essta.  
Nom Nom school-Loc go Comp cause-Past  
‘John caused Mary to go to school.’

This verb ‘hata’ with the complementizer ‘tolok’ in (a) is called the causative verb, which is discussed later.

‘John began to study.’

- b. \*John-i [Mary-ka kongpuha] ki(-lul) sicakha-essta.  
 SUBJ COMP

Like the verbs *han-ta* and *sip-ta* in (6), the aspectual verb *sicakhata* has the grammatical function assignment {SUBJ, XCOMP} and its control relation can be ascertained by rule (4). However, its complementizer is *ki*, which introduces the noun phrase complement construction. So we can attach the accusative case marker *lul*. Aspectual verbs can also have the following construction modified by the relative clause.

- (9) John-i [( \*Mary-ka) kongpuha] nun kes-ul sicakha-essta.  
 Nom Nom study Comp N-Acc begin- Past

The complementizer *nun* is one for relative clause formation and the noun *kes* is the head noun modified by relative clause, but the grammatical function of the whole clause *kongpuha-nun kes* is XCOMP because it cannot have the lexical NP in the subject position.

Note the following psychological verbs *tulyupta* “be afraid of”, *musepta* “be afraid of” and *pukkulepta* “be ashamed of”

- (10) a. John-i [( \*Mary-ka) hakkyo-ey ka] ki-ka tulyupta.  
 Nom Nom school-Loc go Comp-Nom afraid  
 ‘John is afraid of going to school.’  
 b. John-i [( \*Mary-ka) hakkyo-ey ka] ki-ka pukklupta.  
 ashamed  
 ‘John is ashamed of going to school.’

The psychological verbs in (10) form what is called the double subjective construction. But its grammatical function assignment is {SUBJ, XCOMP} and its control equation is ( $\uparrow$  SUBJ) = ( $\uparrow$  XCOMP SUBJ) like the aspectual verb in (8). In this case, its complement is restricted to the untensed non-finite clause. Note the following example:

- (11) John-i [(Mary-ka) hakkyo-ey ka-ss] ton kes-i tulyupta.  
 Past Comp N-Nom  
 ‘John is afraid of (Mary’s) having been to the school.’

The complement in (11) is the tensed clause and it can have the overt

subject, which is the case of the anaphoric control.

Note the following examples:

- (12) a. John-i [Mary-ka iki] tolok ha-essta.  
 Nom Nom win Comp cause-Past  
 'John caused Mary to win.'
- b. John-i Mary-lul [iki] tolok ha-essta.  
 Nom Acc
- (13) a. John-i [Mary-ka hakkyo-ey ka'-nta] ko puleweha-essta.  
 Nom Nom school-Loc go-Pres Comp envy-Past  
 'John envied Mary her going to school.'
- b. John-i Mary-lul [hakkyo-ey ka-nta] ko puleweha-essta.  
 Nom Acc

These seem to be similar to the raising construction like the English verb 'believe'.<sup>4</sup> Then, the raised sentences like (12b) and (13b) have the set of GFs {SUBJ, OBJ, XCOMP}, and the rule (4) introduces the second equation '(↑OBJ)=(↑XCOMP SUBJ)'. However, the Korean raised sentences may permit the pronoun as the subject of the complement although they are very unnatural.<sup>5</sup>

- (14) a. ?John-i Mary-lul [kuney-ka iki] tolok ha-essta.  
 Nom Acc she-Nom win Comp cause-Past
- b. ?John-i Mary-lul [kuney-ka hakkyo-ey ka-nta] ko puleweha-essta.  
 Nom Acc she-Nom school-Loc go-Pres Comp envy-Past

<sup>4</sup> In LFG, the raising is a functional control relation.

(a) John believes that Mary will win the game.

(b) John believes Mary to win the game.

The raising verb *believe* has the following lexical entry (c), which is transitive having a nonthematic object. Then the lexical rule of functional control (4) will expand this entry with the second control equation shown in (d).

(c) (↑PRED)='believe<(SUBJ)(XCOMP)>(OBJ)'

(d) (↑OBJ)=(↑XCOMP SUBJ)

<sup>5</sup> In similar case, Chomsky(1981:65) proposes 'Avoid Pronoun Principle' as imposing a choice of PRO over an overt pronoun:

(a) John would much prefer [(his) going to the movie].

If the examples in (14) are acceptable in Korean, they have the emphatic reading (no one other than Mary).

If this construction is acceptable in Korean, its complement is not XCOMP but COMP. Then it is not the case of the functional control but that of the anaphoric control.

Note the following examples:

- (15) a. John-i Mary-eyke [(?kuney-ka) kongpuha] ki-lul chungkoha-essta.  
 Nom Dat she-Nom study Comp-Acc advise-Past  
 'John advised Mary to study.'
- b. John-i Mary-eyke [(?kuney-ka) kongpuha] l kes-ul seltukha-essta.  
 Nom Dat she-Nom study Comp N-Acc persuade-Past  
 'John persuaded Mary to study.'

These Korean predicate *chungkohata* 'advise' and *seltukhata* 'persuade' seem to have the set of GFs like {SUBJ, OBJ2, XCOMP}. Then, the rule (4) introduces the first equation '(↑OBJ2)=(↑XCOMP SUBJ)' as the control equation of (15). These sentences can have the following structure with the imperative ending.<sup>6</sup>

- (16) a. John-i Mary-eykey [(?kuney-ka) kongha-la] ko chungkoha-essta.  
 Nom Dat she-Nom study-Imp Comp advise-Past
- b. John-i Mary-eykey [(?kuney-ka) kongha-la] ko seltukha-essta.  
 Nom Dat she-Nom study-Imp Comp persuade-Past

However, like the raising verb in (14), these Korean predicates may permit the overt pronoun as the subject of the complement, which means that the grammatical function of their complement is not XCOMP but COMP and they are not the cases of the functional control but those of

<sup>6</sup> The mood as well as the complementizer is very important to determine the control relation in Korean, which was discussed in Kim(1986:b). Note the followings:

- (a) John-i Mary-eykey [ka-keyssta]ko malha-essta.  
 Nom Dat go-would Comp say-Past  
 'John told Mary that he would go.'
- (b) John-i Mary-eykey [ka-la]ko malha-essta.  
 go-Imp  
 'John asked Mary to go.'

The complement in (a), which includes the morpheme 'keyss' representing the subject intention, is controlled by the subject. On the other hand, the complement in (b), which includes the morpheme 'la' representing the imperative mood, is controlled by the object.

the anaphoric control. This means that there is not the functionally controlled XCOMP controlled by the OBJ and OBJ2 in Korean. They will be discussed in the next section.

## 2.2. Constructionally Induced Functional Control

This case of functional control involves SUBJ of XADJ as the controlled element. Since XADJ is an optional argument of the predicate, its control is determined by a rule which annotates a control relation to a C-structure. In other words, the controlled clause is XADJ, and the controller is specified by a functional schema of the form  $(\uparrow G) = (\downarrow \text{SUBJ})$ , which is added to the functional annotations of the adjunct. Because the control equation is syntactically, rather than lexically, specified, it is not constrained by the restrictions on lexical encoding of functions. This means that a wider range of controller is available in principle. The following is the constructional rule of functional control proposed by Bresnan(1982).

### (17) Constructional Rule of Functional Control

If  $(\uparrow \text{XADJ}) = \downarrow$  is a syntactically encoded functional annotation, conjoin it to the disjunction of the schemata  $\{(\uparrow G) = (\downarrow \text{SUBJ}) \mid G \in I\}$

The set of possible controller function appears to be a parameter of variation across language. In English,  $I = \{\text{SUBJ}, \text{OBJ}, \text{OBJ2}, \text{OBL}\}$ .

Note the following example.

- (18) a. Mary passed John in the hall yesterday drunk as usual.  
 b. John was passed by Mary in the hall yesterday drunk as usual.

In contrast to the cases of lexically controlled state complements, the controller of these predicative adjuncts is not restricted to one thematic argument of the verb. In (18a), either the SUBJ, *Mary*, or the OBJ, *John*, can be the controller of *drunk as usual*, although there may be a slight preference to interpret *Mary* as the controller. In (18b), an OBL can control the adjunct, for it is possible for *drunk as usual* to be predicated of the OBL<sub>AG</sub> *Mary* as well as the SUBJ *John*.

Note the following examples, which are the cases obligatorily controlled by the subject of the clause.

- (19) a. Sure of winning, Mary entered the competition yesterday.



- b. #Sure of winning, the competition was entered by Mary yesterday.
- (20) a. #Sure of winning, the competition excited Mary yesterday.  
 b. Sure of winning, Mary was excited by the competition yesterday.

In these examples, XADJ, *Sure of winning*, is controlled by the SUBJ of the sentence; in (19b) and (20a), the SUBJ denotes an inanimate entity, *the competition*, which is semantically anomalous (signaled by #). This SUBJ-control is a marked property of the clause initial XADJ construction shown in (21).

$$(21) S \rightarrow \left( \begin{array}{c} \text{AP} \\ \left\{ \begin{array}{l} (\uparrow \text{XADJ}) = \downarrow \\ (\uparrow \text{SUBJ}) = (\downarrow \text{SUBJ}) \end{array} \right\} \end{array} \right) (\uparrow \text{SUBJ}) = \downarrow \quad \uparrow = \downarrow \text{VP}$$

Since the functional controller of the adjunct has been marked in the clause initial construction given in (21), the rule of constructionally induced functional control (17) is blocked from applying there. Note the example of a purpose adjunct in Korean:

- (22) [kongpuha-le], John-i hakkyo-ey ka-ssta  
 study-Comp Nom school-Loc go-Past  
 XADJ SUBJ OBL<sub>LOC</sub>  
 'In order to study, John went to school.'

In (22), the controller of the purpose adjunct *kongpuha-le* is the matrix SUBJ John. This can be stated by conjoining the schemata  $(\uparrow \text{SUBJ}) = (\downarrow \text{SUBJ})$  as the disjunction of the adjunct as shown in (21). The predicate of XADJ doesn't have the tense marker. It is accompanied by the complementizer such as *le/koza* 'in-order-to'. However, the position of Korean purpose adjunct is not restricted as seen in (23).

- (23) a. John-i [kongpuha-le] hakkyo-ey ka-ssta.  
 SUBJ XADJ OBL<sub>LOC</sub>  
 b. John-i hakkyo-ey [kongpuha-le] ka-ssta.  
 SUBJ OBL<sub>LOC</sub> XADJ

This purpose adjunct does not permit the lexical NP or pronoun as the subject. This means it must not be a closed grammatical function ADJ, which is an anaphoric control, but the functionally controlled XADJ.

- (24) a. \*[Mary-ka kongpuha-le], John-i hakkyo-ey ka-ssta.  
 ADJ SUBJ OBL<sub>LOC</sub>
- b. \*[ku-ka kongpuha-le], John-i hakkyo-ey ka-ssta.  
 he  
 ADJ SUBJ OBL<sub>LOC</sub>

As Bresnan(1982) noted, lexical NPs cannot appear as the subjects of functionally controllable clauses. Moreover, functionally controllable clauses cannot have split antecedents. In contrast, anaphorically controllable clauses may have lexical NP subject, and they may have split antecedents.

- (25) \*[soro soro kongpuha-le], John-i Mary-eyke ka-ssta.  
 each other study-Comp Nom Goal go-Past  
 'In order to study each other, John went to Mary.'
- (26) a. [John-i ilcik wa-so], Mary-ka ku-lul manna-ssta.  
 Nom early come-Comp Nom he-Acc meet-Past  
 'John coming early, Mary met him.'
- b. [soro soro ilcik wa-so], Mary-ka ku-lul manna-ssta.  
 each other  
 'Coming early each other, Mary met him.'

The purpose adjunct in (25) cannot have split antecedents as predicted. However, the conditional adjunct in (26) permits the lexical NP as the subject and can have split antecedents because it is a closed ADJ and anaphorically controlled clause.

Other examples of constructionally induced functional control in Korean are the adjuncts with the complementizer such as *myunso* 'while' and *chaelo* 'with'.<sup>7</sup>

<sup>7</sup> The complementizer 'chaelo' has the following exception:

- (a) [mun-i yullin]chaelo, ku bus-ka tallyu-ssta.  
 door-Nom open Comp the Nom run-Past  
 'With its door opening, the bus ran.'

The example in (a) permits the lexical NP as the subject of its complement unlike in (28b). It may have something to do with the close relationship with the matrix subject as an anonymous LR reviewer suggested. Compare it with the following:

- (b) [mun-lul yun]chaelo, ku bus-ka tallyu-ssta.  
 Acc open  
 'With its door open, the bus ran.'

- (27) a. [sunmul-ul · sa-myunso], John-i Mary-lul pulre-ssta.  
 present-Acc buy-Comp Nom Acc call-Past  
 XADJ SUBJ OBJ  
 'While buying a present John called Mary.'
- b. \*[Bill-i/ku-ka sunmul-ul sa-myunso] John-i Mary-lul pulre-ssta  
 ADJ SUBJ OBJ
- (28) a. [sokos-ul ipun-chaelo] John-i Mary-lul manna-ssta.  
 underwear-Acc wear-Comp Nom Acc meet-Past  
 XADJ SUBJ OBJ  
 'With his underwear on, John met Mary.'
- b. \*[Bill-i/ku-ka sokos-ul ipun-chaelo], John-i Mary-lul manna-ssta  
 ADJ SUBJ OBJ

As noted above, functionally controlled XADJ does not permit the lexical NP or pronoun as the subject and cannot have split antecedents. However, the possible controller of XADJ seems to be only SUBJ in Korean unlike in English.<sup>8</sup> Compare the following Korean example with the corresponding English one.

- (29) a. Mary-ka John-ul [sul-ul masin-chaelo] manna-ssta.  
 Nom Acc beer-Acc drink-Comp meet-Past  
 SUBJ OBJ XADJ  
 'With her drunk by beer, Mary met John.'
- b. Mary met John drunk as usual.

<sup>8</sup> Note the following:

- (a) John-i pang-ul [pin] chaelo tu-essta.  
 Nom room-Acc empty Comp leave-Past  
 'John left the room empty.'

If the example in (a) is the case of the functionally controlled adjunct, the constructionally induced functional control in Korean can have the object control. However, (a) is the case of the functionally controlled argument. Note the following examples presented by Peter(1985:170):

- (b) Fred struck me as a fool.  
 (c) Louise enjoyed sports as a girl.  
 (d) I caught Marcia walking the dog.  
 (e) I found the money walking the dog.

In (b) and (d), the controlled phrase is an XCOMP argument of the verb. On the other hand, in (c) and (e), it is an XADJ. (Example (d) also has a subject-controlled XADJ interpretation for 'walking the dog'.)

As noted above, the English example in (29b) is ambiguous since the controller of *drunk as usual* can be either SUBJ *Mary* or OBJ *John*. But the Korean example in (29a) is not ambiguous since the controller of *sul-ul masin-chaelo* can be only SUBJ *Mary*.

### 3. Anaphoric Control

Anaphoric control relations arise from the presence of a functional anaphor('PRO') which is not expressed in a C-structure. The functional anaphor is created by an optional functional schema of the form  $(\uparrow G \text{ PRED}) = \text{'PRO'}$  for any function G. Since  $((G \uparrow \text{ PRED}) = \text{'PRO'})$  lacks its own lexical entry as a null category, it must be introduced as part of the lexical entry of a lexical form that governs G, and G must be a subcategorizable function. The constraints on lexical encoding of functions further restrict G to be one of the set of semantically unrestricted functions {SUBJ, OBJ, OBJ2}, which is a language-particular parameter. Bresnan(1982) introduces the following rule.

(30) Rule of Functional Anaphora

For all lexical entries L, for all  $G \in \mathcal{A}$ , assign the optional pair of equations  $\{((\uparrow G \text{ PRED}) = \text{'PRO'}), (\uparrow \text{FIN}) =_c \alpha\}$  to L.

The rule of functional anaphora for English is derived by fixing the parameters  $\alpha = -$  and  $\mathcal{A} = \{\text{SUBJ}\}$ . Thus the functional anaphor 'PRO' arises in English only as the subject of a nonfinite verb (infinitive or gerund). In Korean, however,  $\mathcal{A}$  seems to be the set of all GFs, and  $\alpha$  is either + or - since the functional anaphor 'PRO' in Korean can arise as any grammatical function of both tensed and untensed clauses.

(31) a. John-i [PRO Mary-lul po-wassta] ko malha-essta.  
 Nom Acc see-Past Comp say-Past

'John said that PRO saw Mary.'

b. John-i [Mary-ka PRO po-wassta] ko malha-essta.  
 Nom Nom see-Past Comp say-Past

'John said that Mary saw PRO.'

(32) a. John-i [PRO Mary-lul salangha] key ha-essta.  
 Nom Acc love Comp cause-Past

- 'John caused PRO to love Mary.'
- b. John-i [Mary-ka PRO salangha]key ha-esta.  
 Nom Nom love Comp cause-Past  
 'John caused Mary to love PRO.'

In what follows, the functional anaphor in the subject position of Korean complement or adjunct clauses will be discussed.

### 3.1. Anaphoric Control and Its Related Principle

In LFG, the functional anaphor 'PRO' is distinguished from the expressed definite pronoun by the feature called U (for *unexpressed morphologically*). The functional structures for 'PRO' and 'her' will therefore resemble (33a, b).

- (33) a.  $\left[ \begin{array}{cc} \text{PRED} & \text{'PRO'} \\ \text{U} & + \end{array} \right]$
- b.  $\left[ \begin{array}{cc} \text{PRED} & \text{'PRO'} \\ \text{U} & - \\ \text{GEND} & \text{FEM} \\ \text{NUM} & \text{SG} \\ \text{PERS} & 3 \\ \text{CASE} & \text{ACC} \end{array} \right]$

Note the following example:

- (34) a. Mary wishes to vote.  
 b. Mary wishes for her to vote.

The [+U] anaphor ('PRO') in (34a) is bound to the SUBJ *Mary*, while the [-U] anaphor ('her') in (34b) cannot be bound to the SUBJ. This is explained by the following Obviation Principle.

#### (35) Obviation Principle

If P is the pronominal SUBJ of an obviative clause C, and A is a potential antecedent of P and is the SUBJ of the minimal clause nucleus that properly contains C, P is or is not bound to A according to whether P is + or - U, respectively.

Note the Korean examples:

- (36) a. [PRO taehak-ey tuleka] tolok, John-i chaesun- ul ta ha-essta.  
           college-Loc enter Comp Nom best all do-Past  
           ‘In order to enter college, John did his best.’
- b. [ku-ka taehak-ey tuleka] tolok, John-i chaesunn-ul ta ha-essta.  
           he-Nom  
           ‘In order for him to enter college, John did his best.’

The [+U] anaphor (‘PRO’) in (36a) can be bound to the SUBJ ‘John’, although we cannot exclude the possibility that it can also refer to a specific extrasentential referent.<sup>9</sup> But the [-U] anaphor (‘ku-ka’) in (36b) cannot be bound to the SUBJ. This phenomenon seems to be restricted to the clause with the untensed predicate in Korean.

- (37) a. [ku-ka/PRO nuckey wa-ss]ki ttaemuney, John-i yatan maca-ssta.  
           he-Nom late come-Past because Nom scold get-Past  
           ADJ SUBJ  
           ‘Because he came late, John was scolded.’
- b. John-i [ku-ka/PRO nuckey wa-ss]ki ttaemuney, yatan maca-ssta.  
           SUBJ ADJ

The Korean example in (37a) seems to show the same phenomenon seen in (36). However, the pronoun ‘ku-ka’ can refer to the SUBJ if it follows the antecedent as in (37b), although there may be a slight preference to interpret it to a specific contextual referent.

The precedence relation is concerned in the functional anaphor as well as in the pronoun in Korean.

- (38) a. John-i Mary-lul [PRO nuckey wa] so mos manna-ssta.  
           Nom Acc late come for not meet-Past  
           SUBJ OBJ ADJ

<sup>9</sup> In many cases of the control in Korean, the [+U] anaphor (‘PRO’) can refer to a specific extrasentential referent.

Speaker A: [Mary-ka ka-nta]ko nu-ka malha-ess-ni?  
           Nom go-pres Comp who-Nom say-Past-Q

‘Who said that Mary would go?’

B: John-i [PRO ka-nta]ko malha-essta.

‘John said that she would go.’

In the example of the speaker B, the [+U] anaphor (‘PRO’) refers to ‘Mary’ the theme of the context. It usually refers to the matrix subject ‘John’ without this context.

'John did not meet Mary for his or her late coming.'

- b. John-i     Mary-lul [PRO o ] ca maca     manna-ssta.  
       Nom        Acc        come, as soon as meet-Past  
 SUBJ     OBJ        ADJ

'John met Mary on his or her coming.'

The sentences in (38) are ambiguous since the functional anaphor 'PRO' can refer to either the SUBJ 'John' or the OBJ 'Mary'. Compare the following examples:

- (39) a. [PRO nuckey wa] so, John-i     Mary-lul mos manna-ssta.  
           late     come for        Nom        Acc not meet-Past  
       ADJ                                SUBJ        OBJ

'For coming late, John did not meet Mary.'

- b. John-i, [PRO nuckey wa]so, Mary-lul mos manna-ssta.  
 SUBJ     ADJ                                OBJ

- (40) a. [PRO o ] ca maca,     John-i     Mary-lul manna-ssta.  
           come, as soon as        Nom        Acc meet-Past  
       ADJ                                SUBJ        OBJ

'On coming, John met Mary.'

- b. John-i, [PRO o]ca maca, Mary-lul manna-ssta.  
 SUBJ     ADJ                                OBJ

Unlike the example in (38), the functional anaphor 'PRO' in (39, 40) cannot refer to the OBJ 'Mary'.

### 3.2. Lexically Determined Anaphoric Control

The Obviation Principle (35) does not always apply to the anaphoric control. Note the following examples:

- (41) a. Louise signaled to Ted to follow her.  
       b. Louise signaled to Ted for him to follow her.

Examples (41) show that, contrary to the prediction of the Obviation Principle, both the functional anaphor 'PRO' and the pronoun 'him' can refer to 'Ted'. This is because the functional anaphor in (41a) is controlled by the GOAL argument of the matrix predicate. It means that there may be a lexically determined anaphoric control. Note the Korean examples:

- (42) a. John-i Mary-eykey [PRO kongpuha]kilo yaksokha-essta.  
 Nom Dat study Comp promise-Past  
 ‘John promised Mary to study.’
- b. John-i Mary-eykey [ku-ka kongpuha]kilo yaksokha-essta.  
 he-Nom  
 ‘John promised Mary that he would study.’
- c. John-i Mary-eykey [caki-ka kongpuha]kilo yaksokha-essta.  
 self-Nom  
 ‘John promised Mary that he himself would study.’

Though the predicate of complement is untensed, lexical NPs or pronoun can appear as the subject of the complement. It means the predicate *yaksokhata* ‘promise’ is an anaphoric control verb unlike English. But the Obviation Principle is inapplicable to (42) as seen in (41). Moreover, reflexives can appear as the subject of complement like (42c). Since the matrix subject ‘John’ is semantically or thematically determined as a possible antecedent of the pronominal SUBJ of the COMP in (42), the functional anaphor ‘PRO’ in (42a), the definite pronoun ‘ku’ in (42b), and the reflexive ‘caki’ in (42c) can refer to the same referent ‘John’.

Note the following example:

- (43) a. Mary-ka John-eykey [PRO/ku-ka kongpuha]ki-lul pala-ssta.  
 Nom Dat he-Nom study Comp-Acc want-Past  
 SUBJ OBJ2 COMP  
 ‘Mary wanted John to study.’
- b. Mary-ka John-eykey [PRO/ku-ka kongpuha]ki-lul yokuha-essta.  
 Nom Dat he-Nom study Comp-Acc request-Past  
 SUBJ OBJ2 COMP  
 ‘Mary requested John of his studying.’

The Obviation Principle is also inapplicable to (43) since the OBJ2 ‘John’ is semantically or thematically determined as the possible antecedent of the pronominal SUBJ of the COMP. This lexically determined anaphoric control does not seem to be restricted to the COMP with untensed predicate in Korean.



- (44) a. John-i      Mary-eykey [PRO/ku-ka    kongpuha-keyssta]ko  
                   Nom            Dat                    he-Nom study-would      Comp  
 yaksokha-essta.  
 promise-Past  
 'John promised Mary that he would study.'
- b. Mary-ka      John-eykey [PRO/ku-ka    kongpuha-yataynta]ko  
                   Nom            Dat                    he-Nom study-should      Comp  
 yokuha-essta.  
 request-Past  
 'Mary requested that John should study.'

#### 4. Summary and Conclusion

So far the functional control and the anaphoric control as found in Korean have been discussed.

The functionally controlled clause in Korean is defined as the complement or the adjunct lacking its overt subject in C-structure, which is designated by the open grammatical function XCOMP or XADJ. The XCOMP is the lexically induced functional controlled clause since its control equation is part of a lexical entry. The XADJ is the constructionally induced functional controlled clause since its control equation is a C-structure rule annotation. At first, the lexically induced functional control is found in the auxiliary-like predicate such as *halyuko hata*(try), *hako sipta*(wish) and *haci annunta* (not). It is also found in the aspectual predicate such as *sicakhata*(begin), *kaesokhata*(continue) and *cungtanhata*(stop) and in the psychological predicate such as *tulyupta*(be afraid of), and *pukkulepta*(be ashamed of). Secondly, the constructionally induced functional control is found in the adjunct with the complementizer such as *le/koza*(in-order-to), *myunso*(while) and *chaelo*(with). Unlike in English, it is controlled only by the SUBJ.

The anaphorically controlled clause in Korean is defined as the complement or the adjunct that may have its overt subject in C-structure, which is designated by the closed grammatical function COMP or ADJ. At first, it is noted that the Obviation Principle is applied to only some untensed adjunct clause, and the precedence relation is also concerned in anaphoric control. Secondly, it is noted that there is some anaphoric control case to which the Obviation Principle is inapplicable since its controller is determined

by the semantic or thematic structure of the matrix predicate. This lexically determined anaphoric control is not restricted to the COMP with untensed predicate in Korean.

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**ABSTRACT**

## Lexical Functional Grammar and Control in Korean

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This paper deals with the problem of control in Korean within the framework of a Lexical Functional Grammar (LFG, henceforth). In LFG, there are two major classes of control; functional control and anaphoric control. Each case of control phenomena as found in Korean is discussed. At first, functionally controlled clauses in Korean are defined as the complement or the adjunct clauses lacking their overt subject in C-structure. So they have open grammatical functions XCOMP or XADJ. Their control relation is expressed by a control equation. Secondly, anaphorically controlled clauses in Korean are defined as the complement or the adjunct clauses that may have their overt subject in C-structure. That is, they have closed grammatical functions COMP or ADJ. This paper shows that there is another kind of anaphoric control in Korean; lexically determined anaphoric control.

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