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270

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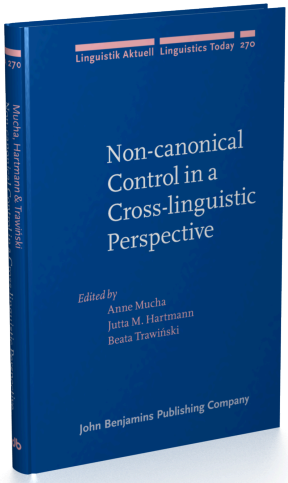

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On the obligatory versus no control split in Korean

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In Korean, Obligatory Control may, under certain conditions, fail to obtain. We present non-canonical cases of logophoric object control where (1) movement of the control clause, and (2) an overt infinitival subject give rise to configurations unexpectedly lacking the Obligatory Control signature; complements to logophoric object control verbs thus exhibit an alternation between Obligatory Control and No Control. In the No Control case, however, the embedded subject remains subject to the restriction that it cannot refer to the matrix AUTHOR. We model the Obligatory versus No Control split derivationally, and show that control complementizers encode information sensitive to attitudinal function.

1. Introduction

Control is an interpretive dependency between an argument of a matrix clause and the subject of an embedded clause, where – canonically – the reference of an overt controller determines the reference of a null controllee. While canonical cases of Obligatory Control (**OC**) have so far been well-studied, the nature and analysis of No Control (**NC**) are still subject to substantive discussion.

The cases we will be concerned with involve logophoric OC, as laid out in Landau (2015). Logophoric OC arises in complements to attitude verbs, where the complement is interpreted relative to the mental states of a participant. It is further characterized by an obligatory *de se* attitude holding between the controller and the controllee, modelled in Landau (2015) as a logophoric center in the periphery of the control clause, rather than as an inherent property of PRO.

In Korean, logophoric OC involves a matrix control verb and an infinitival complement clause headed by one of various complementizers.[1] (1a) and (1b) are examples of logophoric subject and object control, respectively:

1. Uncited Korean data were elicited with consultants via online elicitations. Many thanks for their patience and helpfulness. Like our consultants, this paper's first author is also a native speaker of Korean.

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(1) a. *Subject control*
Jane$_i$-i Mary$_j$-eykey [e$_{i/*j/*k}$ party-lul ttena-kilo] yaksokhayssta
Jane-NOM Mary-DAT party-ACC leave-COMP promised
'Jane promised Mary to leave the party.' OC

b. *Object control*
Jane$_i$-i Mary$_j$-lul [e$_{*i/j/*k}$ party-lul ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC party-ACC leave-COMP persuaded
'Jane persuaded Mary to leave the party.' OC

Focusing on non-canonical cases of logophoric object control, we investigate the presence of OC versus NC as a function of (1) the position of the control clause, and (2) the overtness of the embedded subject.[2] While previous work (Polinsky & Kwon 2006; Polinsky et al. 2007; Kwon et al. 2010) has reported on contrasts between OC and NC in connection with these two parameters, our novel contribution lies in showing that these contrasts are derivational, i.e. that either movement of the control clause, or an overt infinitival subject, or both give rise to a configuration in which OC cannot obtain, such that NC obtains instead; effectively, OC may thus be bled derivationally. So while the absence of OC has been reported in connection with surface constituent order, that its absence may result from the movement of the control clause is, to our knowledge, hitherto unreported.

Moreover, we show that what is special about control complementizers in Korean is their orientation towards attitudinal function, imposed on the reference of the embedded subject. Regardless of whether OC or NC obtains, the object-control complementizer bars the embedded subject position from referring to the attitude holder. By contrast, subject-control complementizers force this position to refer to the attitude holder.

This paper is structured as follows: Section 2.1 provides an overview of control complementizers in Korean; Section 2.2 explores the distribution of OC and NC as affected by the position of the control clause; in Section 2.3, we show that control complementizers are oriented towards attitudinal function; in Section 2.4, we show that overt subjects in the control clause lead to NC; in Section 3, we provide an analysis of the data; in Section 4, we discuss open issues including subject control, optional control shift due to modality and some predictions; Section 5 concludes the paper.

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2. In the literature, the term NOC 'Non-Obligatory Control' is used to describe null logophoric subjects. Since we will be concerned with positions allowing (null or overt) subjects with free reference – next to canonical null OC subjects – the relevant distinction for us is between OC 'Obligatory Control' and NC 'No Control'. We thank two reviewers for pointing out the correct use of these terms.

2. Data

In Korean, control verbs can select both infinitival and finite complements. The former are headed by one of various control complementizers: *-kilo, -lyeko, -koca, -tolok* (Kim 1994; Cormack & Smith 2004; Choe 2006; Madigan 2008; Park 2011). Yang (1982) is the first to report that OC may obtain in finite contexts (see Gamerschlag (2007); Lee (2009); Park (2011); Sisovics (2018) for other studies). Overt lexical items can be locally controlled (Yang 1985; Madigan 2008), and backward control has been reported to be possible (Monahan (2005); a.o.).[3] Based on Park (2011)'s diagnostics for the finiteness of complements, we take those complements headed by *-kilo, -lyeko, -koca, -tolok* to be infinitival control complements.[4]

In this section, we present Korean infinitival control, and how OC may be lost depending on the position of the control clause. We also show how each complementizer imposes an orientation toward *attitudinal function,* even when OC is lost and the embedded subject can otherwise freely refer.

2.1 Control complementizers

In Korean, different classes of control verbs select for complement clauses headed by distinct complementizers: subject-control verbs select either *-kilo, -lyeko* or *-koca,* sometimes allowing more than one option;[5] object-control verbs invariably

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3. We leave the connection of backward control to our work to future research.

4. Park (2011: 3) provides diagnostics to distinguish the finiteness of complement clauses, as follows:

(i) Infinitival clauses are distinguishable from finite clauses, if
  a. they do not allow for tense or aspectual markers;
  b. they do not permit the presence of clause-typing markers;
  c. they cannot be uttered without being embedded.

According to these diagnostics, -tolok-clauses are infinitival, as they do not meet the requirements in (ib) and (ic), unlike finite control complements in (ii);

(ii) Jane$_i$-i Mary$_j$-eykey [e$_{*i/j/*k}$ party-lul ttena-la-ko] seltukhayssta
Jane-NOM Mary-DAT party-ACC leave-IMP-COMP persuaded
'Jane persuaded Mary that she should leave the party.'

5. Subject-control complementizers share similar lexical meanings: *-kilo* means 'to the result that' / 'leading to', and *-lyeko* and *-koca* mean 'with the intention of' / 'in order to'. Nonetheless, we return to a notable difference between these complementizers in Section 5. Thanks to a reviewer for raising this issue.

require the complementizer *-tolok*.[6] A non-exhaustive list of Korean control verbs and the complementizers they select for is given in Table 1:

Table 1. Control verbs and their complementizers

Subject control	***-kilo***	***-lyeko***	***-koca***	***-tolok***
kyelsimha 'decide, determine'	✓	✓	✓	
keylcengha 'decide'	✓	✓		
kyeyhoykha 'plan'	✓	✓	✓	
yaksokha 'promise'	✓			
ayssu 'endeavor'		✓		
cakcengha 'intend'		✓		
nolyekha 'try'		✓	✓	
huymangha 'hope'			✓	
pala 'want'			✓	
Object control	***-kilo***	***-lyeko***	***-koca***	***-tolok***
ceyanha 'propose'				✓
cwungkoha 'advise, counsel'				✓
kwenkoha 'advise, urge, recommend'				✓
myenglyengha 'order'				✓
pwuthakha 'ask'				✓
seltukha 'persuade'				✓
yochengha 'request'				✓
yokwuha 'demand, request'				✓

2.2 Base and inverse order

Throughout, we will refer to the infinitival clause whose subject position is canonically null and obligatorily controlled by a matrix argument as the *control clause* or *complement (clause),* although we will also consider cases where this position is neither null nor controlled. Similarly, we will use *control configuration* to include all configurations which should give rise to control given their structural properties, even though we will show this to not always be the case. As for constituent order, we will refer to the canonical order of control constructions, in which the control clause follows the matrix object, as the *base order,* and the non-canonical order, in which it precedes the matrix object, as the *inverse order.*

6. *Tolok* is translated as 'so that' or 'to the extent that'. Several works have made the claim that *tolok* can function as either a complementizer or a subordinator of adjunct clauses to convey the degree of a resulting state, purpose and a temporal endpoint (Park 2011: 153–155). *Tolok* is also found in periphrastic causative constructions.

In the base order in (2), the embedded subject position has all the expected logophoric OC properties: it must be bound by the closest c-commanding nominal, i.e. the matrix object *Mary,* must be interpreted *de se,* and forces a sloppy reading under VP-ellipsis.[7] In the inverse order (3), the embedded subject lacks these OC properties, hence NC obtains instead.[8] Despite the general disruption of OC in the inverse order, however, the embedded subject position remains subject to the restriction that it cannot refer to the matrix subject *Jane* in (3):

(2) *Base order*
Jane-i$_i$ Mary-lul$_j$ [e$_{*i/j/*k}$ hakkyo-lul ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC school-ACC leave-COMP persuaded
'Jane persuaded Mary to leave school.' OC

(3) *Inverse order*
Jane-i$_i$ [e$_{*i/j/k}$ hakkyo-lul ttena-tolok] Mary-lul$_j$ seltukhayssta
Jane-NOM school-ACC leave-COMP Mary-ACC persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave school.' NC

As mentioned, the contrast between OC and NC with respect to the surface position of the controller and the control clause has been reported for object control in the literature (Polinsky & Kwon 2006; Polinsky et al. 2007; Kwon et al. 2010). By contrast, this effect is absent in inverse subject control configuations, as shown in (4), where OC is retained:

(4) *Subject control in the inverse order*
Jane-i$_i$$^{\text{AUTH}}$ [e$_{i/*j/*k}$ party-lul ttena-kilo] Mary-eykey$_j$ yaksokhayssta
Jane-NOM party-ACC leave-COMP Mary-DAT promised
'Jane promised Mary to leave the party.' OC

We return to subject control in Section 4.1, and now present a novel observation regarding the role of control complementizers in restricting the reference of the embedded subject.[9]

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7. We consulted 9 speakers to diagnose the obligatory *de se* reading. We constructed a scenario by slightly modifying the amnesia scenario from Hornstein (1999: 35–36), originally mentioned in Castañeda (1966).

8. A reviewer points out that the control verb 'persuade' may determine the implicativeness of the controlled event. Polinsky et al. (2007: 8) show a contrast of (non-)implicativeness between in the base and inverse order. However, as noted in their footnote 2, this contrast is very subtle. When the verb selects an infinitival complement, the controlled event is interpreted as non-implicative; the controlled event in finite complements, or infinitival complemements with deontic modality is interpreted as implicative. In other words, the implicativeness of the controlled event depends on the type of complement, rather than the control verb *per se.*

9. We are indebted to an anonymous reviewer for correctly pointing out the contrast between our observations and those in the previous literature.

2.3 The orientation of control complementizers towards attitudinal function

When a control complement is selected by an attitude verb, it carries logophoric information corresponding to the attitude context, in turn constituting part of the control dependency. The attitude context is a tuple consisting of four coordinates: ⟨X, Y, TIME, WORLD⟩ (Landau 2015: 33), where X and Y are bound by the ATTITUDE HOLDER, the matrix participant whose mental perspective is reported, and the ADDRESSEE, the matrix participant to whom this perspective is reported, respectively; following Landau (2015), we henceforth call the ATTITUDE HOLDER the AUTHOR. This context is evaluated relative to the epistemic or bouletic state of attitude holders in the reported situation, not the actual world (Landau 2015: 19). So under subject control verbs, the embedded subject is interpreted with respect to the matrix subject's perspective, whereas under object control verbs, it is interpreted with respect to the matrix object's perspective.

As shown in Section 2.2, the OC signature in logophoric object control is labile, preserved only in the base order. In the inverse order, NC obtains, such that the embedded subject refers freely – except to the matrix subject. We now show this restriction to actually be due to an anti-AUTHOR restriction associated with the object-control complementizer *-tolok,* rather than due to a restriction sensitive to grammatical function. In contrast, subject-control complementizers impose an AUTHOR restriction.

2.3.1 *The anti-AUTHOR restriction*

In the inverse order lacking OC, repeated in (5), the embedded subject behaves like a covert referential pronoun, i.e. *pro,* in that it is able to refer freely; yet it cannot refer to *Jane* in the matrix clause:

(5) *Inverse order*

Jane-i$_i^{\text{AUTH}}$	[e$_{*i/j/k}$	party-lul	ttena-tolok]	Mary-lul$_j$	seltukhayssta
Jane-NOM		party-ACC	leave-COMP	Mary-ACC	persuaded

'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave the party.' NC

While this restriction appears to be sensitive to grammatical function, it is actually sensitive to *attitudinal function* – i.e. the function of a participant within the attitude context. Specifically, the embedded subject in (5) cannot refer to the matrix subject *Jane* because *Jane* corresponds to the matrix AUTHOR. To see this, consider (6b), in which the matrix verb 'persuade' has been passivized. If the restriction in (5) were oriented towards grammatical function, we should expect the embedded subject in (6b) to be unable to refer to the matrix passive subject *Mary.* Yet (6b) is well-formed under co-reference between the embedded subject and the matrix

subject *Mary* – crucially, because *Mary* in (6b) no longer corresponds to the AUTHOR (but rather the EXPERIENCER). Moreover, if *-tolok* were syntactically oriented towards grammatical function, it should change to one of the subject-control complementizers (*-kilo, -lyeko, -koca),* also contrary to fact:

(6) *Passivization in Object Control*
a. Jane-i_i^{AUTH} Mary-lul_j [$e_{*i/j/*k}$ ttena-**tolok**] seltukhayssta
Jane-NOM Mary-ACC leave-COMP persuaded
'Jane persuaded Mary to leave.' OC
b. Mary-ka_i [$e_{i/*j}$ ttena-**tolok**] seltuk-toy-ess-ta
Mary-NOM leave-COMP persuade-become-PST-DECL
'Mary was persuaded to leave.' OC

2.3.2 *The AUTHOR restriction*

We further support our claim that *-tolok* is oriented towards attitudinal function by briefly turning to subject control. The verb 'promise', for example, requires the subject-control complementizer *-kilo* (7). In both the base (7a) and the inverse order (7b), the embedded subject can only refer to *Jane* in the matrix clause:

(7) a. *Base order*
Jane-i_i^{AUTH} Mary-eykey_j [$e_{i/*j/*k}$ party-lul ttena-kilo] yaksokhayssta
Jane-NOM Mary-DAT party-ACC leave-COMP promised
'Jane promised Mary to leave the party.' OC
b. *Inverse order*
Jane-i_i^{AUTH} [$e_{i/*j/*k}$ party-lul ttena-kilo] Mary-eykey_j yaksokhayssta
Jane-NOM party-ACC leave-COMP Mary-DAT promised
'Jane promised Mary to leave the party.' OC

Yet given that, unlike in object control, the inverse order in subject control retains the full OC signature, this fact is ambiguous between there being a restriction that the embedded subject refer to either the matrix subject, or the matrix AUTHOR. As above, matrix passivization reveals that *-kilo* is indeed oriented towards attitudinal function: in (8), the embedded subject cannot refer to the matrix subject *Mary,* but rather must refer to the AUTHOR (in this case *Jane,* expressed as an optional oblique):

(8) *Passivized Subject Control*
Mary-ka_i (Jane-ey uyhay_j) [$e_{*i/j/*k}$ party-lul ttena-kilo]
Mary-NOM Jane-DAT-by party-ACC leave-COMP
yaksok-toy-ess-ta
promise-become-PST-DECL
'Mary was promised to leave the party (by Jane).' OC

2.3.3 *Conditions on the anti-AUTHOR restriction*

The anti-AUTHOR restriction is not a property of the complementizer *-tolok* by itself, but rather of *-tolok* within a complementation configuration. This is evinced by the asymmetry between complement and adjunct clauses headed by *-tolok*; see Example (9):[10]

(9) Jane$_i$-i Mary$_j$-lul [e$_{*i/j/*k}$ party-lul Suzi-wa hamkkey ka-**tolok**]$_1$
Jane-NOM Mary-ACC party-ACC Suzi-and together go-COMP
[kulayse e$_{i/j/k}$ talun chinkwu-lul manna-**tolok**]$_2$ seltukhayssta
so different friend-ACC meet-COMP persuaded
'Jane$_i$ persuaded Mary$_j$ to go to the party with Suzi together so that she$_{i/j/k}$ meets different friends.'

In the first *-tolok*-clause, which functions as a complement to the control verb 'persuade', the null subject position is obligatorily controlled by the matrix object *Mary.* By contrast, the subject position in the second *-tolok*-clause, which is a matrix adjunct purpose clause, refers freely. Since both clauses are headed by *-tolok,* but differ in terms of their relation to the matrix clause, viz. complement versus adjunct, the anti-AUTHOR restriction must be a property of *-tolok* within a complement clause.[11]

The joint necessity of *-tolok* and complementation is further illustrated by nominalized clauses, which – while equally available as complements to the verbs *seltukha* 'persuade' and *yaksokha* 'promise' – lack OC, and also any form of orientation towards attitudinal function (10):

(10) *Nominalized complements*
a. Jane-i$_i^{\text{AUTH}}$ Mary-lul$_j$ [e$_{i/j/k}$ ttena-**ki**-lul] seltukhayssta.
Jane-NOM Mary-ACC leave-NMLZ-ACC persuaded
'Jane persuaded Mary of {her/someone's/the} leaving.'
b. Jane-i$_i^{\text{AUTH}}$ Mary-eykey$_j$ [e$_{i/j/k}$ ttena-**ki**-lul] yaksokhayssta
Jane-NOM Mary-DAT leave-NMLZ-ACC promised
'Jane promised Mary {her/someone's/the} leaving.'

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10. In (9), we choose an adjunct clause which can naturally be construed either high in the matrix or low in the control clause; we thank a reviewer for raising this issue.

11. Other languages like Japanese might exhibit a similar pattern, both in terms of (i) the absence of OC in the inverse order and (ii) the anti-AUTHOR restriction:

(i) *Japanese* (Takanobu Nakamura, p.c.)
a. Jane-ga$_i$ Mary-ni$_j$ [e$_{*i/j/*k}$ gakko-o tachisaru-yoo] susumeta
Jane-NOM Mary-DAT school-ACC leave-COMP persuaded
'Jane persuaded Mary to leave school.' *base order*
b. Jane-ga$_i$ [e$_{*i/j/??k}$ gakko-o tachisaru-yoo] Mary-ni$_j$ susumeta
Jane-NOM school-ACC leave-COMP Mary-DAT persuaded
'Jane$_i$ persuaded Mary$_j$ that *she*$_{*i/j/??k}$ leave school.' *inverse order*

2.4 Overt infinitival subjects

In Korean, the subject position of infinitival clauses may be overt.[12] In this section, we show that in object control, OC disappears when the subject position in the control clause is filled with an overt infinitival subject (**OIS**). Just like in the inverse order with a null infinitival subject, OC is lost when the embedded subject position is filled with an OIS.

The example in (11) shows a subject control clause with an overt pronominal or reflexive subject, marked with nominative case.[13,14] Just like the inverse order in subject control leaves OC intact, so does an OIS – the control clause in (11) exhibits OC:

(11) *Overt infinitival subjects in subject control*
Jane-i$_i$ [**caki/ku-ka**$_{i/*j}$ ttena-lyeko] nolyekhayssta
Jane-NOM self/(s)he-NOM leave-COMP tried
'Jane tried to leave.' OC (Borer 1989: 85)

In object control configurations, however, OC is lost when control clause hosts an OIS; NC obtains instead. Compare (12) and (13):

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12. In subject control, disjoint lexical DPs are ungrammatical in the embedded subject position:

(i) *Lexical DPs in subject control*
Jane-i$_i$ Mary-eykey$_j$ [Suzi-ka$_{*i/*j/k}$ ttena-kilo] yaksokhayssta
Jane-NOM Mary-DAT Suzi-NOM leave-COMP promissed.
Intended: 'Jane promised to Mary that Suzi will leave.

13. *ku* is a third person pronoun, formally identical to a demonstrative use (Kang 2015). The pronominal use of *ku* can be a complex morpheme: *ku* with a bound morpheme *-nye* 'female', which means 'that female'.

14. Korean has a rich anaphor inventory. The reflexive pronouns *caki* and *casin* can be used as local and long-distance anaphors (Yang 1983). It has been suggested that they are sensitive to logophoricity and must be anteceded by perspective holders in the sense of Sells (1987). While the complex anaphor *caki-casin* has been assumed to be a local anaphor in traditional analyses (Yoon 1989; Cole et al. 1990), it may be exempt from Condition A when logophoricity conditions are met (see Kim & Yoon (2009) and Ahn & Charnavel (2017) for experimental studies):

(i) John-un$_i$ [Mary-ka$_j$ caki$_{i>j}$/casin$_{i<j}$/caki-casin$_{*i/j}$-ul coahan-ta]-ko sayngkakhan-ta
John-TOP Mary-NOM self-ACC like-DECL-COMP think-DECL
'John thinks that Mary likes self.' modified from Ahn (2015: 6)

Ahn (2015) draws attention to the inanimate anaphor *cachey,* which is locally bound and subject to Condition A. However, its anaphoric nature is restricted to inanimate antecedents, so we cannot use it to test OC contexts.

(12) *Null infinitival subject + base order*
Jane-i$_i$ Mary-lul$_j$ [**e**$_{*i/j/*k}$ ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC leave-COMP persuaded
'Jane persuaded Mary to leave.' OC

(13) *Overt infinitival subject + base order*
a. Jane-i$_i$ Mary-lul$_j$ [**kunye-ka**$_{*i/j/k}$ ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC she-NOM leave-COMP persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave.' NC
b. Jane-i$_i$ Mary-lul$_j$ [**Suzi-ka**$_{*i/j/k}$ ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC Suzi-NOM leave-COMP persuaded
'Jane$_i$ persuaded Mary$_j$ that Suzi$_{*i/*j/k}$ leave.' NC

Because the OIS refers freely, except to the matrix AUTHOR, its effect on OC parallels that of an inverse control clause. So NC obtains whenever the control clause hosts an OIS, regardless of whether the control clause is in the base or inverse order, subject to the anti-AUTHOR restriction:

(14) *Overt infinitival subject + inverse order*
Jane-i$_i$ [**kunye-ka**$_{*i/j/k}$ ttena-tolok] Mary-lul$_j$ seltukhayssta
Jane-NOM she-NOM leave-COMP Mary-ACC persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave.' NC

Kwon et al. (2010: 304) report that the OIS in the base order is ungrammatical. We propose instead that this reported judgment is actually a matter of linguistic processing.[15] When there is a pause or an intervening item like an adjunct between the controller and the OIS, the sentence in (15b) becomes well-formed for speakers.[16]

(15) a. ?Chelswu-nun Yenghuy-lul$_i$ [kunye-ka$_i$ ttena-tolok] seltukhayssta
Chelswu-TOP Yenghuy-ACC she-Nom leave-COMP persuaded
'Chelswu persuaded Yenghuy to leave.'
b. Chelswu-nun Yenghuy-lul$_i$ [**kanunghan ppalli** kunye-ka$_i$ ttena-tolok]
Chelswu-TOP Yenghuy-ACC as.possible quick she-Nom leave-COMP
seltukhayssta
persuaded
'Chelswu persuaded Yenghuy to leave as quick as possible.'

15. We collected grammatical judgements for (15) from 12 native speakers.

16. As a reviewer points out, Cormack & Smith (2004: 70) also provide acceptable examples where the OIS is controlled by a dative argument. The reviewer points out that the case alternation on the controller might play a role in the OC-NC split. So far, we have observed that the case alternation is possible in object control with no difference regarding the OC-NC split, whereas in subject control (e.g., 'promise'-type) the dative argument cannot alternate with accusative case. Beyond this empirical observation, we have no explanation for this. However, our analysis does not hinge on it.

2.5 Interim summary

We have seen how control configurations behave with respect to two parameters, namely whether the control clause is in the base or inverse position, and whether or not it hosts an OIS. OC in object control is preserved only if the control clause is both in the base position and has a null subject. If the control clause is either in the inverse position, or has an OIS, or exhibits both of these properties, NC arises instead. In these NC cases, the embedded subject position thus behaves like a (null or overt) referential pronoun, referring freely except to the matrix AUTHOR. In contrast, OC in subject control is always retained, regardless of both the position of the control clause and the overtness of the embedded subject. Therefore, the embedded subject position in subject control behaves like a (null or overt) PRO which always refers to the matrix AUTHOR; note that by *overt PRO,* we mean an overt pronoun with all the properties associated with PRO, except for the fact that it is overt.[17] These results are summarized in Table 2:

Table 2. Summary of object and subject control

Order	**Object control†**		**Subject control‡**	
Subject	**Base**	**Inverse**	**Base**	**Inverse**
Null	OC	**NC**	OC	OC
	PRO	*pro*	PRO	PRO
Overt	**NC**	**NC**	OC	OC
	ref. pronoun	ref. pronoun	PRO	PRO

† The reading in the gray area is subject to the anti-AUTHOR restriction.
‡ The reading in the gray area is subject to the AUTHOR restriction.

3. Analysis

In this section, we argue that the control clause in the inverse order has moved (contra Polinsky & Kwon 2006 *et seq.*), providing arguments from selection, variable binding and extraction. We then present our analysis, which models the OC-NC split in Korean derivationally.

17. See Mensching (2000) and Szabolcsi (2009) for discussion of overt instances of PRO.

3.1 The control clause in the inverse order has moved

There are two possibilities regarding the status of the control clause in the inverse order: it is either an adjunct, or a complement to the control verb that has moved from its base into the inverse position. Based on the distribution of control complementizers, variable binding and extraction data, we show that it indeed originates as a complement to the verb, i.e. that the inverse order is related to the base order derivationally (in line with Cormack & Smith 2004, but *pace* Polinsky & Kwon 2006; Polinsky 2007 and Polinsky et al. 2007). Furthermore, we show that this movement does not reconstruct.

3.1.1 *The inverse control clause is selected by the control verb*

In the inverse order (16b), just like in the base order (16a), the complementizer heading the control clause can only be *-tolok,* i.e. the complementizer selected by object-control verbs like *seltukha* 'persuade'. If the control clause were a base-merged adjunct, no such restriction should hold. This indicates that the control clause must have started out in a local configuration with the control verb, so as to be selected by it.[18]

(16) a. *Base order*
Jane-i$_i$ Mary-lul$_j$ [e$_{*i/j/*k}$ ttena-**tolok/*kilo**] seltukhayssta
Jane-NOM Mary-ACC leave-COMP persuaded
'Jane persuaded Mary to leave.' OC

b. *Inverse order*
Jane-i$_i$ [e$_{*i/j/k}$ ttena-**tolok/*kilo**]$_h$ Mary-lul$_j$ t$_h$ seltukhayssta
Jane-NOM leave-COMP Mary-ACC persuaded
'Jane persuaded Mary to leave.' NC

3.1.2 *Extraction patterns*

We now provide extraction data constituting further evidence against an adjunct analysis of the inverse order. First, under an adjunct analysis, any extraction out of the control clause in the inverse order should be ill-formed, given its status as an adjunct. Consequently, a clause like (17) is wrongly predicted to be ill-formed:

(17) ?Jane-i$_i$ [e$_{*i/j/k}$ t$_m$ ttena-tolok]$_n$ [**ku party-nun**]$_m$ Mary-lul$_j$
Jane-NOM leave-COMP DEM party-TOP Mary-ACC
seltukhayssta
persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave the party.'

---

18. In subject control, the control clause likewise requires the same complementizer in both the base and the inverse order.

If the control clause in (17) were a base-merged adjunct, sub-extraction of its object, *ku party-nun,* in the form of topicalization to a position between the control clause and the matrix VP should be ruled out due to the general ban on lowering.[19] Alternatively, if it were a moved adjunct, (17) should equally be ruled out due to adjuncts being islands for extraction. Under the movement analysis proposed here, (17) is correctly predicted to be well-formed because the movement of the embedded object *ku party* precedes that of its remnant clause – i.e. the latter counter-bleeds the former. In the literature, such movement sequences instantiate what has been termed *Anti-Freezing* or *Remnant Movement* (Müller 1998).[20]

A second piece of extraction data used against the movement account comes from multiple scrambling. In Polinsky (2007), it is argued that Korean bans scrambling over an already scrambled constituent.[21] This is supposedly illustrated by the contrast in (18). (18a) shows the baseline, and in (18b), the embedded object *ku chayk-ul* has scrambled out into the matrix to clause-initial position. (18c), however, is claimed to be ill-formed due to the remnant clause scrambling over the object, which has itself previously scrambled:

(18) a. Chelswu-ka [Yenghi-ka ku chayk-ul ilkessta-ko] sayngkakhanta
C.-NOM Y.-NOM that book-ACC read-COMP think
'Chelswu thinks that Yenghi read that book.'

b. [Ku chayk-ul]$_i$ Chelswu-ka [Yenghi-ka t$_i$ ilkessta-ko] sayngkakhanta
that book-ACC C.-NOM Y.-NOM read-COMP think
'That book, Chelswu thinks that Yenghi read.'

c. *[Yenghi-ka t$_i$ ilkessta-ko]$_k$ [ku chayk-ul]$_i$ Chelswu-ka t$_k$
Y.-NOM read-COMP that book-ACC C.-NOM
sayngkakhanta
think
Intended: 'That Yenghi read it, that book, Chelswu thinks.'

(Polinsky 2007: 210)

---

19. Thanks to a reviewer for clarification on this issue.

20. The following example shows that object topicalization out of a complement clause is available independently in Korean:

(i) Jane-i$_i$ [ku party-nun]$_m$ Mary-lul$_j$ [e*$_{i/j/*k}$ t$_m$ ttena-tolok]$_n$ seltukhayssta
Jane-NOM DEM party-TOP Mary-ACC leave-COMP persuaded
'Jane persuaded Mary to leave the party.'

21. While Ha (2004) and Kwon (2010) argue that clausal scrambling does show reconstruction effects, they only consider long-distance scrambling of finite complements. In Section 3.1.3, we show that local scrambling of the control clause does not obligatorily reconstruct. See also Yoon (1991); Lee (1993); Cho (1994); a.o. for key properties of NP scrambling in Korean and Ko (2018) for a general survey.

Now, the examples in (19) involve a control clause and an adjunct clause. Polinsky argues that the adjunct clause 'for her own benefit' starts out in a position c-commanded by the matrix object *Yenghi.* According to her, no element has scrambled in (19a), while in (19b) the adjunct clause has scrambled over the control clause:

(19) a. Chelswu-nun [e hakkyo-ey ka-tolok] Yenghi-lul$_i$ [kunyecasin$_i$-uy
C.-TOP school-to go-COMP Y.-ACC herself-GEN
yuk-ul wihay] seltukhayssta
benefit-ACC for persuaded
'Chelswu persuaded Yenghi$_i$ to go to school for her$_i$ own benefit.'

b. Chelswu-nun [kunyecasin$_i$-uy yuik-ul wihay]$_j$ [*e* hakkyo-ey
C.-TOP herself-GEN benefit-ACC for school-to
ka-tolok] Yenghi-lul$_i$ t$_j$ seltukhayssta
go-COMP Y.-ACC persuaded
'Chelswu, for her$_i$ own benefit, persuaded Yenghi$_i$ to go to school.'
(Monahan 2005: Example 39)

Given the grammaticality of (19b), but the ungrammaticality of (18c), Polinsky (2007) concludes that the control clause in the inverse order must be an adjunct. She reasons that since Korean disallows scrambling over an already scrambled constituent, and since the adjunct clause in grammatical (19b) has moved, the control clause in the inverse order cannot have come to occupy its position via movement; rather, it must have been adjoined in situ.

Our objection against this argument concerns its conclusion. Specifically, given a well-formed construction and the premises that (1) scrambling of X over Y that has itself scrambled is illicit, (2) X can be shown to have moved over Y, the conclusion that no movement of Y whatsoever can have occurred is invalid. If this were true, a case like (17), repeated in (20), is wrongly predicted to be ungrammatical:

(20) ?Jane-i$_i$ [e$_{*i/j/k}$ t$_m$ ttena-tolok]$_n$ [ku party-nun]$_m$ Mary-lul$_j$
Jane-NOM leave-COMP DEM party-TOP Mary-ACC
seltukhayssta
persuaded
'As for the party, Jane persuaded Mary that she$_{*i/j/k}$ leave it.' NC

In (20), the embedded object *ku party-nun* moves out of the control clause, after which the remnant control clause moves over the moved object. We propose that the ungrammaticality of (18c) on the one hand, and the grammaticality of (19b) and (20) on the other follow from the type of movements involved, rather than movement over a moved constituent *per se.* In other words, the correct generalization is that movement of X over Y that has itself moved is indeed possible, so long as the types of movement involved are distinct. This, in fact, corresponds to the *Müller-Takano Generalization,* formulated in (21):

(21) *Müller-Takano Generalization* (Müller 1998: 209):
Remant XPs cannot undergo Y-movement if the antecedent of the unbound trace has also undergone Y-movement.

According to the Müller-Takano Generalization, a configuration where X moves over Y, and Y has itself moved out of X, is well-formed only if the types of movement undergone by X and Y are distinct. This is illustrated in the following examples. In the baseline in (22), no sub-extraction out of the control clause has occurred:

(22) *No sub-extraction out of the control clause*
Jane-i$_i$ Mary-lul$_j$ [e$_{*i/j/*k}$ ku party-nun ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC DEM party-TOP leave-COMP persuaded
'As for the party, Jane persuaded Mary to leave it.' OC

In (23), the embedded object has been topicalized out of the control clause, and in (24), the control clause has scrambled to a position before the matrix object:

(23) *Object topicalization*
Jane-i$_i$ [**ku party-nun**]$_m$ Mary-lul$_j$ [e$_{*i/j/*k}$ t$_m$ ttena-tolok] seltukhayssta
Jane-NOM DEM party-TOP Mary-ACC leave-COMP persuaded
'As for the party, Jane persuaded Mary to leave it.' OC

(24) *Control clause scrambling*
Jane-i$_i$ [e$_{*i/j/k}$ **ku party-nun ttena-tolok**]$_m$ Mary-lul$_j$ t$_m$ seltukhayssta
Jane-NOM DEM party-TOP leave-COMP Mary-ACC persuaded
'As for the party, Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave it.' NC

In (20), both the embedded object and the control clause have moved. The remnant control clause moves to a position preceding the topicalized object, a position where the trace in the control clause is not bound by its antecedent, the topicalized object. This sequence of movement steps is well-formed because each movement step instantiates a distinct type of movement, viz. topicalization and scrambling. By contrast, (25) is ungrammatical due to a minimal, yet crucial difference: the moved object has not been topicalized, like in (20), but scrambled. Since the movement steps undergone by the embedded object and the control clause both instantiate scrambling, the clause is ill-formed:

(25) *MTG: *Object scrambling ≺ remnant control clause scrambling*
?*Jane-i$_i$ [e$_{*i/j/k}$ t$_y$ **ttena-tolok**] [**ku party-lul**]$_y$ Mary-lul$_j$ seltukhayssta
Jane-NOM leave-COMP DEM party-ACC Mary-ACC persuaded
Intended: 'As for the party, Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave it.'

A prediction made by both the adjunct and the movement account is that sub-extraction from a control clause in inverse position should be ill-formed. Under the adjunct account, this follows from the islandhood of adjuncts, while

under the movement account, this follows from the derived islandhood of moved elements, i.e. Freezing. This prediction is borne out: in (26), topicalizing the embedded object *ku party-nun* out of the control clause in the inverse order leads to ungrammaticality:[22]

(26) *Freezing: *control clause scrambling ≺ object scrambling*
?*[**ku party-nun**]$_n$ Jane-i$_i$ [e$_{*i/j/k}$ t$_n$ **ttena-tolok**]$_m$ Mary-lul$_j$
DEM party-TOP Jane-NOM leave-COMP Mary-ACC
t$_m$ seltukhayssta
persuaded
Intended: 'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave the party.'

Finally, note that the adjunct analysis would leave unexplained the contrast in (9), where one clause exhibits the anti-AUTHOR restriction but the other does not, despite both being headed by *-tolok*.

3.1.3 *The anti-reconstruction of control clause movement*

We now show that the moved control clause does not undergo reconstruction, offering evidence from Condition C and variable binding. First, when the R-expression *Mary* in the control clause co-refers with a matrix object in the base order, it induces a Condition C violation (27a). In the inverse order, we find that the sentence is grammatical (27b) – it does not reconstruct to its base position and hence obviates a Condition C violation:

(27) *No reconstruction for Condition C*
a. *Jane-i$_i$ kunye-lul$_j$ [e$_{*i/j/*k}$ **Mary**$_j$-uy yetongsayng-ul manna-tolok]
Jane-NOM she-ACC Mary-GEN sister-ACC meet-COMP
seltukhayssta
persuaded
Intended: 'Jane persuaded her$_j$ to meet Mary$_j$'s sister.'
b. Jane-i$_i$ [e$_{*i/j/k}$ **Mary**$_j$-uy yetongsayng-ul manna-tolok]$_m$ kunye-lul$_j$
Jane-NOM Mary-GEN sister-ACC meet-COMP she-ACC
t$_m$ seltukhayssta
persuaded
'Jane persuaded her to meet Mary's sister.'

---

22. A reviewer points out that on the Movement Theory of Control (MTC; Hornstein 1999, 2001, 2003), one might relate the lack of OC in the inverse order to the controller's inability to move out of the control clause, due to Freezing. As noted by the reviewer themselves, this argument does not go through because of inverse subject control (7b). We add that on the MTC version of our account, as the controller's movement out of the control clause would precede that of the control clause itself (Anti-Freezing or Remnant Movement), OC is actually predicted to remain.

This shows that the control clause containing the R-expression does not reconstruct, but rather is fed into a new configuration from where its subject is no longer c-commanded by the matrix object. Second, anti-reconstruction is supported by variable binding data. In (28b), the control clause containing a bound variable undergoes scrambling such that the variable pronoun cannot be bound by a *wh*-quantifier, which shows that the moved clause does not reconstruct to its base position:[23]

(28) *No reconstruction for variable binding in the inverse order*

a. Jane-i_i nwukwu-lul_j [[kunye-uy_j emma-ka] ttena-tolok]
Jane-NOM who-ACC she-GEN mom-ACC leave-COMP
seltukhayss-ni?
persuaded-Q
'Who$_j$ did Jane persuade that her$_j$ mom should leave?'

b. Jane-i_i [[kunye-$uy_{i/*j/k}$ emma-ka] ttena-tolok]$_m$ nwukwu-lul_j t_m
Jane-NOM she-GEN mom-NOM leave-COMP who-ACC
seltukhayss-ni?
persuaded-Q
'Who$_j$ did Jane persuade that her$_j$ mom should leave?'

3.2 The OC-NC split

3.2.1 *PRO as a bound minimal pronoun*

Since we have observed that the presence of OC is sensitive to the derivational operation of movement, it would be stipulative to assume that the correct type of null embedded subject, viz. PRO versus *pro,* does not surface as a function of whether the control clause has moved or not. It is instead plausible to depart from a single source consisting of a defective φ-feature set. We thus follow the underspecification view of PRO, according to which PRO starts out as a *minimal pronoun* [D,φ:□] with unvalued φ-features (Kratzer 2009, a.o.). The specific type of pronominal element this minimal pronoun ends up as arises as a result of its syntactic context, rather

23. In recent work, Royer (2020) argues for the Mayan language Chuj that objects in transitive clauses undergo A-movement from Comp,V to Spec,*v*P. Analogous to our case, Royer shows that (i) that this movement bleeds c-command between the moved object and the matrix subject, and (ii) that it does not reconstruct. Unlike in our Korean case, however, where movement of the control clause is always optional, object movement in Chuj is obligatory except in the case of reflexives, which must remain in situ due to Condition A. While the facts relating to the A and A-bar distinction in Korean are beyond the scope of this paper, we conjecture that movement of the control clause to an outer Spec,*v*P also instantiates A-movement, and that, following Boeckx (2001), reconstruction of A-moved elements is only possible to positions which assign Case.

than any inherent featural make-up. With different derivations, [D,φ:□] is thus varyingly realized as e.g. a relative pronoun, a reflexive, *pro* or PRO. For logophoric control, we adopt Landau's (2015) two-tiered approach, where PRO is linked to a *pro* bound by the matrix controller. *pro,* merged in embedded Spec,CP in order to satisfy C's selectional feature [*u*D], becomes bound by either the matrix AUTHOR or ADDRESSEE. While *pro* ends up obtaining its reference from the matrix controller via variable binding, it comes to be linked to PRO via predication. *pro* thus encodes a logophoric center overlaid as a second tier on predicative control, the first tier; the special *de se* property arises as a result of a presupposition associated with the control complementizer.

Following Kratzer (2009), both PRO and *pro* start out as minimal pronouns consisting of [D,φ:□].[24] When binding of [D,φ:□] fails, due to there being no c-commanding binder at Spell Out as a result of movement of the control clause, [D,φ:□] is rendered a free variable via *Feature Insertion at LF.* Due to [D,φ:□]'s derived status a free variable, OC can no longer arise, and NC arises instead. Another configuration which disrupts OC is the presence of an OIS in the control clause: because the OIS carries inherent φ-features, it cannot be bound, and hence OC cannot arise. There are thus two routes to NC: (1) movement of the control clause to a position from where its embedded subject cannot be bound, and (2) an OIS in the control clause.

Regarding the anti-AUTHOR restriction, we propose that it be encoded as a presupposition on *-tolok*. While *pro* can generally come to be bound by either the matrix AUTHOR or ADDRESSEE, yielding pro_x and pro_y, respectively (Landau 2015: 43), *-tolok* carries the presupposition that *pro* cannot be pro_x, i.e. that *pro* ≠ pro_x. In the Figures below, we represent this simply with the diacritic ≠ AUTH under *pro*.

3.2.2 *Derivations*

We now give derivations of the OC-NC split, showing how the properties we have established – movement of the control clause, the type of the embedded subject, and the anti-AUTHOR restriction – interact to yield either OC or NC. We begin with the canonical baseline, i.e. the base order with an OC interpretation (29) in Figure 1.

(29) *Inverse order*

Jane-i_i	Mary-lul_j	[$e_{*i/j/*k}$	hakkyo-lul	ttena-tolok]	seltukhayssta
Jane-NOM	Mary-ACC		school-ACC	leave-COMP	persuaded

'Jane persuaded Mary to leave school.' OC

24. We nevertheless keep the labels *pro* and PRO for convenience.

After the object-control complementizer *tolok* merges with TP, a minimal pronoun [D,φ:□] is merged in Spec,CP due to *tolok*'s need to project an individual coordinate of the embedded context in its specifier. The derivation proceeds, ultimately yielding a configuration where the matrix object *Mary* determines the reference of *pro* via variable binding, which is in turn linked to PRO via predication.[25,26]

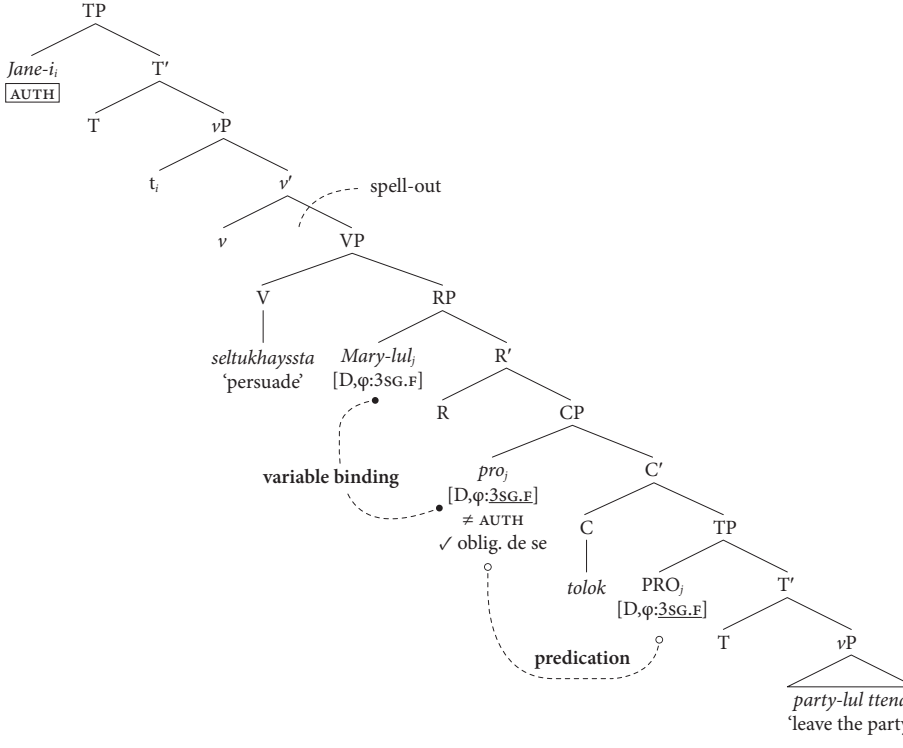

Figure 1. Object control + base order: OC

Next, we turn to the inverse order with an NC interpretation (30) in Figure 2. The complement CP now carries a [SCR] feature, needed for its later movement. The derivation then continues as in the base order up to the merger of *v*, which now carries a [•SCR•] feature (Grewendorf & Sabel 1999; Heck & Müller 2007), the

25. In the Figures, RP is the complement of the object control verb. Its head R^0 functions as a predicative relator between the matrix object and the complement clause.

26. Linking *pro* to PRO via predication is afforded by PRO's movement from Spec,TP to Spec,FinP, which forms a λ-abstract; we omit this step here for simplicity.

triggering counterpart to [SCR]. After the matrix subject *Jane* is merged in Spec,*v*P, the CP moves to an outer Spec,*v*P, thereby satisfying *v*'s [•SCR•] feature. It is the configuration resulting after the subject *Jane*'s movement to Spec,TP which renders the complement CP from a prospective OC clause to an NC clause, because there is no element in the matrix clause that can bind *pro* : the matrix object *Mary* does not c-command *pro,* and the matrix subject *Jane,* despite c-commanding *pro*, corresponds to the matrix AUTHOR, which, however, is barred from binding *pro* due to *tolok*'s inbuilt anti-AUTHOR restriction. Consequently, since there is no matrix element to transmit its φ-values to *pro*, it ends up as a free variable, able to refer to any entity except the matrix AUTHOR. This free reference is passed on to PRO via predication, and hence NC arises instead of OC.

(30) *Inverse order*
Jane-i_i [$e_{*i/j/k}$ hakkyo-lul ttena-tolok] Mary-lul_j seltukhayssta
Jane-NOM self-NOM school-ACC leave-COMP Mary-ACC persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave school.' NC

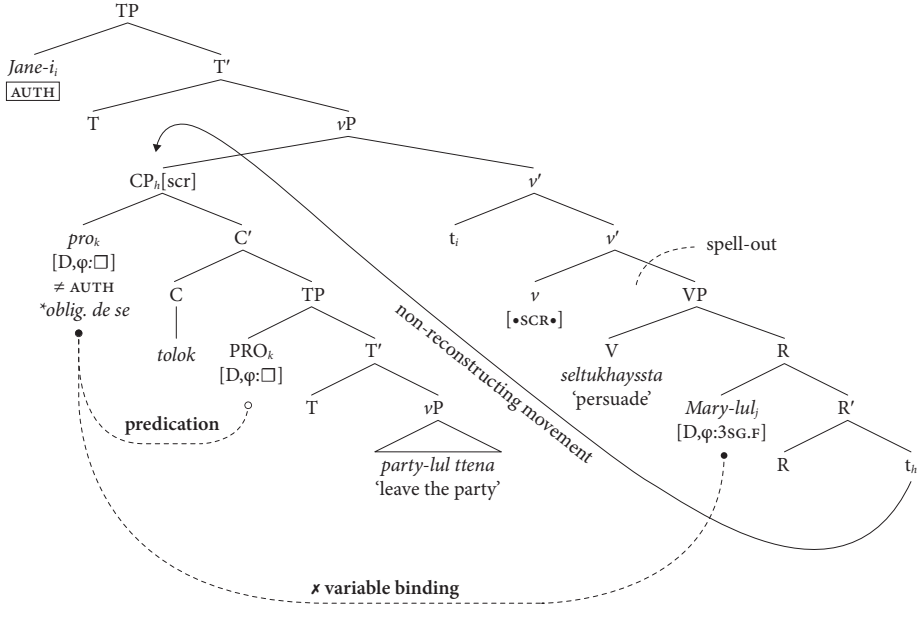

Figure 2. Object control + inverse order: NC

We model the mechanism by which the minimal pronoun *pro* becomes a free variable as a corollary of the semantic condition in (31):

(31) *Semantic condition on bound pronouns* (Landau 2015: 51)
At the semantic interface, bound pronouns must be unvalued.

We propose the operation *Feature Insertion at LF* as a means to satisfy (31) in OC environments: when an unvalued, i.e. minimal pronoun cannot be bound at the interface due to the lack of a c-commanding binder, it receives interpretable φ-values at LF. Feature Insertion thus converts a minimal pronoun into a full pronoun which cannot be bound, thereby satisfying (31). If (31) is understood as a bi-conditional criterion that a pronoun is bound if and only if it is unvalued, Feature Insertion follows as a natural way to satisfy (31). As for why Feature Insertion at LF should be an available option in Korean, it must be afforded by the fact that the conditions on overt subjects are more liberal than those in a language like English. Landau (2015: 51) suggests two other ways of satisfying (31): Feature Transmission at PF and Feature Deletion at LF. Either a bound pronoun never carries interpretable features to begin with, or any interpretable features it has are removed prior to semantics. The two operations are complementary, with Feature Transmission at PF restricted to OC environments, and Feature Deletion at LF to long-distance dependencies.[27]

Lastly, we derive the base order in which the control complement hosts an OIS, with an NC interpretation (32) in Figure 3. That this configuration yields NC rather than OC boils down to the fact that the OIS itself carries fully specified, interpretable φ-values and thereforce cannot be bound by the matrix subject or object. It is a free variable, so NC must arise.

(32) *Overt infinitival subject + base order*
Jane-i$_i$ Mary-lul$_j$ [**kunye-ka**$_{*i/j/k}$ ttena-tolok] seltukhayssta
Jane-NOM Mary-ACC she-NOM leave-COMP persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{*i/j/k}$ leave.' NC

27. A reviewer points out that when OC complements undergo passivization, we should predict NC. As passivization is A-movement, there should be no possible c-commanding controller to bind the null embedded subject in the passivized complement. Although passivized gerundive complements in subject position in English exhibit OC (Landau 2013: 42), we cannot test this in Korean, where OC gerundive complements are not headed by infinitival control complementizers (e.g., *-tolok*).

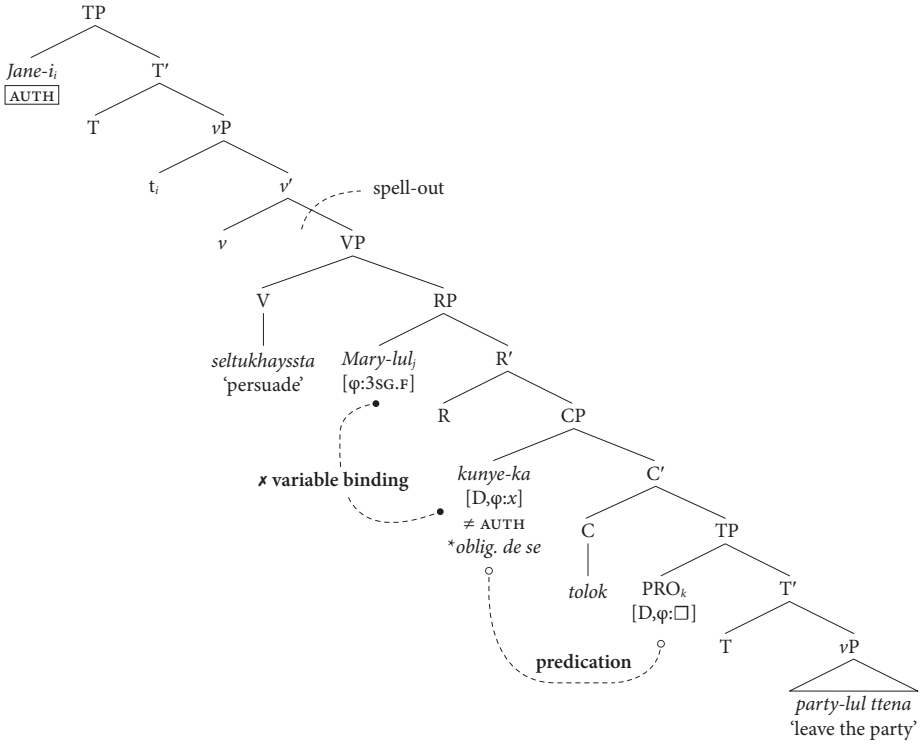

Figure 3. Object control + base order + OIS: NC

In a mixed configuration with both the inverse order and an OIS (cases like (14), not explicitly derived here), OC fails to obtain for two reasons: (1) the fact that the embedded subject cannot be bound in its moved position, and (2) the fact that the embedded subject is a full pronoun. There are hence two factors that yield NC, either individually or jointly: movement of the complement clause, and an OIS.

3.2.3 *The presence vs absence of obligatory de se*

The final issue we turn to in this section concerns the distribution of the obligatory *de se* attitude holding between controller and controllee. It is present only if OC obtains, and absent otherwise. The loss of obligatory *de se* in our NC cases must be directly tied to the absence of a binding relation between a matrix nominal and embedded *pro,* given that *de se* is a special kind of reflexive *de re* belief an attitude holder has about themselves – reified grammatically as a special kind of co-reference. In other words, *de se* is necessarily absent between two individuals x and y if x and y are distinct. In terms of the system in Landau (2015: 41f): as *pro* in Spec,CP is rendered a free, not a bound variable, the conditions for applying the concept generator function G_{SELF} are not met, and hence the obligatory *de se* presupposition cannot arise.

4. Open issues

Before concluding, we touch on subject control, the lifting of the anti-AUTHOR restriction via modality in the control clause, and predictions of our account.

4.1 Subject control

So far, we have mainly been concerned with object control. We briefly consider subject control, where the interactions differ from those in object control. Most importantly, OC is retained both when the control clause appears in inverse position (33a), or its subject is overt (33b):[28]

(33) *Subject control*

a. Jane-i$_i$ [e$_{i/*j/*k}$ party-lul ttena-kilo]$_h$ Mary-eykey$_j$ t$_h$ yaksokhayssta
Jane-NOM party-ACC leave-COMP Mary-DAT promised
'Jane promised Mary to leave.' *inverse order:* OC

b. Jane-i$_i$ Mary-eykey$_j$ [**kunye-ka**$_{i/*j/*k}$ party-lul ttena-kilo] yaksokhayssta
Jane-NOM Mary-DAT she-NOM party-ACC leave-COMP promised
'Jane promised Mary to leave the party.' *OIS:* OC

The embedded subject retains the OC property that it can only refer to the matrix subject. But in fact, the picture is inconclusive: since the AUTHOR restriction holds in subject control, the source of this OC property is ambiguous, such that we should distinguish a genuine case of obligatory subject control via other diagnostics. One of the diagnostics for OC is that the embedded subject resists a strict reading in the context of VP ellipsis, while an NC subject can have both a strict and sloppy reading. (34) shows the interpretive patterns of control clauses headed by two different complementizers under VP ellipsis:

(34) a. *Subject control + -kilo*
Jane-i$_i$ [e$_{i/*j/*k}$ mwutay-ey nam-**kilo**] keylcenghayss-ko,
Jane-NOM stage-at stay-COMP decided-COMP
Mary-to kulayssta
Mary-also did.so

i. Strict: %Jane$_i$ decided [e$_i$ to stay in the scene], and Mary$_j$ decided [e$_i$ to stay in the scene].

ii. Sloppy: Jane$_i$ decided [e$_i$ to stay in the scene], and Mary$_j$ decided [e$_j$ to stay in the scene].

---

28. Given that the inverse control clause remains c-commanded by the matrix subject/AUTHOR, we might expect OC to arise; yet this would leave unexplained (33b), where an OIS does not yield NC, but rather behaves like overt PRO.

b. *Subject control + -lyeko*
Jane-i$_i$ [e$_{i/*j/*k}$ mwutay-ey manu-**lyeko**] keylcenghayss-ko,
Jane-NOM stage-at stay-COMP decided-COMP
Mary-to kulayssta
Mary-also did.so
i. Strict: *Jane$_i$ decided [e$_i$ to stay in the scene], and Mary$_j$ decided [e$_i$ to stay in a scene].
ii. Sloppy: Jane$_i$ decided [e$_i$ to stay in the scene], and Mary$_j$ decided [e$_j$ to stay in the scene].

A sloppy and, for some speakers, also strict reading is possible with *-kilo* in (34a), whereas only a sloppy reading is possible with *-lyeko* in (34b).[29,30] (34a) can be viewed as an "illusory" case of OC, due to the AUTHOR restriction. By contrast, the obligatory sloppy identity shown in (34b) suggests that this complement genuinely contributes to the OC signature. To sum up, the full picture of the interaction of subject control configurations with factors like movement and overt subjects is as yet unclear. This puzzle remains to be investigated in future research.

4.2 Lifting the anti-AUTHOR restriction

When the control clause is marked with modal possibility, *-tolok*'s anti-AUTHOR restriction is lifted. In the base order with OC (35), the embedded subject must refer to either *Jane* or *Mary* in the matrix clause; in the inverse order with NC (36), its reference is fully free:[31]

(35) Jane-i$_i$ Mary-lul$_j$ [e$_{i/j/*k}$ hakkyo-lul ttena-lswuiss-tolok]$_h$ seltukhayssta
Jane-NOM Mary-ACC school-ACC leave-can-COMP persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{i/j/*k}$ may / is able to leave school.' OC

(36) Jane-i$_i$ [e$_{i/j/k}$ hakkyo-lul ttena-lswuiss-tolok]$_h$ Mary-lul$_j$
Jane-NOM school-ACC leave-can-COMP Mary-ACC
t$_h$ seltukhayssta
persuaded
'Jane$_i$ persuaded Mary$_j$ that she$_{i/j/k}$ may / is able to leave school.' NC

---

29. We gave 5 speakers a context in which both Mary and Jane are working on a theater production, but in which only Jane is also acting. Mary decides that Jane should stay in a certain scene, and so does Jane.

30. As noted by a reviewer, this suggests that *-kilo* clauses seem to not involve OC.

31. Depending on the context, the modal flavor is deontic or circumstantial. We refer to the modal expression *-(u)l-swu-iss* 'IRR-possibility-exist' as 'can' for simplicity. See Kim (2010) for a syntactic, and Mun (2016) for a semantic analysis.

This change in referential potential is reminiscent of *control shift* and *proxy control,* where non-canonical control typically arises with the introduction of a permission semantics in the control clause. In control shift, the controller shifts from subject to object or vice versa, while in proxy control, it switches to an extra-sentential, discourse-contextually determined entity (Doliana & Sundaresan to appear). (35) thus instantiates optional control shift, while (36) is simply a case of full NC. The same OC-NC split as a function of the control clause's position confirms that the source of the lifted anti-AUTHOR restriction is indeed modality.

Though a full analysis lies outside the scope of this paper, we lean towards Uegaki (2011) in assuming that modality introduces an additional thematic layer which effectively "dissociates" the embedded Agent from PRO: the already indirect link between the matrix controller and PRO is broken up even further by the presence of an additional embedded Agent, such that PRO ceases to be referentially constrained by the logophoric center *pro* in Spec,CP – reference to the AUTHOR is thus indirectly allowed.

4.3 Outlook

In this section, we present a possible extension to the analysis offered in Section 3.2. So far, we have discussed arguments pointing to the conclusion that clausal movement and the overtness of the embedded subject can bleed OC. This conclusion can be extended to logically possible abstract patterns of the OC-NC split across languages.

One of these patterns comes from languages reported to have OISs in control configurations, such as Hungarian and Romance (see e.g. Szabolcsi 2009; Barbosa 2009; a.o.). The most notable difference between Korean and Hungarian OISs in control configurations, for instance, is the fact that the latter behave like overt PROs: there is a full φ-matching requirement between the matrix verb and the OIS, and the OIS must be interpreted *de se* (Szabolcsi 2009: 17, 23).[32]

We conjecture that language-specific pronoun inventories, including the availability of minimal pronouns and their (inherent or derived) featural make-ups, determine the overtness of controllees; OISs can behave like overt PROs or referential pronouns, or PRO is always null in certain languages. Another route to NC is movement of the control clause, a third ingredient in this connection being whether this movement reconstructs or not. We expect the OC interpretation of the embedded subject to be retained if the control clause must reconstruct to its base position.

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32. In addition, Hungarian OISs are only possible in subject control, but not object control (see Szabolcsi (2009: 12, 18) for examples).

The OC-NC split pattern in Korean also provides support for Landau (2015)'s two-tiered Theory of Control, especially for logophoric OC, in which the control complementizer functions as the central locus of control, including casting the *de se* presupposition.[33] A speculation based on our analysis is that there might exist complementizers which lexicalize a distinct orientation towards attitudinal function, such as ADDRESSEE or anti-ADDRESSEE.

5. Conclusion

In this paper, we have investigated the distribution of OC and NC in interaction with certain parameters in Korean control, namely movement of the control clause, overt infinitival subjects and the orientation of control complementizers to attitudinal function. Specifically, we have seen that movement of the control clause, an overt infinitival subject, or both disrupt the OC relation in object control, yielding NC. In all cases, the embedded subject position remains subject to an anti-AUTHOR restriction, which we locate on the complementizer *-tolok*. By contrast, the complementizer in subject control is oriented towards the AUTHOR. Various issues, including subject control and cross-linguistic variation, remain for future research.

References

Ahn, Dorothy. 2015. *Condition A, exemption, and logophoricity in Korean*. Ms, Harvard University.

Ahn, Dorothy & Charnavel, Isabelle. 2017. Perspective on Korean anaphors: Comparing inanimate cachey vs. animate caki-casin. In *Proceedings of the 34th West Coast Conference on Formal Linguistics(WCCFL 34)*, Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel & Edward J. Rubin (eds), 16–23. Somerville MA: Cascadilla Proceedings Project.

Barbosa, Pilar. 2009. A case for an Agree-based Theory of Control. In *Proceedings of the 11th Seoul International Conference on Generative Grammar*, Sun-Woong Kim (ed.), 101–123. Seoul: Hankuk.

Boeckx, Cedric. 2001. Scope reconstruction and A-movement. *Natural Language & Linguistic Theory* 19(1): 503–548. https://doi.org/10.1023/A:1010646425448

Borer, Hagit. 1989. Anaphoric AGR. In *The Null Subject Parameter* [Studies in Natural Language and Linguistic Theory 15], Osvaldo Jaeggli & Kenneth J. Safir (eds), 69–109. Dordrecht: Springer. https://doi.org/10.1007/978-94-009-2540-3_3

Castañeda, Hector-Neri. 1966. 'He': A study in the logic of self-consciousness. *Ratio* 8: 130–157.

33. A major prediction of our account is that OC should be unaffected by movement of the control clause in predicative control because there is no logophoric *pro,* and hence no variable binding which could be bled. Unfortunately, predicative control complements in Korean involve nominalization, making this prediction untestable.

Cho, Jai-Hyoung. 1994. Scrambling in Korean: Crossover, Reconstruction and Binding Theory. PhD dissertation, The University of Connecticut.

Choe, Hyun-Sook. 2006. On (backward) object control in Korean. In *Harvard Studies in Korean Linguistics XI*, Susumu Kuno (ed.), 373–386. Cambridge MA: Harvard University, Department of Linguistics.

Cole, Peter, Hermon, Gabriella & Sung, Li-May. 1990. Principles and parameters of long-distance reflexives. *Linguistic Inquiry* 21(1): 1–22.

Cormack, Annabel & Smith, Neil. 2004. Backward control in Korean and Japanese. In *University College of London Working Papers in Linguistics 16*, Ad Neelemn & Mary Pearce (eds), 57–83. London: UCL.

Doliana, Aaron & Sundaresan, Sandhya. 2021. Proxy Control: A new species of control in grammar. *Natural Language & Linguistic Theory*. https://doi.org/10.1007/s11049-020-09501-y

Gamerschlag, Thomas. 2007. Semantic and structural aspects of complement control in Korean. In *Studies in Complement Control* [ZAS Papers in Linguistics 47], Barbara Stiebels (ed.), 61–123. Berlin: Leibniz-Centre General Linguistics (ZAS).

Grewendorf, Günther & Sabel, Joachim. 1999. Scrambling in German and Japanese: Adjunction versus multiple specifiers. *Natural Language & Linguistic Theory* 17(1): 1–65. https://doi.org/10.1023/A:1006068326583

Ha, Iljoo. 2004. Specificity and intervention effects in Korean. In *Proceedings of the 4th Workshop in General Linguistics (WIGL 4)*, Nathan Culwell-Kanarek (ed.), 21–31. Madison WI: University of Wisconsin-Madison.

Heck, Fabian & Müller, Gereon. 2007. Extremely local optimization. In *Proceedings of the 26th Western Conference on Linguistics (WECOL26)*, Erin Bainbridge & Brian Agbayani (eds), 170–183. Fresno CA: California State University.

Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry* 30(1): 69–96. https://doi.org/10.1162/002438999553968

Hornstein, Norbert. 2001. *Move! A Minimalist Theory of Construal*. Oxford: Blackwell.

Hornstein, Norbert. 2003. On control. In *Minimalist Syntax* [Generative Syntax 7], Randall Hendrick (ed.), 6–81. Oxford: Blackwell. https://doi.org/10.1002/9780470758342.ch1

Kang, Arum. 2015. (In)definiteness, Disjunction and Anti-specificity in Korean: A Study in the Semantics-pragmatics Interface. PhD dissertation, The University of Chicago.

Kim, Ji-Hye & Yoon, James Hye Suk. 2009. Long-distance bound local anaphors in Korean. An empirical study of the Korean anaphor cakicasin. *Lingua* 119(5): 733–755. https://doi.org/10.1016/j.lingua.2008.10.002

Kim, Shin-Sook. 2010. The structures of modality in Korean. In *Proceedings of the 6th Workshop on Altaic Formal Linguistics*, Hiroki Maezawa & Azusa Yokogoshi (eds), 171–180. Cambridge: MITWPL.

Kim, Sun-Hee. 1994. Division of Labor between Grammar and Pragmatics: The Distribution and Interpretation of Anaphora. PhD dissertation, Yale University.

Ko, Heejeong. 2018. Scrambling in Korean syntax. In *Oxford Research Encyclopedia of Linguistics*. Oxford: OUP. https://doi.org/10.1093/acrefore/9780199384655.013.243

Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40(2): 187–237. https://doi.org/10.1162/ling.2009.40.2.187

Kwon, Jongil. 2010. Scrambling of Korean embedded clauses. *Studies in Generative Grammar* 20(2): 229–249. https://doi.org/10.15860/sigg.20.2.201005.229

Kwon, Nayoung, Monahan, Philip & Polinsky, Maria. 2010. Object control in Korean: A backward control impostor. In *Movement Theory of Control* [Linguistik Aktuell/Linguistics Today 154], Norbert Hornstein & Maria Polinsky (eds), 299–328. Amsterdam: John Benjamins. https://doi.org/10.1075/la.154.11kwo

Landau, Idan. 2013. *Control in Generative Grammar: A Research Companion*. Cambridge: CUP. https://doi.org/10.1017/CBO9781139061858

Landau, Idan. 2015. *A Two-tiered Theory of Control*. Cambridge MA: The MIT Press. https://doi.org/10.7551/mitpress/9780262028851.001.0001

Lee, Kum Young. 2009. Finite Control in Korean. PhD dissertation, University of Iowa. https://doi.org/10.17077/etd.qgulnymt

Lee, Young-Suk. 1993. Scrambling as Case-Driven Obligatory Movement. PhD dissertation, University of Pennsylvania.

Madigan, Sean William. 2008. Control Constructions in Korean. PhD dissertation, University of Delaware.

Mensching, Guido. 2000. *Infinitive Constructions with Specified Subjects: A Syntactic Analysis of the Romance Languages*. Oxford: OUP.

Monahan, Philip. 2005. *Backward object control in Korean*. Ms, University of Maryland.

Müller, Gereon. 1998. *Incomplete Category Cronting: A Derivational Approach to Remnant Movement in German*. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-017-1864-6

Mun, Bokyung. 2016. The Interaction of Modality and Tense in Korean. PhD dissertation, Georgetown University.

Park, Jong Un. 2011. Clause Structure and Null Subjects: Referential Dependencies in Korean. PhD dissertation, Georgetown University.

Polinsky, Maria. 2007. Object control in Korean: Obligatory vs nonobligatory control. In *Studies in Complement Control* [ZAS Papers in Linguistics 47], Barbara Stiebels (ed.), 197–217. Berlin: Leibniz-Centre General Linguistics (ZAS).

Polinsky, Maria & Kwon, Nayoung. 2006. Object control in Korean: Structure and processing. In *Proceedings of the 15th Japanese/Korean Linguistics Conference*, Naomi McGloin & Junki Mori (eds), 249–262. Stanford CA: CSLI.

Polinsky, Maria, Monahan, Philip & Kwon, Nayoung. 2007. Object control in Korean: How many constructions? *Language Research* 43(1): 1–33.

Royer, Justin. 2020. *Binding and coreference in mayan: Evidence for object raising*. Ms, McGill University. Talk given at the 51st Annual Meeting of the North East Linguistic Society at McGill University.

Sells, Peter. 1987. Aspects of logophoricity. *Linguistic Inquiry* 18(3): 445–479.

Sisovics, Milena. 2018. Embedded Jussives as Instances of Control: The case of Mongolian and Korean. PhD dissertation, MIT.

Szabolcsi, Anna. 2009. Overt nominative subjects in infinitival complements cross-linguistically: Data, diagnostics, and preliminary analyses. In *Papers in Syntax* [NYU Working Papers in Linguistics 2], Patricia Irwin & Violeta Vasquéz Rojas Maldonado (eds). New York NY: New York University, Department of Linguistics.

Uegaki, Wataru. 2011. *Controller shift in centered-world semantics*. Ms, MIT. Talk given at Deutsche Gesellschaft für Sprachwissenschaft 33 at the University of Göttingen.

Yang, Dong-Whee. 1982. Control and binding in Korean. *Linguistic Journal of Korea* 7(2): 257–283.

Yang, Dong-Whee. 1983. The extended binding theory of anaphors. *Language Research* 19(2): 195–218.

Yang, Dong-Whee. 1985. On the integrity of control theory. In *Proceedings of the 15th North East Linguistic Society*, Stephen Berman, Jae-Woong Choe & Joyce McDonough (eds), 389–408. Amherst MA: GLSA.

Yoon, Jeong-Me. 1989. Long-distance anaphors in Korean and their crosslinguistic implications. In *Proceedings from the General Session of the 25th Meeting of the Chicago Linguistic Society*, Bradley Music, Randolph Graczyk & Caroline Wiltshire (eds), 479–495. Chicago IL: CLS.

Yoon, Jeong-Mee. 1991. The Syntax of A-chains: A Typological Study of ECM and Scrambling. PhD dissertation, Cornell University.