CLAUSE STRUCTURE AND NULL SUBJECTS: REFERENTIAL DEPENDENCIES IN KOREAN

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By

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This dissertation investigates control structures with infinitival and jussive complements in Korean, an empirical domain that has so far received little attention. It focuses on three theoretical issues: the licensing conditions for controlled subjects, their categorial status, and the algorithm that determines the choice of an argument that acts as a controller. The results show that controlled subjects are not a homogenous class, even within a single language, and that their categorial status correlates with the structure of the complement clause in which they occur.

I examine control constructions with complements introduced by the complementizers -kilo, -lyeko, -koca and -tolok. I propose new diagnostics to demonstrate that they are infinitival clauses, and argue that the forward and backward control dependencies they exhibit result from A-movement of the controller followed by chain linearization at PF. The subject of these infinitival complements is thus the copy of an argument that has raised. Moreover, I compare tolok-complements with Raising-to-Object constructions, as the two share a number of properties, like allowing the controller or lower subject, respectively, to exhibit Case alternations. I make the novel observation that the parallelism in their behavior ends when their complement clauses are fronted by scrambling, and argue that such an asymmetry is explained by a derivational model that adopts Cyclic Spell-Out.

I also examine control constructions where the complement is a jussive clause. Jussive clauses comprise imperatives, exhortatives and the (cross-linguistically rare) type of promissives.
Interestingly, in Korean they can be embedded and, when embedded, they exhibit different control patterns. I show that the null subject of jussive complements is not the copy of a raised argument, but rather a null pronominal element bound by a discourse participant operator in the left periphery. I argue that control dependencies in this case result from a shift in indexicality of the embedded subject pronoun, a phenomenon available in many languages. In particular, I propose that the range of operators available in the jussive complements is determined by the class of control predicates, and furthermore that they are connected to an argument in the matrix clause by syntactic binding.
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# Table of Contents

1. Introduction ......................................................................................................... 1
   1.1 Goals and Claims ............................................................................................. 1
   1.2 Theoretical Framework .................................................................................. 8
   1.3 Organization of the Dissertation ................................................................. 12

2. Typology of Control and Generative Approaches to Control ....................... 15
   2.1 Introduction ..................................................................................................... 15
   2.2 Typology and Diagnostics for Control ....................................................... 19
      2.2.1 Obligatory Control vs. Non-Obligatory Control ........................................ 19
      2.2.2 Diagnostics for OC vs. NO ................................................................. 24
         2.2.2.1 Standard Diagnostics for OC Properties ............................................. 25
         2.2.2.2 The Ban on Split Control and Partial Control ................................... 30
         2.2.2.3 Summary: Subclasses of OC and NO .................................................. 38
      2.2.3 Summary ................................................................................................. 42

2.3 Syntactic Approaches to OC in Generative Grammar ................................. 43
   2.3.1 Transformational Approaches .................................................................... 45
      2.3.1.1 Rosenbaum (1967, 1970) ..................................................................... 45
      2.3.1.2 Chomsky (1973), Chomsky and Lasnik (1977) ................................. 50
      2.3.1.3 Summary ............................................................................................. 56
   2.3.2 Government and Binding Theory Based Approaches ............................ 57
      2.3.2.1 Standard PRO Theory of Control: Chomsky (1981) ......................... 57
      2.3.2.2 Extended Binding Approaches ............................................................. 68
         2.3.2.2.1 Manzini (1983): Control Relations as Anaphoric Binding .............. 68
         2.3.2.2.2 Borer (1989): Anaphoric AGR on INFL ..................................... 71
      2.3.2.3 Extended Control Approach: J. Huang (1989) ..................................... 81
      2.3.2.4 Against the Reductionist View: D. Yang (1985) ................................. 89
3. Control into Infinitival Complements ............................................................ 137

3.1 Introduction .................................................................................................... 137

3.2 Syntactic Properties of Infinitival Complements ........................................... 142

3.2.1 Infinitival Complements in Subject Control .................................................. 142

3.2.2 Infinitival Complements in Object Control ..................................................... 151

3.2.3 Applying OC Diagnostics ............................................................................. 159

3.2.3.1 No Arbitrary Control with OC (Property A) ................................................. 159

3.2.3.2 No LD Antecedent with OC (Property B) ...................................................... 160

3.2.3.3 No Non-C-command Controller with OC (Property C) ............................... 161

3.2.3.4 No Strict Identity with OC (Property D) ......................................................... 162

3.2.3.5 No Invariant Reading with OC (Property E) ............................................... 164

3.2.3.6 No De Re Belief with OC (Property F) ......................................................... 165

3.2.3.7 Summary: kilo-, lyeko, koca-, and tolok-complements are OC Complements ... 166

3.3 Previous Approaches .................................................................................... 167

3.3.1 Control into kilo-, lyeko- and koca-complements ........................................ 167

3.3.1.1 S. Kim (1994) ............................................................................................ 167

3.3.1.2 Gamerschlag (2007) ................................................................................... 173

3.3.1.3 Madigan (2008b) ........................................................................................ 176

3.3.2 Control into tolok-Infinitival Complements ............................................... 182
3.3.2.1 K. Kim (1995), Madigan (2008b): Tolok-constructions are Causative

Constructions ...........................................................................................................183

3.3.2.2 Monahan (2003): Backward Control Exists in Korean....................................190

3.3.2.3 Cormack and Smith (2002, 2004), H. Choe (2006): Semantic/Pragmatic

Approach..............................................................................................................202

3.4 A Movement Analysis of Infinitival Control.......................................................212

3.4.1 Theoretical Background: Movement Theory of Control ................................215

3.4.2 Syntactic Structure of Infinitival Control Complements ................................221

3.4.3 Tense of Infinitival Control Complements ......................................................225

3.4.4 Deriving Subject Control into kilo-, lyeko- and koca-complements ..............231

3.4.4.1 Controller Choice in the Infinitive Subject Control Constructions .............232

3.4.4.2 Promise-type Control and Locality Issue ...................................................239

3.4.5 Deriving Object Control into tolok-complements ........................................249

3.4.5.1 Controller Choice in Forward Control .......................................................249

3.4.5.2 Cyclic Linearization and Controller Choice in Backward Control ..........253

3.5 Conclusion.........................................................................................................262

4. Word Order Asymmetry between Obligatory Control and Raising to Object

Constructions in Korean........................................................................................266

4.1 Introduction .....................................................................................................266

4.1.1 Case Alternations, Scrambling and Word Order Asymmetry in RTO and OC .266

4.1.2 Goals and Claims ........................................................................................268

4.2 Derived Word Order Patterns in RTO Construction........................................273

4.2.1 Movement Analysis of Case Alternation in RTO .........................................273

4.2.2 Predictions of the Movement Analysis .........................................................284

4.2.3 Scrambling the Embedded CP in RTO .........................................................288

4.3 Derived Word Order Patterns in OC ..............................................................292

4.3.1 Movement Analysis of Case Alternation in OC ...........................................292

4.3.2 Empirical Evidence for the Movement Analysis ...........................................301

4.3.3 Scrambling the Embedded CP in OC ............................................................303
4.4 Phase, Cyclic Spell-Out and Word Order Asymmetry .......................................... 306
  4.4.1 Explaining the Word Order Asymmetry between RTO and OC ............................307
  4.4.2 Cross-linguistic Consequence of the Current Analysis ..........................................315
4.5 Conclusion.............................................................................................................. 317

5. Jussive Clauses and Obligatory Control in Korean .................................................319
  5.1 Introduction .......................................................................................................... 319
  5.1.1 Core Data: Control into Jussive Complements in Korean .................................319
  5.1.2 Organization of Chapter 5 ..................................................................................328
  5.2 What are Jussive Clauses?: Grammatical Properties of Jussive Clauses ............. 329
  5.3 Jussive Clauses are Embeddable in Korean .............................................................337
    5.3.1 Evidence for the Embeddability of Jussive Clauses in Korean ............................337
    5.3.2 Notes on Selectional Restrictions on Jussive Complements .............................345
  5.4 Applying OC Diagnostics to Jussive Control in Korean .......................................350
    5.4.1 No Arbitrary Control with OC (Property A) .....................................................351
    5.4.2 No LD Antecedent with OC (Property B) .........................................................353
    5.4.3 No Non-C-command Controller with OC (Property C) ....................................355
    5.4.4 No Strict Identity with OC (Property D) ............................................................357
    5.4.5 No Invariant Reading with OC (Property E) .....................................................359
    5.4.6 No De Re Belief with OC (Property F) ...............................................................361
    5.4.7 Summary: Jussive Complements are OC Complements .................................364
  5.5 Previous Approaches ............................................................................................. 364
    5.5.1 Syntactic Approaches to Jussive Control in Korean ..........................................365
      5.5.1.1 H. Choe (2006) ............................................................................................365
      5.5.1.2 Fujii (2006) ...............................................................................................374
    5.5.2 Semantic Approaches ....................................................................................... 383
      5.5.2.1 Chierchia (1984/88, 1989) ........................................................................383
      5.5.2.2 Farkas (1988) ...........................................................................................390
      5.5.2.3 Sag and Pollard (1991) .............................................................................401
  5.6 Conclusion ............................................................................................................ 409
6. A Formal Analysis of Jussive Control

6.1 Introduction

6.1.1 Major Issues and Claims

6.1.1.1 First Issue: Syntactic Environments/Licensing Condition

6.1.1.2 Second Issue: Categorial Status of Controlled Subjects

6.1.1.3 Third Issue: Controller Choice

6.1.2 Organization of Chapter 6

6.2 Underlying Assumptions about Subjects in Jussive Clauses

6.2.1 Syntactic Properties of Subjects in Jussive Clauses

6.2.2 Jussive Phrase and pro as Subject in Jussive Clauses

6.2.3 Agree as a Feature Sharing Operation and Case

6.2.4 Speaker/Addressee Operators and Person Licensing Condition

6.2.5 How pro in Jussive Clauses differs from pro in Other Contexts?

6.2.6 Summary

6.3 The Semantics of Jussive Clauses and Subject Restrictions

6.4 Answering Three Core Questions

6.4.1 pro and Overt Subjects in Jussive Complements

6.4.2 What licenses the Controlled pro?: Agree, PLC and Futurate Feature on T^0

6.4.3 Controller Choice in Jussive Control Constructions

6.4.3.1 Assumptions about Shifting Indexicality

6.4.3.2 Deriving Object Control Interpretation

6.4.3.3 Deriving Subject Control Interpretation

6.4.3.4 Deriving Split Control Interpretation

6.4.4 Some Consequences of the Proposed Analysis

6.5 Similar Approaches

6.5.1 Gamerschlag (2007)

6.5.2 Madigan (2008a,b)

6.6 Conclusion
7. Conclusion ......................................................................................................... 545

7.1 Conclusion .............................................................................................................. 545

7.2 Residual Issues ....................................................................................................... 548

References ............................................................................................................. 550
<table>
<thead>
<tr>
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Chapter 1 Introduction

1.1 Goal and Claims

The major goal of this dissertation is to investigate control structures with infinitival and jussive complements in Korean, an empirical domain that has so far received little attention compared to other topics like binding, Case and scrambling, etc. In particular, this dissertation aims to show that the way a null subject in obligatory control (OC) contexts finds its reference is correlated with the nature of the syntactic structure in which it appears.

Roughly speaking, the OC relation can be defined as a referential dependency between a (null) subject in the lower clause and an argument in the matrix clause, as in (1).

(1) John, planned [e_i to leave tomorrow morning].

In this sentence, the leaver, which is an implicit subject marked with $e_i$, should be construed as the matrix subject *John*; the former is called a controllee and the latter a controller. Since Rosenbaum’s (1967) seminal work on control phenomena, a great deal of research has been done in various theoretical frameworks. In the framework of generative syntax, which is adopted in this dissertation, the focus has been placed on the following three research questions.

(2) a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
b. What are controlled subjects? (Categorial status of controlled elements)
c. How are controllers determined? (Controller choice)

In investigating the two control constructions in Korean, this dissertation also seeks to properly answer these questions for each construction. In particular, the results of this study
show that controlled subjects are not a homogenous class, even within a single language, and that their categorial status correlates with the structure of the complement clause in which they occur.

In the PRO theory of control (Chomsky (1981)), it has been claimed that the controllee in (1) is PRO, which must appear in an ungoverned position, and the referential dependency between PRO and the matrix subject is determined in the control module. However, this claim has been empirically and theoretically challenged in the past three decades, and various proposals have been advanced in order to resolve the empirical and theoretical problems with the PRO theory of control (see Chapter 2 for detailed discussion). It will be demonstrated that the two Korean control constructions examined in this dissertation also lead us to cast doubt on not only the PRO theory of control but also the subsequent proposals. By making a thorough examination of the syntactic structures of the complement clauses in the two constructions, I will argue that the controlled subjects cannot be defined as PRO but as A-traces or pro depending on the construction, so the ways they are licensed and interpreted cannot be explained in a unified way.

The first major control constructions examined in this dissertation are those with complements introduced by the complementizers -kilo, -lyeko, -koca and –tolok, as in (3).

(3) CONTROL INTO INFINITIVE COMPLEMENTS

   John-TOP Mary-DAT leave-COMP promise-PAST-DECL
   ‘John promised Mary to leave.’

   John-TOP exam-at pass-COMP try-PAST-DECL
   ‘John tried to pass the test.’

   John-TOP college-to pass-COMP want-PAST-DECL
   ‘John wanted to pass the test.’

   John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
   ‘John persuaded Mary to leave.’
e. John-un e John-TOP
    ttena-kake Mary-ACC
    seltukhay-ss-ta. persuade-PAST-DECL

‘John persuaded Mary to leave.’

Although these data have been discussed in several studies, they have not yet received an appropriate account regarding the three issues in (2). In particular, most of the previous studies do not clearly show whether the subordinate clauses in (3a-e) are infinitival clauses; or a few of them characterize the embedded clauses in (3b) and (3e) in an incorrect way. Since Korean does not have inflectional agreement, it seems hard to make a distinction between finite and infinitival clauses in terms of the availability of agreement morphology on the verb. For this reason, I propose new diagnostics, and the diagnostics reveal that the subordinate clauses in (3) are infinitival clauses. Simply put, they are distinguishable from finite clauses, in that (i) they do not allow for tense or aspectual markers; (ii) they do not permit the presence of clause-typing markers such as the declarative marker –ta or interrogative marker –nya, etc.; and (iii) they cannot be uttered without being embedded. I will also demonstrate that the infinitival clauses in (3a-e) cannot be identified with subordinate clauses found in other constructions in Korean, including serial verb constructions, auxiliary verb constructions, resultative constructions or (periphrastic) causative constructions. It will also be shown that the infinitival complements in (3a-e) must have unrealized tense with respect to the matrix clause, which makes them distinguishable from apparently similar constructions like the Raising-to-Object construction.

More importantly, by applying the standard diagnostics for OC, I conclude that the infinitival complements are OC complements. Given this conclusion, adopting Hornstein’s (1999 and subsequent works) Movement Theory of Control, I will argue that the forward control dependency in (3a-d) but also the backward control dependency in (3e) (see Chapter 2 and 3 for
the distinction between forward control and backward control) can be derived by A-movement of
the controller followed by chain linearization at PF. Accordingly, the subject of these infinitival
complements can be defined as the copy of an argument that has moved out of the complements.
Monahan (2003), who first argues that the data (3e) is an instance of backward control in Korean,
also adopts the movement approach. However, since his analysis has some problems, I will
propose that chain linearization can take place in a cyclic way.

Then, I will compare the tolok-control construction in (3d-e) with the Raising-to-Object
(RTO) construction in Korean, as they appear to share some properties on the surface. One
crucial property shared by the two constructions is that they allow the controller or lower subject
to exhibit Case alternations, as in (4a,b). Various diagnostics will show that the Case forms of
the controller and lower subject reflect their structural positions. In order to capture this
correlation, I will adopt the movement approach to the RTO as well.

(4) a. TOLOK-CONTROL CONSTRUCTION
   John-i Mary-ka/lul yeppu-ess-ta-ko sayngkakhay-ss-ta
   ‘John thought that Mary was pretty’

   John-NOM Mary-NOM/ACC be.pretty-PAST-DECL-COMP think-PAST-DECL

   b. RAISING-TO-OBJECT CONSTRUCTION
   ‘John persuaded Mary to leave’

   John-NOM Mary-NOM/ACC leave-COMP persuade-PAST-DECL

However, the parallelism between the two constructions breaks down when their
complement clauses are fronted by scrambling, as shown in (5) and (6), which has not yet
received proper attention in the literature. That is, in the case of the RTO construction,
scrambling of the complement clause stranding the lower subject leads to the ungrammaticality
regardless of the Case form of the stranded subject, as in (5a,b). On the other hand, in the case of
the *tolok*-control construction, scrambling of the complement clause is permitted when the stranded persuadee DP is marked with accusative Case, as in (6a,b).

(5)  

a. *[yeppu-ess-ta-ko_i]        John-i Mary-*ka* ti  
be.pretty-PAST-DECL-COMP John-NOM Mary-NOM  
think-PAST-DECL  
Lit. ‘[was pretty], John thought Mary ti,’

b. *[yeppu-ess-ta-ko_i]        John-i Mary-*lul* ti  
be.pretty-PAST-DECL-COMP John-NOM Mary-ACC  
think-PAST-DECL  
Lit. ‘[was pretty], John thought Mary ti’

(6)  

a. *[ttena-tolok_i]    John-i  Mary-*ka* ti  
leave-COMP       John- NOM Mary- NOM  
persuade-PAST-DECL  
Lit. ‘[to leave], John persuaded Mary ti,’

b. *[ttena-tolok_i]    John-i  Mary-*lul* ti  
leave-COMP       John- NOM Mary- ACC  
persuade-PAST-DECL  
Lit. ‘[to leave], John persuaded Mary ti’

Under the movement approach, the ungrammaticality of (5a) and (6a) can be readily explained by attributing it to a violation against movement of a non-constituent. On the other hand, the asymmetry between (5b) and (6b) appears to be a challenge for the movement view. I claim that the asymmetry between (5b) and (6b) can be explained by a derivational model that adopts Cyclic Spell-Out, which is a stronger version of Chomsky’s (2000, 2001a,b) notion of phase (see Chapter 4 for detailed discussion).

(7) **Cyclic Spell-Out**

If the edge of a Phase (=α) is extended by Re-Merge/Move of β from inside the domain, the domain (=YP) should be spelled-out immediately.

The second control constructions this dissertation investigates are those where the complement is a jussive clause. Jussive clauses comprise promissives (which are crosslinguistically rare), imperatives and exhortatives, which are exemplified in (8a)-(8c),
respectively. Note that unlike the subjects of other clause types, including declaratives and interrogatives, those of jussive clauses are restrictive in their interpretation: simply put, the subject of a promissive must be first person, the speaker of the context, that of an imperative must be second person, the addressee of the context, and that of an exhortative must be first person plural, both the speaker and addressee of the context.

\[(8)\]

a. nayil hakkyo-ey ka-\textbf{ma}. (PROMISSIVE)
   tomorrow school-to go-PRM
   ‘I promise to go to school tomorrow.’

b. hakkyo-ey ka-\textbf{la}. (IMPERATIVE)
   school-to go-IMP
   ‘Go to school!’

c. nayil hakkyo-ey ka-\textbf{ca}. (EXHORTATIVE)
   tomorrow school-to go-EXH
   ‘Let’s go to school tomorrow!’

Crucially, a few studies have recently observed that when these jussive clauses are embedded, they exhibit different control patterns: that is, the subject control interpretation arises if a promissive clause is embedded, as in (9a), the object control interpretation is obtained if an imperative clause is subordinated, as in (9b), and the split control interpretation is available if an exhortative clause is embedded, as in (9c).

\[(9)\]

a. John-i-un Mary-j-eykey [e\textsubscript{j}*j hakkyo-ey ka-\textbf{ma}-ko] malhay-ss-ta
   John-TOP Mary-DAT school-to go-PRM-COMP say-PAST-DECL
   ‘John told Mary that he (John) would go to school.’

b. John-i-un Mary-j-eykey [e\textsubscript{i}j hakkyo-ey ka-\textbf{la}-ko] malhay-ss-ta
   John-TOP Mary-DAT school-to go-IMP-COMP say-PAST-DECL
   ‘John told Mary that she (Mary) would go to school.’

c. John-i-un Mary-j-eykey [e\textsubscript{i}+j hakkyo-ey hamkkey ka-\textbf{ca}-ko]
   John-TOP Mary-DAT school-to together go-EXH-COMP
   malhay-ss-ta.
   say-PAST-DECL
   ‘John told Mary that they (John and Mary) would go to school together.’
By applying a number of diagnostics, I will first show that the complement clauses in (9a-c) are not direct quotes but embedded jussive clauses. In addition, the standard diagnostics for OC will also reveal that the embedded jussives are OC complements. After establishing the conclusion that the sentences in (9a-c) can be appropriately characterized as the OC sentences, I will argue that the null subject of the jussive complements is not the copy of the raised controller but a null pronominal element, pro, which is bound by a discourse participant operator in the left periphery.

The crucial argument for the claim that the subject of the jussive complement is pro comes from the (crosslinguistic) fact that it can alternate with a limited class of overt nouns in both root and embedded contexts.

Furthermore, it has been observed in the literature that in root contexts, a limited range of overt subjects, including personal names, can bind a first or second person pronoun inside the VP in jussive clauses. A few studies (Pak et al. (2007, 2008), Zanuttini et al. (2011)) have advanced a convincing analysis capturing this binding fact, as well as the person restrictions imposed on the jussive subjects. The essential idea is that there is a functional projection, namely, Jussive Phrase, which encodes a distinct person feature depending on the type of jussive clause, and the subject entering the derivation with an unvalued person feature acquires its value via Agree in person with the Jussive head. Given that the subordinate clauses in (9a-c) are embedded jussive clauses, it can be concluded that the same agreement process is required for the subject of the jussive complements. So I will also assume that the Jussive Phrase is projected on top of TP in the embedded jussive clauses. If this assumption is correct, it seems hard to identify the jussive complements with the infinitival complements, which precludes us from extending the movement approach to the jussive control constructions. Indeed, the proposed diagnostics for
the finite vs. infinitival distinction also show that the jussive clauses do not pattern with the infinitival complements.

Notice, however that the null subjects in the jussive clauses in (9a-c) cannot be interpreted as the speaker or addressee of the actual speech context, as they appear in the non-root contexts. Therefore, drawing on Baker’s (2008) syntax-based analysis of shifting indexicality, I will suggest that in both root and embedded contexts, there is an additional functional projection, Speaker/Addressee Phrase, whose specifier is filled with a discourse participant operator, Speaker or Addressee operator, and that the null subject acquiring a first or second person feature via Agree with the Jussive head must be bound by the relevant operator to be licensed. Furthermore, it will be assumed that unlike the discourse participant operators in root contexts, those in embedded jussives need to be bound by the closest argument in the matrix clause. I will suggest that the range of operators available in the jussive complements is not arbitrarily determined but by restricted by the class of control predicates, which are taken to be ‘context-shifters.’ The conclusion will be drawn that the control dependencies in the jussive control constructions in (9a-c) result from a shift in indexicality of the embedded subject pronoun, a phenomenon available in many languages (cf. Schlenker (2003), Anand and Nevins (2004)).

1.2 Theoretical Framework

The major syntactic framework this dissertation employs is the Minimalist Program (Chomsky (1993, 1995, 2000, 2001a,b)). I will not attempt to lay out every single assumption made in this dissertation and will rather confine our discussion to the major assumptions that are essential to this dissertation. The other theoretical assumptions will be provided in later chapters when they
become relevant. To begin with, as for the architecture of the grammar, this dissertation assumes an inverted Y-model, as depicted in (10).

(10) Numeration

According to this model, D-structure and S-structure are no longer necessary in the grammar. Rather, the computational system (CHL) is made up of the numeration and two interface levels, PF and LF. The numeration is a lexical array that contains lexical items (LIs) selected from the lexicon for a certain derivation. The role of the two interface levels is to provide instructions to the performance systems—in particular, the PF interface is paired with the Articulatory-Perceptual (AP) system, while the LF interface is paired with the Conceptual-Intentional (CI) system. LIs selected into the numeration are manipulated by three core operations like Merge, Move and Agree and become a larger syntactic object. Then, the syntactic object is shipped into the two interface systems, PF and LF; in particular, shipping into the PF interface takes place after the Spell-Out point. Spell-Out is assumed to take place by phase, a syntactic domain with a propositional meaning which includes vPs and CPs. In the meantime, the computational system forces the syntactic object to form a pair \((\pi, \lambda)\), where \(\pi\) is a PF object and \(\lambda\) is an LF object. This pair needs to satisfy the Full Interpretation, which requires that all the features of the pair be legible at the relevant interfaces. If \(\pi\) and \(\lambda\) are legitimate objects, the derivation is convergent; otherwise, it crashes at the relevant interfaces.
Merge is a basic syntactic operation that combines two syntactic objects, creating a larger one, as depicted in (11a). The operation Merge that combines LIs one of which is directly drawn from the numeration is often called ‘External Merge.’ Move is another basic syntactic operation that is necessary to build up a larger syntactic object, as in (11b). Assuming that Move can be redefined as a composite operation consisting of Copy and (Re-)Merge, generative syntacticians often call it ‘Internal Merge.’

As for another operation Agree, Chomsky suggests it to capture various agreement phenomena found in human language. When an element $\alpha$ has an uninterpretable feature $uF$, called a probe, it searches down for another element $\beta$ with an interpretable counterpart $iF$, called a goal. If $iF$ is not distinct from $uF$, Agree takes place in between these two features, as shown in (12). As a result, the probe $uF$ that Chomsky assumes to be unvalued before Agree ends up having the same value (represented by the subscript $n$) as the goal $iF$. However, the probe is deleted later for convergence at the interfaces (the strikethrough in (12) indicates that features are deleted).
Notice, however, that rather than taking Chomsky’s definition of Agree, this dissertation adopts Pesetsky and Torrego’s (2007) feature sharing version of Agree as given in (13). The motivation for adopting the latter version will be discussed in detail in Chapter 6.

(13) **AGREE** (Feature Sharing Version)

a. An unvalued feature $F$ (a probe) on a head $H$ at syntactic location $\alpha$ ($F_\alpha$) scans its c-command domain for another instance of $F$ (a goal) at location $\beta$ ($F_\beta$) with which to agree.

b. Replace $F_\alpha$ with $F_\beta$, so that the same feature is present in both locations.

Pesetsky and Torrego (2007: 268)

Furthermore, I assume in this dissertation that jussive clauses (in both root and embedded contexts) are exceptional in Korean, in that a DP can value and delete its Case feature via Agree with a functional head; on the other hand, in other environments like infinitival control constructions and Raising-to-Object constructions, the same operation is not necessary. It has long been observed that unlike agreement-languages, Korean does not have inflectional agreement, so it is hard to detect whether a DP in the subject position establishes an agreement relation with the verb. Therefore, it would make little sense to maintain that a DP values its Case feature only if it undergoes Agree in $\varphi$-features with a functional head across the board. However, the reason the jussive subject case is considered as exceptional with respect to this issue is that we can observe not only semantic (i.e., person restrictions on subjects) but also
morpho-syntactic effects (i.e., morphological realizations of distinct clause-typing markers on predicates), and these effects suggest that the subject agrees with a certain functional head. Thus, except for the jussive clause contexts, this dissertation assumes that a DP can value its Case feature in a local configuration with the closest Case-assigning head. What I mean by the local configuration is a Spec-head relation, which Chomsky (1993) assumes as one of the checking domains. For example, a subject DP values a nominative Case feature by moving to the Spec, TP position, while an object DP values an accusative Case feature by moving to the (outer) Spec, vP position.

1.3 Organization of the Dissertation

Chapter 2 provides a discussion of the general typology of control, which is divided into obligatory control (OC) and non-obligatory control (NOC). In addition, several standard diagnostics for distinguishing OC from NOC will also be discussed. After that, I critically survey the previous approaches to OC within the framework of generative syntax in order to figure out which theory of control makes a better prediction for the data investigated here. The survey includes various studies of control within the Government and Binding and minimalist frameworks: in particular, the standard PRO theory of control, the extending binding or control analysis, the null Case approaches and the Agree-based analysis.

Chapter 3 discusses control constructions whose complements are headed by the four complementizers such as –kilo, -lyeko, -koca and –tolok. I suggest new diagnostics in order to demonstrate that the complement clauses headed by these four complementizers can be best defined as infinitival clauses. I also propose that infinitival clauses in Korean do not have a Mood Phrase whose head is normally assumed to house clause-typing particles. It is shown that
the infinitival complements must have unrealized tense with respect to the matrix clause, a property which the other similar constructions do not need to. After demonstrating that the previous approaches to these constructions have problems, I argue within the framework of the Movement Theory of Control (Hornstein (1999, 2001, 2003)) that both forward and backward control dependencies in the infinitival control constructions are driven by A-movement of controllers for $\theta$-feature checking, and that controlled subjects are the copies of the moved elements. Finally, I show that my analysis of the backward control case involving the tolok-complement appears to be similar to, but is actually different from the previous analysis by Monahan (2003).

Chapter 4 compares the tolok-control construction with the Raising-to-Object (RTO) construction in Korean, which are apparently similar to each other in that they allow the controller or lower subject to exhibit Case alternations. After showing that the movement approach to both constructions makes correct predictions for both constructions, I make the novel observation that this apparent similarity breaks down if part of the complement clause is scrambled by stranding the Case-alternating DPs. From the movement view, this asymmetry between the tolok-control and RTO construction appears to be puzzling, but I argue that it can be readily explained in a strictly derivational model that appeals to Cyclic Spell-Out.

Chapter 5 discusses the basic properties of three clause types such as promissives, imperatives and exhortatives. It is shown that they share a number of morpho-syntactic and semantic properties, which lead us to group them by the name of jussive clauses (Pak (2006), Pak et al. (2007)). I then demonstrate that these clause types are embeddable in Korean, which is not common across languages; more crucially, when these clause types are embedded, different control patterns arise, and these interpretive patterns are tightly related to the clause type of
jussive complement. In order to prove that the embedded jussive clauses are OC complements, the same chapter runs several standard OC diagnostics against the jussive control data. Then, I provide a critical review of the previous syntactic and semantic approaches to OC, which will reveal that an alternative analysis is required for the jussive control constructions.

Chapter 6 provides a formal account for the control patterns in the jussive control constructions, and addresses the other major issues, namely the categorial status of the embedded subjects and the licensing conditions for them. I first lay out the underlying assumptions of my analysis that are drawn from Pak et al. (2007, 2008) and Zanuttini et al. (2011), which provide a convincing analysis of person restrictions on subjects in jussive clauses. One of the core assumptions is that there is a functional projection, Jussive Phrase, where a distinct person feature is encoded depending on the type of jussive clause, and the jussive subject enters an Agree relation with the Jussive head. However, since their analysis is designed for jussive clauses in root contexts, building on Baker’s (2008) syntax-based analysis of shifting indexicality, I suggest that the jussive subject must be bound by a discourse participant operator in the Speaker or Addressee operator. These operators are assumed to be present in both root and embedded contexts, but in the latter contexts, they need to be bound by the closest argument in the matrix clause. It is also proposed that the range of available operators is determined by the class of matrix verbs, which I take to be context-shifters. After showing how my analysis handles the jussive control data with both null and overt subjects, several consequences it brings about are discussed. Then, two previous approaches, which pursue the line of analysis similar to mine, are critically reviewed.

Chapter 7 concludes the dissertation, and also discusses three prominent issues which will be left open for future study.
Chapter 2

Typology of Control and Generative Approaches to Control

2.1. Introduction

This chapter has two goals. The first goal is to provide a typological classification of control phenomena. As mentioned in Chapter 1, the primary data which this dissertation investigates is concerned with obligatory control into complement clauses in Korean; more specifically, the primary focus of our investigation will be placed on three subtypes of obligatory control such as subject, object and split control. The discussion of the control typology in this chapter will give readers a sense of why the Korean control constructions examined in this dissertation are labeled as such. The second goal is to offer an extensive and critical survey of various approaches to the control phenomena, especially within the framework of generative grammar (cf. Chomsky (1957) and subsequent works). The survey will show what problems the previous approaches inherently have and whether they extend to the Korean control data. So it will help us figure out which theory of control would work better for the Korean control data to be discussed in the subsequent chapters.

To look ahead regarding the first goal, control is generally defined in the literature as a referential dependency between the phonologically null subject of a subordinate clause (called a ‘controllee’) and (an) argument(s) of the predicate in a next higher clause (called a ‘controller’) (cf. Farkas (1988), Landau (1999), Y. Huang (2000)). Given in sentence (1) is a typical example in English which illustrates the control relation.
(1) John promised Mary to [e; to start jogging in the morning].

\begin{tabular}{ll}
\textbf{CONTROLLER} & \textbf{CONTROLLEE} \\
\end{tabular}

However, if we look at run-of-the-mill control data from a given language, it can be easily seen that some patterns emerge, for instance, with respect to whether the referential dependency between a controllee and its controller is mandatory; whether the referent of a controllee is completely identical to or partly overlaps with its controller(s) overtly present in the higher clause; and what the grammatical function of a controller is—in other words, whether a controller serves as a grammatical subject, (indirect) object or both, etc.

Many studies of control in the literature have proposed to classify the control phenomena in one way or another. This chapter will first discuss the properties of two conventional types of control, namely, obligatory control (OC) and non-obligatory control (NOC), and present several linguistic diagnostics for distinguishing them. The diagnostics will be utilized in the upcoming chapters in order to show that a number of Korean control constructions investigated in this dissertation are instances of OC. After that, I will introduce a recent perspective on the typology of control. For example, departing from the previous view (Williams (1980), Bouchard (1984), Hornstein (1999)), an increasing number of researchers have recently claimed that ‘split control,’ which can be roughly defined as a type of control where controllers occupy different positions in a higher clause, should be re-classified as OC (Landau (1999) for English; Fujii (2006) for Japanese). A few studies have argued that one of the Korean control constructions examined in this dissertation, which I call ‘jussive control,’ also allows for split control as an instance of OC (Gamerschlag (2007), Madigan (2008a,b)).

Turning to the second goal, the range of works that will be critically reviewed in this chapter stretches from transformational approaches (e.g., Rosenbaum’s (1967, 1970)) through
Government and Binding (GB) approaches (e.g., Chomsky (1981)) to minimalist approaches (e.g., Chomsky and Lasnik (1993)). In particular, our discussion of those major works will be centered on the following three issues.

(2) a. What licenses controlled subjects? (Syntactic environment (or Licensor))
b. What are controlled subjects? (Categorial status of controlled elements)
c. How are controllers determined? (Controller choice)

To give a snap shot beforehand, research on control was not actively done in the 1960’s. Rosenbaum’s (1967, 1970) pioneering work within the transformational framework treats the control dependency as a by-product of the application of a series of transformational rules such as Equi. In the 1970’s, Chomsky (1973) and Chomsky and Lasnik (1977) consider an empty controllee as PRO, while they assume that the controller of PRO is determined by interpretive rules which are not formally defined. At the advent of Government and Binding (GB) Theory, Chomsky (1981) develops a more principled theory of control, which I will call ‘standard PRO theory of control.’ He offers a binding-theoretic account for why controlled null subjects cannot be other empty categories than PRO. Crucially, he proposes the PRO Theorem as a licensing condition for PRO, which stipulates that PRO must be ungoverned. However, as for the issue of controller choice, Chomsky (1981) simply assumes without providing a formal analysis that the referent of PRO is determined by several factors.

Note that Chomsky’s (1981) proposals regarding the three issues in (2a-c) triggered a vast body of subsequent research on control in the GB era. In particular, various suggestions are made in an attempt to explain how PRO picks out its controller. For instance, taking the reductionist position, many researchers put forth a binding-theoretic analysis of controller choice in slightly different ways; but they basically try to reduce the OC dependency in anaphoric
binding (e.g., Manzini (1983), Bouchard (1984), Borer (1989)). On the other hand, some researchers like J. Huang (1989) extend control theory to provide a uniform account for the distribution and interpretation of null subjects in both control and non-control constructions in pro-drop languages, so that pro-drop theory (Taraldsen (1978), Chomsky (1981, 1982), Rizzi (1982, 1986)) can be eliminated.

One of the major goals in minimalist theorizing (Chomsky and Lasnik (1991) and subsequent works) is to eliminate conceptually unnecessary notions from the grammar, such as D-/S-structure and government, etc. Accordingly, Chomsky’s (1981) PRO theory of control, which crucially relies on government, has been challenged by a lot of researchers from diverse perspectives. For example, Chomsky and Lasnik (1993) attempt to reinterpret the PRO theory of control under minimalist theory, and discarding the PRO Theorem, they suggest that PRO needs to check null Case against a non-finite T^0. But they do not make an explicit proposal about controller choice. In addition, Martin (1996) basically adopts Chomsky and Lasnik’s (1993) idea about null Case for PRO, but capitalizing on Stowell’s (1982) tense distinction, he offers a principled account for why only control T^0, as opposed to T^0 in raising and ECM, can check null Case of PRO. Regarding how OC PRO is interpreted, Martin suggests that it undergoes movement to a higher clause in an analogous way to head movement of the SE-type clitic in Romance languages. As for the issue of controller choice, Landau (1999) tries to derive OC interpretations by adopting Chomsky’s (1998) Agree.

The survey of the aforementioned works on control will reveal that they are problematic in making empirical predictions for crosslinguistic data including the Korean control constructions. Notice, though, that I will introduce Hornstein’s (1999, 2001, 2003) Movement Theory of Control (MTC) at the end of this chapter. Taking the reductionist point of view,
Hornstein proposes to reduce OC dependencies to A-chain relations. Under his approach, a controlled subject is reanalyzed as a copy/trace left behind by A-movement of a controller, so PRO is no longer necessary in the grammar. In Chapter 3, I will adopt Hornstein’s approach to derive three subtypes of OC (i.e., subject control, object control and split control) in Korean control constructions involving infinitival complements, such as *kilo-*, *lyeko-/koca-* and *tolok-* complements, as the theory makes correct empirical predictions for the data.

The organization of this chapter is as follows. Section 2.2 discusses a typology of control phenomena as well as linguistic diagnostics for distinguishing between OC and NOC. Then, Section 2.3 provides a survey of major studies on control in generative grammar. Section 2.4 concludes the chapter.

### 2.2 Typology and Diagnostics for Obligatory Control

#### 2.2.1 Obligatory Control vs. Non-Obligatory Control

When it comes to the issue of how to classify control phenomena, a number of ways have been presented in the literature on control (Williams (1980), Landau (1999), Hornstein (2001), Madigan (2008b), among others). The most common way in the literature is grouping various control phenomena in terms of whether a referentially-related antecedent, i.e., a controller, should be in a local position to a controlled null subject (which will be represented PRO for the moment). There are two varieties of configurations with respect to this criterion, one of them being an instance of local control, as in (3), and the other being an instance of long-distance (LD) control, as in (4). The two configurations are obviously distinguished in that the null subject of
an infinitive clause in (3) has a local controller in a next higher clause, while the controller of the null subject of an infinitive clause in (4) does not appear in an immediately higher clause.¹

(3)  
   a. Johnₗ hopes [PROᵢ/*ⱼ to write a paper].
   b. Johnₗ persuaded Maryⱼ [PROᵢⱼ to write a paper].

(4)  
   a. Johnₗ hopes that [PROᵢⱼ writing a paper] will be fun.
   b. Maryᵢ knew that [PROᵢⱼ to perjure himself/herself] would damage Johnⱼ.
   c. Maryᵢ knew that it damaged Johnⱼ [PROᵢⱼ to perjure himself/herself].

   ((4b,c) from Landau (1999: 20))

Under the transformational framework in the late 1960’s and early 1970’s, it is suggested that Equi NP deletion applies in a configuration like (3), while Super-Equi NP deletion takes place in a configuration like (4) (cf. Rosenbaum (1967, 1970) for Equi NP; Grinder (1970), Kimball (1971) for Super-Equi NP). If we take a close look at the data in (3) and (4), it can be easily seen that there is another difference between the two configurations, apart from the difference with respect to the distance between PRO and its controller: that is, the null subject in the former must be coreferential with its local controller, while the null subject in the latter can be optionally coreferential with a local or non-local controller (or even with someone else not present in the sentence). For this reason, Williams (1980) reinterprets the dichotomy between these two

¹ Citing Grinder (1970) and Manzini (1983), Landau (1999) points out that although the configurations in (4b) and (4c) look identical in their control effects at first blush, they actually give rise to different results depending on which predicate selects for an infinitival clause within the clause headed by that. That is, as in (4b) and (4c), when the predicate of the that-complement is not a psychological verb, PRO can be coreferential with a local or LD controller, regardless of the syntactic position of the infinitival clause. On the other hand, when the selecting predicate is a psychological verb, PRO must be controlled by a local controller within the that-complement if the infinitive clause stays put inside VP, as in (ia), while it does not have to if the infinitive clause occupies a subject position outside VP, as in (ib).

   (i)  
   a. Mary knew that it disturbed John [PRO to perjure himself/*herself].
   b. Mary knew that [PRO to perjure himself/herself] would disturb him.

   Landau (1999: 20)
configurations in (3) and (4) by suggesting two types of control, namely ‘obligatory control’ (OC) for the former and ‘non-obligatory control’ (NOC) for the latter. Since then, the OC vs. NOC distinction has been maintained by most of the subsequent studies within the framework of generative grammar (e.g., Manzini (1983), Bouchard (1984), Koster (1984), Lebeaux (1984, 1985) and Hornstein (1999, 2001), to name a few).

However, it has been observed in the literature that in addition to LD control, there are two more subtypes of NOC. They are ‘arbitrary control’ and ‘implicit control,’ both of which do not require the presence of an overt controller in the same sentence. Moreover, the syntactic environments where arbitrary control is available are often, though not always, overlap with those where implicit control arises. Beginning with arbitrary control, PRO in this subtype of NOC does not have a specific individual or set of individuals as its referent(s), as shown in (5).

(5)  
   a. It would help Bill [PROarb to behave oneself in public].
   b. It is dangerous for babies [PROarb to smoke around them].
   c. It is crucial for the success of this conference [PROarb to limit oneself to 20 minutes].

   Landau (1999: (81), 145)

As pointed out in Landau (1999), a widely accepted way to deal with this type of control in the literature is to posit a covert operator in the CP area. For example, a generic reading obtainable from (5a) is represented as ‘∀x[it would help Bill [for x to behave x in public]]’ (Lebeaux (1984)).

On the other hand, PRO in implicit control should meet additional syntactic, semantic or even pragmatic conditions, which still remain unexplained in the literature. Given below are some representative environments where implicit control is observed.\(^2\)

\(^2\) Note that Landau (1999) is leaning toward a conclusion that implicit control may not fall under NOC but...
Notice, however, that since the major concern of this dissertation is OC into complement clauses, implicit control will not be discussed any further. Nevertheless, it should be pointed out that Korean seems to be different from English in the way implicit control is caused. That is, Korean is a pro-drop language which allows subject deletion in a relatively unrestricted manner (J. Huang (1984, 1989), S. Kim (1994)). Therefore, it appears unclear whether the paradigms in (6) can be attested in Korean in a reliable way, as nothing precludes us from treating the unexpressed subject as pro in the Korean equivalents. In particular, since Korean does not have expletives, it would be difficult to construct Korean equivalents to English sentences like (6a). I will not attempt to figure out why Korean differs from English in these respects, because it is beyond the scope of the current dissertation.

I have so far discussed an important criterion based on the locality between PRO and its controller, leading to two major types of control—that is, obligatory control (OC) and non-obligatory control (NOC). It has also been shown that there are three subtypes of control falling under NOC—that is, long-distance (LD) control, arbitrary control and implicit control. If we summarize the types of control based on our discussion, it would look something like (7). Note that the typology below is not a conclusive version, as it will become clear after we discuss subtypes of OC. The subtypes of OC will be discussed shortly in Section 2.2.2.
Before proceeding to the next subsection, I would like to point out that arbitrary control in Korean is induced in slightly different structural environments than in English. First, subordinate clauses that have an arbitrarily controlled null subject in Korean are always in the subject position of the entire sentence; and second, the subordinate clauses appear in the form of nominalized clauses, which do not allow for clause-typing markers (e.g., declarative marker \(-ta\), imperative marker \(-la\)) and complementizers (e.g., infinitival complementizer \(-tolok\), quotative complementizer \(-ko\)). Given below are some relevant examples that illustrate these properties.

Since it is also beyond the scope of the current study, no further discussion of where these differences come from will be given in this dissertation. Likewise, LD control, the remaining type of NOC, will not be dealt with, either, as our primary concern is to explore how OC into a number of different types of complement clauses can be derived in Korean.
2.2.2 Diagnostics for OC vs. NOC

In this subsection, I will present several linguistic diagnostics for distinguishing between OC and NOC, along with the relevant examples. As briefly mentioned in 2.1, in Chomsky’s (1981) PRO theory of control, the PRO Theorem in (9) is an important constraint that governs the distribution of PRO.

(9) PRO THEOREM
    PRO must be ungoverned.           Chomsky (1981)

In addition, PRO is defined as an empty category specified [+ANAPHORIC] and [+PRONOMINAL]. As will be discussed in detail later, Chomsky argues that this kind of contradictory feature composition follows from the PRO Theorem, which limits the distribution of PRO to ungoverned positions, for example, the subject position of infinitives or gerundives in English. Note that in the Government and Binding (GB) framework, a binding domain, which is particularly called a Governing Category (GC), is defined as a syntactic unit that has a governing head, such as N(oun), V(erb), A(djective), P(reposition) or tensed Infl. Given this definition, PRO should be ambiguously interpreted either as a pronoun or anaphor since it fails to have its own GC, as the PRO Theorem allows no governing head.

However, as pointed out in Hornstein (2001: Ch 1), one immediate problem Chomsky’s (1981) analysis faces becomes evident if we consider the interpretive differences between OC PRO and NOC PRO. In other words, contrary to what the PRO Theorem predicts, PRO cannot be anaphoric and pronominal at the same time; rather, we need to distinguish between OC PRO and NOC PRO in terms of whether their antecedents are mandatorily required, whether they are local, and so forth. In Sec 2.2.2.1, I will begin by introducing basic diagnostics originally
suggested in Williams (1980), which clearly show that OC PRO exhibits different interpretive properties than NOC PRO. After that, three more tests revealing their semantic differences, which are not employed by Williams, will be presented: they include the prohibition of strict identity in VP ellipsis, the ban on a \textit{de re} belief for OC PRO, and the preference of a bound variable-like reading for OC PRO. The subsequent subsection (Sec 2.2.2.2) will show that the ban on split antecedents and partial control, which were traditionally used to rule out NOC PRO, have been recently challenged, and that split control (SC) and partial control (PC) need to be redefined as instances of OC, at least in some cases.

2.2.2.1 Standard Diagnostics for OC Properties

First, sentence (10a) is judged as ungrammatical, since PRO in the subject position of a lower clause does not have its antecedent (which I will continue to call a ‘controller’) in the same sentence. Notice, however, that the same sentence is incorrectly predicted to be OK under Chomsky’s (1981) analysis. This is because PRO can be interpreted ambiguously as a pronoun or anaphor but nothing prohibits PRO from behaving as a pronoun in (10a), which need not be bound by an antecedent within a sentence owing to its deictic function.

\begin{enumerate}
\item It was expected to PRO\textsubscript{arb} to shave himself. \textit{cf.} Hornstein (2001: 31)
\item It was believed that PRO\textsubscript{arb} shaving was important. \textit{cf.} Hornstein (2001: 32)
\end{enumerate}

On the other hand, as in (10b), when appearing in the sentential subject, PRO does not have to have an antecedent in the sentence. Therefore, whether or not PRO must have an antecedent in the sentence has been considered as an important diagnostic which keeps OC PRO apart from NOC PRO (Williams (1980), Koster (1984), Hornstein (1999, 2001)). To put it differently, OC
PRO whose distribution is limited to the complement clause disallows arbitrary control, but NOC PRO that ordinarily appears in the sentential subject or the adjunct clause tolerates it.

Second, consider (11a) and (11b) below, which are constructed by subordinating the sentence in (10a) and a sentence almost identical to (10b), respectively. In (11a), the null controllee, which was shown to be ‘OC PRO’ in (10a), is controlled by a potential controller (i.e., *John*) in the same sentence; nonetheless, the sentence is still judged ungrammatical. By contrast, if the null controllee in (11b), which was shown to be ‘NOC PRO’ in (10b), is construed as *John* in the highest clause, the sentence is judged grammatical, despite the distance between the two NPs.

(11) a. *Johni thinks that it was expected PROi to shave himselfi.  Hornstein (2001: 31)  
     b. Johni thinks that it is believed that PROi controlling his mind is necessary for winning the game.

Based on the contrast between (11a) and (11b), it has been claimed that the controller of OC PRO must be local—that is, it must appear in a clause immediately higher up, but this locality requirement does not hold for NOC PRO (Williams (1980), Manzini (1983), Bouchard (1984), Koster (1984), Lebeaux (1984), Hornstein (1999, 2001)). To put it differently, LD control is possible with NOC PRO, while it is impossible with OC PRO.

Third, the potential controller *John* appears in a local position to OC PRO in (12a), but the sentence is considered as ungrammatical. On the other hand, sentence (12b) with NOC PRO is judged grammatical, although PRO fails to be c-commanded by the potential controller *John*. Therefore, it has been claimed that OC PRO must be c-commanded by its controller, while NOC
PRO does not have to (Williams (1980), Bouchard (1984), Koster (1984), Hornstein (1999, 2001)).

   b. John’s coach believes that PRO controlling his mind is necessary for winning the game.

Fourth, it has been observed that under VP ellipsis, OC PRO and NOC PRO give rise to different results in terms of the way their antecedents are determined. Technically speaking, OC PRO in (13a) cannot have a strict reading and must instead have a sloppy reading, while NOC PRO in (13b) can have either a strict or sloppy reading (Bouchard (1984), Higginbothm (1980, 1992), Landau (1999, 2001)).

   b. John thinks that PRO getting his resume in order is crucial and Bill does, too.  Hornstein (2001: 32)

Consider the example in (14) that helps us understand the difference between the strict and sloppy identity in general, which was originally reported by Sag (1977). That is, when a VP containing an overt pronoun is deleted by ellipsis, the pronoun can have either a strict identity

\[ \text{Yesterday, it spoiled Mary’s mood [PROarb to listen to the news]}. \]
\[ \text{[PRO Bill’s/hisi*/j making that comment] was very rude of Johni}. \]

\[ \text{Landau (1999: 43)} \]

However, since Korean, unlike English, does not have an expletive pronoun, it seems hard to see if sentences equivalent to (ia) are attestable. Second, given that (ib) is derived from a representation where John, the controller, can c-command PRO, it cannot be a real example that undermines the c-command requirement for OC. For these reasons, the current study will continue to assume this requirement as a diagnostic for OC PRO.
reading, as in (14a), or a sloppy identity reading, as in (14b), depending on the context.

(14) Peter likes his picture, and Mary does too.
   a. Strict: Peter likes his picture, and Mary likes his (Peter’s) picture.
   b. Sloppy: Peter likes his picture, and Mary likes her (Mary’s) picture.

Turning to the case of OC PRO in (13a), on the one hand, when the elided VP is reconstructed at LF, OC PRO inside the deleted VP in the second conjunct must be interpreted as Bill, not as John, as in (15). On the other hand, NOC PRO in (13b) is interpreted as either (16a) or (16b), in the same way that the overt pronoun his in (14) triggers the ambiguous interpretation.

(15) a. Strict: *John\textsubscript{i} expects PRO\textsubscript{i} to win and Bill\textsubscript{j} expects PRO\textsubscript{i} to win.
    b. Sloppy: John\textsubscript{i} expects PRO\textsubscript{i} to win and Bill\textsubscript{j} expects PRO\textsubscript{j} to win.

(16) a. Strict: John\textsubscript{i} thinks that PRO\textsubscript{i} getting his resume in order is crucial and Bill\textsubscript{j} thinks that PRO\textsubscript{i} getting his resume in order is crucial.
    b. Sloppy: John\textsubscript{i} thinks that PRO\textsubscript{i} getting his resume in order is crucial and Bill\textsubscript{j} thinks that PRO\textsubscript{j} getting his resume in order is crucial.

Therefore, a generalization drawn from the contrast between (13a) and (13b) is that the strict identity reading is unavailable with OC PRO, while it is OK with NOC PRO.

Fifth, if quantified NPs like an only-NP is a controller, OC PRO must be interpreted as a bound variable, while NOC PRO can have either a covariant or invariant reading (Higginbotham (1980, 1992), Hornstein (1999, 2001)). In other words, the referent of OC PRO in this context should co-vary with the operator, as evidenced by the fact that sentence (17) is compatible only with the covariant reading in (17a). On the other hand, the referent of NOC PRO in (18) can co-vary with the operator, as in (18a), but it does not have to, as in (18b).
(17) Only Churchill remembers PRO giving the BST speech.  Hornstein (2001: 31)
a. Covariant: For no x, x different from Churchill, x remembers himself (i.e., x) giving the BST speech.
b. Invariant: *For no x, x different from Churchill, x remembers his (Churchill’s) giving the BST speech.

(18) Only Churchill remembers that PRO giving the BST speech was momentous.  Hornstein (2001: 32)
a. Covariant: For no x, x different from Churchill, x remembers that himself (i.e., x) giving the BST speech was momentous.
b. Invariant: For no x, x different from Churchill, x remembers that his (Churchill’s) giving the BST speech was momentous.

Sixth, the fact that a de se belief is required in order for sentence (19a) to be felicitous while a de re belief is sufficient for sentence (19b) to be true has been adopted as an additional diagnostic for the OC properties. As Landau (1999: Ch 2, Sec 2.2) discusses, the de se vs. de re distinction comes into play in situations where the subject of an attitude verb, such as expect and believe, has incorrect information about his or her own identity (see Lewis (1979), Chierchia (1990), Higginbotham (1992) for more discussion).

(19) a. The unfortunate expects PRO to get a medal.  Hornstein (2001: 31)
   b. The unfortunate believes that PRO getting a medal would be boring.  Hornstein (2001: 32)

To understand better the interpretive difference between (19a) and (19b), consider the following famous scenario from Hornstein (1999).

(20) (There is) a war hero who suffers from amnesia and remembers nothing of his wartime experiences. Suppose this person (hereafter, “the unfortunate”) sees a TV program describing his own exploits, and is impressed with the courage exhibited by that person, who he does not know is “himself.”  Hornstein (1999: 35-36)

4 According to Higginbotham (1992: 86), this scenario was originally mentioned in Castañeda (1966).
In this scenario, *the unfortunate* can be said to be deprived of a *de se* belief, since he lost the ability to identify himself due to his mental disorder. Accordingly, the sentence in (19a) cannot be true under the scenario, as its truth conditions fail to be met if the subject does not have a *de se* belief about the ‘self’; in other words, the absence of the subject’s *de se* belief prohibits the sentence from being interpreted as ‘the unfortunate, believes *of himself* that he, will be a medal recipient.’ On the other hand, even though *the unfortunate* does not know of himself, the sentence in (19b) can be true, as its truth conditions can be satisfied by the *de re* belief about a certain individual, namely, anyone denoted by *the unfortunate*. The interpretive pattern found in (19b) turns out to be analogous to what is found in (21) where the lower subject is an overt pronoun.

(21) The unfortunate expects that he will get a medal. 

Landau (1999: 48)

In a nutshell, the characteristic properties that make OC PRO distinguished from NOC PRO can be listed as follows.

(22) a. Arbitrary control is impossible with OC PRO but possible with NOC PRO.

b. Long-distant antecedents are impossible with OC PRO but possible with NOC PRO.

c. OC PRO must be c-commanded by controllers but NOC PRO do not have to.

d. A strict reading is impossible with OC PRO under VP ellipsis but possible with NOC PRO.

e. With only-NP antecedents, invariant (or coreference) readings are impossible with OC PRO but possible with NOC PRO.

f. *De re* readings are impossible with OC PRO but possible with NOC PRO.

### 2.2.2.2 The Ban on Split Control and Partial Control

In order to draw a more complete picture of the typology of control than what was presented in
2.2.2.1, we need to consider two more constraints—namely, the ban on split antecedents and on partial control. These two constraints were originally used to filter out NOC PRO: that is, if the constraints are not satisfied, controlees cannot be OC PRO but NOC PRO (Williams (1980), Manzini (1983), Bouchard (1984), Martin (1996), Hornstein (1999, 2001)). However, the validity of these two constraints has been challenged in the last decade (Landau (1999), Barrie (2004), Fujii (2006), Hornstein (2003, 2009), Rodrigues (2007), Bowers (2008), Madigan (2008a,b), Snarska (2009), Pittman and Barrie (2010)), and some core data and issues related to each constraint will be discussed below.

Beginning with the ban on split antecedents, Williams (1980) and subsequent studies (e.g., Bouchard (1984), Koster (1984), Martin (1996), Hornstein (1999, 2001)) maintain on the basis of the contrast between (23a) and (23b) that split antecedents are not available for OC PRO.

(23)  
a. *John\textsubscript{i} told Mary\textsubscript{j} PRO\textsubscript{i+j} to leave together. \hspace{1cm} Hornstein (2001: 31)  
b. John\textsubscript{i} told Mary\textsubscript{j} that PRO\textsubscript{i+j} having dinner together on Valentine’s Day would be fun.

However, departing from this long-standing view, Landau (1999) argues that OC PRO can take antecedents that are split in their positions, as illustrated below.

(24)  
a. John\textsubscript{i} promised his son\textsubscript{j} [PRO\textsubscript{i+j} to go to the movies together]. \hspace{1cm} Landau (1999: 43)  
b. John\textsubscript{i} persuaded Mary\textsubscript{j} [PRO\textsubscript{i+j} to kiss in the library].  
c. John\textsubscript{i} proposed to Mary\textsubscript{j} [PRO\textsubscript{i+j} to meet each other at 6].  
d. John\textsubscript{i} asked Mary\textsubscript{j} [whether PRO\textsubscript{i+j} to get themselves a new car]. Landau (1999: 67)

He applies some of the standard diagnostics in (21) to show that PRO which has split antecedents in examples like (24) is OC PRO (see Landau (1999: Ch 2, Sec 3.1) for the relevant data). Notice, however, that Landau does not offer an answer to why split control in (23a), as opposed
to (24a-d), fails to arise, nor does he explain how split control can be derived by his proposed system that relies on Agree. Instead, noting that some of the predicates like persuade and ask are typical OC verbs that are found in non-split contexts, he simply concludes that split control is determined by the semantics of particular verbs.

Furthermore, some recent studies have observed that the judgments on (24a-c) reported by Landau (1999) may not faithfully reflect native speakers’ intuition. For example, Hornstein (2009) suspects that sentences like (24c) are not likely to be genuine instances of split control for a couple of reasons. To begin with, as shown in (25) below, the second sentence is OK even though Mary is not overtly present in the matrix clause of the same sentence.

(25) John was planning to have lunch with Mary. He proposed to meet each other at 1:30.

Hornstein (2009: fn. 2, p.2)

In addition, there are even cases where neither of the two antecedents is required to appear in the same sentence. For instance, the first sentence in (26) seems to be sufficient to make the second sentence true with a reading on which both Mary and Sue were supposed to meet at 6:00

5 Landau (1999) rather focuses on the issue of what distinguishes split control (SC) from partial control (PC), both of which he treats as subtypes of OC. According to him, predicates allowing for SC are similar to those inducing PC, in that the predicates in both types of control are close to double object verbs. However, they need to be distinguished from each other, as the SC predicates allow both syntactic and semantic plurality of the embedded predicate, while the PC predicates license semantic plurality only, as in (i) and (ii) (from Landau (1999: 67)).

(i) a. *John, told Mary that he, preferred [PRO$_i$, to meet each other at 6]. (PC)
   b. John, proposed to Mary$_j$ [PRO$_{ij}$ to meet each other at 6]. (SC)
(ii) a. *John, told Mary that he, wondered whether [PRO$_i$, to get themselves a new car]. (PC)
   b. John, asked Mary$_j$ whether [PRO$_{ij}$ to get themselves a new car]. (SC)

Also, recommend and order, as opposed to propose and ask, cannot license SC but allow PC, as in (iii).

(iii)a. Mary$_i$, recommended to?ordered John$_j$ [PRO$_i$, to convene without her$_i$]. (PC)
b. *Mary$_i$, recommended to/ordered John$_j$ [PRO$_{ij}$ to cooperate with each other]. (SC)

Landau (1999: 68)
(although not all the speakers agree on this reading).

(26) John thought that Mary and Sue should get together over supper and iron out their differences. He proposed to meet each other at 6:00. Hornstein (2009: fn. 2, p.2)

Nevertheless, Hornstein (2009) points out that although there is non-trivial variation among native speakers of English with respect to whether split control is an instance of OC or NOC, some other languages like Japanese obviously exhibit the same phenomenon as a subtype of OC. In particular, as also mentioned by Hornstein, Fujii (2006) convincingly shows that split control is invariably an instance of OC in Japanese. Later, Gamerschlag (2007) and Madigan (2008a,b) have demonstrated that Korean control sentences where an exhortative clause is subordinated are another attested case that fits in with the view of taking split control as OC. I will not attempt to answer why English behaves differently than Japanese and Korean with respect to this type of control. However, it should be pointed out that the aforementioned studies on split control in Japanese and Korean lend support to Landau’s (1999) claim that OC PRO may have split antecedents, and that the ban on split control should be taken out of the list of diagnostics for keeping OC PRO apart from NOC PRO.

If one wishes to enhance his/her understanding of what renders split control available, it would be helpful to examine certain properties that are common to Japanese and Korean: (i) clause types are morphologically manifested by distinct clause-final (or sentential mood) markers, though Japanese has a smaller number of distinctive mood markers than Korean; and (ii) sentences producing split control always subordinate ‘exhortative’ clauses (marked by –yoo in Japanese and –ca in Korean). Detailed discussion of split control will be deferred until Chapters 5 and 6, the latter of which, in particular, will offer a formal analysis of split control.
found in Korean control data which subordinate an exhortative clause (headed by –ca).

Turning to the second constraint, i.e., the ban on partial control, Landau (1999) claims that OC PRO does not meet this constraint. ‘Partial control’ (PC) means that the referents of PRO include not only an overt controller in the next higher clause but also another individual, the latter of which is determined by a preceding sentence or a discourse context, as in (27).

(27)  
   a. John\textsubscript{i} wanted \([\text{PRO}_{i^+}\) to meet at 6].
   b. The chair\textsubscript{i} was afraid \([\text{PRO}_{i^+}\) to gather during the strike].
   c. Mary\textsubscript{i} wondered \([\text{whether PRO}_{i^+}\) to apply together for the grant].

Landau (1999: 41)

‘i+’ in (27) indicates that the referents of PRO include an NP indexed as ‘i’ and someone else determined by the context.⁶ This type of control contrasts with all the other OC environments discussed so far which Landau dubs ‘exhaustive control’ (EC): for example, unlike the case of PC environments in (27), PRO in the EC environments must be identical to the controller in both syntactic and semantic features, as shown in (28) (Landau (1999: 38-39)).

(28)  
   a. *John\textsubscript{i} managed \([\text{PRO}_{i}\) to meet at 6]. (cf. *John met at 6.)
   b. *The chair\textsubscript{i} dared \([\text{PRO}_{i}\) to gather during the strike]. (cf. *The chair gathered during the strike.)
   c. *Mary\textsubscript{i} forgot \([\text{PRO}_{i}\) to apply together for the grant]. (cf. *Mary applied together for the grant.)

For about two decades before Landau (1999), just like the case of split control, the readings available in (27) were regarded as NOC readings (Bouchard (1984), Koster (1984), Martin

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⁶ Interestingly, Paul Portner (p.c.) points out that split control (SC) could be treated as an instance of partial control (PC) rather than of exhaustive control (EC), in that one of the referents of the controlled null subject in the former happens to be in the immediately higher clause. In this dissertation, however, I will continue to take SC to belong to EC, following the recent convention.
But since Landau’s work, an increasing number of studies have reported that PC exhibiting OC properties is robust crosslinguistically (Hornstein (2003, 2009), Barrie (2004), Pittman and Barrie (2010) for English; Rodrigues (2007) for Brazilian Portuguese; Madigan (2008b) for Korean; Snarska (2009) for Polish (and English)).

I should make it clear that although PC is a very intriguing research topic, the current study will not attempt to offer an account for how it can be derived. However, since there are some occasions to address PC in the remainder of this chapter, I will provide a bit more discussion of the properties of OC environments that allow for the PC interpretation. In particular, as discussed in Landau (1999: Ch 2, Sec 3), although PC patterns with EC when they are tested against the standard OC diagnostics, syntactic environments where the two types of OC are available are not identical. First, Landau (1999) maintains that classes of predicates selecting for PC complements differ from those taking EC complements in that only those selected by the PC predicates can have independent tense. Slightly departing from Stowell (1982), Landau suggests that only PC predicates allow complement clauses to denote events that are not realized with respect to the matrix event, as shown by the contrast in (29).

(29)  
a. *Yesterday, John managed to solve the problem tomorrow.  (EC predicate)
b. Yesterday, John wanted to solve the problem tomorrow.  (PC predicate)

The lists of PC and EC predicates are provided in (30), and he further presents the data in (31) and (32) as examples of PC and EC predicates, respectively (data from Landau (1999: 49-50)).

(30)  
a. EC PREDICATES: Implicatives, aspectual or modal.
b. PC PREDICATES: Factive, propositional, desiderative or interrogative.
(31) **EXHAUSTIVE CONTROL (EC) PREDICATES**  
a. **IMPLICATIVE**: John managed to solve the problem.  
b. **ASPECTUAL**: John began to solve the problem.  
c. **MODAL**: John had to solve the problem.

(32) **PARTIAL CONTROL (PC) PREDICATES**  
a. **FACTIVE**: John hated to solve the problem.  
b. **PROPOSITIONAL**: John claimed to have solved the problem.  
c. **DESIDERATIVE**: John hoped to solve the problem.  
d. **INTERROGATIVE**: John wondered how to solve the problem.

Second, controlled null subjects in PC environments should be *semantically* plural, although they are *syntactically* singular. The requirement that the controlled subjects in the PC environments be semantically plural can be seen by the fact that collective predicates (e.g., debate, congregate, convene, gather, kiss, meet, separate, etc.) as in (33), or collectivizing adverbs (e.g., together) can appear only in the PC complements, as in (34).

(33)  
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<td>a.</td>
<td>*John$_i$ told Mary that he$<em>i$ managed [PRO$</em>{i+}$ to meet at 6 o’clock today].</td>
<td>(EC predicate)</td>
<td>Landau (1999: 57)</td>
</tr>
<tr>
<td>b.</td>
<td>John$_i$ told Mary that he$<em>i$ preferred [PRO$</em>{i+}$ to meet at 6 o’clock today].</td>
<td>(PC predicate)</td>
<td></td>
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(34)  
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<tbody>
<tr>
<td>a.</td>
<td>*John$_i$ told Mary that he$<em>i$ was able [PRO$</em>{i+}$ to win the game together].</td>
<td>(EC predicate)</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>John$_i$ told Mary that he$<em>i$ was eager to [PRO$</em>{i+}$ to win the game together].</td>
<td>(PC predicate)</td>
<td></td>
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</tbody>
</table>

On the other hand, the evidence for the syntactic singularity of the controlled subjects in PC comes from the fact that they either fail to license plural anaphors (e.g., each other, themselves) or plural floating quantifiers (e.g., all, both, each) or cannot be predicated of by nominal predicates that are morphologically plural (e.g., members), as illustrated in (35).\(^7\)

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\(^7\)As pointed out by Paul Portner (p.c.), the evidence in terms of the availability of syntactic anaphors does seems to be weaker than the other pieces of evidence that appeal to plural floating quantifiers or
(35) a. *John told Mary that he preferred [PRO, to meet each other at 6 today].
   (cf. John and Mary preferred to meet each other at 6 today.)
   b. *John told Mary that he regretted [PRO, having talked about themselves].
   (cf. John and Mary regretted having talked about themselves.)
   c. *John told his friends that he intended [PRO to each donate at least $100].
   (cf. John and his friends intended to each donate at least $100.)
   d. *John knew that Mary hoped [PRO to become members of the new club].
   (cf. John and Mary hoped [PRO to become members of the new club]).

Landau (1999: 62-3)

This being said, let me briefly comment on whether Korean allows for PC, and if so,
whether controlled subjects in PC environments are syntactically or semantically plural. As
Madigan (2008b) maintains, PC seems to be also available in Korean, as exemplified in (36) and
(37) below. Notice that the controlled subject in both examples can be interpreted as a group
noun that includes a local controller as part of their referents. Furthermore, the availability of the
collective predicate (moi- ‘gather’) or collectivizing adverb (hamkkkey ‘together’) in the
complement clause strongly suggests that PC readings are possible in both sentences.

(36) PC WITH SUBJECT CONTROL VERBS
   a. appa-nun ttal-eykey [e+, hammkkey siktang-ey ka-ma-ko]
daddy-TOP daughter-DAT together restaurant-to go-PRM-COMP
yaksokhayssta.
   promised
   ‘Daddy, promised his daughter [e+, to go to the restaurant together].’
   (Scenario: Mary reserved a table at a luxurious restaurant for her parents, so that they
can celebrate the 30th anniversary of their wedding. Deeply amazed by the surprising
gift, her father promised Mary to go to the restaurant together with her mother despite
his hectic schedule.)

   b. wuywencang i-un [e+, yesetsi-ey moi-kilo] yaksokhayssta.
   chair-TOP 6 o’clock-at gather-COMP promised
   ‘The chair, promised [e+, to gather at 6].’

morphologically plural predicates.
Second, the availability of a plural anaphor or floating quantifier shows that unlike English, controlled subjects in the PC environments in Korean are syntactically plural.

     John-TOP Mary-DAT each.other/all meet-IMP-COMP persuaded
     Lit. ‘Johni persuaded Maryj [ej+ to (all) meet each other].’

     John-TOP Mary-DAT three CL-NOM meet-COMP persuaded
     Lit. ‘Johni persuaded Maryj [ej+ to, the three of them, meet at the library].’

     cf. Madigan (2008b: 121-22)

2.2.2.3 Summary: Subclasses of OC and NOC

Based on the discussion so far, we are led to conclude that OC can be divided at least into three subtypes, i.e., exhaustive control (EC), partial control (PC) and split control (SC). However, as suggested in Madigan (2008b), it would make more sense if we take SC to fall under EC while leaving PC as an independent subclass of OC, rather than keeping all those three as separate subclasses of OC. Notice that SC fits well with the definition of EC since the overtly present controllers are exactly identical with the referents of the controllee. In the case of PC, on the other hand, since the referents of the controllee are not exhaustively present as overt controllers in the higher clause, it would be untenable to classify PC as an instance of EC. Accordingly, the
first version of the typology of control can be modified in the following way (cf. Madigan (2008b: Ch 2, Sec 2.6)):

\[(39)\] TYPOLOGY OF CONTROL (Final)

\[
\begin{array}{c}
\text{Obligatory Control (OC)} \\
\text{Non-Obligatory Control (NOC)} \\
\text{Exhaustive Control} \\
\text{Partial Control} \\
\text{Long-Distance Control} \\
\text{Arbitrary Control} \\
\text{Implicit Control} \\
\text{Split Control} \\
\text{Non-Split Control}
\end{array}
\]

I would like to emphasize again that the control data which will be examined in this dissertation are confined to the subclasses of OC. In particular, this dissertation will primarily investigate the subtypes of EC, where the subject of *complement* clauses is exhaustively controlled by either the single or multiple arguments in the matrix clause.

Note, however, that apart from this typology, there is another convention widely adopted in the literature for classifying OC: that is, researchers often find it convenient to distinguish the subtypes of OC by making reference to syntactic positions which are occupied by the controllers. According to this kind of syntactic criterion, OC can be classified into three subtypes: first, cases where a controller occupies the subject position of a next higher clause are called ‘subject control,’ as in (40a); second, those where a controller appears in the object position of a next higher clause are referred to as ‘object control,’ as shown in (40b); finally, in some cases like
more than one controller occupies a different position, and this type of control is called ‘split (antecedent) control,’ although the same label is also used as a subclass of EC in (39).

(40)  
    a. John, promised Maryj [PRO_{i}^{*j} to go to college].  
    b. Johnj, convinced Maryj [PRO_{*ij} to go to college].  
    c. Johnj, proposed to Maryj [PRO_{i+j} to meet together at 6].

For the sake of convenience, I will continue to use these three terms in the remainder of this dissertation, and except when it is used in contrast with PC, the term SC will be reserved for cases where controllers occupy different syntactic positions in the matrix clause.

More interestingly, a syntactic criterion of this kind makes it easy to deal with recently introduced control patterns, namely, forward control (FC) and backward control (BC). As will be discussed in Chapters 3 and 4, FC indicates OC cases where a controller occupies a structurally higher position than a controlled null argument, as illustrated in (41). According to this distinction, the three syntactic subtypes of OC English exemplified in (40a-c) fall under FC. On the other hand, recent studies have reported that some languages allow a null controllee to appear in a structurally higher position than a controller, as schematized in (42) in which each arrow indicates the direction of control dependency (Polinsky and Potsdam (2002) for Tsez; Monahan (2003), Kwon and Polinsky (2006) for Korean; Fujii (2006) for Japanese).

(41)  
    a. CONTROLLER_{i}  V  [Δ_{i}  to  VP]  (FORWARD CONTROL)

    b. DP  V  CONTROLLER_{i}  [Δ_{i}  to  VP]
(42) **BACKWARD CONTROL**

a. $\Delta_i$ V [CONTROLLER$_i$ to VP]

b. DP V $\Delta_i$ [CONTROLLER$_i$ to VP]

Some relevant examples of BC are provided in (43) and (44) below, which correspond to the schematic representation in (42a) and the one in (42b), respectively.

(43) **BACKWARD CONTROL IN TSEZ (cf. (42a))**

$\Delta_i^{*k}$ [kid-bā$_i$ ziya b-išr-a] y-oq-si  
\hspace{1cm} girl.II-ERG cow.III.ABS III-feed-INF II-begin-PAST.EVID

‘The girl began to feed the cow.’ Polinsky and Potsdam (2002: 246)

(44) **BACKWARD CONTROL IN KOREAN (cf. (42b))**

John-un $\Delta_i$ [Mary-i-ka ttena-tolok] seltukhayssta.  
John-TOP Mary-NOM leave-COMP persuaded

‘John persuaded Mary to leave.’

In short, I have just sketched a way which distinguishes subtypes of OC in terms of the syntactic position of (a) controller(s). If we combine the three subtypes of OC exemplified in (40) (i.e., subject, object and split control) with the notions of FC and BC, we end up with a slightly different typology of OC in Table 1 than the one in (39).
2.2.3 Summary

In this section, I began with a discussion of the typology of control. In particular, it was shown in 2.2.1 that control can by and large be divided into two types, obligatory control (OC) and non-obligatory control (NOC) depending on whether the referential dependency between a null subject of the lower clause and an argument in the matrix clause is compulsory.

Then, both standard diagnostics and recently suggested diagnostics for distinguishing between OC and NOC environments were introduced in 2.2.2.1. The six diagnostics listed in (22a-f) are repeated here for the sake of convenience, and these diagnostics will be utilized in this dissertation in order to prove that the Korean constructions investigated here are genuine instances of OC (see Chapter 3 for infinitival control and Chapter 5 for jussive control).

(22) a. Arbitrary control is impossible with OC PRO but possible with NOC PRO.
   b. Long-distant antecedents are impossible with OC PRO but possible with NOC PRO.
   c. OC PRO must be c-commanded by controllers but NOC PRO do not have to.
   d. A strict reading is impossible with OC PRO under VP ellipsis but possible with NOC PRO.
   e. With only-NP antecedents, invariant (or coreference) readings are impossible with OC PRO but possible with NOC PRO.
   f. De re readings are impossible with OC PRO but possible with NOC PRO.
In 2.2.2.2, it was demonstrated that split control (SC) and partial control (PC) can no longer be taken to be the characterizing properties of NOC PRO, since they are proven to appear in OC environments in many languages.

Given the discussions in these two subsections, a complete typology of control was presented in 2.2.2.3. In addition to this typology, I also introduced another way of classifying the subtypes of OC in terms of the syntactic positions of the controllers, which will turn out to be useful for our discussion in later chapters, particularly dealing with backward control found in the infinitival control constructions in Korean (see Chapters 3 and 4).

2.3 Syntactic Approaches to OC in Generative Grammar

This section will provide an in-depth survey of the major syntactic approaches to control, especially, obligatory control (OC), in generative grammar (since Chomsky (1957)). In particular, the survey aims at uncovering how each work addresses three essential questions in (2), repeated below.

(2)  
  a. What licenses controlled subjects? (Syntactic environment (or Licensor))  
  b. What are controlled subjects? (Categorial status of controlled elements)  
  c. How are controllers determined? (Controller choice)

It will not take long to recognize that a vast number of analyses have been advanced even within the framework of generative grammar, and they have attempted to answer the questions in (2a-c) in one way or the other. However, due to the large number of works and diversity in their interests, it would not be realistic to review every single work existing in the literature. For this reason, I will narrow down the scope of discussion to some of the major approaches that view the OC phenomena from a syntactic perspective. In the meantime, I will point out problems for
those approaches, so that we can eventually find a better way to answer the aforementioned three questions in light of the Korean control constructions.

There are two more things I would like to mention regarding the survey provided in this section. First, as pointed out in Section 2.1, the emergence of a new analysis of the OC phenomena is generally contingent upon that of a new theoretical model. For example, the PRO Theorem, which limits the distribution of the controlled subject to ungoverned positions, was proposed at the advent of Government and Binding (GB) theory (initiated by Chomsky (1981)). For this reason, the upcoming three subsections (2.3.1 – 2.3.3) allotted for the survey coincide with three major models of generative grammar such as transformational, GB and minimalist framework. One to three studies will be picked out from each of the major generative frameworks.

Second, one might think that some of the studies surveyed in the following subsections are not directly relevant to the Korean control constructions the current study is concerned with. However, it will become clear in the subsequent chapters how they are related to the Korean data under discussion. Conversely, readers may find that there are only a few works among those surveyed in this chapter, which directly handle the Korean control data examined in this dissertation. Notice, however, that a number of previous approaches addressing any of the Korean control constructions will be critically reviewed whenever necessary in the subsequent chapters. Likewise, the survey provided in this chapter does not include semantic approaches to the OC phenomena, but some of the semantic approaches will be discussed in the following chapters when they are relevant.
2.3.1 Transformational Approaches:

2.3.1.1 Rosenbaum (1967, 1970)

This subsection will review Rosenbaum’s (1967, 1970) pioneering work on control, which was done within the Standard Theory (initiated by Chomsky (1965)). As mentioned above, the discussion will be centered on the three issues in (2). As for the issue of controller choice in (2c), the basic idea adopted in most of the transformational analyses in Standard Theory is that two NPs referentially linked to each other in control sentences are present in Deep Structure, and the control dependency is obtained by a transformational rule that deletes the initial NP of the complement clause, which is identical with subject or object in the main clause.\(^8\) This transformational rule erasing one of the identical NPs is dubbed ‘Equivalent NP Deletion’ (or ‘Equi’), and specifically, Rosenbaum (1967, 1970) analyzes control sentences like (45a) and (45b) by adopting this rule.

(45) a. John condescended to go. 
   b. John defied Bill to go. 
   
Rosenbaum (1970: 20)

---

\(^8\) In Standard Theory, just as in any versions of contemporary generative grammar, raising is dealt with differently than control. More specifically, in the raising construction, as in (i) below, two other transformational rules, such as Extraposition and Pronoun Replacement, are assumed to apply instead of Equi NP Deletion. That is, as shown in (ii), other parts than the raising verb *seem* starts out as a constituent in the sentential subject position, and at some point, *the students* and *have gone home* are separated via Extraposition followed by Pronoun Replacement (and Complementizer Deletion).

(i) The students seem to have gone home.
(ii) a. \[[NP it] [S the students have gone home]] seem 
   b. \[[NP it] [S for the students have gone home]] seem 
   c. \[[NP it] seem [S for the students have gone home]] 
   d. \[[NP the students] seem [S for have gone home]] 
   e. \[[NP the students] seem [S to have gone home]]

Deep Structure  
Complementizer Insertion  
Extraposition  
Pronoun Replacement  
Complementizer Deletion  

Davies and Dubinsky (2004: 23)
The abstract phrase structures of these two sentences in Deep Structure are given in (46a, b).\(^9\)

\[(46)\]

a. \[\begin{array}{c}
  \text{S} \\
  \text{NP} \\
  \text{V} \\
  \text{S} \\
  \text{John condescended} \\
  \text{NP} \\
  \text{V} \\
  \text{S} \\
  \text{John} \\
  \text{go} \\
\end{array}\]

b. \[\begin{array}{c}
  \text{S} \\
  \text{NP} \\
  \text{V} \\
  \text{NP} \\
  \text{S} \\
  \text{John} \\
  \text{defied} \\
  \text{NP} \\
  \text{V} \\
  \text{NP} \\
  \text{Bill} \\
  \text{V} \\
  \text{S} \\
  \text{Bill} \\
  \text{go} \\
\end{array}\]

Rosenbaum (1970: 21)

Given these structures, a series of transformational rules such as deletion and insertion are assumed to apply, yielding the desired word orders in Surface Structure, as illustrated below.

\[(47)\] Derivational Steps for (45a)/(46a)

a. John condescended \[\text{[S [NP John] go]}\] DEEP STRUCTURE
b. John condescended \[\text{[S for [NP John] go]}\] COMPLEMENTIZER INSERTION
c. John condescended \[\text{[S for to go]}\] EQUI NP DELETION
d. John condescended \[\text{[S to go]}\] COMPLEMENTIZER DELETION

\[(48)\] Derivational Steps for (45b)/(46b)

a. John defied \[\text{[NP Bill][S [NP Bill] go]}\] DEEP STRUCTURE

---

\(^9\) According to the Phrase Structure Rules in Rosenbaum (1967), the main VP is dominated by the Predicate Phrase (PDP), which is not adopted in Rosenbaum (1970).
Notice, however, that although both sentences involve the application of the same Equi rule at some point of the derivation, the noun phrase erased by the rule is the subject of the main clause in (45a), while it is the object of the main clause in (45b). According to the current typology of OC, the former case can be labeled subject control, while the latter falls under object control. Rosenbaum (1970) initially suggests that there are two distinct rules applying to the sentences in (45a) and (45b)—one for the subject control sentence, as in (49a), and another for the object control sentence, as in (49b).

Then, the immediate question that emerges is how we can ensure that the antecedent of the deleted NP is the higher subject in (45a), as stated in (49a), while it is the matrix object in (45b), as stated in (49b). To answer this question, Rosenbaum (1970) proposes a principle of minimal distance (PMD), and given below is what Rosenbaum (1970: 26) says regarding this principle:\(^{10}\)

\(^{10}\) As mentioned before, the same principle is now known as the Minimal Distance Principle (MDP). To avoid any confusion, I will confine the use of the original name of the principle in the current section, but elsewhere, I will call it the Minimal Distance Principle, following the practice in the recent literature.
The generalization that determines which of the two noun phrases in the main sentence must be identical to the initial noun phrase of the complement can be expressed in terms of a principle of minimal distance (henceforth PMD). In the underlying phrase structure diagram [(46b)], one observes that the noun phrase in the main sentence which is relevant, i.e., the object noun phrase, is also that noun phrase which is least distant from the initial noun phrase of the complement. Distance here naturally can be defined in terms of the underlying phrase structure itself by making reference to the number of branches in the path which separates the NP nodes in the main sentence from the initial NP node in the complement. [...] Sentence [(45a)] reveals a special case of the principle. In this instance, the subject noun phrase of the main sentence is the only noun phrase in the main sentence and is, therefore, the least distant from the initial noun phrase of the complement.

Given this principle, Rosenbaum (1970) tries to unify the two deletion rules by formulating a new rule in (50) below: step (i) aims at covering (49a) and (49b), but step (ii) is designed for inverse Equi cases like Knowing the fact worries John, which will not be discussed here.

\[
\begin{align*}
(50) \quad & W \quad (NP) \quad X \quad \left\{ \begin{array}{c}
\text{for} \\
\text{POSS}
\end{array} \right\} \quad \text{NP} \quad Y \quad (NP) \quad Z \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\Rightarrow \\
\text{(i)} & 5 \text{ is erased by 2.} \\
\text{(ii)} & 5 \text{ is erased by 7, where a constituent A is erased by a constituent B, e.g., A} \Rightarrow \emptyset, \\
& \text{just in case A and B meet the conditions imposed by the principle of minimal distance.}
\end{align*}
\]

In brief, according to the transformational analysis by Rosenbaum (1967, 1970), two identical NPs that are in a control relation are overtly present in Deep Structure, and their relation is already encoded in the transformational rule called Equi. More importantly, the determination of the matrix NP that leads to the erasure of the initial NP of the lower clause is regulated by the PMD, an independent rule of locality, though it is not clearly formalized. Then, what is known as the control dependency can be said to be the by-product of the application of
Equi (in combination with other transformational rules). This is the gist of what the transformational approach in Standard Theory suggests regarding the question about the controller choice in (2c). However, his analysis regarding the controller choice has problems some of which seem to be inherent to the transformational framework itself. First, just as in other transformational analyses, Rosenbaum assumes Deep Structure and Surface Structure, which are abandoned in the Minimalist Program since the two levels of representation are proven to be conceptually unnecessary (see Chomsky (1995), Hornstein et al. (2005) and references therein). Second, his analysis seems to make an incorrect prediction for the control interpretation triggered by the verb *promise* (e.g., *John promised to Mary* [*e*₁ to leave]). Since the verb selects not only for a clausal object but also an NP object, the Equi Deletion for Object in (49b) will apply in accordance with the PMD, which forces the object NP rather than the subject NP to be picked out as the controller.

As for the question concerning the categorial status of controlled subjects in (2b), the controlled subject takes the same form as the matrix NP which is identical in reference in Deep Structure but is ‘doomed’ to be erased by the construction-specific deletion rule, namely, Equi, from the very beginning of the derivation. Thus, in order to distinguish the null subjects in control sentences from those in other apparently similar constructions, for example, raising constructions like *The students seem to have worked hard*, he appeals to the differences between the control and raising constructions with respect to their Deep Structure and the kinds of transformational rules that apply.

Finally, tightly related to the issue of the categorial status of the controlled subjects is the question in (2a) which is about the nature of the environments licensing null subjects in control sentences. Just like other transformational analyses in Standard Theory, Rosenbaum (1967,
1970) does not explore the nature of the subordinate clause, in particular, with respect to whether the clause is tensed and/or infinitival. Instead, the Deep Structure representation and the construction-specific transformational rule, namely, the Equi rule, only provide the structural information about the subordinate clause in the control (as opposed to raising) construction.

2.3.1.2 Chomsky (1973), Chomsky and Lasnik (1977)

In Extended Standard Theory Chomsky (1973) proposes different ideas concerning (2a-c) than Rosenbaum (1967, 1970). As for the categorial status of controlled subjects in (2b), rather than adopting Equi, Chomsky suggests that a special empty pronoun, PRO, is base-generated in Deep Structure. In addressing the issue of controller choice in (2c), he assumes that PRO is interpreted by an interpretive rule in Surface Structure, although he does not make it clear what the rule is. Finally, as for the issue in (2a), namely, the structural environments permitting PRO, he implicitly suggests that it can appear in the subject position of an infinitive clause.

In Revised Extended Standard Theory, Chomsky and Lasnik (1977) provide a more refined analysis of control than Chomsky (1973), especially, with respect to two related issues: the syntactic environments of PRO and the differences between PRO and traces or lexical NPs in their distributions. Furthermore, instead of simply assuming that PRO is referentially related to the subject or object in the matrix clause, Chomsky and Lasnik present crucial data which lead to the conclusion that the referential dependency between PRO and the matrix NP is ‘obligatory.’ The data discussed by them include those where PRO appears in the \textit{wh}-interrogative infinitival clause and in the non-interrogative infinitival clause selected by control predicates such as \textit{try}, \textit{persuade} and \textit{promise} in English.
Beginning by addressing the question in (2b), i.e., the categorial status of controlled subjects, Chomsky and Lasnik (1977) assume with Chomsky (1973) that there is a special kind of null category \([\text{NP } e]\), which is labeled PRO. According to them, since this null category is anaphoric by nature, it cannot have its own index until an interpretive rule dubbed ‘Construal’ assigns the relevant index to it through the device of coindexing at the time of mapping into Logical Form, as shown in (51b). Chomsky and Lasnik keep this null category apart from another kind of null category, a trace, since the latter gains its index as a result of the application of a movement transformation by S-Structure, as illustrated in (52b) (and the LF representation would look like the same).^{11}

\[
\begin{align*}
\text{(51)} & \quad \text{a. } [S [S [NP John] [VP [V persuaded] [NP Bill]] [S [S [NP e] [VP to leave]]]]] \quad \text{(DS/SS)} \\
& \quad \text{b. } [S [S [NP John] [i [VP [V persuaded] [NP Bill]]] [S [S [NP e] [i [VP to leave]]]]]] \quad \text{(LF)} \\
\text{(52)} & \quad \text{a. } [S [S [NP e] [VP was [AP en [VP [V hit] [NP Bill]]]]]] \quad \text{(DS)} \\
& \quad \text{b. } [S [S [NP Bill] [i [VP was [AP en [VP [V hit] [NP e]]] [i]]]]] \quad \text{(SS)}
\end{align*}
\]

As regards the issue in (2a), unlike Chomsky (1973), which simply assumes that PRO can occur in the subject position of infinitival clauses, Chomsky and Lasnik attempt to show why categories other than PRO cannot occur in some environments. Consider the following sentences where PRO is typically allowed to occur.

\[
\begin{align*}
\text{(53)} & \quad \text{It is unclear } [S \text{ what } [S \text{ ___ to do}]]. \quad \text{C&L (1977: (27))} \\
\text{(54)} & \quad \text{a. John persuaded Bill } [S \text{ [S ___ to leave]}]. \\
& \quad \text{b. John promised Bill } [S \text{ [S ___ to leave]]}. \quad \text{C&L (1977: (28))} \\
\text{(55)} & \quad \text{a. John told Bill } [S \text{ what } [S \text{ ___ to do}]].
\end{align*}
\]

^{11} Chomsky and Lasnik (1977) do not make a distinction between \textit{wh}-traces and NP-traces, just as in most other works at that time.
On their analysis, these three sets of data are grouped into two—one group where PRO appears in the subject position of \textit{wh}-interrogative clauses, as in (53) and (55), and another group where PRO occupies the subject position of non-\textit{wh}-interrogatives, as in (54). Chomsky and Lasnik characterize these two groups by different underlying structures given below.

\begin{align*}
(56) & \quad \text{a. } [S \left[ \text{COMP} +\text{WH} \right] [S \text{ NP to VP}]] \quad \text{C\&L (1977: (31))} \\
& \quad \text{b. } \text{John (persuaded, promised) Bill } [S \left[ \text{COMP} -\text{WH} \right] [S \text{ NP to VP}]] \quad \text{C\&L (1977: (32))}
\end{align*}

Given the first representation in (56a), Chomsky and Lasnik draw a generalization that the \textit{wh}-interrogative clause whose complementizer is specified as [+WH] requires the subject NP to undergo Construal independently of the context, giving rise to obligatory control. This generalization can be confirmed by the ungrammaticality of the following sentences where the subject position of the interrogative infinitive clause is occupied by a lexical NP or trace.

\begin{align*}
(57) & \quad \text{a. } \text{*It is unclear what John to do.} \\
& \quad \text{b. } \text{*I told Bill what John to do.} \\
& \quad \text{c. } \text{*Who did you tell Bill what } t \text{ to do?} \quad \text{C\&L (1977: (34))}
\end{align*}

According to C\&L, the ungrammaticality of (57a) and (57b) can be explained in two ways. First, the Construal rule cannot apply to the lower subject in the domain of the [+WH] Comp, since the lexical NP \textit{John} enters the derivation with its own index fixed, blocking the application of Construal. Alternatively, the same sentences are ruled out by the *\textit{NP-to-VP} filter, which Chomsky and Lasnik assume applies to indexed NPs, such as lexical NPs and traces. The definition of the filter is given below (where categories with [-N] are verbs and prepositions).
(58)  \*[\alpha \text{NP to VP}], unless \alpha is adjacent to and in the domain of [-N].

The lexical NP *John is adjacent to the adjective in (57a) and the noun in (57b), both of which are characterized as [+N] categories, and thus, the ungrammaticality of the two sentences falls out from the violation of the *\[NP\text{-}to\text{-}VP\] filter. Likewise, (57c) can be ruled out for two reasons: first, Construal for control fails to apply to the trace under the scope of the [+WH] Comp, as it has already been assigned an index via a movement transformation by Surface Structure; secondly, the trace with its own index is subject to the *\[NP\text{-}to\text{-}VP\] filter, but since the trace is in the domain of *what, the [-N] category in (55c), the filter is not respected.

Another generalization Chomsky and Lasnik make about the obligatory environment of PRO is that Construal should apply to the subjects of the non-interrogative infinitive clauses if the clauses are selected by a limited class of (control) verbs, as schematized in (56b) above. In support of the second generalization, they present the following examples.

(59)  a. *John persuaded Bill [Tom to leave].
    b. *Who did John persuade Bill [t to leave]?
    c. *John promised [Bill to leave]
    d. *Who did John promise [t to leave]?

C&L (1977: (35))

Chomsky and Lasnik argue that either the failure in the application of Construal or the *\[NP\text{-}to\text{-}VP\] filter is responsible for the ungrammaticality of (59a) and (59b), since the lower subjects in both sentences are already given their own index, and they are not in the domain of the [-N] category. On the other hand, it is clear that the lower subject in (59c) has its own index from the beginning of the derivation and the one in (59d) obtains its index through the movement
transformation, so the Construal rule for control is precluded from applying to these subjects. But the \*[NP-to-VP] filter is unable to rule out the same sentences, for the lower subjects in both sentences are in the domain of the verb *promise*, which has the property of the [-N] category.

Notice, however, that the structural condition, in particular, the (non-)adjacency to the [-N] category, is not sufficient for capturing the distribution of PRO in the subject position of the declarative infinitival clause. This becomes evident if we compare (60) and (61) below. Just as in the case of *promise* in (59c,d), neither a lexical NP nor a trace is permitted to occur in the declarative infinitive clause if the complement clause is selected by *try*, as shown in (60). On the other hand, the subject of the declarative infinitive complement, if selected by *believe*, allows not only a lexical NP but also a trace, as shown in (61a) and (61b), respectively. In order to explain this contrast, Chomsky and Lasnik stipulate that only a limited class of predicates can license PRO whose dependency with the matrix argument is established by the Construal rule. Indeed, *try* came to be known as an instance of typical control verb, while *believe* falls under the so-called Raising-to-Object (or Exceptional Case Marking) predicates that do not license PRO.

\[(60)\]
\begin{enumerate}
  \item a. John tried [[NP e] to be nice].
  \item b. *John tried [Bill to be nice].
  \item c. *Who did John try \[t to be nice]\? (trace of who the subject of be)
\end{enumerate}

\[(61)\]
\begin{enumerate}
  \item a. John believed [Bill to be nice].
  \item b. Who did John believe \[t to be nice]\? (trace of who the subject of be)
\end{enumerate}

In brief, the important conclusion drawn from Chomsky and Lasnik’s generalizations about the distribution of controlled subjects is that PRO is in complementary distribution with other NP categories such as traces and lexical NPs, in that the occurrence of the former is confined to the subject position of the *wh*-interrogative infinitive clause or the non-interrogative
infinitives selected by the control predicates.\textsuperscript{12} It seems that Chomsky and Lasnik’s (1977) approach to control is partly successful, in that they provide a description of precise, though not exhaustive, environments where obligatory control is obtained in English. Nevertheless, their analysis is not free from problems. One immediate problem has to do with the postulation of the $^{*}[\text{NP-to-VP}]$ filter. That is, in order to exclude the ungrammatical sentence where the subject of the infinitival complement is occupied by an indexed NP, Chomsky and Lasnik resort to the $^{*}[\text{NP-to-VP}]$ filter, but this filter seems to be a mere generalization of the illegitimate environment prohibiting categories other than PRO. Furthermore, as manifested in (56a) above, Chomsky and Lasnik stipulate that Construal should always apply to the null subject of the interrogative infinitival clause whether the clause occupies the subject or complement position in a sentence. But why the subject position of this type of infinitive clause mandatorily requires PRO independently of the context is left unexplained. A related problem, although not crucial, is that sentences like \textit{It is uncertain what to do} in (53) are not an instance of obligatory control but of arbitrary control which belongs to non-obligatory control according to the current typology, and this requires the first environment for PRO in (56a) to be further refined.\textsuperscript{12} However, this conclusion does not seem to hold for every control predicate in English, and in fact, certain control predicates like \textit{want} and \textit{prefer} behave differently than other canonical control verbs. More specifically, the verb \textit{want} can normally function as a subject control verb, as in (ia) and (id), but the verb can also pattern with Raising-to-Object (RTO) verbs, as in (ib) and (ie). To capture this ambiguity, Chomsky and Lasnik (1977) suggest that sentences in (ib) and (ie) are obtained by optional deletion of the complementizer, while those like (ic) are in fact derived from (id) by Equi NP Deletion, rather than Construal; that is, the Equi rule erases the reflexive co-indexed with the matrix subject in (id), turning the sentence into (ic) in the end.

\begin{itemize}
  \item[(i)] a. We want very much [for Bill to win].
  \item b. We want [Bill to win].
  \item c. We want (very much) to win.
  \item d. ?We want very much for ourselves to win.
  \item e. ?We want ourselves to win.
\end{itemize}

\textsuperscript{12} However, this conclusion does not seem to hold for every control predicate in English, and in fact, certain control predicates like \textit{want} and \textit{prefer} behave differently than other canonical control verbs. More specifically, the verb \textit{want} can normally function as a subject control verb, as in (ia) and (id), but the verb can also pattern with Raising-to-Object (RTO) verbs, as in (ib) and (ie). To capture this ambiguity, Chomsky and Lasnik (1977) suggest that sentences in (ib) and (ie) are obtained by optional deletion of the complementizer, while those like (ic) are in fact derived from (id) by Equi NP Deletion, rather than Construal; that is, the Equi rule erases the reflexive co-indexed with the matrix subject in (id), turning the sentence into (ic) in the end.\textsuperscript{12}}
Turning to the last issue in (2c), Chomsky and Lasnik (1977) attempt to offer answers to when and how PRO receives its interpretation in a more detailed way than the previous works including Chomsky (1973). To begin with, they suggest that PRO, whose distribution is restricted to the subject position of the infinitive complement clause, gains its index by the rule of Construal that need to apply by Logical Form after the Surface Structure representation is built up. In addition, Chomsky and Lasnik observe that a context like (56b) where the non-interrogative infinitive clause is subordinated by a control predicate, the Construal rule must apply to the null subject, making it interpreted as either the matrix subject or matrix object. Nonetheless, they just stipulate that whether PRO is construed as the matrix subject or object in this environment is entirely a matter of the lexical property possessed by the predicate. Therefore, in order for their analysis to become more complete, Chomsky and Lasnik should make it clear how the lexical property of each predicate interacts with the Construal rule in determining the controller.

### 2.3.1.3 Summary

We have discussed three different approaches to control under the transformational framework, focusing on the three issues in (2), and they can be summarized as follows.

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Environments (2a)</th>
<th>Categorial Status (2b)</th>
<th>Controller Choice (2c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosenbaum (1967, 1970)</td>
<td>Specified in Structural Description of Equi</td>
<td>Same as controller but w/o phonetic content</td>
<td>Equi + Principle of Minimal Distance</td>
</tr>
<tr>
<td>Chomsky (1973)</td>
<td>Specified in Phrase Structure rule</td>
<td>PRO</td>
<td>Interpretative rule + properties of verbs</td>
</tr>
<tr>
<td>Chomsky &amp; Lasnik (1977)</td>
<td>The <em>[NP-to-VP]</em> filter</td>
<td>PRO</td>
<td>Construal rule + properties of verbs</td>
</tr>
</tbody>
</table>
2.3.2 Government and Binding Theory Based Approaches

2.3.2.1 Standard PRO Theory of Control: Chomsky (1981)

Chomsky (1981) advances an unprecedented theory of syntax, which is labeled Government and Binding (GB) Theory (also known as Principles and Parameters (P&P) Theory). In the GB model, in particular, he takes a modular approach, arguing that grammar consists of several subcomponents called ‘modules,’ which include Binding Theory, Bounding Theory, Case Theory, Control Theory, Government Theory, \( \theta \)-Theory, and X’-bar Theory. According to him, these modules interact with one another to generate or filter out (il)legitimate strings of words in language. In addition, he suggests that different kinds of transformations such as movement, adjunction and substitution are reduced into a single rule ‘Move \( \alpha \)’ by which anything can move anywhere, but the representations produced by Move \( \alpha \) are constrained by the interaction of some of the subcomponents listed above.

When it comes to the three issues of control in (2a)-(2c), what particularly concerns us among these modules is the Binding Theory, which is made up of the three conditions given in (62). It will be shown shortly how Chomsky (1981) connects these conditions to the licensing environments and categorial status of controlled subjects.

(62) BINDING THEORY\(^{13}\)

a. An anaphor is bound in its governing category.

b. A pronominal is free in its governing category.

c. An R-expression is free. \hspace{1cm} \text{Chomsky (1981: 188)}

\(^{13}\) The definition of governing category is as follows:

(i) GOVERNING CATEGORY

\( \alpha \) is the governing category for \( \beta \) if and only if \( \alpha \) is the minimal category containing \( \beta \) and a governor of \( \beta \), where \( \alpha = \text{NP or S} \). \hspace{1cm} \text{Chomsky (1981: 188)}
Chomsky postulates these conditions for the purpose of capturing the distribution of three nominal categories, such as anaphors, pronouns and R(eferring)-expressions, in a uniform way. Before the GB model, the complementary distribution of anaphors and pronouns was assumed to be encoded in different transformational rules, Reflexivization and Pronominalization, whose output representations are constrained by discrete conditions such as the Clause-mate Condition, Tensed Sentence Condition (TSC), Specified Subject Condition (SSC) and Nominative Island Condition (NIC), etc. On the other hand, the distribution of R-expressions (e.g., proper names, full NPs) was handled independently by some other rules such as Rule of Interpretation (Chomsky (1973)) or Noncoreference Rule (Lasnik (1976)). Putting aside the detailed discussion of how those various conditions are unified under the Binding Theory, let me focus on how the aforementioned binding conditions work and how they are connected to the Control Theory. Consider the sentences below.

(63)  a. John$_i$ likes himself$_i$.
     b. *John$_i$ thinks that Mary likes himself$_i$.

(64)  a. *The students$_i$ likes them$_i$.
     b. The students$_i$ think that the teacher likes them$_i$.

(65)  a. *He$_i$ likes John$_i$. (cf. John$_i$ likes him$_i$.)
     b. *He$_i$ thinks that John$_i$ is smart. (cf. John$_i$ thinks that he$_i$ is smart.)

First, Binding Condition A, which governs the distribution of anaphors (reflexives and reciprocals), requires that the anaphors, which Chomsky (1981) defines as [+ANAPHORIC, -PRONOMINAL], be bound in their governing category.$^{14}$ Notice that in keeping with Chomsky

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$^{14}$ From a binding-theoretic perspective, Chomsky (1981) suggests that overt and covert NPs can be
Chomsky (1981) defines $\alpha$ as a binder of $\beta$ iff $\alpha$ c-commands and is co-indexed with $\beta$, and the governing category is roughly equivalent to a clausal unit. Given this condition, Chomsky suggests that (63b) is ruled out due to the violation of Binding Condition A, as the reflexive *himself* is bound by the antecedent *John* which is assigned the same index in S-Structure, but the antecedent is not in the governing category of the anaphor. On the other hand, (63a) meets Condition A, as the reflexive *himself* is c-commanded by and co-indexed with its antecedent *John* in its governing category. Second, according to Binding Condition B, which dictates the distribution of pronominals characterized as $[-ANAPHORIC, +PRONOMINAL]$, they must not be bound (i.e., must be free) in their governing category. The contrast between (64a) and (64b) follows from this condition, as the pronoun *them* is free in its governing category in the latter sentence, but not in the former. Third, the R-expression *John* in (65a,b), which is defined as $[-ANAPHORIC, -PRONOMINAL]$, fails to meet Binding Condition C requiring that an R-expression not be bound, for the R-expression is bound by *he* whether or not the pronoun is in the governing category of *John*.

Notice, however, that according to Chomsky’s classification of NP categories by two binary features $[\pm ANAPHORIC, \pm PRONOMINAL]$, we are still left with one more category that is specified $[+ANAPHORIC, +PRONOMINAL]$. It seems difficult to find an overt NP category that satisfies this feature combination, as what Condition A requires is contradictory with what is classified into four groups in terms of two bivalent features $[\pm ANAPHORIC]$ and $[\pm PRONOMINAL]$, as given below.

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>OVERT NP</th>
<th>NULL NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ANAPHORIC, -PRONOMINAL</td>
<td>Anaphor</td>
<td>NP-trace</td>
</tr>
<tr>
<td>-ANAPHORIC, +PRONOMINAL</td>
<td>Pronoun</td>
<td>pro</td>
</tr>
<tr>
<td>-ANAPHORIC, -PRONOMINAL</td>
<td>R-expression</td>
<td>Wh-trace</td>
</tr>
<tr>
<td>+ANAPHORIC, +PRONOMINAL</td>
<td>-</td>
<td>PRO</td>
</tr>
</tbody>
</table>
Condition B does. To put it differently, a pronoun under the control of Condition B is prohibited wherever a reflexive governed by Condition A appears, as shown by the contrast between (63) and (64). However, Chomsky (1981) claims that there is a null category that satisfies these two contradictory requirements, and that the category typically appears in control environments like (3a) and (3b), repeated here as (66a) and (66b), respectively.

(66) a. John, hopes [PRO_i/*j to write a paper].  
    b. John, hopes that [PRO_i/*j writing a paper] will be fun.

Just as in the Extended Standard and Revised Extended Standard model, Chomsky (1981) assumes that the null subject in both sentences is ‘PRO,’ which answers the question concerning the category of controlled subjects in (2b), but he takes one further step to justify the need for such a null category with the aid of the Theta Theory and Extended Projection Principle (EPP). For example, although (66a) involves two predicates both of which assign at least two theta roles, there is only one overt NP, and it thus seems unclear how an external theta role of the lower verb write is discharged. According to Chomsky, the null category, PRO, receives the external theta role from the verb write, respecting the Theta Criterion, and the category also satisfies the EPP for the lower clause, which requires every clause to have its subject.15

Zooming in on the referential properties of PRO which is characterized as [+ANAPHORIC, +PRONOMINAL], Chomsky contends that this null category exhibits the properties of anaphors or those of pronouns depending on the context where it appears. On the one hand, when PRO

15 Chomsky (1981) defines the Theta Criterion as follows:

(i) **Theta Criterion**  
Each argument bears one and only one θ-role, and each θ-role is assigned to one and only one argument.  

Chomsky (1981: 36)
appears in such an environment as in (66a), it is ‘anaphoric’ in that it has to be bound by the local antecedent. On the other hand, the same null category in (66b) is ‘pronominal,’ as it can be free in its local domain. This means that the distribution of PRO is subject to both Condition A and Condition B, but the question is how the same category, PRO, can be both bound and free in the same domain called ‘governing category.’ In order to resolve this paradox, Chomsky presents a solution out of the paradox itself, suggesting that PRO cannot have a governing category, which came to be known as the PRO Theorem.

(67) \textbf{PRO Theorem}

\begin{align*}
\text{PRO must be ungoverned.} & \\
\text{(Chomsky (1981))} & \\
\end{align*}

From this requirement for PRO, we can deduce the environments where PRO can be licensed, an issue addressed in (2a). More specifically, it can only appear in the ‘subject’ position, as the object position is normally lexically governed (and assigned Case) by categories such as verbs or prepositions. Second, the position available for PRO is confined to the subject position of the ‘infinitival’ clause, as it is only the finite INFL that can govern its subject position. Given these two structural conditions, we are led to conclude that PRO can appear in the subject position of the infinitival or gerundive clause, as in (66), and that the infinitive clause in (66a) and (66b) is not \( S \) but \( S' \), as shown in (68a) and (68b), respectively; otherwise, the subject of the infinitival clause could be governed by the lexical verb hope or the finite INFL, contrary to fact.

\begin{align*}
(68) & \\
& a. \text{John\textsubscript{i} hopes \[S' [S PRO_{ij} to write a paper]\].} & \text{(OC)} \\
& b. \text{John\textsubscript{i} hopes that \[S' [S PRO_{ij} writing a paper]\] will be fun.} & \text{(NOC)} \\
\end{align*}
Furthermore, as shown in (68c) above, neither PRO nor the non-reflexive pronoun *him can occur in the subject position of the infinitive clause in the ECM (or RTO) constructions. If one assumes with Chomsky (1981) that the ECM complement, as opposed to the control complement, is not S’ but S, the unavailability of PRO and *him in (68c) can be attributed to the violation of the PRO Theorem and Condition B, respectively, given that the governing category of *him is the entire sentence.

It is noteworthy that the canonical positions of PRO, namely the un governed positions, are Caseless positions, since structural Cases such as nominative and accusative Case are assumed to be assigned only by a governing head under the GB framework. Therefore, without recourse to the Construal rule or the *[NP-to-VP] filter, we can readily explain why a lexical NP or trace, as opposed to PRO, is prohibited in the subject position of a (declarative) infinitival clause selected by a control predicate in sentences like (60), repeated below as (69) with slight modifications on the brackets. To wit, (69b) and (69c) are ungrammatical since both the lexical NP and *wh-trace cannot be Case-marked, as their positions are not governed.

(69)  a. John tried [S′ [S [NP PRO] to be nice]].
    b. *John tried [S′ [S [NP Bill to be nice]].
    c. *Who did John try [S′ [S [NP t to be nice]]?]

However, it still remains unexplained why lexical NPs or *wh-traces without Case render sentences ungrammatical. In order to answer this question, Chomsky (1981) suggests that the Case Filter, defined in (70) below, is responsible for filtering out overt NPs without Case at Phonetic Form (PF). Note that the Case Filter is not designed only for specific environments nor...
particular languages, unlike the *[/NP-to-VP/] filter proposed by Chomsky and Lasnik (1977); the former is instead assumed to apply to all the NPs across the board crosslinguistically.

(70) CASE FILTER
*NP if NP has a phonetic content and has no Case. Chomsky (1981: 49)

Third, as for the issue of controller choice in (2c), Chomsky (1981) does not develop a specific mechanism to explain how the controller of PRO is determined. As Davies and Dubinsky (2004: 196) comment, Chomsky simply makes a conjecture that various grammatical or contextual factors come into play when the controller of PRO is selected, and that the range of factors stretches from structural configurations and lexical properties of control verbs to semantic and pragmatic considerations (Chomsky (1981: 78-9)).

To summarize, as regards the issue of the categorial status of controlled subjects in (2b), by showing that they can be anaphoric or pronominal, Chomsky (1981) argues that the controlled subjects are PRO since other NP categories, overt or covert, would fail to meet Condition A and Condition B at the same time. According to him, only this type of null category can resolve the contradiction between the two conditions, for it does not have a governing category, which is formalized in the name of the PRO Theorem. This theorem is in turn argued to constrain the distribution of PRO, an issue addressed in (2a). That is, the theorem requires PRO to occur in an ungoverned position, and it follows from this theorem that the subject position of control infinitive or gerundive clauses are the only positions allowing for PRO, as the nonfinite INFL cannot govern and the S’ node (equivalent to the CP node) dominating these clauses blocks government by any potential governor outside the clauses. By contrast, rather than providing a concrete answer to the question in (2c), Chomsky (1981) ascribes the controller choice to the
interaction among a variety of factors, grammatical and/or contextual, and rather than defining those factors, he simply puts them under the rug called the ‘Control Theory.’

Despite several advantages of Chomsky’s (1981) Control Theory over the previous ones, his analysis seems to run into some problems. First of all, as just mentioned above, regarding the issue of controller choice, Chomsky’s approach does not provide a principled account but makes a tentative conjecture. In addition, as for the issue of the syntactic distribution of PRO, at the core of Chomsky’s analysis lies the notion of government, which is specifically embodied by the PRO Theorem, but the notion has already turned out to face both theory-internal and empirical problems. On the theoretical side, it has been argued within the Minimalist Program (e.g., Chomsky and Lasnik (1993), Chomsky (1995), among many others) that various syntactic phenomena previously considered to fall under different modules, such as Binding Theory, Case Theory and Control Theory, all of which place the notion government at the core, can now be reinterpreted without recourse to that notion (see Hornstein et al. (2005)).

On the empirical side, since the PRO Theorem forces PRO to occur in an ungoverned position, the subject position of the finite clause fails to host the controlled subject. However, unlike the prediction made by the PRO Theorem, it has been reported in the literature that many languages allow PRO to be Case-marked in control infinitives, and furthermore, cases where the controlled subject can appear in the subject position of finite clauses are robust across languages. For example, given in (71) are instances from Icelandic where PRO agrees with the controller in Case, as well as number and gender (Andrews (1981, 1982), Sigurðsson (1991), Landau (2004, 2006), Ussery (2007), among many others). What is relevant to our current discussion is that PRO is assigned structural or quirky Case in this language, which is evidenced by the morphological form of the predicative adjective. However, given that Case can be assigned only
if a Case assigner can govern a Case assignee, these sentences should be incorrectly ruled out by
the PRO Theorem, contrary to fact.

(71)  ICELANDIC
   a. hana, langar til að PRO, vera vinsaela
      she.ACC.FEM.SG longs toward to-to-be popular.ACC.FEM.SG
      ‘She longs to be popular.’
   Andrews (1982: 26)
   b. hún skipaði honum, að PRO, vera góðum
      she.NOM ordered him.DAT.MASC.SG to-to-be good.DAT.MASC.SG
      ‘She ordered him to be good.’
      Andrews (1981:453)
   c. ég tel hana, vonast til að PRO, vera vinsaela.
      I believe her.ACC.FEM.SG to-hope toward to-to-be popular.ACC.FEM.SG
      ‘I believe her to hope to be popular.’
      Andrews (1981:26)

The second case where the control dependency is established by subordinating finite clauses is
easily found in Balkan languages. For instance, Romanian patterns with Modern Greek in this
respect, and in both languages lacking infinitive clauses, subjunctive clauses are normally
embedded to create a control relation, as shown in (72) and (73) (the latter of which are repeated
from (2)), respectively (Philippaki-Warburton (1987), Terzi (1997), Landau (2004, 2006) for
Modern Greek; Kempchinsky (1989), Landau (2006) for Romanian). Moreover, it has been
reported that Modern Hebrew allows the tensed clause to be subordinated under a control
predicate, as shown in (74) (Borer (1989), Landau (2006)).

(72)  ROMANIAN
   a. Ion a ajutat-o, [PRO, să ajungă ea, prima].
      John has helped-her.ACC PRO.NOM PRT arrive she.NOM the-first
      ‘John has helped her to arrive the first.’

65
b. Maria\textsubscript{d} va încerca [PRO\textsubscript{i} sǎ nu i se facă ei\textsubscript{i} prima dor de Bucharești].

her.DAT the first of Bucharest

‘Maria will try not to be the first of them who misses Bucharest.’

Landau (2006: 155-6)

(73) **MODERN GREEK (SUBJECT CONTROL)**

a. Ι Maria prospathi [na elekti tin oreksi tis].

Mary try-3SG PRT control-3SG the appetite her

‘Mary tries to control her appetite’

b. O Yiannis elpizi [na pari tin ipotofia].

John hope-3SG PRT get-3SG the scholarship

‘John hope to get the scholarship’

Terzi (1997: 336)

(74) **MODERN HEBREW**

a. Talila\textsubscript{i} amra le-Itamar [ʃe e\textsubscript{j} yavo] (OBJECT CONTROL)

Talila said to-Itamar that will-come.m.sg

‘Talila told Itamar to come.’

b. Talila\textsubscript{i} amra le-Itamar [ʃe e\textsubscript{i} tavo] (SUBJECT CONTROL)

Talila said to-Itamar that will-come.f.sg

‘Talila\textsubscript{i} told Itamar\textsubscript{j} that she\textsubscript{i} will come.’

Borer (1989: 93)

Notice that while PRO in Icelandic is phonologically unrealized, the controlled subject in other languages like Modern Greek may be replaced with an overt NP. Although it is hasty to determine at this moment whether subordinated clauses in the control contexts are finite or infinitive, Korean may be added to the list of languages where the controllee can be lexicalized in the subordinate clause, as exemplified in (75) (D. Yang (1985), Borer (1989), S. Kim (1994), Landau (2006), Gamerschlag (2007), Madigan (2008b), J. Park (2010b), among others). As clearly shown, not only the third person pronoun kue ‘he’ or kunye ‘she’ but also the long-distance reflexive caki can appear in place of PRO, which should be impossible according to
Chomsky’s (1981) PRO Theorem (see Chapter 6 for more information about the distribution of lexicalized controlees in Korean jussive control).

(75) **KOREAN**

a. John₁-un Mary₁-eykey [eᵢ/kuᵢ-ka/cakiᵢ-ka nonmwun-ul ssu-**ma**-ko]
   John-TOP Mary-DAT he-NOM/self-NOM paper-ACC write-PRM-COMP
   yaksokhay-ss-ta.
   promise-PAST-DECL
   Lit. ‘John₁ promised Mary₁ that eᵢ/heᵢ/selfᵢ would write a paper.’

b. John₁-un Mary₁-eykey [eᵢ/kunyeᵢ-ka/cakiᵢ-ka nonmwun-ul ssu-**la**-ko]
   John-TOP Mary-DAT he-NOM/self-NOM paper-ACC write-IMP-COMP
   seltukhay-ss-ta.
   promise-PAST-DECL
   Lit. ‘John₁ persuaded Mary₁ that eᵢ/sheᵢ/selfᵢ should write a paper.’

In a nutshell, for both conceptual and empirical reasons, we are led to conclude that Chomsky’s (1981) binding-theoretic approach to control where the PRO Theorem constrains the distribution of controlled subjects fails to make correct predictions for the crosslinguistic data which allow controlled subjects to appear in both governed and Case-marked positions. If this is correct, an important question that we must ask regarding the status of a controlled subject is whether PRO should be reduced into other empty categories, as the theorem regulating its distribution is abandoned, or whether it can nonetheless be maintained, but without recourse to the PRO Theorem.

With respect to the way researchers answer the aforementioned question, namely, whether PRO is necessary, they are roughly divided into two groups under the GB or minimalist framework, depending on whether they take the first track (Borer (1989), H. Choe (2006), J. Park (2009d, 2010b) for Korean; Spyropoulos (2007) for Modern Greek; Hornstein (1999, 2001, 2003) for English), or the second strategy (Manzini (1983), Bouchard (1984), J. Huang (1989) by
unifying binding and control; Chomsky and Lasnik (1993), Martin (1996) by suggesting null Case; Landau (2004, 2006) by appealing to Chomsky’s (2000, 2001) Agree; Madigan (2008a,b) by applying Pak et al.’s (2006) clause type theory). In 2.3.2.2, I will first discuss two alternative approaches to the standard PRO theory of control under the GB model, which attempt to reduce OC intro binding relations. In 2.3.2.3, a detailed discussion of J. Huang’s (1989) extended control approach will follow. Then, Section 2.3.2.4 reviews D. Yang’s (1985) analysis of control constructions in Korean, which argues against the so-called reductionist approaches to control. After that, various alternative approaches to control within the minimalist framework will be discussed in 2.3.3.

2.3.2.2 Extended Binding Approaches

2.3.2.2.1 Manzini (1983): Control Relations as Anaphoric Binding

To begin with, rather than eliminating PRO entirely, Manzini (1983) deals with it as a pure anaphor and groups it together with lexical anaphors and NP-traces that are characterized as \([+\text{ANAPHORIC}, (-\text{PRONOMINAL})]\). The complete inventory of NPs assumed by Manzini (1983) is given in Table 3 below.

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>OVERT NP</th>
<th>NULL NP</th>
</tr>
</thead>
<tbody>
<tr>
<td>([+\text{ANAPHORIC}, (-\text{PRONOMINAL})])</td>
<td>Lexical anaphor</td>
<td>NP-trace, PRO</td>
</tr>
<tr>
<td>([-\text{ANAPHORIC}, +\text{PRONOMINAL}])</td>
<td>Pronoun</td>
<td>Pro</td>
</tr>
<tr>
<td>([-\text{ANAPHORIC}, -\text{PRONOMINAL}])</td>
<td>R-expression</td>
<td>\textit{wh}-trace</td>
</tr>
</tbody>
</table>

With this new inventory of NPs, Manzini proposes a generalized theory of binding where Chomsky’s (1981) original version of Condition A cleaves into two conditions, Condition A and
Condition A’, which are defined in (76a) and (76b), respectively. According to her, Condition A’ dictates the distribution of PRO, while Condition A regulates the distribution of lexical anaphors and NP-traces.

(76) **GENERALIZED BINDING CONDITIONS**

a. Condition A: An anaphor is bound in its GC.
b. Condition A’: An anaphor without an GC is bound in its domain-GC.\(^{16}\)
c. Condition B: A pronominal is free in its GC.

Let me briefly go over Manzini’s (1983) analysis of control to figure out how her system answers the questions in (2a-c). Beginning with the question in (2b), Manzini takes controlled subjects to be PRO, as specified in Table 3 above. In addition, regarding the issue of controller choice in (2c), her system presents an explicit, but ad hoc, mechanism for the interpretation of PRO by suggesting a binding-theoretic condition dubbed Condition A’. This mechanism apparently fares better than Chomsky (1981), since the latter remains vague about how controllers are determined and ascribes it to the interaction of grammatical and pragmatic factors in the name of Control Theory. Finally, regarding the question in (2a), although she does not make it explicit whether she adopts Chomsky’s (1981) PRO Theorem, it can be easily seen from the definition of Condition A’ in (76b) that her system assumes, on a par with the theorem, that PRO must be ungoverned.

\(^{16}\) The definition of a domain-GC and a c-domain (which is part of the former) are as follows:

(i) \(\gamma\) is a domain-GC for \(\alpha\) iff (a) \(\gamma\) is the minimal category with a subject containing the c-domain of \(\alpha\), and (b) \(\gamma\) contains a subject accessible to \(\alpha\). Manzini (1983: 433)

(ii) \(\gamma\) is the c-domain of \(\alpha\) iff \(\gamma\) is the minimal maximal category containing \(\alpha\). Manzini (1983: 422)
Manzini’s (1983) system can be viewed as a successful attempt, in that it tries to capture the distribution and interpretation patterns of PRO in a unified way with those of pure anaphors, and it thus explores the possibility of reducing the control dependency to binding effects, eventually dispensing with the control module. However, despite this advantage, Manzini’s (1983) approach appears to have some problems. On the theoretical side, her analysis still makes reference to governing category (GC), which inevitably includes as part of its definition the notion of ‘government’ that has been shown to be dispensable in various studies under the Minimalist Program.\textsuperscript{17} Furthermore, Manzini’s generalized binding theory is by no means conceptually simpler than Chomsky’s (1981) Control Theory, in that her theory postulates an additional binding condition, namely Condition A’, which only holds for PRO; and it also assumes another independent binding domain for PRO, which is called the domain-GC.

On the empirical side, Manzini’s analysis of control, which crucially relies on Condition A’, seems to undergenerate. For example, as shown in (72)-(74), it is not difficult to find cases across languages where the control relation can be established by subordinating finite clauses. In those data, the finite Infl is obviously both a governor and an accessible SUBJECT, making the lower clause a GC for the null subject. Since the null subject in each sentence has its own GC, it can in principle be defined as an anaphor and should respect Condition A rather than Condition A’. As a result, the null subject is predicted to be bound within its GC (i.e., the lower clause),

\textsuperscript{17} Manzini (1983) herself also recognizes that her initial version of generalized binding theory appealing to the notion of government poses a problem for the sentences like (i), so she revises slightly her theory by eliminating government. However, the revised version without recourse to government also fails to capture the obligatory disjoint reference of the embedded pronoun with the matrix subject in (ii).

(i)  
\begin{itemize}
  \item a. John asked Bill PRO to go.
  \item b. Mary knows that PRO to behave oneself is important.
\end{itemize}  
\textsuperscript{Manzini (1983: 442-43)}

(ii)  
\begin{itemize}
  \item a. The boys believe them to be honest.
  \item b. John considers him stupid.
\end{itemize}  
\textsuperscript{Manzini (1983: 444)}
but unlike the prediction, it winds up being controlled by an NP outside the GC (the same point also made by Borer (1989: 86)). Furthermore, as J. Huang (1989) points out, Manzini’s analysis fails to rule out a sentence where PRO occupies an object position, as in (77).

(77) *[s They saw PRO]. \textsuperscript{18} \quad \text{J. Huang (1989: 207)}

Note that the S node in the sentence above can be a GC for PRO, as it includes the verb \textit{saw} as a governor and \textit{they} (or the finite Infl) as a subject (or \textit{subject}) for PRO. As such, PRO in the object position should be permissible, but the sentence is obviously judged ungrammatical. In order to rule out the sentence correctly, Manzini has to make an assumption that PRO cannot be licensed in a Case-marked position, but this assumption seems to render her system less economical and, moreover, makes it incompatible with the crosslinguistic data in (72)-(74), where the controlled subjects are Case-marked, or the subordinate clauses are finite or tensed.

2.3.2.2 Borer (1989): Anaphoric AGR on INFL

Now let us turn to Borer (1989) which proposes to reduce control effects to binding under the GB framework. Notice, however, that Borer’s analysis is clearly distinguished from Manzini’s (1983) in two respects: first, Borer claims that the controlled subjects are \textit{pro} rather than PRO; and second, she also claims that it is not the null subject of a control complement but AGR, an N-type element under Infl, which may be ‘anaphoric’ and needs to be bound by a matrix NP.

Note that what underlies her second claim is the assumption that the Infl in control infinitives can have ‘AGR.’\textsuperscript{18} In support of these claims, she presents crosslinguistic data where \textit{ overt

\textsuperscript{18}} In order to distinguish control from ECM or raising constructions, Borer (1989: 83) suggests that a proposition selected by verbs of the \textit{believe/seem} class has a ‘Degenerate Infl,’ which does not have an
controllees occur in infinitive complements (e.g., Italian, Korean), and those where controllees appear in *tensed* clauses (e.g., Chinese, Hebrew, Samaraccan).

Looking at Borer’s (1989) analysis more closely, one crucial assumption in her theory of control is that there are two kinds of AGR, namely anaphoric and non-anaphoric AGR, and that the anaphoric AGR, due to the lack of referential properties, must be bound by a c-commanding NP in a higher clause, while the non-anaphoric AGR does not have to. In order to implement her idea about the anaphoricity of AGR, Borer suggests the following principle.

(78) Anaphoric AGR must be X-bound by a +N category at S-structure \( (X = A, \bar{A}) \).

Borer (1989: 74)

Capitalizing on the assumption incorporated into this principle, she further argues that the control dependency between a lower subject and its antecedent in a higher clause can be achieved only through the mediation of the anaphoric AGR. In other words, the anaphoric AGR must be bound by an appropriate antecedent in the higher clause, in accordance with the principle in (78), so that it can fix the value of its reference, which is in turn transmitted to the subject \textbf{pro} in the Spec-IP position of the complement clause.

At this point, one can raise questions concerning how the anaphoric AGR of the lower clause can be bound by an antecedent in a higher clause, as well as what forces the subject \textbf{pro} to share the reference of the anaphoric AGR. In order to answer the second question, Borer adopts the I-identification Requirement for null subjects from Borer (1986), which is given in (79). I-

(i) Coindex with Infl in the accessible domain of Infl.

---

ability of I-identifying null categories in its specifier position, since the Infl node is not subject to the I-Subject rule given in (i).
Identifiers are considered as a well-defined set of coindexed antecedents with a set of sufficiently rich (n)flexional-features.\textsuperscript{19}

\begin{equation}
\text{I-IDENTIFICATION REQUIREMENT}
\end{equation}
\begin{center}
All empty categories must be I-identified. In other words, they must be coindexed with an I-identifier.
\end{center}
Borer (1989: 71)

Simply put, according to this requirement, empty categories, including both controlled and non-controlled pro, can be licensed only if there is an appropriate I-identifier that provides them with the reference. Among those that function as I-identifiers are an anaphoric AGR in control infinitive clauses in non-null subject languages like English, which lacks inflectional features and thus need to be bound by a matrix NP; and a non-anaphoric AGR in null subject languages like Spanish or Italian, which has sufficiently rich inflectional features.

As for the first question about how the anaphoric AGR can be bound by an antecedent in the higher clause, she assumes that the anaphoric AGR, which does not have the ability of I-identifying the null subject by itself, should move up to the C node (COMP in Borer’s terms) by I-to-C raising. It is further assumed that once the Infl node containing the anaphoric AGR lands in C\textsuperscript{0}, CP, the projection of the latter head, can be notated as I\textsubscript{C}P, as the features of the raised Infl percolate up to the C head. What is crucial here is that as a result of I-to-C raising, the binding domain for the I\textsubscript{C}P can be shared by the Infl node, so whatever binds the I\textsubscript{C}P can also be a binder of the raised Infl (as well as Tense or AGR elements in it). Taking the OC sentence in (80) for example, if the Infl node of the embedded infinitive clause raises to the C node, the anaphoric

\textsuperscript{19} According to Borer (1989: 71), there are three types of relations that belong to this well-defined set of antecedents: those that are found between clitics and the syntactic positions coindexed with them; those that are found between members of a chain (either A- or A’-chain); and those that are found between AGR and its I-Subject that Borer assumes may satisfy what was previously defined as the Extended Projection Principle (EPP).
AGR can be bound by John and its the reference from it, in accordance with the principle in (78), as the I-to-C raising extends the binding domain of the anaphoric AGR to the IcP. Finally, the reference of the anaphoric AGR is transmitted to pro in the lower clause, so that the subject can be I-identified, satisfying the requirement in (79).

(80) \[\text{John}, \text{tried} [\text{IcP INFL}_i [\text{IP pro}_i [\text{INFL} e] \text{to leave}]].\] Borer (1989: 75)

via I-to-C Raising

Note, however, that there is a caveat: Borer stipulates that I-to-C raising required for the anaphoric AGR to be bound can only apply if the C node is unoccupied by an overt complementizer, or an overt complementizer can be vacated via lowering. For example, she attributes the absence of OC readings in such examples as (81a,b) to the failure of I-to-C raising, as the prepositional complementizer for already occupies the C node, blocking the raising of Infl. In case the C node is already filled, an overt NP should occupy the Spec-IP position as a last resort; otherwise, the anaphoric AGR that fails to move up to C would be left unbound, violating the binding requirement in (78). Similarly, in (81c), the complementizer for prevents Infl from raising to C, so the anaphoric AGR that lacks its own reference cannot I-identify the pro subject, thereby violating the I-identification Requirement. This sentence could be saved if the pro is replaced with an overt NP, just as in (81a,b), since the NP can I-identify and license the pro.

(81) a. It would please John \text{for Bill} to win.
b. It would please John \text{for him} to win.
c. *It is easy \text{for pro} to leave. \hspace{1cm} \text{Borer (1989: 75)}

Borer’s (1989) analysis has some advantages over the previous approaches. First, unlike Manzini’s (1983) system, Borer’s analysis does not need any special assumption in defining a
governing category of a controlled subject, as I-to-C raising renders the anaphoric AGR accessible to government from the higher clause (putting aside any possible problem with the notion ‘government’ itself for now). Second, if controlled subjects are pro, we can get rid of PRO, a special empty category allowed only in the subject position of control infinitives, so that we can reduce the number of null categories to two (i.e., pro and traces) in the grammar. Third, given the assumption that the nature of AGR under Infl makes a null subject referentially dependent on the matrix argument, it is naturally explained why obligatory control effects are limited to subject positions. Last but not least, she claims that her system correctly predicts that controlled subjects can be overt in some languages, and even tensed clauses may be selected as control complements. Let us see how Borer handles the relevant data for each case. To begin with, she reports that the controlled null subject in Korean can be replaced with an overt pronoun like ku ‘he’ or the anaphor caki ‘self,’ as in (82a), but any other overt element, either having its own fixed reference or disjoint reference from a potential antecedent, cannot appear in place of pro, as in (82b).20

(82)  

John-NOM hei-NOM/selfi-NOM leave-will-COMP try do-PAST-DECL


John-NOM Billi-NOM/hei-NOM leave-will-COMP try do-PAST-DECL

Borer (1989: 85)

According to Borer, Korean patterns with English in some respects: first, control complements in both languages are infinitival clauses whose AGR under Infl is ‘anaphoric’; and second, I-to-C raising must takes place in order for the anaphoric AGR to be bound by an antecedent in the

20 Some typos are corrected, and the glosses are Borer’s (1989).
However, it is also argued that Korean is different from English in that overt subjects in the former cannot bind the anaphoric AGR, while those in the latter can, and she ascribes this difference to whether I-to-C raising can apply even when the C node is filled with an overt complementizer. On the one hand, when the prepositional complementizer is selected in English infinitives, as in (81a,b) above, there must be an overt NP in the lower Spec, IP in order for the anaphoric AGR to be bound, as I-to-C raising is blocked by the complementizer under C; otherwise, the null subject fails to be I-identified, as in (81c). On the other hand, in Korean, even though the C node is occupied by the overt complementizer –ko, as in (82a) above, the anaphoric AGR can still (and in fact, must) undergo I-to-C raising. Borer suggests that this is because the complementizer –ko in Korean obligatorily cliticizes onto IP, and if nothing fills up the vacated C position, the Empty Category Principle (ECP) would be violated as the null C cannot be properly governed by the lowered complementizer. As a result of I-to-C raising, the anaphoric AGR ends up in a higher position than the overt NP, failing to be bound by the latter. At the final step, the anaphoric AGR is bound by a matrix NP, which makes the pronoun or anaphor in the lower Spec-IP coindexed with the matrix NP by transitivity. Notice that in contrast to the data in (82a), those in (82b) are ungrammatical, since the coindexation of the matrix argument with the overt subject in the lower Spec-IP leads to a conflict in reference, as they have different indices. This is how Borer explains the contrast between Korean and English regarding the availability of overt subjects in control complements.

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21 In Borer’s (1989) system, however, although the ‘anaphoric’ AGR in two languages is taken to have the same properties, the ‘non-anaphoric’ AGR in Korean is distinguished from English in that only the former has sufficiently rich inflectional features enough to license a null pro in non-control complements (which she assumes to be different from a null topic, on a par with Huang (1984, 1989)). She argues that this difference is what makes the null (pronominal) subjects in the non-control contexts licensed only in Korean.
Next, as for the cases where tensed clauses are subordinated as control complements, Borer discusses the data from Modern Hebrew, as this language exhibits obligatory control dependencies only when 3rd person subjects, whose distribution is limited to non-root contexts, are not overt and the subordinate clauses are either in past or in future tense, as shown in (83) and (84), respectively (some of which have already been introduced earlier in this chapter). These certainly contrast with the sentences in (85), where the subordinate clauses are in present tense and neither 3rd person null subjects nor the obligatory dependency of those null subjects with the matrix NPs is available.

(83)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Tense</th>
<th>Control Subject</th>
<th>Verb</th>
<th>Location</th>
<th>Target</th>
<th>Infinitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Past</td>
<td>ObjC</td>
<td>yavo</td>
<td>M.SG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Past</td>
<td>SbjC</td>
<td>tavo</td>
<td>F.SG</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Past</td>
<td>ObjC</td>
<td>hicliax</td>
<td>M.SG in-tests</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘Talila told Itamar to come.’

‘Talila told Itamarj that shei will come.’

‘Talilaj told Itamarj that *(they) will come.’

(84)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Tense</th>
<th>Control Subject</th>
<th>Verb</th>
<th>Location</th>
<th>Target</th>
<th>Infinitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Past</td>
<td>ObjC</td>
<td>hicliax</td>
<td>M.SG</td>
<td></td>
<td>succeeded.M.SG</td>
</tr>
<tr>
<td>b.</td>
<td>Past</td>
<td>SbjC</td>
<td>hicliax</td>
<td>F.SG</td>
<td></td>
<td>succeeded.F.SG</td>
</tr>
<tr>
<td>c.</td>
<td>Past</td>
<td>ObjC</td>
<td>hicliax</td>
<td>M.SG in-tests</td>
<td></td>
<td>succeeded.M.SG</td>
</tr>
</tbody>
</table>

‘Talila told Itamarj that he succeeded.’

‘Talila told Itamarj that she succeeded.

‘Talila told Itamarj that *(they) succeeded.’

Borer (1989: 93)

(85)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Tense</th>
<th>Control Subject</th>
<th>Verb</th>
<th>Location</th>
<th>Target</th>
<th>Infinitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Past</td>
<td>ObjC</td>
<td>macliax be-bxinot</td>
<td>M.SG</td>
<td></td>
<td>in-tests</td>
</tr>
<tr>
<td>b.</td>
<td>Past</td>
<td>SbjC</td>
<td>macliax be-bxinot</td>
<td>F.SG</td>
<td></td>
<td>in-tests</td>
</tr>
</tbody>
</table>

Intended: ‘Talilaj told Itamarj that hej succeeds in tests (habitually).’

‘Talilaj told Itamarj that she succeeded in tests.’
Intended: ‘Talila, told Itamar, that she, succeeds in tests (habitually).’

Borer (1989: 93)

In an attempt to capture the correlation between the tense information of complement clauses and the availability of the OC dependency in Modern Hebrew, Borer suggests that AGR in Infl in the past or future tense is anaphoric, while the AGR in the present tense is not anaphoric and entirely lacks a person slot, and that this difference makes I-to-C raising of the AGR obligatory only in the former two tenses. Given this suggestion, it follows that the null subjects in (83a,b) and (84a,b) can be I-identified by the anaphoric AGR, since the AGR is bound by an appropriate antecedent after I-to-C raising, but the null subjects in (85a,b) cannot be licensed, since the non-anaphoric AGR in situ fails to I-identify them due to the lack of sufficient i-features. Furthermore, in order to explain how the overt pronouns in (83c) and (84c) end up with disjoint reference from the potential antecedents, she suggests that the overt complementizer *she* ‘that’ in Modern Hebrew can optionally cliticize onto IP, while the same operation in Korean is obligatory. In other words, when an overt pronoun occupies the lower Spec-IP position, it is able to bind AGR, regardless of whether the AGR is anaphoric. Therefore, the Infl node has no need to move up to C, which renders the cliticization of the complementizer unnecessary.

This being said, Borer’s (1989) theory of control in light of the three issues in (2a-c) can be summarized as follows. First, it is the anaphoricity of the AGR of a complement clause that licenses overt or null controllees. Second, as for the categorial status of controlled subjects, they are not defined as PRO but *pro* in both null subject and non-null subject languages. Finally, according to Borer’s system, what controls the *pro* subject of a control complement (whose AGR is anaphoric) is determined by what binds the anaphoric AGR that obligatorily raises to C⁰, and this view on control is different from the standard view that takes the control dependency to
be a direct relation between a controlled subject in the lower clause and a coreferential NP in the matrix clause.

Before proceeding to the next subsection, let me point out some problems for her approach. First, she suggests that the (non-)anaphoricity of AGR in a clause is determined by the finiteness or tense of the clause, in combination with some other idiosyncratic properties of a language, but this suggestion does not seem to make a correct prediction for languages like Chinese (cf. S. Kim (1994: 93)). Specifically, she assumes that AGR of a finite clause (as opposed to AGR of an infinitive clause) is non-anaphoric in both Chinese and Korean. However, according to her, these two languages diverge when it comes to the identifiability of the non-anaphoric AGR’s. On the one hand, she assumes that since it is specified [+IDENT] in Korean, the non-anaphoric AGR of the finite clause has sufficient i-features to I-identify a null subject. On the other hand, she suggests that since it is marked [-IDENT] in Chinese, the non-anaphoric AGR of the finite clause does not have enough i-features to I-identify a null subject. Then, it is incorrectly predicted that Chinese does not allow for null subjects in finite clauses. To put it differently, her assumption about the non-anaphoric AGR’s in Chinese and Korean in their ability to identify pro runs counter to the well-documented observation that both Chinese and Korean are discourse-prominent languages that permit pro-drop (J. Huang (1984, 1989)). Moreover, she simply assumes that the Infl node has AGR in Chinese and Korean, but this assumption is not compatible with the standard assumption that there is no AGR on $I^0/T^0$ in East Asian languages including these two languages (J. Huang (1984, 1989), D. Yang (1984, 1985), S. Kim (1994); cf. Hasegawa (1984/1985) for Japanese). Thus, in order to for her assumption to be justified, independent evidence that Infl has AGR in Chinese and Korean should be provided.

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22 This problem could be avoided if it is assumed that what appears to be a null subject in Chinese is in fact a null topic. Thanks to Paul Portner for pointing this out to me.
Second, in implementing her idea that the anaphoric AGR must be bound by a matrix NP via I-to-C raising, Borer suggests that even if a control complement is headed by an overt complementizer, the complementizer can be cliticized down onto the Infl node, which makes the C position available for the raised anaphoric AGR; and that whether the cliticization is possible and it is obligatory or optional varies depending on languages. However, one potential problem with this suggestion is that downward movement is considered as very exceptional, and it is allowed only in some limited cases like affix hopping for verbal inflections. In addition, it is not clear how the anaphoric AGR under Infl in control infinitives in Korean can move up to $C^0$ after the overt complementizer is cliticized down onto Infl. In other words, does it move by pied-piping the entire Infl node, or by stranding the latter? Given the abstract representation in (80) above, she seems to assume that the entire Infl node is raised along with the anaphoric AGR. Then, it becomes mysterious where the cliticized complementizer ends up being.

Third, recall that at least two subtypes of obligatory control are available in Modern Hebrew—that is, subject control, as in (83b) and (84b), and object control, as in (83a) and (84a). However, given that the matrix predicates in both cases are the same, the question arises why the raised AGR has to be bound by the matrix subject in the former type, but by the matrix object in the latter type. Borer could argue that why the anaphoric AGR in (83a) and (84a) should be bound by the matrix object, not by the subject, can be answered by a locality constraint that works for the binding relationship, since the object is closer to the AGR under C than the subject. Even if this is true, something still has to be said in order to ensure that it is not the object but subject that binds the anaphoric AGR in (83b) and (84b).\textsuperscript{23}

\textsuperscript{23} Of course, anyone who wishes to provide a proper analysis of the control facts in Modern Hebrew should be able to capture this.
In the previous subsection, I have reviewed two reductionist approaches to control, i.e., Manzini (1983) and Borer (1989). Departing from Chomsky’s (1981) standard PRO theory of control, they attempt to derive control effects from the binding principles by treating OC PRO as a pure anaphor (Manzini (1983)), or by attributing control effects to the anaphoric nature of AGR in control complements (Borer (1989)). J. Huang (1989) can be said to take the reductionist position as well, but he is not just concerned with the distribution and interpretation of PRO but also with the similarities and differences between PRO and pro in pro-drop languages. In particular, J. Huang aims to entirely eliminate Chomsky’s (1981, 1982) agreement-based pro-drop theory by suggesting a ‘generalized theory of control’ that determines the reference of both PRO and pro. To achieve this goal, assuming that Chinese is a pro-drop language, as he does in J. Huang (1984), J. Huang (1989) examines both control constructions and sentences with null arguments in this language. As a point of departure, J. Huang (1989) first shows that Chomsky’s (1981, 1982) pro-drop theory, which is also independently developed into the pro-drop parameter by Rizzi (1982, 1986), faces a problem with capturing how null arguments can be licensed and recovered in Chinese. As shown in (87a) and (87b), which are possible answers to the question in (86), either the subject or object can be dropped in Chinese.

(86)  Zhangsan  kanjian  Lisi  le  ma?
      Zhangsan  see  Lisi  ASP  Q
   ‘Did Zhangsan see Lisi?’

(87)  a. (ta) kanjuan  (ta)  le.
      he  see  he  PERF
   ‘(He) saw (him).’

(87)  b. wo  xiang [(ta) kanjian(ta) le].
      I  think  he  see  he  PERF

81
According to J. Huang (1989), what is missing in the subject position in (87) is pro, which is characterized as [+PRONOMINAL], and can be bound by any coreferential element as long as they are not in the same clause. On the other hand, a null argument in the object position is not pro but a variable that can only be bound by a null topic operator. In support of this distinction, he provides the following pair of examples, where the null subject in the lower clause can be optionally bound by the matrix subject, as in (88a), while the null object cannot, as in (88b).

(88) a. Zhangsan_i shou [e_ij hen xihuan Lisi].  (NULL SUBJECT)
    ‘Zhangsan say very like Lisi.’

b. Zhangsan_i shou [Lisi hen xihuan e*ij].  (NULL OBJECT)
    ‘Zhangsan say Lisi very like
    ‘Zhangsan said that Lisi liked [him].’  J. Huang (1989: 187)

In particular, following J. Huang (1984), J. Huang (1989) attributes the impossibility of coindexation of the null object with the matrix subject in (88b) to a violation of Condition C: that is, since the null object is a variable, it cannot be bound by a c-commanding NP in an A-position.24

What is more relevant to our current discussion is that after establishing the availability of pro as a null subject in Chinese, J. Huang (1989) raises the important question of what licenses it in this language. In other words, according to Chomsky’s (1981, 1982) pro-drop theory, which relies on the principle of recoverability (in Taraldsen’s (1978) sense), subjects can be dropped in a language if the language has inflection rich enough to recover the contents of the

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24 Note, however, that contrary to what J. Huang (1984, 1989) says, a number of studies have argued that even a null object may be pro, as it can be bound by a c-commanding NP in an A-position (e.g., D. Yang (1985), S. Kim (1994) for Korean).
missing subjects. However, unlike pro-drop languages with rich inflection, such as Italian and Spanish, Chinese is known to lack syntactic agreement and AGR as well. Accordingly, the agreement-based pro-drop theory predicts that pro should not be possible in any positions in Chinese-type languages, but this prediction is obviously not borne out, as shown above. For this reason, J. Huang (1989) argues that the pro-drop theory should be reduced to a more general principle by which we can value the reference of pro in finite clauses, as well as that of PRO in infinitive clauses, in both null subject and non-null subject languages.

But if we assume that the distribution of PRO is confined to infinitival clauses, while that of pro is limited to finite clauses, one can ask whether and how finite and infinitival clauses can be distinguished in Chinese, as the language does not exhibit syntactic agreement. Arguing that Chinese has the finite vs. infinitival distinction, J. Huang suggests that unlike languages with agreement, rich or meager, the distinction between finite and infinitival clauses in Chinese cannot be made by verbal morphology but by the availability of auxiliary elements, such as modal auxiliaries and aspectual markers. For example, the aspectual marker le is available in the lower clause in (89a), while the modal auxiliary is used in the embedded clause in (89b). As indicated, the null subject of the lower clause in each sentence is interchangeable with the overt pronoun, and he suggests that since auxiliary elements are, by assumption, ‘governors’ in Chinese, the alternability of the pro with the pronoun in the subject position of a finite clause is naturally expected under the standard Case Theory.

(89)  a. Zhangsan shou [(ta) lai le].  
      Zhangsan say he come ASP  
      ‘Zhangsan said that (he) came.’

b. Zhangsan xiangxin [(ta) hui lai].  
      Zhangsan believe he will come  
      ‘Zhangsan believes that (he) will come.’  

J. Huang (1989: 188)
So far I have reviewed J. Huang’s arguments for the claim that just as in many other languages with agreement, Chinese, though lacking agreement, has a distinction between finite and infinitive clauses, and when they are subordinated, null subjects, pro in the former type and PRO in the latter type, are allowed. But we are still left with the question raised at the beginning—that is, how the pro subject in finite clauses in languages like Chinese without AGR can be licensed and interpreted. In answering this question, rather than adopting the principle of recoverability which appeals to agreement only for the distribution and interpretation of the pro, J. Huang (1989) argues that the distribution and interpretation of both pro and PRO are governed by a more general principle called ‘Generalized Control Rule’ (GCR) in (90), in combination with the definition of control domain in (91).

(90) **GENERALIZED CONTROL RULE** (GCR)
An empty pronominal is controlled in its control domain (if it has one).

(91) **CONTROL DOMAIN**
- α is the control domain for β iff it is the minimal category that satisfies both (a) and (b):
  a. α is the lowest S or NP that contains (i) β, or (ii) the minimal maximal category containing β (henceforth, MMC(β)).
  b. α contains a SUBJECT accessible to β. J. Huang (1989: 193)

In order to buttress his unified view of the control and pro-drop phenomena, he makes an interesting observation about the parallelism between pro and PRO in their distribution and interpretation in Chinese. In particular, he maintains that just as null subjects in control constructions are divided into OC and NOC PRO, there are also two types of pro, namely, the controlled pro and uncontrolled pro. To begin with, in some environments like resultative constructions, when subjects in post-verbal adjunct clauses are null, they must be coreferential
with the matrix subjects, as shown in (92a) and (92b). As argued by J. Huang, this interpretive pattern seems to follow from the GCR. For example, in (92a), the adjunct clause cannot be a control domain for the null subject, because there is no accessible SUBJECT inside the adjunct clause due to the lack of AGR in Chinese. By contrast, since the subject NP in the matrix clause c-commands the null subject, it can be an accessible SUBJECT to it. Then, the entire sentence can be defined as a control domain for the null subject, pro, and the GCR requires pro to be controlled by the matrix subject in (92a).

(92) a. Zhangsan; qi ma qi de [pro_{i,*j}/ma hen lei].
    Zhangsan ride horse ride till horse very tired
    ‘Zhangsan rode a horse until he/the horse got very tired.’
    b. Zhangsan; ku de [pro_{i,*j}/Lisi hen shangxin].
    Zhangsan cry till Lisi very sad
    ‘Zhangsan cried till he/Lisi got very sad.’ J. Huang (1989: 192)

According to J. Huang, the availability of a lexical NP in the same position supports his analysis that deals with the missing subjects in (92a,b) as pro, not PRO. In addition, he takes the availability of an aspectual marker as well as a lexical subject in (93) to show that the adjunct clauses with the controlled pro in (92a,b) are not infinitival but finite clauses.

(93) Zhangsan; ku de [yanlei liu-le chu-lai].
    Zhangsan cry till tears flow-ASP out-come
    ‘Zhangsan cried till tears came out.’ J. Huang (1989: 193)

On the other hand, there are also cases in Chinese where the pro subject is not obligatorily controlled by an NP in the matrix clause. For example, when null subjects appear in preverbal adjuncts, they are optionally controlled by the matrix subjects, as in (94a,b).
(94)  a. \([\text{pro}_{ij}\ yihui\ dao\ jia}],\ \text{Zhangsan}_i\ jiu\ ku.\)
    ‘As soon as he arrived home, Zhangsan began to cry.’

b. \([\text{ruguo\ pro}_{ij}\ bu\ lai}],\ \text{ta}_i\ keneng\ hui\ shengqi.\)
    ‘If we/you … don’t come, he will probably be angry.’ J. Huang (1989: 198)

Given the assumption that preverbal adjuncts in Chinese are base-generated in a sentence-initial position adjoined to the highest clause, the \text{pro} subject in (94a) and (94b) fails to have a control domain, as there is nothing that can behave as an accessible SUBJECT in both the preverbal adjunct clauses and the matrix clauses. Consequently, the \text{pro} subject is optionally interpreted as the matrix subject in each sentence.

To sum up, in addressing the issue about the categorial status of controlled subjects in (2b), J. Huang (1989) argues that they may be PRO or \text{pro} in Chinese, depending on the environment where they appear—that is, PRO can occupy the subject position of an infinitival clause, while \text{pro} is available for the subject position of a finite clause. As for the licensing condition for controlled subjects in (2a) and the way of determining their controllers in (2c), assuming that \text{pro} can be governed but PRO cannot, he argues that his generalized control theory, particularly, the Generalized Control Rule, can deal with the distribution and interpretation of both \text{pro} and PRO: in short, \text{pro} and PRO are prohibited where they have a control domain but are not controlled in it, whereas they are permitted where they have a control domain and are controlled in it, and where there is no control domain for them.

From the perspective of economy, J. Huang’s (1989) unified approach to the control and \text{pro}-drop phenomena can be said to be appealing, in that the agreement-based \text{pro}-drop theory is no longer necessary. Nonetheless, it should be pointed out that J. Huang’s approach faces some problems. First of all, since his generalized control theory is designed only for the reference
assignment to *null* elements, it is obscure how the theory can be extended to crosslinguistic data where controlled subjects can be overtly realized (cf. Borer (1989: 86)).

Second, J. Huang draws the generalization that the controlled *pro* appears in a governed position, while PRO occupies an ungoverned position, but there are some cases where this generalization does not hold. As J. Huang (1989) acknowledges, when a null subject appears in a sentential complement selected by such verbs as *say* and *ask*, as well as in a sentential subject, it can be either *pro* or PRO and may not be controlled, as shown in (95) and (96).

(95) a. Zhangsan shou [pro/PRO mingtian bu bi lai].
   Zhangsan say tomorrow not need come
   ‘Zhangsan said that he/she/we/one … need to come tomorrow.’

b. Zhangsan wen [pro/PRO yao-bu-yao lai].
   Zhangsan ask should-not-should come
   ‘Zhangsan asked whether he/she/you/one … should come or not.’

(96) [pro/PRO xiyan] you hai.
       smoke have harm
   ‘Smoking is harmful.’ J. Huang (1989: 200)

However, it seems unclear, at least to me, how both *pro* and PRO can occupy the same position, and insofar as this question is not properly answered, the free variation between the two types of null subjects is problematic for his generalization that *pro* is found only in finite clauses, while PRO is confined to infinitival ones. It should also be noted that J. Huang’s suggestion for capturing the possibility of optional control into the null subject (and the availability of arbitrary control) in (95a,b) is not unproblematic. Following Rosenbaum (1967), he basically proposes that a certain class of predicates such as *say* and *prefer* select for an NP, while those verbs as *force* and *try* subcategorize for an S. Then, since the selected complements are NPs in (95a,b), it is naturally explained why the null subjects inside them may not be obligatorily controlled. As
independent evidence in favor of his proposal, J. Huang provides the following pair of examples, which arguably show that the complement subordinated by *say* in English is a nominal category, while the complement selected by *force* is a clausal unit.

(97)  a. [That he would come] was never said.  (\(\checkmark\) PASSIVE)
b. What he said was [that he would come].  (\(\checkmark\) PSEUDO-CLEFT)
c. He said \([\text{NP} \text{the right thing}]\).  (\(\checkmark\) NP COMPLEMENT)

(98)  a. *[To go] was forced John.  (*PASSIVE)
b. *[What he forced (John) was [(for John) to go].  (*PSEUDO-CLEFT)
c. *He forced (John) \([\text{NP} \text{the task}]\).  (*NP COMPLEMENT)

J. Huang (1989: 202)

However, as Landau (1999) points out, what the passivization test and pseudo-cleft test really suggest here has little to do with the category of the tested item but with whether the tested item is an OC or NOC complement. Another problem, which looks more straightforward than the first one, is that there does not exist a correlation between whether an NP can be selected as a complement and whether the type of control is OC, NOC or arbitrary control. In other words, J. Huang’s analysis predicts that if a predicate can subcategorize an NP, arbitrary control should be possible when an infinitival clause is subordinated by the predicate. But as observed by Landau (1999), many verbs that can select for an NP fail to give rise to arbitrary control, as shown below.

(99)  a. John wanted \([\text{NP} \text{a promotion}]\).
b. *John wanted \([\text{PRO}_{\text{arb}} \text{to be promoted}]\).
c. John declined \([\text{NP} \text{the offer}]\).
d. *John declined \([\text{PRO}_{\text{arb}} \text{to accept the offer}]\).  

Landau (1999: 189)
D. Yang (1985) argues against the reductionist approaches to control, such as Manzini (1983), Bouchard (1984), Sportiche (1984), Koster (1984), and J. Huang (1984), who propose to reduce control effects to the Binding Theory or the Pro-Drop Theory. Instead, D. Yang claims that control should be distinguished from binding, and that controlled subjects cannot be treated in the same way as pronouns and reflexives. He discusses three major control phenomena, including not only obligatory control but also optional and arbitrary control, in Korean and two other typologically related languages, namely Chinese and Japanese. In particular, as instances of obligatory control constructions in Korean, D. Yang examines a sentence whose complement involves the modal marker –keyss in (100) and a sentence whose complement is headed by the complementizer –tolok in (101).

(100) Johni-un [Tomj-i Billk-eykey [PROj,*i,*k/kuj,*i,*k-ka/caki,j,*i,*k-ka
John-TOP Tom-NOM Bill-DAT he-NOM/self-NOM
Mary-ACC meet-MOD-DEC-COMP promise-PAST-DEC-COMP believe-ASP-DEC
‘Johni believes that Tomj promised Billk [PROj,*i,*k/hej,i,*k/selfj,*i,*k to meet Mary].’
Yang (1985: 390-91)

(101) Johni-un [Tomj-i Billk-eykey [PROk,*i,*j/kuj,*i,*j-ka/caki,*i,*j,*k-ka
John-TOP Tom-NOM Bill-DAT he-NOM/self-NOM
Mary-ACC meet-COMP persuade-PAST-DEC-COMP believe-ASP-DEC
‘Johni believes that Tomj persuaded Billk [PROk,*i,*j/hej,j,k,*i/selfi,*i,*j,*k to meet Mary].’
Yang (1985: 392)

As indicated above, following Chomsky’s (1981) PRO theory of control, D. Yang argues that the null subject in each sentence is PRO. Notice that in (100), the pronoun and the reflexive both have the same range of antecedents as the PRO subject. According to D. Yang, however, the
similarity between PRO, the pronoun *ku* ‘he’ and the reflexive *caki* ‘self’ in their interpretation in (100) is just apparent. To begin with, he argues that the interpretive patterns of the same pronoun and reflexive in non-obligatory control contexts like (102) show that they are subject to different mechanisms.

(102) John$_i$-un [Tom$_j$-i Bill$_k$-eykey [ku$_{j,k,*i}$-ka/caki$_{j,*i,*k}$-ka] Mary-lul
John-TOP Tom-NOM Bill-DAT he-NOM/self-NOM Mary-ACC
meet-MOD-DEC-COMP say-PAST-DEC-COMP believe-ASP-DEC
‘John$_i$ believes that Tom$_j$ told Bill$_k$ [he$_{j,k,*i}$/self$_{j,*i,*k}$ must meet Mary].’

Yang (1985: 391-92)

As shown above, although both the pronoun and the reflexive may have antecedents in the immediately higher clause, the former can refer to the subject or object, while the latter can only be construed as the subject. This difference, according to D. Yang, is readily explained if we assume that the pronoun, being subject to Binding Principle B, can be coreferential with any c-commanding element unless they are in the same clause, while the anaphor *caki*, as a subject-oriented reflexive, can be coreferential with any c-commanding subject.

Furthermore, the interpretive patterns of the most deeply embedded subjects in (101) show that the reflexive behaves differently not only from the pronoun but also from PRO. That is, in this sentence, PRO and the pronoun *ku* ‘he’ can be interpreted as the object in the second highest clause, but the reflexive *caki* ‘self’ cannot. Given that a null subject in *tolok*-complements is forced to be coreferential with the object in the immediately higher clause, the impossibility of coindexation of the reflexive with the object in the intermediate clause in (101) suggests that the reflexive needs to be treated in a different way from both PRO and the pronoun.
In short, (101) and (102) seem to reveal that whereas PRO and a pronoun pattern together regarding their interpretation, they behave differently from a reflexive in the same aspect. However, it has not been yet seen why PRO should be distinguished from the pronoun. What D. Yang provides as crucial evidence for the necessity of differentiating PRO from the pronoun is not obligatory control but optional control sentences like (103).^{25}

\begin{verbatim}
(103) John-i [Tom-i Bill-eykey [PRO_{j,k,*}/kui_{j,k}-ka/caki_{j,k}-ka/Mary-ka
John-NOM Tom-NOM Bill-DAT he-NOM/self-NOM/Mary-NOM
Sam-ACC meet-must-ASP-DEC-COMP say-PAST-DEC-COMP believe-ASP-DEC
\end{verbatim}

‘John, believes that Tomj told Billk that PRO_{j,k,*}/he_{j,k}/self_{j,k,*}/Mary must meet Sam.’

Yang (1985: 396)

As shown above, there is no modal marker or complementizer in the lowest clause, which could cause a particular type of control interpretation (i.e., subject control or object control), and even the lexical NP Mary can appear in the lowest subject position. Thus, the sentence cannot be viewed as obligatory control but as optional control. According to D. Yang, PRO in this optional control sentence can be coindexed with any c-commanding NPs other than the highest subject John, while the pronoun can be bound even by the highest subject. Given this fact, he concludes that PRO cannot be dealt with in the same way as a pure pronoun.

Turning to the issue of how controlled subjects are licensed, D. Yang argues that the PRO Theorem requiring that PRO be ungoverned, which was originally suggested by Chomsky (1981),

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^{25} Although D. Yang (1985) does not provide a formal definition, under his approach, obligatory control sentences are roughly defined as those that involve a particular modal marker (e.g., -keyss) or specific complementizers (e.g., -tolok) inside subordinate clauses, both of which indicate the type of control, such as subject control and object (or non-subject) control. On the other hand, optional control sentences are those that do not have such markers or complementizers. In addition, although not discussed in this section, he suggests that arbitrary control is available when null subjects appear in a sentential subject or complement headed by the complementizer –nunkes specified for [+GENERIC].
should be retained, and that PRO can be licensed only in an ungoverned position in Korean. However, as pointed out in Section 2.3.2.1, if controlled null subjects must be ungoverned, it is incorrectly predicted that they cannot alternate with overt elements such as pronouns and reflexives in Korean. For this reason, he assumes that East Asian languages like Korean, Chinese and Japanese lack AGR, and that it is AGR under $\theta^0$ that has the ability to govern. Based on these assumptions, D. Yang suggests that the subject position in Korean, Chinese and Japanese is structurally ungoverned in control and non-control constructions, and he further claims that these languages cannot be pro-drop languages as there is no subject-verb agreement. If the subject position is always structurally ungoverned in Korean, the question arises as to how lexical subjects including pronouns and reflexives can be licensed and assigned nominative Case in such cases as (100)-(102). In answering this question, he proposes that the lexical subject is assigned nominative Case ‘inherently’ by the $\theta$-role of the predicate. This proposal is based on Chomsky’s (1984) idea that the lexical subject in the English gerundive clause *John’s reading the book* is $\theta$-marked and inherently Case-marked by the predicate *reading the book*. Furthermore, D. Yang (1985: 402) suggests the Subject Marker Insertion Rule by which the subject marker (i.e., nominative Case) is inserted in the context “[S NP ___ $\alpha$],” where $\alpha$ is VP or S (the latter for the multiple subject construction). Simply put, because of this rule, the inherent nominative Case, which is assigned by a $\theta$-role from a predicate, can be realized on the subject in control and non-control sentences in Korean.

Finally, as for the way controllers are determined, maintaining the independence of Control Theory, D. Yang argues that control interpretations are derived by various factors including lexical, semantic and pragmatic ones. According to him, for example, in (100) above, the obligatory subject control arises compositionally due to the lexical meaning of the verb
yaksokha- ‘promise’ and the modal marker –keyss conveying the speaker’s volition. The same line of analysis applies to the obligatory object control sentence in (101), and the reading is triggered by the combination of the lexical meaning of the verb seltukha- ‘persuade’ with that of the complementizer –tolok. Furthermore, in an attempt to show that controller choice is somehow affected by pragmatics, he introduces the sentence in (104), where a null category, PRO under his analysis, is allowed in the object position normally taken to be structurally governed.

    John-NOM Mary-NOM hate-ASP-DEC-COMP say-PAST-DEC
    ‘John said that Mary hated [e].’ Yang (1985: 404)

Notice, however, that there are some limitations in D. Yang’s (1985) analysis. The first problem is that he explicitly argues against some previous approaches to control, but unlike his argument, his own analysis turns out to be similar to one of them. Recall that rather than following the reductionist position, which subsumes control under an extension of the existing theories (e.g., Binding Theory, Pro-Drop Theory), D. Yang claims that Control Theory and PRO should be retained independently. At the same time, he denies the availability of pro in any syntactic positions in Korean (and other East Asian languages). Consequently, the null category known as pro in the literature should be reanalyzed as PRO under his analysis. In fact, a similar line of analysis is also found in J. Huang’s (1984, 1989) Generalized Theory of Control under which (controlled) pro is treated in the same way as OC PRO since the Pro-Drop Theory is discarded. But D. Yang explicitly says that J. Huang’s (1984) generalized approach is problematic because it derives control effects from the pro-drop principle. To me, however, it appears that D. Yang’s criticism against J. Huang’s approach is misleading, as the two
approaches are basically the same except that D. Yang does not admit the existence of \textit{pro} in Korean.

Note also that from the current point of view, except for the obligatory object control sentence in (101), the other examples reproduced here as the obligatory and optional control sentences are those generally considered as environments licensing the null category \textit{pro}. For example, D. Yang takes the sentence in (103) to be crucial evidence for his claim that PRO should be distinguished from a pure pronoun, but it can be easily shown that in the similar configuration, not only the overt pronoun but also the null category in the lower clause can be coreferential with the highest subject, as shown in (105). The availability of coreference between the null subject and the highest subject in (105), as opposed to (103), suggests that the reference of the null subject in what he defines as optional control may vary depending on the contexts, and this is exactly the defining property exhibited by the null category, \textit{pro}, in East Asian languages.

(105) sicang-i [sangday hwupo]_ka enlonk-eykey [[e]i,*j,*k/kui,*j,*k-ka/caki,*i,*k-ka
mayor-NOM competing candidate-NOM media-DAT he-NOM/self-NOM
race-ACC give.up-must-ASP-DECL-COMP say-PAST-DECL-COMP believe-PAST-DECL

‘The mayor believed that the competing candidate told the media that ei,*j,*k/
hei,*j,*k/selfi,*i,*k must give up the race.’

Secondly, under D. Yang’s analysis, \textit{pro} does not exist in Korean and the licensing of null subjects in this language is subject to the PRO Theorem. Therefore, it would not be easy to correctly rule in control and non-control sentences accompanying overt subjects in Korean. In order to explain the availability of overt subjects, D. Yang suggests that the subject position in both control and non-control sentences is not ‘structurally’ but ‘inherently’ governed. However,
this leaves us the question of whether to eliminate pro and introduce a new notion of ‘inherent
government’ is a better way than simply to maintain pro in capturing the distribution of a null
subject and its alternability with a lexical subject. Although I do not directly answer this
question, it would be worth mentioning two issues related to it. From the theoretical point of
view, since the notion of government is no longer necessary in recent Minimalist theorizing (e.g.,
Chomsky (1995)), it seems hard to reinterpret D. Yang’s analysis under that framework. On the
empirical aspect, there is an immediate problem for D. Yang’s approach in terms of inherent
government: that is, it fails to give a proper account for the availability of a controlled null
category in the object position in (104). Note that the object position is undoubtedly a
structurally governed position, so the null category, PRO, should not be allowed in (104),
contrary to fact. As for the availability of the null object in (104), rather than offering an
explanation, he simply says, “the unique syntactic condition for control that PRO may not be
governed may be overridden by lexical and semantic factors” (Yang (1985: 404)).

In conclusion, D. Yang (1985) is correct in observing the role of the modal marker (e.g., -
keyss) and complementizer (e.g., -tolok) in triggering control readings, and his intuition behind
this observation somehow overlaps with the idea to be pursued in the upcoming chapters, namely
that control patterns in some of the Korean control constructions, such as jussive control
constructions, are determined by the combination of the lexical meaning of a subordinating verb
and the clause type of an embedded clause (see Chapters 5 and 6 for more information).
Nonetheless, he does not provide an explicit analysis to flesh out his intuition, and there are also
some theoretical and empirical problems with his approach. Therefore, we need to develop an
alternative analysis to overcome those drawbacks.
### 2.3.2.5 Summary

I have so far discussed various approaches to control and controlled subjects under the Government and Binding framework, and what each approach suggests with respect to the three major issues in (2a)-(2c) is summarized in Table 4 below.

#### Table 4. Summary of Government & Binding Approaches to Control

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Environments (2a)</th>
<th>Categorial Status (2b)</th>
<th>Controller Choice (2c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chomsky (1980, 1981)</td>
<td>Infinitival subject position (Ungoverned position)</td>
<td>PRO ([+PRONOMINAL, +ANAPHORIC])</td>
<td>Several factors incorporated in Control Theory</td>
</tr>
<tr>
<td>Manzini (1983): Generalized Binding Theory</td>
<td>Infinitival subject position (Ungoverned position)</td>
<td>PRO ([+ANAPHORIC])</td>
<td>Condition A’</td>
</tr>
<tr>
<td>Borer (1989)</td>
<td>Specifier position of Infl with the anaphoric AGR</td>
<td>pro ([+PRONOMINAL])</td>
<td>I-to-C movement (if Infl is the anaphoric AGR)</td>
</tr>
<tr>
<td>J. Huang (1989): Generalized Control Theory</td>
<td>Ungoverned (for PRO)/governed (for controlled pro)</td>
<td>PRO/controlled pro ([+PRONOMINAL])</td>
<td>PRO and controlled pro subject to the Generalized Control Rule</td>
</tr>
<tr>
<td>D. Yang (1985)</td>
<td>(Non-)finite subject or object position (Ungoverned position)</td>
<td>PRO ([+PRONOMINAL, +ANAPHORIC])</td>
<td>Several factors incorporated in Control Theory</td>
</tr>
</tbody>
</table>

### 2.3.3 Minimalist Approaches to Control

#### 2.3.3.1 Null Case Approach

Elaborating an original version of the Chain Visibility Condition, Chomsky (1986a) proposes the following version of the Chain Visibility Condition in an attempt to regulate not only the
distribution of lexical NPs and null NPs (e.g., NP-traces and variables), but also that of PRO.²⁶ The idea is that in order for NPs to be θ-marked, they should be visible, and for being visible, they must be Case-marked. But since PRO cannot be Case-marked due to the PRO Theorem, Chomsky distinguishes chains headed by PRO from those headed by the rest of the NP categories in the revised condition.

²⁶ The original version of Chain Visibility Condition is defined as follows:

(i) **CHAIN VISIBILITY CONDITION (Chomsky (1986a))**

   A Chain is visible for θ-marking only if it contains a Case-position.

(106) **REVISED CHAIN VISIBILITY CONDITION**

   A Chain is visible for θ-marking if it contains a Case-position or is headed by PRO.

However, it is not difficult to see that the Visibility Condition faces some problems (cf. Martin (1996: 24)). One immediate problem is that the part of the condition for PRO is nothing but a stipulation, calling for a real explanation. Moreover, as shown in 2.3.2, there are many cases where PRO may be Case-marked. Before we look at crosslinguistic data where PRO is Case-marked, let us first consider the sentence in (107a). In the GB framework, the Visibility Condition in (106), along with the PRO Theorem, leads us to assume that in (107a), PRO has moved from a θ-position to the specifier of an infinitive clause, as schematized in (107b).

(107) a. John hopes to be respected.
    b. John hopes PROₜ to be respected ᵇₜ.

However, one might ask what forces PRO to move in (107b). Notice that, following Chomsky (1986b), Chomsky (1993) maintains an economy condition on movement, generally known as...
Last Resort, according to which movement can apply only when there is a driving force. Specifically, Chomsky (1993) argues for a ‘Greed’ version of Last Resort, which requires not only that movement operations lead to feature checking but also that some feature of a moving element be checked. Given this economy condition, the question raised for (107b) can be rephrased as whether the movement of PRO to the embedded Spec, TP meets Greed. One might argue that PRO must move out of its base position in (107b), since the PRO Theorem would be violated if it remains in situ. However, even though it is the case, it is not clear whether any feature of T₀ can be checked as a result of PRO movement in this sentence.

In order to answer this question, Chomsky and Lasnik (1993) argue that the Case feature of PRO can be checked when it moves to Spec, TP in control infinitives, and they provide the convincing piece of evidence showing that PRO has Case, just as do lexical NPs. It is well known that lexical NPs, including pronouns, are not allowed to undergo A-movement from a Case position to another Case position, as shown in (108a) and (109a) (cf. Chomsky (1986b, 1993, 1995)). If we assume Greed, why movement from a Case position to another position in such environments is prohibited naturally follows. Simply put, the pronoun him in both (108a) and (109a) does not need to move out of the PP to the complement position of another preposition for, since its Case feature has already been checked by the preposition to or the verb strike. Nevertheless, the movement of the pronoun takes place in (108a) and (109a), which leads to a violation of Greed.

\[(108)\] a. *I prefer for him, to seem to t, that he is clever.  
   b. I prefer for it to seem to him that he is clever.

\[(109)\] a. *I prefer for him, to strike t, that he is clever.  
   b. I prefer for it to strike him that he is clever.
Extending this Case-theoretic analysis to the distribution of PRO, Chomsky and Lasnik (1993) argue that just as the movement of lexical NPs from a Case position to another Case position runs afoul of Greed, PRO cannot move from a Case position to another Case position due to the same economy condition. The parallel behavior between lexical NPs and PRO can be confirmed by the ungrammaticality of (110a,b): that is, if PRO is base-generated in a Case position and moves to the Spec of non-finite T, the sentence becomes ungrammatical.

\[(110)\]
\begin{align*}
a. & \text{He prefers } [\text{PRO}_i \text{ to strike } t_i \text{ [that he is clever]}]. \\
& \text{b. He prefers } [\text{PRO}_i \text{ to seem to } t_i \text{ [that he is clever]}]. \\
\end{align*}

Given that the infinitival Spec, TP is a typical position allowing for PRO, the fact that PRO starts out from a Case-marked position seems to be the most probable culprit for the ungrammaticality of (110a,b). Indeed, if the base position of PRO is replaced with a position where Case cannot be checked, the movement of PRO is possible, as in (111a,b).

\[(111)\]
\begin{align*}
a. & \text{He prefers } [\text{PRO}_i \text{ to strike John } [\text{as } t_i \text{ clever}]]. \\
& \text{b. He prefers } [\text{PRO}_i \text{ to seem to John } [t_i \text{ to be clever}]]. \\
\end{align*}

Then, since the infinitival Spec, TP is not a governed position, any analysis that insists on the PRO Theorem would fail to explain why the movement of PRO is possible in (111a,b), but not in (110a,b). By contrast, the question can be readily answered if we adopt Chomsky and Lasnik’s (1993) claim that PRO has Case. That is, the ungrammaticality of (110a,b), as opposed to (111a,b), can be attributed to a violation of Greed, as PRO should get Case not only from its base position but also from its landing site. Note that Chomsky and Lasnik’s claim can also provide an account for what forces movement of PRO in (107) above: that is, PRO moves to the Spec, TP position to check Case while satisfying Greed, as the passivized verb *respected* has no
ability to assign structural Case. Furthermore, on the conceptual side, Chomsky and Lasnik’s (1993) suggestion that PRO has Case makes it possible to simplify the Revised Chain Visibility Condition in (106) by getting rid of the disjunction part “… or is headed by PRO.”

Now, the critical problem with the Chain Visibility Condition (which Chomsky (1986a) considers as an underlying principle for the Case Filter) is resolved by Chomsky and Lasnik’s (1993) suggestion that PRO has Case. At this point, however, two additional related questions arise: that is, what kind of Case does PRO receive from a non-finite T⁰; and if a non-finite T⁰ is a Case-assigning head, why can lexical DPs not appear in the specifier of the non-finite T⁰? In addressing these issues, Chomsky and Lasnik (1993) propose that it is ‘null Case’ that the non-finite T⁰ assigns (or checks). They also assume that null Case is compatible only with PRO since it is different from other types of structural Case such as nominative, accusative and dative Case. The contrast between (112a) and (112b), as well as the impossibility of PRO in (113a-d), seems to follow from these suggestions.

(112) a. John tries [PRO to win the lottery].
    b. *John tries [Mary to win the lottery].

(113) a. *John considers PRO is the best writer.
    b. *John considers PRO to be the best writer.
    d. *John admires PRO.

The lexical DP cannot appear in the specifier of a non-finite T⁰ in (112b), as the non-finite T⁰ can only assign null Case. In addition, PRO is banned in (113a-d), because all the positions it occupies are assigned various types of structural Case or inherent Case, but by assumption, PRO is not compatible with those kinds of Case. It is worth noting that the important conclusion
drawn from Chomsky and Lasnik’s (1993) null Case approach is that the distribution of PRO can be deduced from Case Theory, which in turn renders the PRO Theorem unnecessary.

2.3.3.1.2 Martin (1996)

Martin (1996) also advocates the null Case approach initiated by Chomsky and Lasnik (1993). However, although Chomsky and Lasnik remain unclear about what makes null Case available, Martin explicitly suggests that null Case can be borne and checked only by non-finite T⁰'s of control infinitives, since they are distinguished from those of ECM and raising infinitives with respect to their tense specifications. Martin correctly points out that although Chomsky and Lasnik’s analysis is successful in deriving the distribution of PRO from Case Theory without recourse to the PRO Theorem, their analysis fails to capture the entire distribution of PRO. That is, under Chomsky and Lasnik’s approach, PRO should be able to appear in the specifier position of not only control infinitives but also ECM or raising infinitives. However, as shown below, this is not the case.

(114) a. John tried [PRO to be the best player in the league].
    b. *John believes [PRO to be the best player in the league].

(115) a. For John, it is difficult [PRO to be the best player in the league].
    b. *For John, it seems [PRO to be the best player in the league].

(cf. Martin (1996: 48))

Under their approach, the grammaticality of (114a) and (115a) seems straightforward: that is, PRO can be licensed in these sentences since a non-finite T⁰ of control infinitives can check null Case against PRO. The impossibility of the occurrence of PRO in (114b) can also be explained given the standard analysis where the ECM verb believe is taken to check accusative Case, which
is incompatible with PRO. However, it is unclear under Chomsky and Lasnik’s approach why the occurrence of PRO in the specifier of a non-finite T₀ in the raising construction is prohibited in (115b). Note that unlike the ECM verb, the raising verb seem is unable to check any type of structural Case, as evidenced by the following examples.

(116)   a. John believed [Bill to be the best player in the league].  
        b. John seems [t to be the best player in the league].  (cf. Martin (1996: 48))

Given the ban against A-movement from a Case to another Case position, the possibility of movement of John from the Spec of the lower T₀ to that of the matrix T₀ clearly suggests that neither the non-finite T₀ nor the verb seem checks structural Case in the raising construction like (116b). Simply put, Chomsky and Lasnik’s approach turns out to be problematic since it fails to capture the difference between non-finite T₀’s of control infinitives and those of ECM and raising infinitives with respect to their ability to license PRO.

In order to resolve this problem, Martin (1996) argues that whether a non-finite T₀ can license PRO in its specifier position is determined by its tense value—that is, only non-finite T₀’s that are specified [+TENSE] can check null Case. To support his claim, Martin capitalizes on Stowell (1982) which shows the difference between control infinitives and ECM/raising infinitives in their tense properties. According to Stowell, control infinitives have tense specifications while ECM and raising infinitives do not. Consider first sentences with non-finite control complements in (117).

(117)   a. Ginny remembered [PRO to bring the wine].  
        b. Kim decided [PRO to go to the party].  
        c. Romário promised Bebeto [PRO to pass the ball].  Martin (1996: 51)
In (117a), the event of bringing the wine does not temporally coincide with Ginny’s recollection; rather, the former is necessarily preceded by the latter. In addition, in (117b), the event of party-going takes place in the future with respect to the event of Kim’s decision-making. Likewise, in (117c), the event of Romário’s promise-making occurs prior to the event of ball-passing. As Martin (1996: 51) mentions, the generalization drawn from the data is that the event time of a control infinitive is unrealized with respect to the time denoted by the matrix predicate. In other words, the event time of the control infinitive is shifted to the future relative to the time of the matrix predicate. The time shift available for control infinitives is supported by the fact that they resist perfective aspect, as in (118).

\[
\begin{align*}
(118) & \quad a. \text{*Ginny remembered to have bought some beer} \\
& \quad b. \text{*Kim decided to have gone to the party.} \\
& \quad c. \text{*Romário promised Beberto to have passed the ball.} \quad \text{Martin (1996: 52)}
\end{align*}
\]

On the other hand, unlike control infinitives, the shift into the future with respect to the time of the matrix predicate is not available for ECM and raising infinitives, as in (119).

\[
\begin{align*}
(119) & \quad a. \text{Everyone believed [Rebecca to be the best basketball player at UConn].} \\
& \quad b. \text{The doctor showed [Bill to be sick].} \\
& \quad c. \text{The defendant seemed to the DA [ti to be a conspirator].} \quad \text{Martin (1996: 53)}
\end{align*}
\]

Taking (119a) for example, the time of belief should coincide with the interval of Rebecca’s being the best player. In other words, the truth conditions for this sentence would be that there is some time $T$ in the past such that everyone had the belief at $T$ that Rebecca was the best basket player during $T$. By contrast, it is impossible to get the reading on which there is some time $T$ in
the past such that everyone believed at T that Rebecca would become the best basketball player sometime after T.

To explain this difference in temporal interpretations between control infinitives and ECM/raising infinitives, Stowell (1982) suggests that there are two varieties of non-finite T₀, namely, tensed and untensed infinitival T₀’s, and that control predicates select for a tensed infinitival T₀ specified [+TENSE], while ECM and raising predicates select for an untensed infinitival T₀ specified [-TENSE]. Given the standard assumption that the [+TENSE] feature on T₀ is what checks structural Case above the VP domain, Martin (1996) proposes that a finite T₀ and non-finite control T₀ with [+TENSE] can check Case, nominative Case by the former and null Case by the latter, while a non-finite ECM and raising T₀ with [-TENSE] can check none of them.²⁷ Recall that Chomsky and Lasnik (1993) assume that only PRO is compatible with null Case, and with this assumption, we can partly answer why PRO, not lexical DPs, can only appear in control infinitives. That is, the tensed non-finite T₀ selected by control predicates can check null Case, but DPs other than PRO are not compatible with null Case. However, it is still mysterious under Chomsky and Lasnik’s approach why both the tensed non-finite T₀ and PRO are unable to check other types of structural Case than null Case. For this question, Martin (1996: 168-9) argues within Chomsky’s (1995) theory of feature checking that unlike other NP

²⁷ To support his idea that null Case is a property of a tensed non-finite clause, Martin (1996) also presents the following data in (i), which show that event-denoting predicates cannot appear in ECM or raising infinitives. He attributes the ungrammaticality of (ia-c) to Enç’s (1990) observation that event-denoting predicates have event variables that can be bound by tense or a temporal operator. Then, it follows that the event-denoting predicates cannot appear in ECM or raising infinitives in (i), since they do not have tense or a temporal operator which can bind the event variables of the predicates.

(i)  a. *Everyone believed [Rebecca to win the game right then].
    b. *The doctor showed [Bill to take the wrong medicine at that exact time].
    c. *The defendant seemed to the DA [t to conspire against the government at that exact time].
  
  Martin (1996: 59)
categories, PRO does not carry person and number features, which are needed for nominative or accusative Case to be checked, and likewise, the non-finite $T^0$ of control infinitives, though tensed, lacks the same kinds of $\phi$-features.

Before looking at how Martin (1996) derives the OC interpretation, let me briefly compare Chomsky and Lasnik (1993) with Martin (1996) in light of the three core issues in (2). First, regarding the question about the categorial status of controlled subjects in (2a), Chomsky and Lasnik assume that they are PRO, defined as \([+\text{ANAPHORIC}, +\text{PRONOMINAL}]\). As will be discussed shortly, however, Martin (1996) suggests that PRO is generated under the head of a complex DP whose complement is occupied by $\text{pro}$, although PRO ultimately ends up having a referential relation with a controller. As for the second issue in (2b), both analyses maintain that PRO can be licensed only by a head that can check null Case. Chomsky and Lasnik simply assume that only a non-finite control $T^0$ can check null Case, which is compatible only with PRO. However, Martin shows that Chomsky and Lasnik’s analysis has difficulty explaining the impossibility of the occurrence of PRO in the specifier of raising infinitives (e.g., *For John, it seems [PRO to be the best player in the league]). In order to solve this problem, building on Stowell’s (1982) observation that the non-finite $T^0$ of control infinitives is tensed but the non-finite $T^0$ of ECM and raising infinitives is untensed, Martin suggests that since only the tensed infinitival $T^0$ selected by control predicates can check null Case, PRO can appear only in the control infinitives. One of the important consequences of their analysis is, though, that the distribution of PRO is derived by Case Theory, getting rid of the need for the PRO Theorem. Regarding the third issue of controller choice in (2c), Chomsky and Lasnik do not offer a novel view on the way controllers are determined, while Martin makes an interesting proposal for
deriving OC. After laying out Martin’s analysis of the controller choice, I will discuss a few problems which Martin’s analysis confronts.

Martin (1996) claims that PRO is an anaphoric clitic, which is analogous to the reflexive/impersonal clitic SE found in Romance languages, including *se* in Spanish and Portuguese and *si* in Italian, in that both of them are interpreted as strictly anaphoric and indefinite, or sometimes as conveying the point of view of the speaker or embedded subject depending on contexts. In particular, following Uriagereka (1995b), Martin assumes that the anaphoricity exhibited by SE is due to its weak morphological nature. So when SE appears in the object position, as in (120), it should raise and adjoin to $T^0$, so that its morphological properties as a clitic can be satisfied.

(120) $Se$ levanto (a $si$ mismo) [SPANISH]
    SE raised.III to the same
    ‘He raised himself.’ Martin (1996: 132)

Furthermore, keeping in line with Uriagereka’s (1988, 1995a) view of clitics, Martin assumes that the SE-type clitic is generated under the head of a complex DP whose complement is pro, as illustrated in (121). So in sentences like (120) above, the SE-type clitic raises to $T^0$, while pro inside the object DP is referentially connected to the subject pro in the specifier of TP.

(121)

```
  (double)
    D         D’
    |
    SE       pro
```

Martin (1996: 131)
What is unique to Uriagereka’s analysis is that after the clitic adjoins to T⁰, the chain consisting of the subject pro and its trace in Spec, vP and another chain containing se and its trace inside the object DP are fused into a single chain (pro, ti, tₜₑ).²⁸

Extending this analysis to instances of OC, Martin (1996) suggests that just like the SE-type clitic, OC PRO is generated under the head of a complex DP, and must move up to the matrix T⁰ via clitic climbing-like movement. Notice also that unlike many other previous approaches including Chomsky and Lasnik (1993), Martin assumes that what is subordinated by control predicates may be a bare TP. This being said, on Martin’s analysis, the structure for a subject control sentence in (122a) can be roughly represented as in (122b).

(122) a. John tried [PRO to win the race].

²⁸ Uriagereka (1995b) makes the generalization about environments where this kind of chain fusion can take place. Martin (1996: 176) represents this generalization in the following way:

<table>
<thead>
<tr>
<th>CHAIN FUSION SITUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Where α and β are different Chains, if α’s head is non-distinct from β’s head within a given checking domain (contained within the same X₀MAX), and the tail of α c-commands the tail of β, then α and β can fuse into an integrated Chain γ, subsuming the properties of α and β.</td>
</tr>
</tbody>
</table>

---

Proper names and symbols used throughout the text.
Note that after the matrix subject and PRO raise to the Spec, TP and the matrix $T^0$, respectively, two independent chains are created—i.e., $CH_1 = (\text{John}_i \ t_i)$ and $CH_2 = (\text{PRO} \ t_{\text{PRO}})$. Then, the question to be answered is how the obligatory referential dependency between the matrix subject and PRO can be obtained from the above structure. In answering this question, Martin suggests that the two chains, $CH_1$ and $CH_2$, created by independent movement of the higher subject and PRO, respectively, are collapsed into a single chain $(\text{John}_i, t_i \ \text{PRO})$ in the same way as the two chains are fused in clitic climbing in (120). Since the controller and controlled subject become members of the same chain as a result of chain fusion, why they end up having the same reference can be explained.

It seems that Martin’s (1996) version of the null Case approach is superior to Chomsky and Lasnik’s (1993), in that it provides an explicit account for why only the non-finite $T^0$ can check null Case. To recap, Martin assumes with Stowell (1982) that non-finite $T^0$’s of control infinitives, as opposed to those of ECM/raising infinitives, are tensed, and argues that only the non-finite $T^0$ defined as $[+\text{TENSE}]$ can check null Case. However, as Hornstein (2003: 17ff.) points out, unlike Martin’s suggestion, it is not always the case that the distinction between the control $T^0$ and the non-control $T^0$ can be made in terms of tense or event-denoting properties. According to Martin’s analysis, when there are event-denoting predicates in infinitival clauses selected by ECM verbs, the sentences are judged ungrammatical, as shown below (where (a) and (b) are repeated from (i) in footnote 27, and (c) is drawn from Hornstein (2003: 17)).

(123) a. *Everyone believed [Rebecca to win the game right then].
b. *The doctor showed [Bill to take the wrong medicine at that exact time].
c. *John believed [Bill to eat a bagel].
Accordingly, if the same event-denoting predicates appear inside infinitives selected by raising predicates, the sentences are predicted to be as bad as (123), since the raising predicates are traditionally treated as non-control predicates, on a par with the ECM verbs. Notice, however, that the sentences are perfectly fine, as in (124), an unwelcome result for Martin’s analysis.

(124)   a. Rebecca seemed [to win the game right then].
       b. John appeared [to take the wrong medicine].
       c. John is likely/certain/sure [to eat a bagel].

Hornstein (2003: 17)

In addition, as mentioned by Hornstein (2003: 17), (124c) gives rise to a reading on which it is currently likely/certain/sure that John will eat a bagel later, and according to the tense distinction by Martin, this kind of shifted tense reading with respect to the matrix tense should not be available for the non-finite T₀ of the raising infinitives, contrary to fact.²⁹

One more problem for the null Case approach, which seems more critical than the one just reviewed, has to do with the fact that across languages, there are cases where null subjects in control complements are assigned various types of structural Case or quirky case. For example, as already seen in 2.3.2, null subjects in control complements in Icelandic are assigned Case, which is detected by the Case forms of adjectival predicates, as in (125), repeated from (71). In addition, controlled subjects in Korean can be assigned nominative Case, which becomes explicit when the subjects are overt, as in (126), repeated from (75).

²⁹ Martin (1996) in fact makes the same observation that the non-finite T₀ of infinitives subordinated under predicates, such as likely, certain and sure can license event-denoting predicates, as well as ordered temporal readings. Given the contrast between (123) and (124) and some additional data, which will not be dealt with here, Martin (1996: 100) concludes that likely-type adjectives are lexically ambiguous, so they exhibit the properties of not only raising but also control predicates. The implication of Martin’s conclusion is that whenever a certain predicate is compatible with an event-denoting predicate, it may be defined as a control predicate which selects infinitives whose head is a tensed T₀. However, it is shown by Hornstein (2003) that this is not always the case. Readers are referred to Hornstein (2003) for detailed discussion.
(125) **ICELANDIC (= (71))**

a. hana\textsubscript{i} langar til að PRO\textsubscript{i} vera vinsaela
   she.ACC.FEM.SG longs toward to to-be popular.ACC.FEM.SG
   ‘She longs to be popular.’ Andrews (1982: 26)

b. hún skipað\textsubscript{i} honum\textsubscript{i} að PRO\textsubscript{i} vera góðum
   she.NOM ordered him.DAT.MASC.SG to to-be good.DAT.MASC.SG
   ‘She ordered him to be good.’ Andrews (1981: 453)

c. ég tel hana\textsubscript{i} vonast til að PRO\textsubscript{i} vera
   popular.ACC.FEM.SG to-hope toward to to-be
   I believe her.ACC.FEM.SG to-hope toward to to-be
   ‘I believe her to hope to be popular.’ Andrews (1981: 26)

(126) **KOREAN (= (75))**

a. John-un Mary\textsubscript{j}-eykey [e\textsubscript{i}/ku-ka/caki-ka nonmwun-ul ssu-ma-ko]
   
   John-TOP Mary-DAT he-NOM/self-NOM paper-ACC write-PRM-COMP
   
   yaksokhay-ss-ta.
   promise-PAST-DECL
   Lit. ‘Johni promised Maryj that e\textsubscript{j}/he\textsubscript{i}/self\textsubscript{i} would write a paper.’

b. John-un Mary\textsubscript{j}-eykey [e\textsubscript{i}/kunye-ka/caki\textsubscript{j}-ka nonmwun-ul ssu-la-ko]
   
   John-TOP Mary-DAT he-NOM/self-NOM paper-ACC write-IMP-COMP
   seltukhay-ss-ta.
   promise-PAST-DECL
   Lit. ‘Johni persuaded Maryj that ej/shej/selfj should write a paper.’

However, it seems unclear how Martin (1996) (let alone Chomsky and Lasnik (1993)) can capture the availability of various types of structural (or quirky) Case in these languages, as he assumes that PRO can only be licensed by a \texttt{+TENSE T\textsubscript{0}} that checks ‘null’ Case. In fact, Martin (1996: 174ff.) discusses some Icelandic data in (127), drawn from Hornstein (1990), which are basically similar to those presented in (125), in that adjectival predicates in infinitival clauses are marked with the overt Case.
Martin argues that the Case patterns exhibited by PRO in Icelandic can be explained if we assume that “null Case is something like a wildcard or chameleon Case” (Martin (1996: 174)). In other words, on his system, OC PRO raises to the matrix T₀ or ν₀, so that its chain can be fused into a chain containing the controller. Consequently, OC PRO can be marked either nominative Case as a default Case, or the Case inherited from the controller corresponding to the head of the fused chain. However, this line of analysis runs counter to his own proposal that only PRO can check null Case for it lacks φ-features, particularly, person and number. Although the glosses for the agreement patterns happen to be missing in (127), the adjectival predicates in the infinitival complements in fact exhibit agreement in person and gender with PRO, as clearly shown in (125). In addition, if null Case checked by PRO were a phonetically null instance of structural Case, there would be no clear reason why contraction is allowed in such sentences as I wanna win (cf. I want PRO to win), but not in those like *Who do you wanna win? (cf. Who, do you want ti to win?) (Hornstein (1999)).

Finally, there seem to be some problems with Martin’s (1996) proposal that the OC interpretation can arise when two independent chains, one for the controller and another for PRO, are fused into a single chain. This proposal crucially relies on the assumptions that (i) PRO has similar properties to the SE-type clitic, and (ii) control complements are TP, not CP. Notice, however, that in languages like Korean, control complements are generally headed by the overt complementizer: for example, in (126) above, the complementizer –ko subordinates the
complement clauses. Thus, at least for Korean, it would be untenable to assume that the control complements are TP. If this is correct, it is unclear how OC PRO can undergo clitic-like movement to the matrix T⁰ or v⁰ across the C⁰ head without violating the Head Movement Constraint or Relativized Minimality (Rizzi (1990)). Furthermore, it would not be easy for Martin’s analysis to derive split control in Korean and Japanese, as exemplified in (128).

\[(128)\]

\begin{align*}
\text{a. KOREAN} & \quad \text{John}-\text{TOP} \quad \text{Mary}-\text{DAT} & \quad [\text{e}_i+j \quad \text{hamkkey} \quad \text{ttena-ca-ko}] & \quad \text{ceyanhayssta.} \\
& \quad \text{‘John proposed to mary to leave together.’} \\
\text{b. JAPANESE} & \quad \text{Yoko}-\text{TOP} \quad \text{Hiroshi}-\text{DAT} & \quad [\text{e}_i+j \quad \text{boku-no} \quad \text{beeguru-o} \quad \text{tabe-\text{yoo-to}]} \\
& \quad \text{proposed} & \quad \text{(yooda)} & \quad \text{teiansita} & \quad \text{(yooda)} \quad \text{proposed seems} \\
& \quad \text{‘(It seems that) Yoko proposed to Hiroshi to eat my bagel.’} & \quad \text{Fujii (2006: 18)}
\end{align*}

That is, in order for the split control interpretation to be possible, at least three chains, one for PRO and two for the controllers, should be collapsed into a single chain. But it is unclear to me how the computational system ensures that the three independent chains are incorporated into a single chain, and even how the collapsed chain can be represented.

2.3.3.2 Agree-based Approach: Landau (1999)

Landau (1999) advances a novel view on types of control in terms of how controlled subjects are interpreted, and provides a syntactic account for how obligatory control (OC) is derived in each subtype of OC within the framework of Chomsky (1998) (also published as Chomsky (2000)). What deserves special attention in his work is that as discussed in 2.2.2.3, Landau proposes to divide OC into two types, exhaustive control (EC) and partial control (PC), in terms of whether
the reference of a controlled subject is exhausted by its controller. For example, in the case of EC, the reference of a controlled subject is identical with that of the controller overtly present in the subordinating clause, as in (129a). On the other hand, in the case of PC, the reference of a controlled subject includes the overt controller and someone else the latter of which is determined by the discourse context, as in (129b).

(129)  a. John\(_i\) began [PRO\(_{i/+}\) to solve the problem].  (EC)
b. John\(_i\) hoped [PRO\(_{i/+}\) to solve the problem].  (PC)

Landau (1999: 71)

In an attempt to figure out where this interpretive difference comes from, Landau (1999: 70) suggests that the T\(^0\) of infinitival complements in PC has independent tense, while that of infinitival complements in EC does not. Recall that a similar idea has already been entertained in various works, which maintain that control infinitives are different from non-control ones in that only the former allow ‘unrealized’ tense (or irrealis tense) with respect to the matrix tense (Stowell (1982), Pesetsky (1991), Martin (1996), Bošković (1997), among others). However, slightly departing from the previous idea, Landau attributes the difference between EC and PC to the availability of independent tense in complement clauses. He provides (130a-b), repeated from (29a-b), to support his idea: that is, PC predicates tolerate a tense mismatch between the matrix clause and the complement clause, as in (130b), while EC predicates do not, as in (130a).

(130)  a. *Yesterday, John began to solve the problem tomorrow.  (EC)
b. Yesterday, John hoped to solve the problem tomorrow.  (PC)

Landau (1999: 71, 72)
In short, according to Landau, infinitive complements selected by PC verbs, but not those by EC verbs, can have an independent temporal operator, and only the former can be defined as ‘tensed’ infinitives which are assumed to carry their own semantic tense value.

In addition to the assumption about the difference between PC and EC predicates in tense properties, Landau makes some more assumptions in developing a syntactic analysis of PC and EC. Let me begin with what he assumes about features on PRO. Under Landau’s system, the notion of semantic number, especially, ‘semantic plurality,’ is one of the crucial factors for determining whether PC is available. As discussed in 2.2.2.2, PC is possible only when PRO is semantically plural, which is evidenced by the contrast between the a-examples and the b-examples in (131) and (132), repeated from (33) and (34), respectively. That is, PRO in the control complements selected by the EC predicates cannot license the collective predicate and collectivizing adverb, as in (131a) and (132a), but PRO in the complements selected by the PC predicates can, as in (131b) and (132b). Because of this fact, Landau assumes that PRO comes in two varieties, PRO\textsubscript{SEM: +pl} and PRO\textsubscript{SEM: -pl}.

\begin{align*}
(131) \quad & \text{a. } *\text{John}_i \text{ told Mary that he}_i \text{ managed [PRO}_i+ \text{ to meet at 6 o’clock today]. (EC)} \\
& \text{b. John}_i \text{ told Mary that he}_i \text{ preferred [PRO}_i+ \text{ to meet at 6 o’clock today]. (PC)} \\
(132) \quad & \text{a. } *\text{John}_i \text{ told Mary that he}_i \text{ was able [PRO}_i+ \text{ to win the game together]. (EC)} \\
& \text{b. John}_i \text{ told Mary that he}_i \text{ was eager to [PRO}_i+ \text{ to win the game together]. (PC)}
\end{align*}

Then, how can PRO acquire semantic number? Landau suggests that the way PRO obtains semantic number is different from the way lexical DPs do. On the one hand, he assumes that lexical DPs pick up formal \( \varphi \)-features when entering the derivation, but unlike the formal features, semantic number is listed as part of the idiosyncratic lexical meaning of a DP. On the other hand, PRO can get formal features upon entering the derivation, while it retains the nature
of being ‘anaphoric,’ just like lexical anaphors, requiring indexation (not valuation). However, unlike lexical DPs, the semantic number of PRO is not encoded in the lexical entry, as there is no evidence that PRO is lexically ambiguous, and whether it is PRO_{SEM: +pl} or PRO_{SEM: -pl} is determined in the course of a derivation. He further suggests that there are two ways for PRO to determine its semantic number depending on whether it appears under EC or PC: in EC contexts, PRO inherits the semantic number of the controller DP via agreement, especially, Agree in Chomsky’s (1998) sense; and in PC contexts, PRO gets its semantic feature from the context. As for the features of functional heads, he assumes that they enter a derivation with unvalued uninterpretable features such as \( \varphi \)-features and T(ense)-feature, and with no semantic number.

Finally, following Pesetsky and Torrego (1999), Landau (1999) maintains that \( C^0 \) carries an ‘uninterpretable’ T-feature only in tensed clauses, and that in order for the uninterpretable T-feature to be eliminated, T-to-C movement should take place. Therefore, Landau assumes that only PC complements have an uninterpretable T-feature on \( C^0 \), since they need to determine a tense domain. Note that unlike the T-feature on \( C^0 \), its counterpart on \( T^0 \) in PC complements is interpretable, as the semantics of tense comes from \( T^0 \). It thus follows that T-to-C movement is not necessary for EC complements, as they have no uninterpretable T-feature on the \( C^0 \) that needs to be checked. Provided in (133) is the list of core assumptions which Landau makes for his analysis (from Landau (1999: 77-79)).

(133)  
  a. PRO enters the derivation with valued \( \varphi \)-features, but no semantic number.  
  b. Functional heads enter the derivation with unvalued \( \varphi \)-features, but no semantic feature.  
  c. PRO and functional heads can acquire semantic number by agreement with (an element that agrees with) a lexical noun.  
  d. PRO can acquire semantic number by context.  
  e. In tensed clauses, \( C \) contains an uninterpretable feature.  
  f. T-to-C applies in PC-complements but not in EC-complements.
This being said, let us briefly examine how Landau’s system derives EC and PC, respectively. Beginning with the EC sentence in (134a), Landau provides the representation in (134b) as an abstract structure, where $F$ stands for $T^0$ in subject control and $v^0$ in object control. Notice that, rather than positing AgrP as an independent functional projection, Landau assumes that Agr$^0$ is contained in $T^0$. When PRO enters the derivation, it has valued $\phi$-features, but no semantic number, as stated in (133a). Therefore, at the point when Agree$_1$ ($T$-Agr, PRO) applies to T-Agr and PRO, PRO does not have semantic number. But even after Agree$_1$ takes place, which matches all the $\phi$-features of PRO and Agr, as well as checks the null Case of $T^0$, PRO still lacks semantic number, since the lower $T^0$ enters the derivation without having its semantic number either, as stated in (133b). Then, PRO undergoes Move to the specifier of the lower $T^0$ in order to satisfy the EPP of the T head.

(134) a. The chair$_i$ managed [PRO$_i$ to submit a proposal by deadline].

b.  

\[
\text{FP} \quad \text{VP} \\
\quad \text{Agree}_2 \quad \text{Agree}_3 \\
\quad \text{F} \quad \text{DP} \quad \text{V'} \\
\quad \text{C} \quad \text{TP} \\
\quad \text{PRO} \quad \text{T'} \\
\quad \text{T-Agr} \quad \text{t}_{\text{PRO}} \quad \text{V'} \\
\]

Landau (1999: 81)
Note that, as listed in (133e,f), since the EC complement that is untensed does not have an uninterpretable T-feature on $C^0$ to be checked, the lower T-Agr stays put under the T node without undergoing T-to-C movement, as depicted in (134b).

Looking at the matrix clause, the finite T$^0$, corresponding to F in (134b), enters the derivation with $\varphi$-features but no semantic number, as stated in (133b), and Agree$_2$ (F, DP) establishes agreement between the functional head T$^0$ and the controller *the chair*. As a result of Agree$_2$, the uninterpretable $\varphi$-features of the matrix T$^0$ come to have the same value as the interpretable counterparts of the DP, and as stated in (133c), the higher T$^0$ also inherits the semantic number of the controller DP *the chair*, which is semantically singular—i.e., $\text{[SEM: -pl]}$. Finally, Agree$_3$ (F, PRO) matches all the $\varphi$-features of the T$^0$ in the higher clause and PRO in the lower Spec, TP, and the latter inherits the semantic number from the higher T$^0$, as listed in (133c). Note that under Chomsky’s (1998) Agree system, if a DP gets its Case checked, it becomes invisible to syntactic operations, and thus, the DP can no longer participate in another instance of Agree (or Move). Nevertheless, the probe in Agree$_3$ can see PRO as its goal, and adopting the traditional intuition, Landau (1999: 80) stipulates that this is because PRO is ‘anaphoric’ by nature.

Second, for the PC sentences like (135a), Landau provides the representation in (135b), where F corresponds to finite T$^0$, as the controller is in the subject position. At the first stage, just as in the case of EC, Agree$_1$ (T-Agr, PRO) matches the formal features of T-Agr and PRO, and checks the null Case of T$^0$. However, as stated in (133a,b), neither the probe (i.e., T-Agr) nor the goal (i.e., PRO) has semantic number at the time of entering the derivation, and thus, PRO raises to the lower Spec, TP to satisfy the EPP without semantic number determined. As stated in (133e,f), the C head has an uninterpretable T feature, since the infinitival clause is
selected by the PC verb *hope*; therefore, the lower $T^0$ has to undergo T-to-C movement in order to check off the uninterpretable T-feature on the lower C. In the matrix clause, Agree$_2$ (F, DP) applies, matching the $\varphi$-features of the finite $T^0$ and the controller DP. At this time, the uninterpretable $\varphi$-features of the higher $T^0$ are valued by the interpretable counterparts of the controller DP, and furthermore, semantic number of the latter, [SEM: -pl], is transferred to the former in accordance with the assumption in (133c).

(135) a. The chair hoped [PRO$_{i+}$ to meet at 6:00].

\[
\begin{align*}
\text{FP} & \quad \text{F} \\
& \quad \text{DP} \\
& \quad \text{V} \\
& \quad \text{CP} \\
& \quad \text{T-Agr} \\
& \quad \text{C$_T$} \\
& \quad \text{PRO} \\
& \quad \text{t$_{T-Agr}$} \\
& \quad \text{t$_{PRO}$} \\
& \quad \text{V'}
\end{align*}
\]

Landau (1999: 81)

At the final stage, Agree$_3$ (F, T-Agr) takes place, but note that the goal of this operation is not PRO but T-Agr. This is because PRO is not in the Spec or head of the lower CP, so it is not visible to the matrix $T^0$, due to the Phase Impenetrability Condition (PIC) that prohibits elements in positions other than the edge (i.e., specifier and head) positions of a phase from being accessible by a probe outside the phase (e.g., CP or vP). On the other hand, T-Agr, which has
been raised to the lower C via T-to-C movement, is visible to the matrix \( T^0 \), since it is in the edge position of the CP. Furthermore, Landau assumes that just like PRO, Agr\(^0 \) in OC infinitives is ‘anaphoric,’ an idea originally proposed by Borer (1989), so that it can get involved in Agree\(_3\), yielding the OC interpretation. As a result of Agree\(_3\), PRO gets to match the controller DP in all \( \varphi \)-features ‘by transitivity,’ since Agree\(_2\) matches the \( \varphi \)-features of the higher \( T^0 \) and the controller while Agree\(_1\) matches those of T-Agr in the lower clause and PRO. Notice, however, that the semantic feature of the higher \( T^0 \) (which has been inherited from the controller via Agree\(_2\)) cannot be transmitted to PRO, since the latter does not directly participate in Agree\(_3\) (T/F, T-Agr). Therefore, Landau (1999: 82) suggests that semantic number of PRO is determined by the context, which is arguably a characteristic property of the PC effect.

Let me recapitulate Landau’s Agree-based analysis of control in light of the three major issues in (2a-c). Beginning with the second issue in (2b), Landau (1999) assumes that controlled null subjects are always PRO regardless of the types of control. Second, as for the issue regarding the licensing condition for controlled subjects in (2a), he assumes with Martin (1996) that PRO can appear in control infinitives that are distinguished from non-control ones with respect to tense properties, and PRO can check null Case against a control \( T^0 \). However, slightly departing from Martin’s suggestion that non-finite \( T^0 \)'s in all control infinitives are tensed, Landau argues that tense in control infinitives should be further distinguished in terms of whether tense mismatches between the matrix and infinitive clause are tolerated: in particular, control infinitives under PC predicates are tensed, allowing for the tense mismatch, and they are headed by a \( C^0 \) with an uninterpretable T-feature; on the other hand, those under EC predicates are not tensed, prohibiting the tense mismatch, and their \( C^0 \) does not have an uninterpretable T-feature. Furthermore, whether \( T^0 \) allows for the tense match or not, it must carry ‘anaphoric
Agr’ on it. Third, regarding the issue of controller choice in (2c), Landau basically argues that OC, which falls into EC and PC, arises as a result of Agree in Chomsky’s (1998) sense. But there is a crucial difference between the EC and PC effects under Landau’s Agree-based analysis: that is, the EC interpretation comes from agreement between the controller and PRO, while the PC interpretation can be obtained by agreement between the controller and T-Agr, as a consequence of T-to-C movement of T-Agr for checking off the uninterpretable T-feature on C⁰.

Landau (1999) makes a number of contributions: for example, he provides a finer-grained typology of OC than the previous studies, and he advances a new perspective on how control relations are defined—that is, he considers OC as an instance of the Agree relation. However, his analysis has some issues to be carefully reconsidered. First, under Landau’s system, EC can be obtained by Agree between F and PRO, but it seems unclear how the functional head can have access to PRO without inducing a violation of the locality condition, namely the Phase Impenetrability Condition (PIC) (the same point also made by Hornstein (2003: 38) and Madigan (2008b: 134)). Following Chomsky (1998), Landau assumes a syntactic unit called ‘phase’ as a local domain for Agree and Move, which includes CP’s and vP’s, and according to the PIC, only the edge of a phase (i.e., the head and specifier) is visible to a probe outside the phase. However, as shown in (134b), when Agree₃ (F, PRO) applies, the probe F can reach the goal, PRO, although the latter is not positioned in the edge of the lower CP. To get around this problem, Landau modifies the original version of PIC, suggesting that the constraint works selectively: in other words, as stated in (136) below, if a goal carries uninterpretable features, it must be in the edge of a phase to be visible to a probe outside the phase; on the other hand, if a goal has only interpretable features, a probe can see it, although it is not in the edge of a phase.
Modified PIC

In a structure [... X ... [YP ... Z ... ]], where YP is the only phase boundary between X and Z, Z is visible to X:

(i) Only at the head or edge of YP, if Z is uninterpretable.
(ii) Anywhere in the YP phase, if Z is interpretable.

Landau (1999: 83)

However, it does not seem to be a good move to make such a modification to the locality condition to justify an exceptional case of Agree. That is, the more this kind of modification is made for each exceptional case, the less explanatory power the grammar ends up having.

The second issue, which has to do with minimality, is how F can undergo Agree with PRO and T-Agr in EC and PC, respectively, despite the existence of an intervening DP in the matrix clause. That is, as depicted in (134b) and (135b), when Agree$_3$ takes place in between the probe (i.e., F) and the goal (i.e., PRO or T-Agr), the DP intervenes in between them. As Hornstein (2003: 83) points out, however, if Agree$_3$ in both cases is a genuine instance of Agree(ment), we would expect minimality effects to arise, just as in Icelandic (137).

(137) a. Okkur virtist/*virtust henni hafa leiðst þeir.
    us.DAT  seemed.3SG/*3PL her.DAT  have found-boring they. NOM

b. Okkur sýndist/*sýndust honum hafa hentað pennarnir vel.
    us.DAT  appeared.3SG/*3PL him.DAT  have suited pens.the. NOM well

Sigurðsson (2000: 99)

A finite T$^0$ can basically agree in person and number with a nominative object in Icelandic, but Agree fails to apply when there is an intervening DP in between the finite T$^0$ and the nominative-marked object, as in (137a,b). According to Chomsky (1998), the failure of agreement in such a configuration suggests that Agree is susceptible to the minimality condition, apart from the PIC. If this is correct, it is mysterious why no minimality effects are detected in Agree$_3$ in both EC
and PC. The current situation could be interpreted in two ways: the relation between F and T-Agr/PRO is not an instance of Agree, or there is no direct syntactic relation between the two. But whatever may be chosen would undermine the explanatory power of Landau’s analysis.

Third, as Hornstein (2003: 39) mentions, Landau’s definition of Agree is not identical to Chomsky’s (1998) original definition. According to Chomsky, Agree applies to two elements, and it first checks whether the features of the two elements are matched. Their features should be strictly identical or at least non-distinct in order for Agree to take place. And as a result of Agree, the uninterpretable features of the two (i.e., \(u\phi\) of the probe and \([u\text{Case}]\) of the goal) are valued and eliminated for convergence. By contrast, under Landau’s system, the function of Agree is not only to check if the features of a probe and a goal are matched, but also to transmit some feature of the probe to the goal, so that the latter picks up the transmitted feature for the expected reading. So he should have made it clear how Agree employed in his analysis differs from Chomsky’s. In Chapters 5 and 6, capitalizing on Pesetsky and Torrego (2007), I adopt a different version of Agree than Chomsky’s in analyzing the person restrictions on subjects in jussive clauses as well as control effects in jussive control contexts.

Finally, recall our discussion in 2.2.2.2 that Landau (1999) also maintains that in English split control (SC), along with EC and PC, falls under the category of OC. For example, as shown in (138), repeated from (24), PRO is controlled by both the subject and the indirect object in the matrix clause.

(138) a. John, promised his son, \([\text{PRO}_{i+j} \text{ to go to the movies together}]\).  
    b. John, persuaded Mary, \([\text{PRO}_{i+j} \text{ to kiss in the library}]\).  
    c. John, proposed to Mary, \([\text{PRO}_{i+j} \text{ to meet each other at 6}]\).  
    d. John, asked Mary, \([\text{whether PRO}_{i+j} \text{ to get themselves a new car}]\).  

Landau (1999: 43)  
Landau (1999: 67)
However, Landau does not provide an explicit account for how the split control interpretation can be derived under his Agree system. The first immediate question is whether SC is derived by Agree of the type in PC, or that of the type in EC. If it is assumed, just as in this chapter, that SC can rather be treated as a subtype of EC, then Agr-T inside the lower CP should undergo Agree not only with the matrix \( T^0 \) and the matrix \( v^0 \) in order for both the matrix subject and indirect object to be the controllers of SC PRO in (138). If this is the case, multiple Agree should be allowed in English in order for the SC interpretation to be available, but the evidence for the availability of multiple Agree is not robust in English. Furthermore, in (138d), the SC PRO is embedded in a \( wh \)-complement, which is considered as a syntactic island for Move and Agree in English. The same issue seems to arise when it comes to the Korean and Japanese control data of SC in (128), repeated below. That is, does T-Agr inside the lower CP undergo multiple Agree with the matrix \( T^0 \) and \( v^0 \)? In addition, it should be carefully examined whether it is OK to assume that there is Agr on \( T^0 \) in Korean and Japanese, which are known to lack agreement at the IP level.

(128) a. KOREAN

\[
\begin{align*}
\text{John,un} & \quad \text{Mary,eykey} & [e_{i+j} \quad \text{hamkkey} & \quad \text{ttena-ca-ko}] & \quad \text{ceyanhayssta.} \\
\text{John-TOP} & \quad \text{Mary-DAT} & \text{together} & \text{leave-EXH-COMP} & \text{proposed} \\
\text{‘John proposed to Mary to leave together.’}
\end{align*}
\]

b. JAPANESE

\[
\begin{align*}
\text{Yoko}-\text{wa} & \quad \text{Hiroshi,ni} & [e_{i+j} \quad \text{boku-no} & \quad \text{beeguru-o} & \quad \text{tabe-yoo-to}] \\
\text{Yoko-TOP} & \quad \text{Hiroshi-DAT} & \text{I-GEN} & \text{bagel-ACC} & \text{eat-YOO-COMP} \\
\text{teiansita} & \quad \text{(yooda)} & \text{proposed} & \text{seems} & \text{‘(It seems that) Yoko proposed to Hiroshi to eat my bagel.’}
\end{align*}
\]

Fujii (2006: 18)

Taking the reductionist view, Hornstein (1999, 2001, 2003) advances an analysis within the minimalist framework, which subsumes control effects under movement, and he claims that the Control Theory is superfluous. As Hornstein (2001: 5) mentions, at the heart of minimalism are two different types of economy considerations, namely, methodological and substantive economy considerations. For example, according to the former type of economy consideration, having two levels of representation (e.g., PF and LF) is more economical than positing four levels of representation (e.g., D-Structure, S-Structure, PF and LF), so the grammar with a smaller number of levels or representations is preferred. On the other hand, the second type of economy consideration forces us to make the least effort to produce maximum effects from given resources. For instance, if there are two alternative derivations that result in the same sentence, the derivation that involves three steps should be chosen over the one that requires four steps.

Given this backdrop, Hornstein tries to get rid of the control module from the grammar, and the specific claims he makes are that OC PRO is the residue of movement of a controller, and that the OC dependency can be reduced to a relation between members of a chain created by movement of a controller.

The theory of control Hornstein develops for capturing both OC and NOC (the latter of which will not be discussed in this chapter) is called Movement Theory of Control (MTC). The following is the list of core assumptions that Hornstein makes for OC PRO and its interpretation.

---

30 There are in fact other minimalist approaches (Martin (1996), O’Neil (1997), Manzini and Roussou (2000)), which attempt to reduce OC relations to A-chain relations. Notice, however, that their detailed analyses are different from one another, and this section (and the subsequent chapter) will focus on Hornstein’s Movement Theory of Control since his analysis seems to be the most comprehensive and latest version.
(139)  

a. θ-roles are features on verbs.

b. Greed is enlightened self interest.

c. A D/NP receives a θ-role by checking a θ-feature of a verbal/predicative phrase that it merges with.

d. There is no upper bound on the number of θ-roles a chain can have.

Hornstein (2001: 37)

Given these assumptions, let us look at how OC constructions like (140) can be derived under Hornstein’s MTC approach.

(140) John hopes to win.

a. [vP JohnNOM,θi v-\text{win} [VP t_{\text{win}}]]

b. [TP John_{\text{NOM},θi} [\text{T} \to [vP John_{\text{NOM},θi} v-\text{win} [VP t_{\text{win}}]]]]

c. [vP John_{\text{NOM},θi,θj} [\text{T} \to [TP John_{\text{NOM},θi} to [vP John_{\text{NOM},θi} v-\text{win} [VP t_{\text{win}}]]]]]

d. [TP John_{\text{NOM},θi,θj} [\text{T} \to [TP John_{\text{NOM},θi} to [vP John_{\text{NOM},θi} v-\text{win} [VP t_{\text{win}}]]]]]]

At the first step in (140a), John is combined with the predicate \text{win} via (pure) Merge, and checks the θ-role of the predicate (which is labeled as θi). As a result, John gets a first θ-role from the verb \text{win}. Note that following Chomsky (1995), Hornstein assumes that lexical and functional items enter the derivation with formal features, and the features need to be checked during the derivation for convergence. Thus, John already has interpretable φ-features and an uninterpretable Case feature at the very beginning of the derivation. However, as implied by the assumption in (139c), Hornstein maintains, unlike Chomsky, that there is an asymmetry between DPs and predicates with respect to the time they obtain θ-features. In other words, predicates have θ-features before entering the derivation, while DPs acquire θ-features later when they check the θ-features of the predicates. At the second step in (140b), where a copy of John undergoes Move to Spec of the embedded TP, the raised subject checks the EPP-feature (or D-
feature) of the non-finite $T^0$, but at this time, no additional $\theta$-role is assigned. After that, $John$ moves out of the lower clause into Spec of the matrix VP, and it receives an additional $\theta$-role (represented as $\theta_2$) from the matrix verb hope by checking it off, as shown in (140c). Unlike the null Case approach, Hornstein does not assume null Case on the non-finite $T^0$ in control infinitives. Thus, $John$ can move further out of the embedded Spec, TP without inducing the so-called Case freezing effect (e.g., *I prefer for John to seem to it that he is clever vs. I prefer for it to seem to John that he is clever). Note also that although the $\theta$-feature of the matrix verb is checked by movement of $John$ in (140c), this step of the derivation is not incompatible with the assumption in (139c) that $\theta$-features are assigned to DPs through checking by Merge, given that Move is regarded as the composite of Copy, Merge and Delete in the Minimalist Program (Chomsky (1995, 2000, 2001)). In addition, according to Hornstein’s analysis, control infinitives are a bare TP out of which DPs can be extracted by A-movement without violating a locality condition, such as Phase Impenetrability Condition (Chomsky (2000, 2001)). Recall that the standard PRO theory of control in GB considers control infinitives as a CP, since PRO is otherwise governed by a control predicate, leading to a violation of the PRO Theorem. However, since neither PRO nor government is assumed in the movement analysis under minimalism, no theoretical problem arises if the non-finite complement is considered as a TP, just as suggested by Hornstein. Finally, $John$ raises to Spec of the higher TP, as in (140d), and it checks off the nominative Case of the finite $T^0$. Thus, at the end of the derivation, the chain created by Move of $John$ ends up with two $\theta$-roles.\footnote{Hornstein adopts the copy theory of movement (Chomsky (1993)), so each step of Move leaves behind a copy of $John$ (although we often call it a ‘trace’ here for the sake of convenience). But for the purpose of chain linearization, copies other than the one in the higher Spec, TP are deleted at the PF interface. Please refer to Nunes (2004) and Chapter 3 for detailed discussion of chain linearization under the}
It is worth noting that some of the previous works have assumed that controller choice is restricted by Rosenbaum’s (1967, 1970) Minimal Distance Principle (MDP), which can be roughly defined as in (141) (e.g., Larson (1991), Martin (1996), Manzini and Roussou (1998)). However, Hornstein (1999) argues that this principle can be reinterpreted in terms of an economy condition that constrains the application of Move in the Movement Theory of Control.

(141) **MINIMAL DISTANCE PRINCIPLE**
An infinitive complement of a predicate P selects as its controller the minimal c-commanding noun phrase in the functional complex of P.

as represented by Larson (1991: 115)

According to the MDP, the closest DP that c-commands PRO is chosen as a controller of OC PRO. First, in a configuration like (142a), DP₁ is trivially selected as a controller of PRO, as there is no other DP than DP₁. On the other hand, in a configuration like (142b), there is more than one DP in the matrix clause, both of which c-command PRO, but the MDP chooses DP₂ as a controller, since it is closer to PRO than DP₁ is.

(142)  
\[\text{a. } \text{DP}_1 \ [V \ [\text{PRO}_1 \ldots]]\]  
\[\text{b. } \text{DP}_1 \ [V \ \text{DP}_2 \ [\text{PRO}_2 \ldots]]\]

However, if the OC dependency is achieved by movement of a controller, as argued by the movement approach, the locality effects governed by the MDP can be captured by the Shortest Move (SM) or Minimal Link Condition (MLC), a locality condition for movement.\(^\text{32}\) According

\[^{32}\text{The formal definition of MLC Chomsky (1995) provides is given in (i). Since it is beyond the scope of this chapter to discuss whether and how the MLC is distinguished from the SM, the two conditions will be used together.}\]
to this condition, an element must move to the closest c-commanding position without skipping a possible landing site. For example, this condition correctly predicts that in subject control cases like (143a), the controller should be the copy of *John* in the matrix Spec, TP, as it is the only antecedent of the same copy in the lower Spec, TP. To put it differently, *John* can raise to the matrix Spec, TP without inducing a violation of the SM/MLC.

(143) a. John\(_i\) tries \([t_i \text{ to win}].\)
b. John\(_i\) persuaded Mary\(_j\) \([t_j \text{ to win}].\)

Likewise, the reason why the controller of the lower subject is not *John* but *Mary* in (143b) follows from the SM or MLC. That is, at some point of a derivation, *Mary* has to move out of the infinitive clause into the matrix clause. At that point, it targets the matrix indirect object position, not the matrix Spec, vP position, since the former position is obviously closer to the infinitive Spec, TP than the latter position. If *Mary* moves up to the matrix Spec, vP, skipping the indirect object position, the SM or MLC would be violated.

Let me summarize Hornstein’s (1999, 2001, 2003) movement approach in light of three issues in (2). Beginning with the first issue in (2a), namely, the categorial status of controlled subject, under this approach, OC PRO is the residue of A-movement of a controller, which is generally called a copy (or trace). It thus follows that PRO is no longer necessary in the grammar. Secondly, as for the issue of the licensing condition in (2b), just as in raising constructions, a chain created by the movement of a controller across clauses in OC winds up in a Case position (either the Spec, TP or Spec, vP), but unlike the raising constructions, the moving element has to go through \(\theta\)-positions, obtaining multiple \(\theta\)-roles at the end of the derivation.

\(\alpha\) can raise to target K only if there is no legitimate operation Move \(\beta\), where \(\beta\) is closer to K.

---

Chomsky (1995: 296)
Regarding the issue of controller choice in (2c), the OC dependency follows from chain membership, as the null category in the non-finite Spec, TP and its controller are members of a chain formed by Move of the controller. Consequently, the control module, which was taken to be an interpretive component determining the control interpretation, is no longer necessary. Overall, the Movement Theory of Control suggested by Hornstein seems to be better suited for the minimalist considerations than the other existing approaches including the null Case approach and the Agree-based approach. More than anything else, from the perspective of methodological economy, a grammar without PRO and the control module is obviously more economical than any other comparable grammar with PRO and/or the module. In addition, movement of a controller in OC configurations is motivated for $\theta$-feature checking in accordance with Greed, which fits the consideration of substantive economy.

2.3.3.4 Summary

I have reviewed three minimalist approaches to OC, such as the null Case approach (Chomsky and Lasnik (1993), Martin (1996)), the Agree-based approach (Martin (1996)) and the Movement Theory of Control (Hornstein (1999, 2001, 2003)), which are summarized in Table 5.
### Table 5. Summary of Minimalist Approaches to Control

<table>
<thead>
<tr>
<th>Approaches</th>
<th>Environments (2a)</th>
<th>Categorial Status (2b)</th>
<th>Controller Choice (2c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chomsky and Lasnik (1993)</td>
<td>Spec of non-finite $T^0$ that can check null Case</td>
<td>PRO</td>
<td>N/A</td>
</tr>
<tr>
<td>Martin (1996)</td>
<td>Spec of non-finite $T^0$ specified [+TENSE] that can check null Case</td>
<td>PRO as a head of a DP whose complement is pro</td>
<td>Cross-clausal clitic-like movement for OC</td>
</tr>
<tr>
<td>Landau (1999/2000)</td>
<td>Spec of non-finite $T^0$ w/o T-feature for EC; Spec of non-finite $T^0$ w/ T-feature for PC</td>
<td>PRO</td>
<td>Agree for EC; T-to-C Move + Agree for PC</td>
</tr>
</tbody>
</table>

#### 2.4 Conclusion

In the first part of this chapter, I have provided a recent view on the typology of control phenomena. I showed that control falls into two subclasses, OC and NOC, in terms of whether the referential dependency between a controllee and its controller is mandatory (Williams (1980), Manzini (1983), Koster (1984), Lebeaux (1984, 1985), Hornstein (1999, 2001), among others). Then, I have introduced various standard diagnostics for distinguishing OC PRO from NOC PRO: they include the ban on arbitrary antecedents and long-distance antecedents, the c-command requirement for controllers, the prohibition of a strict reading under VP ellipsis and *de re* readings, etc. (Hornstein (1999, 2001)). These diagnostics will be utilized in the subsequent chapters to show that the referential dependency observed in the Korean control constructions examined in this dissertation is an instance of OC.
Unlike the standard view on OC, however, Landau (1999) argues that the availability of split controllers and partial controllers cannot be the characterizing property of NOC PRO, and adopting his view, this dissertation considers split control (SC) and partial control (PC) as subclasses of OC (see also Barrie (2004), Rodrigues (2007), Bowers (2008), Madigan (2008b), Snarska (2009), Pittman and Barrie (2010) for PC; Fujii (2006), Madigan (2008a,b), Snarska (2009) for SC). However, slightly departing from Landau, I assume with Madigan (2008b) that rather than SC is not an independent subclass of OC but rather falls under the category of exhaustive control (EC) where the referent of a controlled subject is exhausted by the controller. In short, there are two subtypes under the category of OC, i.e., EC and PC. These two subtypes are distinguished in terms of whether the referent of a controlled subject is exhausted by its controller(s). In particular, EC is further divided into SC and non-SC. On the other hand, the rest of control interpretations, such as long-distance (LD) control, arbitrary control and implicit control, are classified as subtypes of NOC (see the diagram in (39)).

In addition to the interpretation-based typology, I have also discussed another typology which is drawn based on the syntactic position of controllers: under this typology are subject control, object control and split control. I have pointed out that this typology is very useful when we discuss a recently discovered control pattern, labeled backward control (BC) (e.g., Polinsky and Potsdam (2002), Monahan (2003), Kwon and Polinsky (2006), Fujii (2006)). As illustrated in Table 1, both forward and backward control are attested in subject control and object control, while backward control is not attested in split control.

In the latter half of this chapter, I have provided a critical survey of the various previous works on control in the framework of generative grammar. My discussion of each work has centered on the three issues given in (2): that is, what licenses controlled subjects; what are
controlled subjects; and how controllers are determined. In the early stages of the transformational framework (called Standard Theory), control relations are regarded as driven by the application of a number of transformational rules including a deletion rule, which is called ‘Equi’ (Rosenbaum (1967, 1970)). So the information about the control environment is encoded in Structural Description of the Equi rule. I have also discussed two more works, Chomsky (1973) and Chomsky and Lasnik (1977), under the transformational framework. They are distinguished from Rosenbaum in that they treat controlled null subjects as a special empty category PRO. Unlike Chomsky (1973), Chomsky and Lasnik (1977) provide an explicit condition for licensing PRO, i.e., *[NP-to-VP] filter, but the filter turns out to be a descriptive generalization of the environment. Furthermore, neither of them provides an explicit analysis of controller choice.

In the Government and Binding (GB) era, Chomsky (1981) advances a binding-theoretic theory of control, which I call the standard PRO theory of control. In particular, he proposes the PRO Theorem which requires PRO to appear in an ungoverned position. Chomsky argues that since PRO appears in the environment without a governor, it cannot have a governing category (GC), making PRO ambiguously interpreted either as an anaphor or a pronoun. However, he does not make an explicit proposal about how OC can be derived. Since Chomsky (1981), various attempts have been made in the GB framework in order to provide an explicit analysis of controller choice, and one of them is to extend binding theory. Manzini (1983) treats OC PRO as an empty anaphor (just like an NP-trace), and suggests Condition A’ which requires OC PRO to be bound in an extended binding domain (which she calls a domain GC). On the other hand, Borer (1989) suggests that INFL in control infinitives has an anaphoric AGR, which must be bound by a local antecedent in the matrix clause when it raises to C⁰ via I(nfl)-to-C movement.
The controlled subject, pro, which is in a Spec-head relation with Infl, is later referentially linked to the controller by transitivity. However, it has been shown that both approaches have problems. For instance, Manzini’s approach fails to rule out the cases where PRO appears in object position. In the case of Borer (1989), in order to derive the OC interpretation in Korean, she has to assume that there must be an AGR on Infl in control infinitives, which is not compatible with the traditional view that there is no AGR on Infl in Korean (D. Yang (1984, 1985)). She also assumes that the overt complementizer must cliticize onto IP before the anaphoric AGR raises to C\textsuperscript{0}, which is a very marked operation across languages.

J. Huang (1989) extends the control theory to provide a uniform analysis of the distribution and interpretation of controlled PRO and pro, eventually eliminating an agreement-based pro-drop theory (Chomsky (1981, 1982)). In particular, he proposes the Generalized Control Rule, stipulating that an empty pronominal must be bound if it has a control domain. However, his approach has also some problems. For example, since his analysis is designed for null pronominal elements, it seems unclear how it can capture the OC interpretation in Korean control sentences where the controlled subject is overt.

D. Yang (1985) disputes the reductionist position, which attempts to derive control dependencies from binding relations. Instead, following Chomsky (1981), he claims that controlled subjects are PRO in both obligatory and optional control constructions, which should be distinguished from overt pronouns and a long-distance anaphor, and that they must appear in an ungoverned position, as required by the PRO Theorem. In order to capture the fact that overt elements can appear in place of PRO in Korean, he stipulates that the subject position in both control and non-control complements are inherently governed, though not structurally governed. D. Yang’s analysis seems problematic, since it appeals to the notion of government, which is no
longer necessary in the minimalist framework. Furthermore, he claims that pro does not exist in
Korean (and typologically related East Asian languages), but the interpretive patterns of PRO in
optional control constructions seem to overlap with those of pro.

In the minimalist framework, since the notion of government is eliminated due to lack of
conceptual necessity, the PRO Theorem is no longer an appropriate condition that regulates the
distribution of PRO. For this reason, Chomsky and Lasnik (1993) suggest that PRO has null
Case, and it moves out of VP to Spec of the infinitival TP to check null Case, satisfying Greed.
However, they do not make an explicit proposal about how OC PRO finds its controller.
Furthermore, their analysis fails to explain why PRO is not possible in Spec of the infinitival TP
in raising or ECM constructions. For this reason, building on Stowell (1982), Marin (1996)
suggests that non-finite T0’s in control infinitives, as opposed to those in raising/ECM infinitives,
are tensed, and thus they can check null Case. In addition, in order to derive the OC
interpretation, he suggests that OC PRO undergoes clitic-like movement to the nearest functional
head (v0 or T0) to the controller. Nevertheless, it has been shown that Martin’s analysis has some
problems. For example, since only null Case is available for PRO, it would seem hard to explain
how PRO can be assigned structural or quirky Case in languages like Icelandic, and more
importantly, how overt controllees in some Korean control constructions can get nominative
Case and receive the OC interpretation.

In addition, Landau (1999) provides a finer-grained typology of control, showing that
partial control (PC) and split control (SC), along with exhaustive control (EC), are subclasses of
OC. Slightly departing from Martin (1996), Landau suggests that not all control T0’s are tensed:
specifically, control T0’s selected by PC verbs are tensed and they are paired with a C0 bearing
the uninterpretable T-feature, which requires Agr-to-C movement; on the other hand, control
T₀'s selected by EC verbs are untensed, and thus, they are paired with a C₀ without the unintepretable T-feature, which does not force Agr-to-C movement. As for the way controllers are determined, he suggests that PC can be obtained by Agree between a functional head (which has undergone Agree with the controller DP) and Agr-T on C₀, while EC can be derived by Agree between a functional head and PRO inside the lower clause. According to him, PC is made possible since the semantic number of PRO is not obtained by Agree with the controller, but from the context. However, we have seen that there are some problems for Landau’s Agree approach. For example, the definition of Agree he employs is different from that of Agree Chomsky (1998) suggests: that is, according to his definition, Agree leads to feature transmission from a probe to a goal. However, Landau does not make it clear why the definition of Agree should be revised as such. Furthermore, his Agree-based approach seems to have some difficulty explaining split control.

Finally, Hornstein’s (1999, 2001, 2003) Movement Theory of Control has been reviewed. He suggests that the OC dependency is nothing but an A-chain relation, and controlled subjects are a trace left behind by A-movement of the controller. What distinguishes control infinitives from raising infinitives is that an NP moving out of the control infinitive clause ends up with multiple θ-roles, while an NP moving out of the raising infinitive can have only one θ-role. According to him, since the OC relation is redefined as an A-chain relation, Rosenbaum’s (1967, 1970) Minimal Distance Principle, which constrains the controller choice, can be redefined in terms of the locality condition on Move, such as Shortest Move or Minimal Link Condition. Hornstein also argues that one immediate advantage of the MTC is to reduce the number of empty categories by eliminating PRO, and eventually to get rid of the control module from the grammar.
In Chapter 3, I will adopt Hornstein’s (1999, 2001, 2003) Movement Theory of Control in order to derive OC interpretations from Korean control constructions that subordinate infinitival clauses. One of the advantages of adopting the MTC for the Korean infinitive control is that we can easily capture the availability of backward control in the *tolok*-control construction, as exemplified in (144), repeated from (44). It seems that no previous works that consider controlled subjects as PRO can easily explain this pattern of control where the controller occupies a structurally lower position than the controllee. On the other hand, under the MTC, the same control pattern can be explained without difficulty: simply put, after Mary moves out of the *tolok*-complement, the higher copy is deleted at PF, while the lower copy is retained.

(144) **BACKWARD CONTROL IN KOREAN**

John-un $\Delta_i$ [Mary-ka ttena-tolok] seltukhayssta.

John-TOP Mary-NOM leave-COMP persuaded

‘John persuaded Mary to leave.’

136
3.1 Introduction

The goal of this chapter is to examine control constructions in Korean where infinitival clauses are embedded as complements. The most common way employed for establishing obligatory control (OC) dependencies in many languages is to subordinate infinitival clauses as complements. For example, in English, subject control can arise if an infinitival clause is embedded under predicates like *promise*, as in (1a), while object control can be obtained if an infinitival clause is complemented under predicates like *persuade*, as in (1b).

\[(1) \quad \text{ENGLISH} \]
\[\text{a. John} \_i \text{ promised Mary} \_j \left[ e_{i^{*}j} \text{ to leave early} \right]. \]
\[\text{b. John} \_i \text{ persuaded Mary} \_j \left[ e^{*}_{ij} \text{ to leave early} \right]. \]

Korean seems to have the equivalents of English OC constructions where infinitival clauses are complemented. Specifically, subject control is caused if infinitival complements headed by the complementizers, such as \(-\text{kilo}\) and \(-\text{lyeko}\), are embedded under control verbs like *yaksokha-* ‘promise’ and *nolyekha-* ‘try’, as in (2a) and (2b), respectively (cf. C. Lee (1973), S. Kim (1994) for \textit{kilo}-complements; Borer (1989), S. Kim (1994), Gamerschlag (2007), Madigan (2008b) for \textit{lyeko}-complements). In addition, subject control can also be induced if an infinitival complement headed by the complementizer \(-\text{koca}\) is embedded under the subject control verb *pala-* ‘want’, as in (2c). Notice that although their distributions are not exactly identical, verbs that select for these three complementizers sometimes overlap. Nonetheless, the type of control
that emerges in the constructions involving the three complementizers remains the same—i.e. it is always subject control interpretation.


Then, the question that immediately arises is what tells us that the clauses embedded in (2a-d) are infinitival clauses. Notice that it is well known that inflectional agreement is absent at the IP level in Korean. In other words, unlike agreement languages like English, the finiteness of a clause cannot simply be determined by the presence or absence of inflectional morphology on verbs. Therefore, it would be hard to define the complement clauses in (2a-d) as infinitival clauses by appealing to the criteria used for agreement languages. Instead, I suggest different criteria for distinguishing finite from infinitival clauses in Korean: in short, a clause can be

(2) KOREAN
   John-TOP Mary-DAT leave-COMP promise-PAST-DECL
   ‘John promised Mary to leave.’

   John-TOP exam-at pass-COMP try-PAST-DECL
   ‘John tried to pass the test.’

   John-TOP college-to pass-COMP want-PAST-DECL
   ‘John wanted to pass the test.’

   John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
   ‘John persuaded Mary to leave.’
defined as an infinitival one if it does not allow for tense or aspectual markers (e.g., -ess/-ass), if it does not allow for clause-typing markers, such as the declarative marker –ta or the interrogative marker –nya; and if it fails to be uttered as a root clause. The application of the suggested diagnostics will reveal that the four complement clauses in (2a-d), which are headed by the –kilo, –lyeko, -koca and –tolok, respectively, can be best characterized as infinitival clauses. It is very important to uncover the exact syntactic nature of clauses embedded under control predicates. This is because the fundamental hypothesis tested in this dissertation is that controlled subjects are not homogenous across languages and even within a language, and their categorial status and controller choice are contingent upon the syntactic nature of the clause in which they appear. Two subsections to follow in this chapter (Sec 3.2.1-3.2.2) will be devoted to showing that clauses headed by the four complementizers are infinitival and they are not adjuncts but complements.

Speaking of the core research questions to be addressed in this chapter, recall from our discussion in the previous chapters that since Rosenbaum (1967), theories of control in generative grammar have been developed surrounding the issues in (3). The investigation of the Korean OC constructions involving infinitival complements in this chapter seeks to provide an appropriate answer to each of these questions.

(3) a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
   b. What are controlled subjects? (Categorial status of controlled elements)
   c. How are controllers determined? (Controller choice)

In particular, a number of previous works on the constructions involving the four markers under discussion will be critically reviewed in order to figure out which analysis makes correct predictions for the empirical data investigated here. The review will reveal that most of the
previous approaches fail to provide a principled account for the data. On the other hand, it will be shown that Monahan’s (2003) work, which draws on Hornstein’s (1999) Movement Theory of Control (MTC), can capture the OC patterns in the *tolok*-control constructions. However, since his analysis also has some problems, I will provide my own account for the same constructions under the framework of MTC by closely examining the nature of chains and chain linearization in the *tolok*-control constructions in Korean. This chapter also argues that the control patterns in the subject control constructions in (2a-c) can be easily handled under the same framework. In brief, the important hypothesis adopted in this chapter for explaining the infinitival control constructions in Korean can be stated as follows:

(4) Obligatory control in infinitival control contexts in Korean can be reduced to A-chain relations.

To have some taste of my analysis of obligatory control (OC) in advance, I assume with Hornstein (1999, 2001, 2003) that θ-features are formal features, and a controller can move out of an infinitival complement into a matrix clause in order to check θ-features and Case features in narrow syntax. After that, a chain created by Move of a controller has to be linearized at PF, and thus, Chain Reduction, a PF operation deleting copies, erases the copies except for the one that has checked the highest number of features (Nunes (2004)). As a result, both the (forward) subject control and object control can be obtained. However, it has been reported in the literature (Monahan (2003), Kwon and Polinsky (2006)) that Korean allows for the so-called backward (or inverse) control in the *tolok*-control constructions, where the controller appears in a lower position than a null category referentially associated with the controller, as in (2f), below.
In order to derive this control pattern, I suggest that chain linearization can apply cyclically by phase (in Chomsky’s (2000, 2001a,b) sense) (cf. Fujii (2007) for the similar idea on English *seem like* constructions), and in the case of (2f), it applies to the chain of Mary created in the lower phase and another chain created in the higher phase. As a result, two copies from each chain survive, but due to a contradiction in linear order relative to the other syntactic objects, the surviving copy in the lower chain, rather than the one in the higher chain, must be kept undeleted, correctly yielding the surface order in (2f) (see 3.4.5.2 for detailed discussion).

As for the organization of this chapter, Section 3.2 provides detailed discussion of the syntactic properties of infinitival clauses that are investigated in this chapter. In particular, the section examines whether clauses headed by *-kilo*, *–lyeko*, *-koca* and *–tolok* are infinitival clauses, and how they are distinguished from other similar constructions, such as serial verb constructions or auxiliary verb constructions in Korean. Then, the standard diagnostics will be applied to the major data so that we can confirm whether they are OC sentences. Section 3.3 surveys a number of previous works on the constructions involving the four complementizers, and will show that they encounter some problems. Section 3.4 provides a formal account for the infinitival control constructions in (2a-f) under the Movement Theory of Control (Hornstein (1999, 2001, 2003)). In so doing, three questions in (3a-c), along with some specific issues, will be addressed. Section 3.5 summarizes and concludes this chapter.
3.2 Syntactic Properties of Infinitival Complements

3.2.1 Infinitival Complements in Subject Control

It has been reported in the literature on Korean grammar that three markers, *-kilo*, *-lyeko* and *-koca*, can be categorized as complementizers that embed a complement clause in Korean (C. Suh (1996), H. Sohn (1999), among others).\(^1\) As for the environments allowing for these three complementizers, the list of predicates that co-occur with each complementizer is provided in (5). Note that some verbs like *kyeyhoykha*- ‘plan’ and *kyelsimha*- ‘decide’ are compatible with all three markers.


In H. Sohn (1999), the second complementizer *–lyeko* is labeled an intentive marker, which is roughly translated as ‘intending to’ or ‘ready to’, because the marker frequently co-occurs with verbs like *cakcengha*- ‘intend’. On the other hand, the third complementizer *–koca* is called a

\(^1\) There seems to be strong evidence supporting the view that three markers, *-kilo*, *-lyeko* and *–koca*, can be best categorized as complementizers. That is, they cannot co-occur with the (indirect) quotative complementizer *–ko*, as shown in (ia-c).

\[
\begin{align*}
\text{(i) a. } & \text{Johni-un } [\text{Mary} \_\text{eykey} \ [e_{i,j}]] \text{ ttena(*-ko)-kilo(*-ko)] yaksokhay-ss-ta.} \\
& \text{John- TOP Mary- DAT leave-COMP-KILO-COMP promise-PAST-DECL} \\
& \text{‘John promised Mary to leave.’} \\
\text{b. } & \text{Johni-un } [\text{sihem-ey} \ [e_{i,j}]] \text{ hapkyekha(*-ko)-lyeko(*-ko)] nolyekhay-ss-ta.} \\
& \text{John- TOP exam-at pass-COMP-LYEKO-COMP try-PAST-DECL} \\
& \text{‘John tried to pass the test.’} \\
\text{c. } & \text{Johni-un } [\text{college-to} \ [e_{i,j}]] \text{ hapkeykha(*-ko)-koca(*-ko)] palay-ss-ta.} \\
& \text{John- TOP college-to pass-COMP-KOCA-COMP want-PAST-DECL} \\
& \text{‘John wanted to pass the test.’}
\end{align*}
\]
Desiderative marker, the meaning of which is ‘wanting to’ or willing to’, since it is often selected by verbs like huymangha- ‘hope.’ Then, the first complementizer –kilo, though not discussed by H. Sohn, can be referred to as a commitative marker, since it often connects a complement clause to verbs of commitment like yaksokha- ‘promise.’ However, this kind of labeling seems to have little consequence, since there are many instances where the three markers are selected by the same predicate, as shown in the list of selecting verbs in (5). For example, the three markers can appear when the matrix verb is kyehoykha- ‘plan’, as in (6).

   John- TOP Europe trip-ACC go-COMP plan-PAST-DECL
   ‘John planned to take a trip to Europe.’

   John- TOP Europe trip-ACC go-COMP plan-PAST-DECL
   ‘John planned to take a trip to Europe.’

   John- TOP Europe trip-ACC go-COMP plan-PAST-DECL
   ‘John planned to take a trip to Europe.’

As discussed in H. Sohn (1999: Ch 4, Sec 9.4.4), there are cases where the same markers function not only as a complementizer that embeds a complement but also as a conjunctive suffix that subordinates an adjunct clause. Consider the following examples where the marker -lyeko connects two clauses (the data from H. Sohn (1999: 313) with slight modifications).

I- TOP church-to go-CONJ early get.up-PAST-DECL
   ‘Intending to go to church, I got up early.’

I- TOP church-to early go-COMP intend-PAST-DECL
   ‘I intended to go to church early.’
Despite their apparent similarity, –lyeko subordinates an adjunct clause in (7a), but the same marker embeds a complement clause in (7b). There are some reasons to believe that the clause headed by -lyeko in (7a) is an adjunct, while the clause headed by the same marker in (7b) is a complement. The most compelling piece of evidence seems to come from the VP topicalization test (cf. Shim and den Dikken (2007) for the adjuncthood of key-clauses in Korean resultatives). According to this test, adjuncts can be freely stranded when VP topicalization takes place, while complements cannot. As expected, when VP topicalization applies, stranding the lyeko-clause, (7a) still remains grammatical, as in (8a), while (7b) becomes ungrammatical, as in (8b).

(8) a. [VP (ilccik) ilena-ki]-nun, na-i-nun [e_i kyohoy-ey ka-lyeko] 
   early get.up-NML-TOP I-TOP church-to go-CONJ
   hay-ss-ta. (cf. (7a))
   do-PAST-DECL

b.*[VP cakcengha-ki]-nun, na_i-nun [e_i kyohoy-ey ilccik ka-lyeko] 
   intend-NML-TOP I-TOP church-to early go-COMP
   hay-ss-ta. (cf. (7b))
   do-PAST-DECL

Besides, there are a couple of more facts that reveal the difference between the lyeko-clause in (7a) and the one in (7b) with regard to the argument/adjuncthood. That is, in Korean, control verbs that select a complement clause can be replaced with the verb ha- ‘do’, while verbs that co-occur with an adjunct clause cannot. If we replace the matrix verb with the verb ha- in (7a), the intended meaning cannot be preserved, which suggests that the lyeko-clause is not a complement clause. On the other hand, the alternation of the matrix verb with the verb ha- in (7b) does not affect the intended meaning. Finally, as pointed out by H. Sohn (1999: 315), the complementizer –leyko in (7b) can be contracted into –lye when the matrix verb is ha-. However, whether the
matrix verb is \textit{ha} or not, the conjunctive marker \textit{–lyeko} in (7a) cannot be phonologically reduced into \textit{–lye}.

Furthermore, since two adjacent predicates share one or two arguments in serial verb constructions (SVCs) or auxiliary verb constructions (AVCs) in Korean, one might think that the control sentences involving the \textit{kilo-}, \textit{lyeko-} and \textit{koca}-complements can be classified with one of those constructions (cf. T. Chung (1993), H. Sohn (1999), S. Choi (2003), Zubizarreta and Oh (2007), Sohn and Ko (2010) for more information about serialization in Korean). As illustrated in (9) and (10), two predicates mediated by a particular marker are predicated of one or two arguments in the SVC and AVC (data adapted from H. Sohn (1999) and Sohn and Ko (2010)).

(9) \textbf{SERIAL VERB CONSTRUCTION (SVC)}
\begin{itemize}
  \item a. John-i tolo-lul ki-e-ka-ss-ta.  
    \textit{John- NOM street- ACC crawl- LINK-go-PAST-DECL}  
    ‘John crawled away on the street.’
  \item b. Bill-i sensayngnim-aphey kkwulh-e-anc-ass-ta. 
    \textit{Bill- NOM teacher-in.front.of kneel- LINK-sit-PAST-DECL}  
    ‘Bill kneeled down in front of the teacher.’
  \item c. Mary-ka koki-lul kwu-e-mek-ess-ta. 
    \textit{Mary- NOM meat- ACC broil- LINK-eat-PAST-DECL}  
    ‘Mary broiled and ate the meat.’
\end{itemize}

(10) \textbf{AUXILIARY VERB CONSTRUCTION (AVC)}
\begin{itemize}
  \item a. nac-i kil-e-ci-n-ta. 
    \textit{daytime- NOM be.long- LINK-get.to.be-PRES-DECL}  
    ‘The daytime is getting longer.’
    \textit{John-TOP money- ACC all spend- LINK-throw.away-PAST-DECL}  
    ‘John used up all the money.’
  \item c. Mary-nun ku tuleysu-lul ip-e-po-ass-ta. 
    \textit{Mary-TOP the dress- ACC wear- LINK-try-PAST-DECL}  
    ‘Mary tried to put the dress on.’
\end{itemize}
In the SVC, the infix –e- connects two independent lexical verbs, making them serialized. Likewise, in the AVC, the same form of infix also combines two predicates. But unlike the SVC, the second predicate does not retain its original meaning and simply modifies the meaning of the first predicate. Since a second predicate appears to take a first predicate as part of a complement clause in the SVC and AVC, we are tempted to treat these two constructions in the same way as the control constructions in (6). However, a close examination reveals that this view is not tenable. First, unlike the control constructions, each predicate can never be independently modified by an adverb in the SVC or AVC, as illustrated in (11).

(11) a. John-\text{TOP} \ [e_{i}^{*j} \ \text{wyulep} \ \text{yehayng-ul} \ \text{alttulhakey} \ \text{ka-lyeko}] \ \text{kkomkkomhakey} \ \text{kyeyhoykhy-s-ss-ta.} \ (\text{cf. (6b)})
   \begin{tabular}{llll}
   John- & Europe & trip-ACC & frugally & go-COMP \\
   \text{kkomkkomhakey} & & & \\
   meticulously & plan-PAST-DECL & & \\
   \end{tabular}
   \\
   ‘John meticulously planned to take a trip to Europe frugally.’

b. *Bill-\text{NOM} \ \text{sensayngnim-aphey} \ \text{chenchenhi} \ \text{kkwulh-e} \ \text{kongsonhi} \ \text{anc-ass-ta.} \ (\text{cf. (9b)})
   \begin{tabular}{llll}
   Bill- & teacher-in.front.of & slowly & kneel-LINK & politely \\
   \text{anc-ass-ta.} & & & sit-PAST-DECL & \\
   \end{tabular}
   \\
   Lit. ‘Bill slowly kneeled and politely sat in front of the teacher.’

c. *Mary-\text{TOP} \ \text{ku} \ \text{tuleysu-lul} \ \text{kuphakey*} \ \text{ip-e} \ \text{taychwung} \ \text{po-ass-ta.} \ (\text{cf. (10c)})
   \begin{tabular}{llll}
   Mary- & that & urgently & wear-LINK & carelessly \\
   \text{po-ass-ta.} & & & try-PAST-DECL & \\
   \end{tabular}
   \\
   Lit. ‘Mary carelessly tried to urgently put the dress on.’

If two predicates appear in different clauses, it is expected that different adverbs can modify each predicate independently. Thus, the grammaticality of (11a) lends support to our view that the lyeko-clause is a complement clause selected by a control predicate. By contrast, two predicates

2 Note that H. Sohn (1999) treats both constructions as a subset of complement constructions. However, as will be discussed shortly, there are some facts showing that serial verb and auxiliary verb constructions are different from other complement constructions including kilo-, lyeko- and koca-control constructions.
that appear in adjacent positions in (11b) and (11c) fail to be modified by independent adverbs. The ungrammaticality of the latter two sentences can be taken as the evidence that the first predicate is not part of a complement clause in the SVC and AVC.

Second, whether two predicates can be independently negated is another test for keeping the control sentences apart from the SVC and AVC. Note that there are two types of negation in Korean: one of them is short form negation where a negative marker an is attached to a predicate like a prefix, while another one is long form negation where –ci anh is attached to the right-hand side of a predicate. In control sentences involving the lyeko-clause like (12a), the two predicates can be independently negated by the short form or long form negation. In the SVC and AVC, by contrast, it is impossible for the two adjacent predicates to be negated independently, as shown in (12b) and (12c).

(12)  

a. John-i-un [e, wyulep yehayng-ul an ka-lyeko]  
    kyeyhoykha-ci-anh-ass-ta.  
    John-TOP Europe trip-ACC NEG go-COMP  
    plan-NML-NEG-PAST-DECL  
    ‘John did not plan not to take a trip to Europe.’  

    Bill-NOM teacher-in.front.of NEG kneel-LINK sit-NML-NEG-PAST-DECL  
    Lit. ‘Bill did not kneel and did not sit in front of the teacher.’  

    Mary-TOP that dress-ACC NEG wear-LINK look-NML-NEG-PAST-DECL  
    Lit. ‘Mary did not try not to put the dress on.’  

Third, it is well known that in Korean, scrambling can move around syntactically independent units, such as NPs, VPs and CPs, etc. Then, if a syntactic unit containing a first predicate is a complement clause, we should be able to displace it by scrambling. However, it turns out that while the lyeko-clause can be scrambled across the subject, as in (13a), the first predicate in the SVC and AVC cannot, as in (13b) and (13c), respectively.
Given the three facts discussed so far, we are led to conclude that despite their apparent similarity, control constructions involving the lyeko-clause should be dealt with differently than the SVC and AVC. That is, while the lyeko-clause is a complement clause, the first verb in the sequence of $V_1$-$V_2$ in the SCV and AVC is not part of a complement clause but of a serialized or compound verb. Although detailed discussion will not be provided, the same conclusion about the status of the lyeko-clause holds for the status of the kilo- and koca-clauses.

Notice, however, that although the kilo-, lyeko- and koca-clauses have been shown to be complement clauses that are selected by control predicates, I have not yet discussed why these clauses should be treated as infinitival clauses. As mentioned in Section 3.1, unlike agreement languages like English, whether or not inflectional agreement is available on the stem of a verb cannot be a reliable criterion for finiteness in Korean since the language is known to lack agreement at the IP level. For this reason, I argue that the finiteness of clauses in Korean can rather be determined by the following three criteria:

3 I was informed by Paul Portner (p.c.) that similar diagnostics have been independently suggested for Chinese by Tzong-Hong Jonah Lin. See Lin (2011) for detailed discussion.

- First, whether tense or aspectual markers are available in a clause;
- Second, whether clause-typing markers, such as the declarative marker –$ta$ or the interrogative marker –$nya$, are available;
• Third, whether a clause can be produced independently as a root clause (cf. J. Huang (1989) for the idea on the definition of finiteness in terms of the presence of auxiliary elements in Chinese).

In particular, a clause can be defined as an infinitival clause if it is negatively specified for these criteria. Let me compare a kilo-clause with a finite clause to see how they behave with respect to the three criteria for finiteness. On the one hand, a clause that can be characterized as a finite clause without controversy allows for the past tense marker on the stem of a predicate, as shown in the complement clause in (14a). In addition, the finite complement clause must end in the declarative marker –ta, since it belongs to the declarative type (cf. C. Suh (1996), H. Sohn (1999), M. Pak (2006) for discussion of major clause types and clause-typing markers in Korean). Note that the omission of the declarative marker renders the sentence ungrammatical, as in (14b) (where the symbol ‘∅’ indicates the omission of a morpheme). Furthermore, the complement clause can stand freely without being embedded, as shown in (14c).

(14)  

John-TOP  Bill-DAT Mary-NOM college-at linguistics-ACC  
study-PAST-DECL-COMP  say-PAST-DECL  
‘John told Bill that Mary studied linguistics at college.’

b. *John-un Bill-eykey [Mary-ka tayhak-eyse enehak-ul  
John-TOP  Bill-DAT Mary-NOM college-at linguistics-ACC  
kongpwuhay-ss-∅-ko]  malhay-ss-ta.  
study-PAST-∅-COMP  say-PAST-DECL  
Intended: ‘John told Bill that Mary studied linguistics at college.’

c. Mary-ka tayhak-eyse enehak-ul  kongpwuhay-ss-ta.  
Mary-nom college-at linguistics-ACC study-PAST-DECL  
‘Mary studied linguistics at college.’
On the other hand, within a kilo-clause, the future tense marker –l is prohibited to occur, as in (15a). In addition, no clause-typing markers, such as the declarative marker –ta, can intervene in between the verb and the complementizer –kilo, as in (15b). Finally, just as in infinitival clauses in English, the kilo-clause must be embedded under a control verb, as in (15c).4

   John-TOP Mary-DAT leave-FUT-COMP promise-PAST-DECL
   Intended: ‘John promised Mary to leave.’

   John-TOP Mary-DAT leave-DECL-COMP promise-PAST-DECL
   Intended: ‘John promised Mary to leave.’

   c. *[ei ttena-kilo]
      leave-COMP

It seems that there are some cases where a kilo-clause can be uttered without being embedded. However, in those cases, the kilo-clause can be analyzed as being equivalent to a fragment answer to a question from another interlocutor in a given conversation, as in (16).

(16) A: John-[un] Mary-[eykey] [ei mwues-ul ha-kilo] yaksokhay-ss-nya?
    John-TOP Mary-DAT what-ACC do-COMP promise-PAST-DECL
    ‘What did John promise Mary to do?’

    B: ttena-kilo
    leave-COMP
    Lit. ‘To leave.’

---

4 On a lexical account, it is assumed that whether a certain type of verbal suffixes including complementizers can be attached to verbal stems is encoded in the lexicon, not in the syntax proper (Sells (1995), Yu-Cho and Sells (1995), among others). According to this account, the fact that the tense marker or clause-typing marker fails to co-occur with the complementizer in the infinitival control constructions under discussion does not directly suggest anything about the presence or absence of particular functional projections like TP. Although this line of thinking could be an alternative account of the ungrammaticality of (15a,b), I will continue to maintain the syntactic approach since there does not seem to be any direct evidence which contradicts the syntax-based approach.
In short, we have seen that *kilo*-clauses do not behave in the same way as finite clauses with respect to three criteria for distinguishing between finite and infinitival clauses, which include the availability of tense (or aspect) markers, the compatibility with clause-typing markers and the possibility of free standing as a root clause. That is, unlike the finite clauses, the *kilo*-clause allows for neither tense markers nor clause-typing markers and fails to be uttered in root contexts. I consider these differences as the evidence supporting the current view that the *kilo*-clause is an infinitival clause. Given the similarity of three complementizers in their distribution, the same conclusion can be readily extended to *lyeko*- and *koca*-clauses. In other words, although the relevant examples will not be provided here, no tense (or aspectual) markers nor clause-typing markers can co-occur with the complementizers –*lyeko* and –*koca*. In addition, both clauses headed by –*lyeko* and –*koca* cannot stand unembedded. These results point to the conclusion that clauses headed by these two complementizers should be defined as infinitival.

To summarize this subsection, it has been demonstrated that *kilo*-, *lyeko*- and *koca*-clauses, which trigger subject control when selected by a limited number of predicates (listed in (5)), are complement clauses, and that they can be characterized as infinitival clauses in terms of the three suggested criteria.

### 3.2.2 Infinitival Complements in Object Control

Just as the three markers, -*kilo*, -*lyeko* and -*koca*, the marker –*tolok* has been categorized as a complementizer in the literature (N. Kim (1978, 1984), D. Yang (1985), C. Suh (1996), H. Sohn (1999), among others). Given below is a list of verbs that select for this complementizer (from N. Kim (1978) with slight changes):

---

5 As in the case of the three markers, -*kilo*, -*koca* and –*lyeko*, the marker –*tolok* cannot co-occur with the (indirect) quotative complementizer –*ko*, as shown in (i). This distributional restriction strongly suggests
Notice, however, that unlike the object control sentence in (18), repeated from (2d), there are other environments involving \textit{tolok}-clauses, which seem to have little to do with object control. The data in (19) illustrate some of those cases ((a) adapted from M. Son (2009); (c) and (d) drawn from C. Suh (1996: 1279)).

\begin{itemize}
    \item[(a)] John-un [mok-i swuy-\textit{tolok}] solichi-ess-ta.  
        John-\text{TOP} throat-NOM be.hoarse-\textit{TOLOK} shout-PAST-DECL
    \end{itemize}

    ‘John screamed himself hoarse.’ (Lit. ‘John screamed so that his throat got hoarse.’)

\begin{itemize}
    \item[(b)] sicang-un [si-ka penchangha-\textit{tolok}] yelsimhi nolyekhay-ss-ta.  
        mayor-\text{TOP} city-NOM be.prosperous-\textit{TOLOK} hard try-PAST-DECL
    \end{itemize}

    ‘The mayor tried hard so that the city became prosperous.’

\begin{itemize}
    \item[(c)] [ai-tul-i mek-\textit{tolok}] emeni-ka panchan-ul cwunphiy-ss-ta.  
        child-PL-NOM eat-\textit{TOLOK} mother-NOM side.dish-ACC prepare-PAST-DECL
    \end{itemize}

    ‘The mother prepared the side dish in order for the children to have it.’

\begin{itemize}
    \item[(d)] ku haksayng-un [pam-i say-\textit{tolok}] keli-lul ssoa.tani-ess-ta.  
        the student-\text{TOP} night-NOM break-\textit{TOLOK} street-ACC hang,.about-PAST-DECL
    \end{itemize}

    ‘The student hung about the street in order for it to be broken.’

\begin{itemize}
    \item[(i)] John-un Mary-j-lul [e*\text{ij} ttena-\textit{tolok}(*-ko)] seltukhay-ss-ta.  
        John-\text{TOP} Mary-\text{ACC} leave-\text{COMP}-\text{TOLOK}-\text{COMP} persuade-PAST-DECL
    \end{itemize}

    ‘John persuaded Mary to leave.’

\textit{tolok} is a complementizer rather than a clause-typing marker or mood marker.

\textit{tolok} is a complementizer rather than a clause-typing marker or mood marker.

\begin{itemize}
    \item[(i)] John-un Mary-j-lul [e*\text{ij} ttena(*-ko)-\textit{tolok}(*-ko)] seltukhay-ss-ta.  
        John-\text{TOP} Mary-\text{ACC} leave-\text{COMP}-\text{TOLOK}-\text{COMP} persuade-PAST-DECL
    \end{itemize}

    ‘John persuaded Mary to leave.’

\begin{itemize}
    \item[(i)] John screamed with pro, (= his throat) until it was hoarse.
    \end{itemize}

\textit{tolok} is a complementizer rather than a clause-typing marker or mood marker.

\textit{tolok} is a complementizer rather than a clause-typing marker or mood marker.

\begin{itemize}
    \item[(i)] John-un Mary-j-lul [e*\text{ij} ttena(*-ko)-\textit{tolok}(*-ko)] seltukhay-ss-ta.  
        John-\text{TOP} Mary-\text{ACC} leave-\text{COMP}-\text{TOLOK}-\text{COMP} persuade-PAST-DECL
    \end{itemize}

    ‘John persuaded Mary to leave.’
‘The student hung about in the street until dawn broke.’

In no examples in (19a-d) do we observe a referential dependency between an object in the matrix and a subject in the lower clause, which is normally found in the object control constructions involving the \textit{tolok}-complement like (18).

Then, the question that arises is how we can define the marker \textit{–tolok} in (19a-c); more specifically, it should be figured out whether it is a complementizer or something else. I argue that the marker \textit{–tolok} can function as either a complementizer or adjunct subordinator, just as \textit{-kilo}, \textit{-lyeko} and \textit{–koca} have a dual function as a complementizer and conjunctive suffix.\textsuperscript{7} Furthermore, I argue that the status of the marker is determined by the syntactic environment in which it occurs. Specifically, I suggest, just as in J. Park (2010a)), that \textit{–tolok} in (18) is a complementizer that embeds a control complement, while the marker in (19a-d) is a subordinator that heads an adjunct clause. We have seen in the previous section that the VP topicalization test can be employed as a diagnostic for distinguishing between arguments and adjuncts; in particular, adjunct clauses, but not complement clauses, can be stranded when VP topicalization applies. If my claim is correct, it is predicted that a topicalized VP can strand the \textit{tolok}-clause in (19), while it cannot in (18). As shown in (20) below, this prediction seems to be borne out.

\begin{itemize}
  \item \textit{\textsuperscript{7}} What H. Sohn (1999) defines as a ‘conjunctive suffix’ does not seem to be different from what I define as an ‘adjunct subordinator’ in their function—that is, both markers subordinate unselected adjunct clauses. So although two different terms are used in this subsection, I assume that they basically appear in the same position, namely, the head of CP, which can also be occupied by the quotative complementizer \textit{–ko}.
\end{itemize}
Note that a number of studies have discussed the constructions in (19a-d) in the literature, and they seem to provide direct or indirect support for my claim that the *tolok*-clauses in these data are not a complement but an adjunct. Notably, the sentence in (19a) has been treated as one of the major resultative constructions in Korean (Kim and Maling (1997), J. Kim (1999), Wechsler and Noh (2001), Chang and Kim (2001), Lee and Lee (2003), S. Hong (2005), Shim and den Dikken (2007), M. Son (2009), among others). Among those studies, several works have made the claim that *tolok*-clauses in the resultative constructions of the type in (19a) which are called ‘subject-oriented resultatives’ or ‘unselected resultatives’ should be analyzed as an adjunct (S. Hong (2005), Shim and den Dikken (2007), M. Son (2009)). In addition, as discussed in J. Park (2010a), the literature on Korean grammar has observed that the marker –*tolok*, which is roughly translated as ‘so that, to the extent that’, can serve as a subordinator of adjunct clauses that convey a variety of meanings such as degree of a resulting state, purpose and a temporal ending point, etc. (C. Suh (1996); cf. J. Kim (1999), Lee and Lee (2003) for diverse meanings of the subject-oriented resultative construction).

---

8 It should be pointed out that -*key*, rather than –*tolok*, is found in most of the data reported in these works. However, some of those works also observe that the marker –*key* can alternate with the marker –*tolok*, particularly, in the type of subject-oriented/unselected resultatives. So I also take –*tolok* to be identical to –*key* in their function in this type of resultatives.

9 Readers are referred to Shim and den Dikken (2007) for detailed discussion about diagnostics for the adjuncthood of *key*-clauses in resultative constructions in Korean.
Furthermore, –tolok can also be found in syntactic causative (a.k.a. periphrastic causative) constructions in Korean, where the matrix predicate is the verb ha ‘do’. Just as in the resultative constructions, the marker –tolok can alternate with the marker –key, as in (21).

(21) SYNTACTIC CAUSATIVE CONSTRUCTION

\[ \text{Johni-un Maryj-lul } [\text{e*ij ttena-key/tolok}] \text{ hay-ss-ta.} \]

‘John made Mary leave.’

Apparently, there seem to be a couple of common syntactic and semantic properties shared by the tolok-control construction like (18) and the syntactic causative construction like (21). On the semantic aspect, both the syntactic causative construction and the tolok-control construction give rise to a causative-like reading. In addition, the empty subject of a lower clause is referentially dependent on the indirect object in both constructions. Syntactically, both constructions involve a bi-clausal structure and each clause denotes an independent event or state. Furthermore, the controller in the tolok-control construction and the causee in the syntactic causative construction exhibit three-way Case alternations: that is, Mary-lul ‘Mary-ACC’ in (18) and (21) can alternate with Mary-ka ‘Mary-NOM’ or Mary-eykey ‘Mary-DAT’. Due to these similarities between the syntactic causative and tolok-control construction, some studies have maintained that the latter is in fact a subclass of the former (e.g., K. Kim (1995), Madigan (2008b)).

However, along the lines of J. Park (2010a), I argue that the two constructions should be kept apart from each other. There are three pieces of evidence in favor of this claim. First, the causative construction is different from the tolok-control construction with respect to the degree of a causal relation. On the one hand, the syntactic causative construction forces an entailment relation to hold between the entire causative sentence and the event (or state) in the complement clause, as shown in (22).
(22)  John\textsubscript{i}-un Mary\textsubscript{j}-lul \([e_{ij} \text{ ttena-key/tolok}]\) hayssta. (= (21))
John-\textsc{TOP} Mary-\textsc{ACC} leave-\textsc{COMP/COMP} did

\textquoteleft John made Mary leave.\textquoteright

a. َدَعا لوْنَةُ نَهْيَتْنَا ِتْنَا ِسْتَتْنَا.
\text{therefore she-\textsc{TOP} leave-PAST-DECL}

\textquoteleft Therefore, she (Mary) left.\textquoteright

b. َدَعا لوْنَةُ نَهْيَتْنَا ِتْنَا ِسْتَتْنَا.
\text{but she-\textsc{TOP} leave-\textsc{COMP} NEG-PAST-DECL}

\textquoteleft But she (Mary) didn\textquoteleft t leave.\textquoteright

That is, in the case of the syntactic causative construction, the truth of the entire sentence entails that the event denoted by the \textit{tolok}-clause has occurred. Therefore, (22a) is OK as a continuation of (21), while (22b) cannot be felicitous as a continuation of the same sentence. On the other hand, such an entailment relation does not necessarily hold between two events in the \textit{tolok}-control construction, as in (23). In other words, either (23a) or (23b) can be felicitous as a continuation of (18).

(23)  John\textsubscript{i}-un Mary\textsubscript{j}-lul \([e_{ij} \text{ ttena-tolok}]\) seltukhayssta. (= (18))
John-\textsc{TOP} Mary-\textsc{ACC} leave-\textsc{COMP} persuaded

\textquoteleft John persuaded Mary to leave.\textquoteright

a. َدَعا لوْنَةُ نَهْيَتْنَا ِتْنَا ِسْتَتْنَا.
\text{therefore she-\textsc{TOP} leave-PAST-DECL}

\textquoteleft Therefore, she (Mary) left.\textquoteright

b. َدَعا لوْنَةُ نَهْيَتْنَا ِتْنَا ِسْتَتْنَا.
\text{but she-\textsc{TOP} leave-NML NEG-PAST-DECL}

\textquoteleft But she (Mary) didn\textquoteleft t leave.\textquoteright

Second, although they appear to have bi-clausal structures, the two constructions do not pattern alike with respect to the availability of scrambling of a complement clause. Specifically, the \textit{tolok}-complement can be scrambled across the controller as illustrated in (24a). On the other
hand, the complement in the syntactic causative sentence fails to be scrambled across the causee, as shown in (24b).

(24)  a. Tolok-CONTROL CONSTRUCTION
      John\textsubscript{i}-un [e\textsubscript{i,j} ttena-tolok\textsubscript{k}] Mary\textsubscript{j}-lul \( t_k \) seltukhayssta.
      John-TOP leave-COMP Mary-ACC persuaded
      Lit. ‘John [to leave]\textsubscript{k} persuaded Mary \( t_k \).’

      b. SYNTACTIC CAUSATIVE CONSTRUCTION
      *John\textsubscript{i}-un [e \textsubscript{j ttena-key/tolok\textsubscript{k}] Mary\textsubscript{j}- lul \( t_k \) hayssta.
      John-TOP leave-COMP/COMP Mary- ACC did
      Lit. ‘John leave\textsubscript{k} made Mary \( t_k \).’

Furthermore, the matrix predicate in the tolok-control construction can be modified by an adverb, as in (25a), while the matrix verb cannot in the syntactic causative sentence, as in (25b).

(25)  a. Tolok-CONTROL CONSTRUCTION
      John\textsubscript{i}-un Mary\textsubscript{j}-lul [e\textsubscript{i,j} ttena-tolok\textsubscript{k}] kanglyekhakey seltukhayssta.
      John-TOP Mary-ACC leave-COMP strongly persuaded
      ‘John strongly persuaded Mary to leave.’

      b. SYNTACTIC CAUSATIVE CONSTRUCTION
      *John\textsubscript{i}-un Mary\textsubscript{j}- lul [e\textsubscript{j ttena-key/tolok\textsubscript{k}] kanglyekhakey hayssta.
      John-TOP Mary- ACC leave-COMP/COMP strongly did
      Intended: ‘John strongly made Mary leave.’

These differences lead me to conclude that tolok-control constructions cannot be treated in the same way as syntactic causative constructions embedding a tolok/key-clause as a complement in Korean.

The last question which should be addressed in this subsection is what tells us that tolok-clauses are infinitival clauses. I have argued in 3.1.1 that due to the lack of agreement at the IP level, the distinction between finite and infinitival clauses cannot hinge on the availability of inflectional agreement on the stem of a verb in Korean. Instead, three criteria have been
proposed as novel ways to distinguish between finite and infinitival clauses: in brief, a clause can be defined as an infinitival one if it allows for no tense (or aspectual) markers nor clause-typing markers, as well as if it cannot be produced as a root clause. To see how the tolok-clause in the tolok-control sentence behaves with respect to these criteria, consider the examples in (26).

(26) a. *John$_{1}$-un Mary$_{j}$-lul [ej ttena-\~{\textit{tolok}}] seltukhay-ss-ta.  
    John-TOP Mary-ACC leave-FUT-COMP persuade-PAST-DECL  
    Intended: ‘John persuaded Mary to leave.’

b. *John$_{1}$-un Mary$_{j}$-lul [e*$_{ij}$ ttena-ta\textit{-tolok}] seltukhay-ss-ta.  
    John-TOP Mary-ACC leave-DECL-COMP persuade-PAST-DECL

c. *[e ttena\textit{-tolok}] leave-COMP

First, the future tense marker –\textit{l} is not allowed to occur on the predicate within the tolok-clause, as in (26a). Second, the declarative clause marker –\textit{ta} cannot occur inside the tolok-clause, as in (26b). Finally, the tolok-clause fails to be produced unless embedded, as shown in (26c). Note that just as in the case of kilo-, lyeko- and koca-clauses, the tolok-clause can sometimes be unembedded when it is used as a fragment answer. In short, the three suggested criteria strongly suggest that tolok-clauses in the tolok-control constructions are infinitival clauses.

To wrap up 3.2.2, it has been shown that subordinate clauses in tolok-control constructions like (18) are complements, which are distinguished from adjuncts found in resultative constructions as well as temporal or purpose clauses in Korean. In addition, I have also demonstrated that the tolok-clauses should be characterized as infinitival clauses due to their behavior with regard to three criteria for the distinction between finite and infinitival clauses suggested here.

10 Note that in limited situations like military settings, tolok-clauses can also be uttered as a root clause, for example, when a command is given. In this case, they usually convey imperative force, as well as a special intonation pattern that is not found in declarative clauses, should be accompanied.
3.2.3 Applying OC Diagnostics

In this subsection, I will show that the referential dependency exhibited by the null subject of four infinitival clauses headed by –kilo, -lyeko, -koca and –tolok is an instance of obligatory control, and thus, these four clauses are OC complements. To this end, the infinitival control data will be tested against diagnostics for distinguishing obligatory control (OC) from non-obligatory control (NOC). In Chapter 2, I have discussed six diagnostics, which are listed in Table 1 below.

<table>
<thead>
<tr>
<th>DIAGNOSTICS</th>
<th>OC</th>
<th>NOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No Arbitrary Control</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>B. No Long-distance Control</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>C. C-command Requirement</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>D. No Strict Reading under VP Ellipsis</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>E. No Invariant Reading with Only-NP</td>
<td>✓</td>
<td>x</td>
</tr>
<tr>
<td>F. No De Re Reading</td>
<td>✓</td>
<td>x</td>
</tr>
</tbody>
</table>

3.2.3.1 No Arbitrary Control with OC (Property A)

Since the OC subject, as opposed to the NOC subject, must have an explicit controller in the same sentence, an arbitrary control reading is prohibited. The sentence embedding a kilo-clause does not allow for the arbitrary reading, and the null subject should be construed as the matrix subject, as shown in (27a). This suggests that the kilo-clause is an OC complement, which triggers the obligatory subject control interpretation. The same conclusion holds for the sentences subordinating a lyeko- and koca-clause, as in (27b) and (27c), respectively.

    John-TOP leave-COMP decide-PAST-DECL
    ‘John decided to leave.’
b. John-un $[e_{ij}^{arb} \text{sihem-ey}] \text{hapkyekha-lyeko]$ nolyekhay-ss-ta.
John-TOP exam-at pass-COMP try-PAST-DECL
‘John tried to pass the test.’

c. John-un $[e_{ij}^{arb} \text{yehayng-ul}] \text{ka-koca]$ kyeyhoykhay-ss-ta.
John-TOP trip-ACC go-COMP plan-PAST-DECL
‘Johni planned $[e_{ij}^{arb}$ to take a trip].’

Likewise, the sentence where a tolok-clause is embedded under the control predicate seltukha- does not permit an arbitrary reading. In particular, the empty subject must be coreferential with the indirect object rather than the subject, as shown in (28). The obligatory referential dependency between the null subject and the matrix object confirms that the tolok-clause is an OC complement as well.

(28) John-un Mary-j-lul $[e_{ij}^{arb} \text{ttena-tolok}]$ seltukhay-ss-ta.
John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
‘Johni persuaded Maryj $[e_{ij}^{arb}$ to leave].’

3.2.3.2 No LD Antecedent with OC (Property B)
The OC subject must have a local antecedent in the next higher clause, while the NOC subject does not have to. The null subject in the sentence embedding a kilo-clause does not allow for a long-distance (LD) controller, as shown in (29a). Instead, it must be interpreted as coreferential with the subject in the immediately higher clause—that is, the null subject cannot be construed as Bill but as John. The null subject in a lyeko-complement in (29b) and the null subject in a koca-complement in (29c) pattern alike with respect to the same constraint. Thus, the ban on LD antecedents reveals that kilo-, lyeko- and koca-clauses are OC complements.

(29) a. Bill-i-un $[\text{John-i}^{i} \text{ttena-kilo}]$ kyelsimhay-ss-ta-ko.
Bill-TOP John-NOM leave-COMP decide-PAST-DECL-COMP
sayngkakhay-ss-ta.
think-PAST-DECL
‘Billi thought that Johnj decided [e*i/*j/*k to leave].’

b. Billi-un [Johnj-i [e*i/*j/*k sihem-ey hapkyekha-lyoko]
Bill-TOP John-NOM exam-at pass-COMP
try-PAST-DECL-COMP think-PAST-DECL
‘Billi thought that Johnj tried [e*i/*j/*k to pass the test].’

c. Billi-un [Johnj-i [e*i /*j/*k yehayng-ul ka-koca]
Bill-TOP John-NOM trip-ACC go-COMP
plan-PAST-DECL-COMP think-PAST-DECL
‘Billi thought that Johnj planned [e*i/*j/*k to take a trip].’

In the case of a sentence where a *tolok*-clause is multiply embedded, no other readings than the one on which the null subject inside the *tolok*-complement refers to the direct object in the next higher clause are available, as shown in (30). The fact that the null subject in the *tolok*-clause satisfies the ban on LD antecedents also shows that this clause is not an NOC but OC complement.

(30) Billi-un [Johnj-i Maryk-lul [e*i/*j/*k ttena-tolok]
Bill-TOP John-NOM Mary-ACC leave-COMP
persuade-PAST-DECL-COMP think-PAST-DECL
‘Billi thought that Johnj persuaded Maryk [e*i/*j/*k to leave].’

3.2.3.3 No Non-C-command Controller with OC (Property C)

We have just seen that the OC subject must have a local controller in the next higher clause. However, if a potential local controller fails to c-command the OC subject, the sentence becomes ungrammatical. Note that as shown in (31a), the null subject within a *kilo*-complement is prohibited from being controlled by a local antecedent that fails to c-command it. Likewise, the subject in a *lyeko-* and *koca*-clause must be controlled by a c-commanding controller, as in (31b).
and (31c), respectively. The fact that the null subject in the kilo-, lyeko- and koca-clause must be c-commanded by its antecedent can be added as an additional piece of evidence showing that these clauses are OC complements.

(31) a. John$_i$-uy tongsayng$_j$-un [e$_{i,j}$ ttena-kilo] kyelsimhay-ss-ta.  \\
    John-GEN brother-TOP leave-COMP decide-PAST-DECL  \\
    ‘John$_i$’s brother$_j$ decided [e$_{i,j}$ to leave].’

b. John$_i$-uy tongsayng$_j$-un [e$_{i,j}$ sihem-ey hapkyekha-lyeko]  \\
    John-GEN brother-TOP exam-at pass-COMP  \\
    nolyekhay-ss-ta.  \\
    try-PAST-DECL  \\
    ‘John$_i$’s brother$_j$ tried [e$_{i,j}$ to pass the test].’

c. John$_i$-uy tongsayng$_j$-un [e$_{i,j}$ yehayng-ul ka-koca] kyeyhoykhay-ss-ta.  \\
    John-GEN brother-TOP trip-ACC go-COMP plan-PAST-DECL  \\
    ‘John$_i$’s brother$_j$ planned [e$_{i,j}$ to take a trip].’

It seems that the null subject in a tolok-clause behaves in the same way with respect to the c-command condition. That is, as shown in (32), the null subject inside the tolok-clause cannot be controlled by Mary but by Mary’s brother, since only the latter has the ability to c-command into the tolok-clause. This suggests that the null subject in the tolok-clause is an OC subject, and the clause is thus an OC complement.

(32) John$_i$-un Mary$_j$-uy tongsayng$_k$-ul [e$_{i,j,k}$ ttena-tolok]  \\
    John-TOP Mary-GEN brother-ACC leave-COMP  \\
    seltukhay-ss-ta.  \\
    persuade-PAST-DECL  \\
    ‘John$_i$ persuaded Mary$_j$’s brother$_k$ [e$_{i,j,k}$ to leave].’

3.2.3.4 No Strict Identity with OC (Property D)

According to the fourth diagnostic, the OC subject resists a strict reading in the context of VP ellipsis, while the NOC subject can have either a strict or sloppy reading in the same context. As
shown in (33b), when an elided VP is reconstructed at LF in the second conjunct, the null subject inside a *kilo*-clause can refer to the subject in the same conjunct. By contrast, a strict reading on which the null subject is construed as the subject in the first conjunct is ruled out, as in (33a).

(33)  
\[
\begin{array}{c}
\text{Bill}_i \text{-un} \ [e_i \text{ ttena-} \text{kilo}] \text{ kyelsimhay-ss-ko, John-to} \text{ kulayssta.} \\
\text{Bill-TOP} \text{ leave-COMP} \text{ decide-PAST-CONJ} \text{ John-also} \text{ did.so}
\end{array}
\]

a. Strict: *Bill$_i$ decided [e$_i$ to leave], and John$_j$ decided [e$_j$ to leave].

b. Sloppy: Bill$_i$ decided [e$_i$ to leave], and John$_j$ decided [e$_j$ to leave].

Likewise, the same interpretive pattern is observed in the cases of VP ellipsis where a *lyeko*- and *koca*-clause are deleted in the second conjunct, along with the matrix predicate dominating each clause. That is, when the elided VP is recovered, the null subject inside the *lyeko*- and *koca*-clause allows only for a sloppy reading, as provided in (34) and (35), respectively.

(34)  
\[
\begin{array}{c}
\text{Bill}_i \text{-un} \ [e_i \text{ sihem-ey} \text{ hapkyekha-} \text{lyeko}] \text{ nolyekhay-ss-ko,} \\
\text{Bill-TOP} \text{ exam-at} \text{ pass-COMP} \text{ try-PAST-CONJ}
\end{array}
\]

\[
\begin{array}{c}
\text{John-to} \text{ kulayssta.} \\
\text{John-also} \text{ did.so}
\end{array}
\]

da. Strict: *Bill$_i$ tried [e$_i$ to pass the test], and John$_j$ tried [e$_j$ to pass the test].’

db. Sloppy: ‘Bill$_i$ tried [e$_i$ to pass the test], and John$_j$ tried [e$_j$ to pass the test].’

(35)  
\[
\begin{array}{c}
\text{Bill}_i \text{-un} \ [e_i \text{ yehayng-ul} \text{ ka-} \text{koca}] \text{ kyeyhoykhay-ss-ko,} \\
\text{Bill-TOP} \text{ trip-ACC} \text{ go-COMP} \text{ plan-PAST-CONJ}
\end{array}
\]

\[
\begin{array}{c}
\text{John$_i$-to} \text{ kulayssta.} \\
\text{John-also} \text{ did.so}
\end{array}
\]

da. Strict: *Bill$_i$ planned [e$_i$ to take a trip], and John$_j$ planned [e$_j$ to take a trip].’

db. Sloppy: ‘Bill$_i$ planned [e$_i$ to take a trip], and John$_j$ planned [e$_j$ to take a trip].’

Turning to the case of a *tolok*-clause, it can be easily seen that the null subject in the *tolok*-complement also resists a strict reading, as in (36a). When the elided VP containing the *tolok*-clause is reconstructed, what can be obtained is only a sloppy reading where the null subject inside the *tolok*-clause refers to the indirect object in the second conjunct, as in (36b).
Bill-i\[un\] Jenifer-j\[lul\] [e\[j\] ttena-tolok\] seltukhay-ss-ko,
Bill-TOP Mary-ACC leave-COMP persuade-PAST-CONJ
John-to Mary-lul kulayssta.
John-also Mary-ACC did.so

a. Strict: *‘Bill\[i\] persuaded Jenifer\[j\] \[ej\] to leave], and John\[k\] persuaded Mary\[n\] \[en\] to leave].’
b. Sloppy: ‘Bill\[i\] persuaded Jenifer\[j\] \[ej\] to leave], and John\[k\] persuaded Mary\[n\] \[en\] to leave].’

3.2.3.5 No Invariant Reading with OC (Property E)

Recall that when a controller is focalized by only, the referent of the OC subject varies depending on the value of the operator. This interpretive pattern of the OC subject is in contrast to that of the NOC subject, in that the referent of the NOC subject either co-varies with the value of the operator or is independently determined by the contextual information. As mentioned in Chapter 2, the former type of reading is called a ‘co-variant reading’ while the latter type is labeled an ‘invariant reading’ (cf. Higginbotham (1980, 1992)). As shown in (37), if a potential controller is focus-marked by the delimiter –man, which is equivalent to only in English, the null subject inside a kilo-complement does not allow for an invariant reading but for a covariant reading.

(37) John-man \[e\ ttena-kilo\] kyelsimhay-ss-ta.
John-only leave-COMP decide-PAST-DECL

a. Covariant: ‘For no x, x different from John, x decided that x would leave.’
b. Invariant: *‘For no x, x different from John, x decided that John would leave.’

As expected, when the delimiter man ‘only’ is attached to a controller in the matrix clause, the null subject inside a lyeko- and koca-clause behaves in the same way as the null subject inside the kilo-clause. That is, as shown in (38), the null subject in both the lyeko-complement permits
a covariant reading rather than an invariant reading. The same conclusion also holds for the case where the *koca*-clause is complemented, but the relevant example will not be provided here.

(38)  
\[
\text{John-man} \quad [\text{e sihem-ey hapkyekha-lyeko}] \quad \text{nolyekhay-ss-ta} \\
\text{John-only} \quad \text{exam-at} \quad \text{pass-COMP} \quad \text{try-PAST-DECL}
\]
\begin{itemize}
  \item a. Covariant: ‘For no x, x different from John, x tried that x would pass the test.’
  \item b. Invariant: *‘For no x, x different from John, x tried that John would pass the test.’
\end{itemize}

The same behavior of the null subject in the *kilo*-*, *lyeko*- and *koca*-complement is also found with the null subject in a *tolok*-complement. That is, as shown in (39), in the environment where a potential controller is focused by the delimiter –*man* ‘only’, the referent of the null subject in the *tolok*-clause should co-vary with the value of the operator. Again, this fact suggests that the *tolok*-clause can be characterized as an OC complement.

(39)  
\[
\text{John-un} \quad \text{Mary-man} \quad [\text{e ttena-tolok}] \quad \text{seltukhay-ss-ta.}
\]
\begin{itemize}
  \item a. Covariant: ‘For no x, x different from Mary, John persuaded x that x would leave.’
  \item b. Invariant: *‘For no x, x different from Mary, John persuaded x that Mary would leave.’
\end{itemize}

3.2.3.6 No De Re Belief with OC (Property F)

The OC subject requires a *de se* belief in order for the sentence to be true, while the NOC subject and pronoun allow for a non-*de se* belief. Among the four infinitival control sentences under discussion, I will choose one sentence involving a *kilo*-complement, and apply this diagnostic to see whether it is an OC complement. Instead of making use of the scenario discussed in Chapter 2, I will construct another scenario by slightly modifying the one suggested by Fujii (2006: 47) for testing Japanese OC sentences.

(40)  
John is a manager of the sales department at a small company. One day, the owner of the company gave him a document where the business achievements of each employee’s
were recorded. She then told him to pick one employee whose achievement is the worst, since the company had to lay off at least one person due to the economic recess. The owner left out employees’ personal information including their names, but instead, each employee was given a number, so that John would make an objective decision without any bias. After going through the document, John finally chose one employee based on the record of business achievement, and let the owner know the number of that employee. The owner found that it was John himself that had been chosen to be fired. Thus, as planned, she fired John on the following day.

Given this scenario, if one utters the sentence in (41) below, it cannot be judged felicitous. Notice that as described in (40), John was not aware of the identity since he had no access to personal information of the employees (except for their business achievements) on the document, and he did not even know that he picked himself until notified by the owner—simply put, John did not have a de se belief. Therefore, the fact that the scenario renders sentence (41) infelicitous suggests that the kilo-complement is an OC complement whose subject resists a non-de se reading.

(41) #John\textsubscript{i}-un [e\textsubscript{i} hoysa-lul \textit{tena-kilo}] kyelsimhay-ss-ta.
John-<i>-<b>TOP</b> company-<b>ACC</b> leave-<b>COMP</b> decide-<b>PAST</b>-<b>DECL</b>
‘John decided to leave the company.’

Given the parallel behavior of the other three infinitival complements at issue, the conclusion based on the kilo-complement can be extended to the lyeko-, koca- and tolok-complement.

3.2.3.7 Summary: kilo-, lyeko, koca-, and tolok-complements are OC Complements
In 3.2.3.1 through 3.2.3.6, I have run six standard diagnostics for OC against the Korean control data involving kilo-, lyeko-, koca- and tolok-complement clauses. The results of the tests have demonstrated that the referential dependency between the null subject of these clauses and the subject or indirect object in the matrix clause is an instance of OC. This conclusion in turn lends
support to our initial observation in Section 3.1 that clauses headed by the four complementizers are OC complements in Korean.

3.3 Previous Approaches

3.3.1 Control into kilo-, lyeko- and koca-Complements

There are a number of studies in the literature on control, which have discussed -kilo and –lyeko, but I have encountered only a few that deal with the marker –koca. This subsection will survey three major studies which touch on the former two complementizers. I will show that although all of them acknowledge that there is an obligatory referential dependency between the null subject of the clauses headed by –kilo and –lyeko and one of the matrix arguments, their accounts for how the dependency can be derived differ from one another.

3.3.1.1 S. Kim (1994)

S. Kim (1994) aims to get rid of control theory and agreement-based pro-drop theory, providing an alternative account for the distribution and interpretation of null pronouns in Korean (and other languages). In particular, she claims that null pronouns in both finite and infinitival clauses in Korean are pro, and that PRO is superfluous in the grammar (cf. Borer (1989)).\(^{11}\) In order to

\(^{11}\) S. Kim’s (1994) claim is similar to Borer’s (1989) concerning this issue. As discussed in Chapter 2, Borer also discusses Korean control constructions involving lyeko-clauses. Observing that the null subject in the lyeko-complement can alternate with an overt subject, she argues that it is not PRO but pro. In addition, assuming that AGR in control complements in Korean without agreement is anaphoric, Borer suggests that it must undergo I-to-C raising to get the reference from the matrix subject. After that, the anaphoric AGR can license pro by transitivity, so that the latter satisfies the Identification Requirement for null subjects defined in (i). However, I have shown in that chapter that Borer’s analysis faces some problems. See Chapter 2 for detailed discussion.

(i) I-IDENTIFICATION REQUIREMENT (Borer (1989: 71))
All empty categories must be I-identified. In other words, they must be coindexed with an I-identifier.
capture the distribution and interpretation of null pronouns, which she treats as pro. S. Kim suggests that pro can be licensed under government by certain licensing heads, and that it picks its reference from a c-commanding NP or from discourse context, which is largely affected by semantic or pragmatic factors.

In order to support her claim that null pronouns are invariably pro even in control contexts, S. Kim discusses various language data from Modern Hebrew, Korean, Romanian and Saramaccan, where controlled subjects are overt and/or control complements are tensed clauses. The relevant Korean data which she argues allows for an overt controllee in place of PRO in an infinitival complement is provided in (42) (with slight changes to glosses).

     John-NOM in person Mary-ACC meet-COMP tried
     ‘John tried to meet Mary in person.’

     John-NOM self-NOM in person Mary-ACC meet-COMP tried
     ‘John himself tried to meet Mary in person.’

     John-NOM Bill-NOM in person Mary-ACC meet-COMP tried
     Intended: ‘John tried for Bill to meet Mary in person.’

S. Kim (1994: 83)

---

12 (ia) and (ib) illustrate the Romanian examples where the overt subject is available in a subjunctive complement, while (ii) corresponds to the Saramaccan data where the overt subject appears in a tensed complement. Recall also from our discussion in Chapter 2 that Modern Hebrew allows for controlled subjects in tensed complements, but I will not repeat the relevant data here.

(i) a. Ion l-a ajutat pe Dan_i [ša resolve (el_i) problema]
     Ion CLI-has helped ACC Dan SUBJ solves he the problem
     ‘Ion helped Dan to solve the problem.’

b. Ion încearca [ša resolve (el_i) problema]
     Ion tries SUBJ solves he the problem
     ‘Ion helped Dan to solve the problem.’

(ii) Samoi tei di pau [(ai) naki di sindeki]
     Samo take the stick he hit the snake
     ‘Samo hit the snake with the stick.’

S. Kim (1994: 84)
As discussed in Chapter 2 of this dissertation, PRO is an idiosyncratic null category the distribution of which is constrained by the PRO Theorem, which stipulates that it must be ungoverned (Chomsky (1981)). However, Chomsky’s standard PRO theory of control fails to make a correct prediction for data like (42b) above, where the anaphor caki ‘self’ occupies the position of a controlled subject. From this fact, she draws the conclusion that what has been taken to be PRO by most of the Government and Binding (GB) approaches to control should be identified as pro. In fact, this conclusion boils down to the claim that pronominal null subjects in both finite and infinitival clauses are pro.

Then, the question that can be immediately raised is how null pronominal subjects are licensed and how their reference is determined in both environments. In answering this question, S. Kim basically assumes with Rizzi (1986) that the licensing and recovery of pro (in both subject and object position) should be separated. Given this assumption, she suggests that pro can be licensed by a governing head, which varies from language to language—that is, finite/non-finite I₀ and V₀ can be licensors in Korean and Japanese permitting pro in object position, while only I₀ can be in other languages disallowing object drop. As for the way pro recovers its reference, she first points out that some of the previous unified approaches to control and pro-drop have their own problems. For example, J. Huang’s (1984) analysis, which proposes the Generalized Control Rule for both PRO and pro, fails to explain the availability of a null pronominal object in Korean, and Borer’s (1989) analysis, which appeals to raising of an anaphoric AGR to C₀ for the identification of a controlled pro, does not naturally work for the Korean control data like (42) due to the presence of the overt complementizer, without making a stipulation (see Chapter 2 of this dissertation for more information about Borer (1989) and J. Huang (1989), an updated version of J. Huang (1984)). For this reason, instead of following the
lines of J. Huang or Borer, she argues that the reference of pro in both subject and object position is recovered by the lexical semantics of matrix predicates or by pragmatic or semantic considerations. Specifically, she proposes the following mechanism by which pro determines its reference in discourse-prominent languages like Korean and Japanese.

(43) **The Recovery Procedure of pro** (S. Kim (1994: 100))

a. The interpretation of pro in control constructions is determined by lexical semantics.
b. When there is no lexically determined interpretation, pro is interpreted by picking up its reference either from a c-commanding NP or from a pragmatically salient NP. In this case, the fixing the referent of pro is largely determined by pragmatic and semantic factors.

As empirical motivation for her analysis of the interpretation of pro in control infinitival complements, S. Kim (1994) discusses Korean control cases where the lexical meaning of a control predicate or the mood of an embedded clause plays a crucial role in determining the reference of a null subject. First, based on C. Lee’s (1973) observation, she argues that whether an embedded subject, overt or null, is referentially linked to the matrix subject is determined by the lexical meaning of a control predicate. For example, in sentences like (44), the obligatory referential dependency between a null subject in the kilo-complement and the matrix subject is already encoded in the lexical entry of the verb kyelsimha- ‘decide, determine’ or hwuhoyha- ‘regret’.

(44)  

John-NOM self/he-NOM leave-COMP determined
‘John decided to leave.’

John-NOM self/he-NOM lie do-REL-NML-ACC regretted
‘John regretted having telling a lie.’

S. Kim (1994: 95)
In a similar vein, when the matrix verb is the utterance verb *malha- ‘say’ that does not predispose to a particular type of control, the mood of an embedded clause determines the reference of the null subject, as in (45a,b) (with some modifications on glosses).

   John-NOM Bill-DAT he-NOM first go-IMP-COMP said
   ‘John told Bill to go first.’

   John-NOM Bill-DAT he-NOM first go-will-DECL-COMP said
   ‘Johni told Billj that (heᵢᵢʲ) would go first.’    S. Kim (1994: 96)

Although her observation that the controller choice is correlated with the lexical meaning of a matrix verb or the mood of a lower clause is basically on the right track, there appear to be some problems for her analysis. First, there seems to be no way for her system to prohibit *pro from occurring in Exceptional Case Marking (ECM) environments. That is, unlike the standard GB approach, she assumes that I₀ in a finite or infinitival clause can govern and license a null pronominal element. Then, it is predicted that *pro in the ECM construction like (46) should be allowed, being construed as the c-commanding NP, John, by the recovery procedure in (43). However, this is not the case.

(46) *Johnᵢ believes [*proᵢ to be smart].
   Intended: ‘John believes himself to be smart.’

In fact, S. Kim assumes an additional requirement for *pro in sentence-oriented languages like English and Spanish, according to which the features of *pro in these languages should be recoverable from its syntactic context—for instance, by AGR on a finite I₀ in a rich agreement language (S. Kim (1994: 101)). With this assumption, she argues that it is possible to explain why *pro is allowed in a finite clause in rich agreement languages like Spanish, but not in meager
agreement languages like English. Nonetheless, this additional constraint does not help to rule out pro in an ECM infinitive in English. This is because, according to her system, pro may recover its reference from a c-commanding NP if it occurs in an environment where the control relation is not specified by lexical semantics or there is no AGR with which it can agree.\footnote{S. Kim (1994) provides the so-called Super-Equi data as an instance where the reference of pro is neither determined by lexical semantics nor by AGR with rich inflection. Instead, it gets its features from a c-commanding NP even across multiple clause boundaries, as in (i) below.}

Second, the recovery procedure in (43) seems to me to be a mere generalization rather than a real account. In other words, S. Kim argues that the lexical meaning of a control predicate is the top priority on the hierarchy of ways to determine the reference of a null pronoun, but she does not make it clear how the semantics works for finding the referent of a pro in a control infinitive. Specifically, it should be answered what semantic principle determines which argument in the matrix clause can be a controller of pro—for example, is it a responsibility relation in Farkas’s (1988) sense or a thematic hierarchy in Chierchia’s (1989) sense?\footnote{See Chapter 5 for more information about semantic approaches by Farkas (1988) and Chierchia (1989).} Unless the procedure in (43a) is elaborated in a formal way, it would be difficult to derive a wide range of control patterns including not only subject and object control but also split control, and in particular, to explain how the clause type of an embedded clause interacts with a matrix predicate in causing the three types of control in Korean control constructions of the kind in (45a) (cf. Ch 5 and Ch 6 for more discussion about these constructions labeled ‘jussive control’).

Third, as mentioned above, S. Kim assumes that a null pronominal subject or object must be governed by an appropriate head such as I\(^0\) or V\(^0\) in order to be licensed. However, recall from discussion in Chapter 2 that the notion of government is argued to be eliminated in the minimalist framework, since the grammatical properties that were formerly defined in terms of...
government, such as Case assignment and binding domain, are shown to be conceptually unnecessary (Chomsky (1995), Hornstein et al. (2005)). Therefore, it is unclear how her suggestion about the licensing condition for null pronouns can be reinterpreted within the minimalist framework.

3.3.1.2 Gamerschlag (2007)

Gamerschlag (2007) provides a comprehensive survey of obligatory control (OC) constructions that involve various kinds of complement clauses in Korean. He claims that in Korean, control effects are by and large caused by the semantic meaning of a control predicate, while they are structurally induced only in a handful of constructions.\(^\text{15}\) Given below is one of the few constructions where the control effects are assumed to be structurally induced.

\begin{align*}
\text{(47) a. } & \text{John-} \text{TOP } [\text{e}_i^{\ast j} \text{ i nonmwun-ul ilk-e }] \text{ po-ass-ta.} \\
& \text{John tried to read the paper.}
\end{align*}

\begin{align*}
\text{b. } & \text{Nai-} \text{TOP } [\text{e}_i^{\ast j} \text{ ttena-ko}] \text{ siph-ta.} \\
& \text{I wish to go.} \quad \text{Gamerschlag (2007: 93)}
\end{align*}

\(^{15}\) This view on control effects is somehow identical to the view maintained by S. Kim (1994). Note also that keeping in line with semantic approaches like Jackendoff (1972), Dowty (1985), Farkas (1988), Chierchia (1988) and Cormack and Smith (2004), etc., Gamerschlag (2007) advances a semantic account for OC effects in Korean, which are arguably induced by semantic factors. Specifically, he proposes the semantic condition for subject control interpretation in (i), but later suggests that this condition, along with the condition for object control interpretation (not provided here), can be incorporated into Farkas’s (1988) Principle of Controller Choice given in (ii). Refer to Chapter 5 for a full-length discussion about Farkas’s semantic analysis of control, as well as Gamerschlag’s analysis of control effects caused by the semantic meaning of a control predicate or the modal affixes inside an embedded clause.

\begin{align*}
\text{(i) CONDITION ON SEMANTIC SUBJECT CONTROL (Gamerschlag (2007: 98))}
& \text{A matrix verb exhibits semantic subject control iff its meaning involves that the event denoted by the embedded verb is brought about by the referent of the matrix subject.}
\end{align*}

\begin{align*}
\text{(ii) PRINCIPLE OF CONTROLLER CHOICE (Farkas (1988: 44))}
& \text{For RESP-inducing V’s, the controller of the infinitival complement is the argument linked to } i(V’m).
\end{align*}
Gamerschlag also argues that some control construction, which involves an infinitival clause headed by –lyeko, as in (48a) and (48b) (repeated from (2b) and (6a), respectively), can be grouped with those in (47) above.

    John-TOP exam-at pass-COMP try-PAST-DECL
    ‘John tried to pass the test.’
    John-TOP Europe trip-ACC go-COMP plan-PAST-DECL
    ‘John planned to take a trip.’

Notice, however, that the sentences in (47) cannot be identified with the OC sentences in (48); rather, they can be best characterized as an auxiliary verb construction (AVC). As discussed in 3.2.1, there are some pieces of evidence which support the conclusion that the marker –lyeko in (48) heads a complement selected by a control predicate, while the marker –e- in (47) is an infix that connects two predicates, making them serialized or compounded. Let me quickly rehearse the relevant arguments here. First, in the case of the OC construction, both the matrix predicate and embedded predicate can be independently modified by different adverbs, as in (49a). By contrast, in the case of AVC, it is impossible for both predicates to be modified by different adverbs, as in (49b) (where I label the infix –e- ‘LINK(ER)’ instead of ‘INF’).

(49) a. Johni-un [e_i wyulep yehayng-ul alttulhakey ka-lyeko]
    John-TOP Europe trip-ACC frugally go-COMP
    kkomkkomhakey kyeyhoykhay-ss-ta. (cf. (48b))
    meticulously plan-PAST-DECL
    ‘John meticulously planned to take a trip to Europe frugally.’
b. *Johni-un [e_i i nonmwun-ul sincwunghakey ilk-e]
    John-TOP this paper-ACC carefully read-LINK
    chenchenhi po-ass-ta. (cf. (47a))
    slowly try-PAST-DECL
Lit. ‘John slowly tried to read the paper carefully.’

Secondly, although the two predicates in the OC construction in (48b) can both be negated, as in (50a), those in the AVC in (47a) cannot, as in (50b).

\[(50)\]
a. \[\text{John-un } [\text{e}_i \text{ wyulep yehayng-ul an ka-lyeko}] \]
\hspace{1cm} \text{plan-NML-NEG-PAST-DECL}
\hspace{1cm} ‘John did not plan not to take a trip to Europe.’

\[\text{John-top} \text{ Europe} \text{ trip-ACC} \text{ NEG} \text{ go-COMP} \text{ kyeyhoykha-ci-anh-ass-ta. (cf. (48b))} \]

\[\text{b. *John-un } [\text{e}_i \text{ i nonmwun-ul an ilk-e}] \]
\hspace{1cm} \text{try-NML-NEG-PAST-DECL}
\hspace{1cm} ‘John did not try not to read the paper.’

\[\text{John-top} \text{ this paper-ACC} \text{ NEG} \text{ read-LINK} \text{ po-ci-anh-ass-ta. (cf. (47a))} \]

Third, the application of scrambling also reveals that the infinitival OC construction should be distinguished from the AVC. That is, the complement clause headed by the complementizer – *lyeko* in (48b) can be displaced across the subject by scrambling, as in (51a). On the other hand, if what appears to be equivalent to a complement clause in (47a) is scrambled across the subject, the resulting sentence is judged ungrammatical, as in (51b).

\[(51)\]
a. \[\text{[e}_i \text{ wyulep yehayng-ul ka-lyeko]}_k \text{ John-un } t_k \text{ kyeyhoykhay-ss-ta.} \]
\hspace{1cm} \text{Europe} \text{ trip-ACC} \text{ go-COMP} \text{ John-top} \text{ plan-PAST-DECL}

\[\text{This paper-ACC read-LINK John-top try-PAST-DECL} \]

\[\text{b. *[e}_i \text{ i nonmwun-ul ilk-e]}_k \text{ John-un } t_k \text{ po-ss-ta.} \]

The three tests, which make use of adverb modification, negation and scrambling, have clearly demonstrated that unlike the OC sentences involving the *lyeko*-clause in (48), the sentences in (47) cannot be defined as an instance of OC but rather as an instance of AVC. Therefore, it would be inappropriate to treat the first verb in ‘\text{V}_1\text{-LINK} \text{-V}_2’ as a predicate of a
complement clause selected by the second verb and to postulate an empty subject which the first
verb is predicated of. So it can be concluded that although Gamerschlag’s view taking lyeko-
clauses as an infinitival complement is in line with my proposal, they must receive an account
different from the one for the the AVC construction in (47).

3.3.1.3 Madigan (2008b): -lyeko as a Control Creating Marker

Madigan (2008b) aims to provide a unified analysis of various control constructions in Korean,
particularly, those with certain markers signaling the type of control. Specifically, he examines
the constructions in (52a-c) where a certain class of markers he calls ‘Control Creating Markers’
(CCMs) contributes to the type of control: that is, the complementizer –lyeko, the volitional
modal marker –keyss and the promissive marker –ma force subject control, while the imperative
marker –la and exhortative marker –ca trigger object control and split control, respectively (data
and glosses in (52a,b) taken from Madigan (2008b)).

(52) a. Hwun-

   Hwun-NOM book-ACC read-INT-COMP try-PAST-DECL
   ‘Hwun tried to read the book.’
   nolyekhay-ss-ta.

b. Jwuhi-

   Jwuhi-NOM Hwun-DAT book-ACC read-VOL-DECL-COMP
   promise-PAST-DECL
   yaksokhay-ss-ta.
   ‘Jwuhi promised Hwun to read the book.’
   Madigan (2008b: 222)

c. John-

   John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL
   ‘John promised Mary to go to school.’
   ka-

   ka-

   myenglyenghay-ss-ta
   ma-

   la-

   order-PAST-DECL

d. John-

   John-TOP Mary-DAT school-to go-IMP-COMP order-PAST-DECL
   ‘John ordered Mary to go to school.’
   [PRO_{ij} hakkyo-ey]
   hamkkey ka-

   go-EXH-COMP
Before discussing how Madigan (2008b) derives the subject control in (52a) where the *lyeko*-clause is complemented, let me briefly sketch the core ideas of Pak (2004) and Pak et al. (2006), since they are adopted as a theoretical background for his analysis of not only (52a) but also (52b-e). To begin with, Pak (2004) makes the interesting observation that three clause types of promissive, imperative and exhortative clauses, which she labels ‘jussive clauses,’ pattern together in Korean, in that each clause imposes a restriction on subjects in person. That is, the subject of a promissive clause is always 1\textsuperscript{st} person, that of an imperative is 2\textsuperscript{nd} person, and that of an exhortative is 1\textsuperscript{st} and 2\textsuperscript{nd} person (or, 1\textsuperscript{st} person plural inclusive of the speaker). This kind of subject restrictions in person is hardly found in the other major clause types such as declaratives and interrogatives in Korean. Furthermore, she points out that each clause accompanies a distinctive clause-typing marker which correlates with the person feature of a subject: for example, the promissive clause whose subject is 1\textsuperscript{st} person ends in –*ma*, as in (53a), the imperative clause whose subject is 2\textsuperscript{nd} person ends in –*la*, as in (53b), and the exhortative clause whose subject is both 1\textsuperscript{st} and 2\textsuperscript{nd} person ends in –*ca*, as in (53c).

\[(53)\]

| a. [NP e] hakkyo-ey school-to ka-\textbf{ma}. \quad \text{(PROMISSIVE)} |
|\[\text{I promise to go to school.}\] |
| b. [NP e] hakkyo-ey school-to ka-\textbf{la}. \quad \text{(IMPERATIVE)} |
|\[\text{(You) go to school!}\] |
| b. [NP e] hakkyo-ey school-to ka-\textbf{ca}. \quad \text{(EXHORTATIVE)} |

\[\text{Note that Chapters 5 and 6 provide an extensive discussion of jussive clauses and control constructions embedding jussive complements in Korean.}\]
‘Let us go to school.’

In order to capture the person restrictions on jussive subjects, as well as the correlation between the type of clause marker and the person feature of a subject in jussives, Pak (2004) and Pak et al. (2006) propose that there is a functional projection (i.e., Addressee/SpeakerP in the former and Jussive Phrase in the latter) which exists only in the left periphery in jussive clauses; and that the head of the functional projection enters a derivation with the relevant person feature, while the subject inherits a person feature from the functional head by an agreement relation. On their analysis, the different clause-typing markers, –ma, -la and –ca, in jussive clauses are results of morphological spell-out of the person feature(s) on Addressee/Speaker head. In addition, adopting the well-received assumption that person features are presuppositional (e.g., Cooper (1979), Heim and Kratzer (1998)), Pak et al. suggest that 1st and 2nd person features can be regarded as the speaker and addressee of the context, respectively. Semantically, building on Portner (2004), Pak et al. argue that the three jussive clauses denote properties, and the sentential force of each subtype is to update the To-do List of the relevant subject. For example, the sentential force of an imperative is to update the addressee’s To-do List by adding a property denoted by the imperative clause.

Turning to Madigan (2008b), he observes that when three subtypes of jussive clause are embedded under control predicates, a different type of control can be induced, as shown in (52c-e) above. To capture how these types of control can arise in those sentences, drawing on Pak (2004) and Pak et al. (2006), he argues that Addressee/SpeakerP is projected in the left periphery in jussive clauses, and the head of the projection establishes an Agree relation in person with the subject, thereby the person feature of the former being transmitted to the latter. The way a null subject in jussive clauses acquires a relevant person feature is illustrated in (54).
However, since the jussive clauses in (52c-e) appear in embedded contexts, Pak’s (2004) and Pak et al.’s (2006) analysis of jussive clauses in root contexts cannot be directly extended. For this reason, redefining 1st and 2nd person features as [+SPEAKER] and [+ADDRESSEE], respectively, Madigan suggests that control predicates are context-shifters (cf. Schlenker (2003)). Thus, the [+SPEAKER] and [+ADDRESSEE] feature borne by PRO as a result of Agree can be interpreted relative to the reported speech act. Put it differently, PRO with [+SPEAKER] is construed as the matrix subject, while PRO with [+ADDRESSEE] as the matrix object, etc.\(^\text{17}\)

Extending this analysis, Madigan attempts to derive the subject control interpretation to the first two sentences in (52a,b). Postponing detailed discussion of his analysis of (52b) until Chapter 6, let us consider here how he analyzes the control pattern in (52a) where the lyeko-clause is subordinated.\(^\text{18}\) As illustrated in (55), unlike the current view, he splits up –lyeko into –lye and –ko rather than treating it as a single morpheme and takes –lye as a mood marker generated under the head of Mood Phrase (MP), which is absent in jussive clauses, as shown in

\(^{17}\) In fact, Pak et al. (2007, 2008) and Zanuttini et al. (2011) also observe that when jussive clauses are embedded under the verb of utterance *malha-* ‘say’, a null subject in the embedded clause is referentially connected to the matrix subject and/or the indirect object, depending on the type of the embedded clause. In order to derive the interpretive patterns in those data, they also appeal to the notion of shiftability of person features. See Chapter 6 for the relevant data and discussion.

\(^{18}\) Refer to Chapter 6 for more discussion of Madigan’s (2008b) analysis of Korean control constructions.
In addition, he assumes that the head of MP bears the [+INTENTIVE] feature in the context of (52a).

(55) Derivation for –lye (in (52a))

According to him, since the [+INTENTIVE] feature does not participate in Agree, PRO ends up with the [+SPEAKER] feature only, which gives rise to the subject control interpretation. However, he assumes that PF can still see both [+SPEAKER] and [+INTENTIVE] after \( M^0 \) undergoes head movement to Addressee/Speaker\(^0 \). To be more specific, Madigan’s proposal distinguishes (52a) embedding the lyeko-clause from (52c) embedding the promissive clause as follows. That is, the Addressee/Speaker\(^0 \) can acquire not only [+SPEAKER] but also [+INTENTIVE] in (52a) by the time the Spell-Out rule applies. On the other hand, the Addressee/Speaker\(^0 \) obtains only the [+SPEAKER] feature in (52c). Accordingly, the features on the Addressee/Speaker\(^0 \) in (52a) are spelled-out as –lye, while the feature on the same head in (52c) is spelled-out as –ma.

Although his analysis seems appealing in that it opens up the possibility of having a uniform account for the diverse OC constructions in (52a-e), there are a couple of issues that undermine his analysis of lye(ka)-clauses. First, treating the marker –lye as a mood marker is not compatible with the standard view on the function of the Mood Phrase (e.g., Whitman (1989), Ahn and Yoon (1989) and Cinque (1999), among others). That is, according to the traditional
view, the Mood Phrase is the locus where information about sentential mood such as declaratives or interrogatives is encoded. But whether a clause is a declarative or interrogative does not necessarily entail that the subject of the clause is intentive or volitional, etc. Second, the proposed structure in (55) for (52a) seems to fail to predict the distribution of clauses involving the marker –lye. On his analysis, the structure for (52b) where the embedded clause contains the volitional modal marker –keyss is almost identical with the structure for (52a), except that the Mood⁰ bears [+VOLITIONAL] rather than [+INTENTIVE] in the former. Then, it is expected that the clause involving the marker –lye can be uttered as a root clause, just as can the clause with –keyss. However, contrary to this prediction, the former clause, as opposed to the latter, fails to be produced as a root clause, as shown in (56). It is worthwhile to note that, as shown in (53a) above, the clause involving the promissive marker –ma behaves similarly to the clause with –keyss with regard to this property.

(56)  a. *chayk-ul ilk-ulye-ko (cf. (52a))
      book-ACC read-INT-COMP
   b. Na-nun chayk-ul ilk-keyss-ta. (cf. (52b))
      I-TOP book-ACC read-VOL-DECL
       ‘I will read the book.’

Third, Madigan’s claim that PRO in the lyeko-clause also inherits [+SPEAKER] from Addressee/Speaker⁰ as a result of Agree does not seem to be easily extended to the data like (57), repeated from (6b). That is, it seems unclear to me whether it would make sense to assume that the matrix verb kyeyhoyha- ‘plan’ is a context-shifter, which makes PRO with [+SPEAKER] interpreted relative to the reported speech act.

      John-TOP Europe trip-ACC go-COMP plan-PAST-DECL
‘John planned to take a trip to Europe.’

Fourth, the nature of the features such as [+INTENTIVE] or [+VOLITIONAL] should be clarified; in other words, are these features (morpho-)syntactic or semantic? One might think that these features are (morpho-)syntactic, since these features, along with the [+SPEAKER] feature, are assumed to be morphologically realized as either –lye or -keyss at PF. Then, it is mysterious why there is no pronominal element across languages, which bears the [+INTENTIVE] or [+VOLITIONAL] feature. Madigan acknowledges that these features are different from such features as [+SPEAKER] or [+ADDRESSEE], but does not explicitly discuss the nature of these features.

To sum up, Madigan’s (2008b) treatment of –lye in the uniform way with other markers –keyss and –ma turns out to have a couple of empirical problems. This also suggests that there does not seem to be a good reason to split the marker –lyeko into –lye and –ko. Thus, I will continue to deal with it as a single morpheme (cf. H. Sohn (1999)).

3.3.2 Control into tolok-Infinitival Complements

As discussed in J. Park (2010a), there are roughly two different views on constructions subordinating tolok-clauses in Korean. The first view treats them as an instance of obligatory control (OC) constructions, while another one is to view them as other constructions than OC. In particular, some researchers identify the tolok-constructions with syntactic causative (a.k.a. periphrastic causative) constructions (e.g., K. Kim (1995), Madigan (2008b)). As discussed in 3.2.2, one could take the tolok-constructions to be an instance of resultative construction due to their apparent similarities, but this subsection will not repeat this line of analysis and problems for it. On the other hand, the first view can be divided into two with respect to how the OC
dependency can be derived—in particular, whether it is syntactically derived or semantically derived. One group of researchers consider the tolok-clauses as OC complements, which allow for not only forward control but also backward control (e.g., Monahan (2003), Kwon and Polinsky (2006); cf. D. Yang (1984, 1985)). In particular, they suggest that the OC dependency can be driven by A-movement of the controller followed by copy deletion. By contrast, another group of researchers suggest that the OC dependency can be semantically derived; in particular, they suggest that the OC interpretation is encoded in ‘meaning postulates’ (e.g., Cormack and Smith (2004), H. Choe (2006)). This subsection discusses analyses taking tolok-clauses to be causative constructions, as well as syntactic and semantic approaches to tolok-constructions as OC constructions.

3.3.2.1 K. Kim (1995), Madigan (2008b): Tolok-constructions are Causative Constructions

K. Kim (1995) and Madigan (2008b) independently argue that tolok-constructions should be characterized as causative constructions rather than obligatory control (OC) constructions. Let me discuss a number of empirical facts they present as supporting evidence for their claim. Although some of their arguments overlap, there are also arguments that they present independently. First, syntactic (or periphrastic) causative constructions can employ the same complementizer as tolok-control constructions (K. Kim (1995), Madigan (2008b)). Note that the syntactic causative construction in Korean is basically formed by adding –key-ha, which consists of a causative complementizer and the light verb ha- ‘do.’ However, the marker –key can sometimes be replaced with the marker –tolok, as in (58).

19 As reviewed in Chapter 2, D. Yang (1984, 1985) treats tolok-constructions as an instance of OC construction in Korean, but he does not discuss the so-called ‘backward control’ case where the controller appears in the tolok-complement, not in the matrix clause.
Secondly, it is argued that a causative-like reading is available in both the syntactic causative construction and *tolok*-control construction (K. Kim (1995), Madigan (2008b)). According to them, there is a causal relation between the matrix event (or causing event) and the embedded event in both (58) and (59). More specifically, the matrix subject (called the causer) makes the matrix object (called the causee) bring about the event described by the lower clause.

Third, Madigan (2008b) observes that just like the indirect object in the *tolok*-control construction, the causee argument exhibits three-way case alternations without causing a significant change in meaning, as shown below. That is, both the causee argument in the syntactic causative construction and the indirect object in the *tolok*-control construction can be marked with not only accusative or dative Case but also nominative Case.

\[
(60)\quad \begin{align*}
\text{a. SYNTACTIC CAUSATIVE CONSTRUCTION} \\
\text{John-un} & \quad \text{ye.tongsayng-i/ul/eykey} \quad \text{wul-} & \text{key/tolok} \quad \text{hay-ss-ta.} \\
\text{John-TOP} & \quad \text{sister-NOM/ACC/DAT} \quad \text{cry-COMP} \quad \text{do-PAST-DECL} \\
& \quad \text{‘John made his sister cry.’}
\end{align*}
\]

\[
\begin{align*}
\text{b. TOLOK-CONTROL CONSTRUCTION} \\
\text{John-un} & \quad \text{Mary-ka/lul/eykey} \quad \text{ttena-} & \text{tolok} \quad \text{seltukhay-ss-ta.} \\
\text{John-TOP} & \quad \text{Mary-NOM/ACC/DAT} \quad \text{leave-COMP} \quad \text{persuade-PAST-DECL} \\
& \quad \text{‘John persuaded Mary to leave.’}
\end{align*}
\]
Fourth, K. Kim (1995) argues that the syntactic causative is very close to the tolok-control construction with respect to the categorial status of the lower clauses. According to him, the embedded clauses in both the causative and tolok-control construction are not complements but unselected adjuncts, and the adjuncthood of both clauses comes from the fact that the addition of an argument is allowed, as in (61) and (62).

(61) **Syntactic Causative Construction**

John-i  Mary-i-eykey [e_i  ku  il-ul  ha]-**tolok**

John-NOM Mary-DAT the work-ACC do-COMP

[mwuetinka]-lul  hay-ess-ta.

something-ACC  do-PAST-DECL

‘John did something to Mary so that (she) will do the work.’


(62) **Tolok-control Construction**

a. sensanyngnim-i  haksayng-i-eykey [e_i  ku  il-ul  ha]-**tolok**

teacher-NOM  student-DAT the work-ACC do-COMP

cisihay-ss-ta.

instruct-PAST-DECL

‘The teacher instructed the student (her) doing the work.’

b. sensanyngnim-i  haksayng-i-eykey [e_i  ku  il-ul  ha]-**tolok**

teacher-NOM  student-DAT the work-ACC do-COMP

kulen  cisi-lul  hay-ess-ta.

such  instruction-ACC  do-PAST-DECL

‘The teacher gave such an instruction to the student so that (he) will do the work.’


That is, if the embedded clauses in both the syntactic causative construction and the OC construction are complements, it is predicted that no extra argument can be added, as the maximum valency of the causative verb ha- ‘do’ and the object control predicate cisiha- ‘instruct’ is at most three. However, unlike this prediction, both constructions allow an additional argument to occur in the matrix clause: in the syntactic causative construction in (61),
the addition of *mwuetinka-lul* ‘something-ACC’ in the matrix clause does not make the sentence ungrammatical; likewise, the *tolok*-control sentence in (62a) remains grammatical even if *kulen cisi-lul* ‘such instruction-ACC’ is added in the matrix clause.

However, as discussed in 3.2.2, the similarities between the two constructions are just apparent, and a close examination into them reveals that they cannot be treated in an identical way. I will rehearse the arguments against the uniform treatment of the causative construction and the *tolok*-control construction here. First, the degree of a causal relation between the causing event (i.e., the matrix event) and the embedded event does not seem to be identical in the two constructions. On the one hand, in the syntactic causative construction, the truth of the entire sentence entails that the embedded event has taken place. This is confirmed by the fact that (63a) can be a continuation of sentence (58), while (63b) cannot.

```
(63) John-un ye.tongsayng-ul wul-key/tolok hay-ss-ta. (= (58))
    John-TOP sister-ACC cry-COMP/COMP do-PAST-DECL
    ‘John made his sister cry.’
    a. √kulayse kunye-nun wul-ess-ta.
       therefore she-TOP cry-PAST-DECL
       ‘Therefore, she cried.’
    b. #kulena kunye-nun wul-ci anh-ass-ta.
       but she-TOP cry-COMP NEG-PAST-DECL
       ‘But she didn’t cry.’
```

On the other hand, the same degree of causal relation does not always hold between the events in the *tolok*-control construction. That is, the truth of sentence (59) does not necessarily entail that the event denoted by the embedded clause has taken place. Therefore, either (64a) or (64b) can be felicitous as a continuation of (59).

```
(64) John-un Mary-lul ttena-tolok seltukhay-ss-ta. (= (59))
    John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
```
Second, the application of scrambling to the lower clause also demonstrates that the two constructions are different. On the one hand, the *tolok*-clause in the *tolok*-control construction can be freely scrambled across the subject, as in (65b). On the other hand, scrambling of the lower clause is prohibited in the causative construction, as in (65a).

(65)  

a. **Syntactic Causative Construction**

\[
\text{John} \text{-un} \ [e_{ij} \ \text{wul-} \text{key/tolok}]_{k} \ \text{ye.tongsayng-ul} \ \text{tk} \ \text{hayssta.}
\]

Lit. ‘John cry\text{\_k made Mary }t_{k}.’

b. **Tolok-control Construction**

\[
\text{John} \text{-un} \ [e_{ij} \ \text{tena-} \text{tolok}]_{k} \ \text{Mary}_{j-lul} \ \text{tk} \ \text{seltu khayssta.}
\]

John-TOP leave-COMP Mary-ACC persuaded

Lit. ‘John [to leave] \text{\_k persuaded Mary }t_{k}.’

This contrast clearly shows that the differences between the two constructions are not limited to semantics, but they also have different syntactic properties. It should also be pointed out that the failure of scrambling of the lower clause in the syntactic causative construction in (65a) is very suggestive with regard to the argument/adjuncthood of the *key*-clause. That is, if the *key*-clause in the syntactic causative is an unselected adjunct, as argued by K. Kim (1995), it is puzzling why the clause fails to be scrambled across the subject. Note that the possibility of (clause-internal) scrambling of a clausal constituent does not necessarily suggest that it is a complement, while the impossibility of scrambling can be regarded at least as a token that the clausal
constituent is not an adjunct clause. Thus, I argue that the *tolok*-clause in (61) is different from the *tolok*-clause found in the typical syntactic causative construction. That is, while the *tolok*-clause in the typical causative is a complement clause, the *tolok*-clause in (61) corresponds to an adjunct clause that is roughly equivalent to the ‘so that’ purpose clause.

Fourth, the two constructions do not pattern alike with respect to whether the lower clause is omissible. While the *tolok*-clause can be omitted in the control construction, as in (66b), the *key*-clause cannot in the syntactic causative construction, as in (66a). So it would make little sense to argue that the *key*-clause in the latter construction is an unselected adjunct clause. Then, one might think that the *tolok*-clause in the OC construction is an unselected adjunct, as argued by K. Kim. However, given that the predicate *seltukha*- ‘persuade’ can also serve as a transitive verb, the fact that the *tolok*-clause is omissible does not necessarily support K. Kim’s view.

    John-TOP sister-ACC do-PAST-DECL
    Lit. ‘John made his sister.’

    John-TOP Mary-ACC persuade-PAST-DECL
    ‘John persuaded Mary.’

Finally, although the matrix predicate in the *tolok*-control construction can be independently modified by a manner adverb, as in (67b), the higher verb in the syntactic causative construction cannot, as in (67a).

(67) a. **SYNTACTIC CAUSATIVE CONSTRUCTION**
    *John-un ye.tongsayng-lul wul-key/tolok kanglyekhakey hayssta.
    John-TOP sister-ACC leave-COMP/COMP strongly did
    Intended: ‘John strongly made Mary leave.’
To summarize, K. Kim (1995) and Madigan (2008b) argue that since *tolok*-control constructions and syntactic causative constructions in Korean exhibit similar properties, the former can be better classified with the latter. However, a number of diagnostics have revealed that the two constructions are in fact different constructions, which contradicts the unified view endorsed by K. Kim and Madigan. If my conclusion is correct, one question still awaits an appropriate answer, which has to do with the similarity between the *tolok*-clause in the syntactic causative construction in (61) and that in the OC construction in (62). As reviewed above, observing that an extra argument can be added in the matrix clause in both sentences, K. Kim argues that the *tolok*-clause in the syntactic causative and the OC construction can be best defined as an adjunct, drawing a broader conclusion that the two constructions should be treated in the uniform way. However, his analysis of the OC construction in (62b) seems to be misleading. He takes *kulen cisi* ‘such an instruction’ to be an extra argument added to the matrix verb *ha-* ‘do’, but they are in fact a compound verb, which is equivalent to the non-compound counterpart *cisiha-* ‘instruct’. Korean has countless compound verbs that are derived by combining the light verb *ha-* ‘do’ with Sino-Korean nouns such as *cosa* ‘examination’, *yenkwu* ‘research’, *kyelhon* ‘marriage’, *kamsa* ‘gratitude’, etc. (C. Suh (1996), H. Sohn (1999)). More importantly, those verbs can be broken up into two parts without tampering their original meaning and the nominal part is marked with accusative Case. There are a lot of examples that illustrate this property: e.g., *cosa-lul ha-ta* examination-ACC do-DECL (‘examine’); *yenkwu-lul ha-ta* research-ACC do-DECL (‘investigate, study’); *kyelhon-ul ha-ta* marriage-ACC do-DECL.
Furthermore, the separated noun can be modified by an adjective or demonstrative: e.g., *myenmilhan cosa-lul ha-ta* close examination-ACC do-DECL (‘closely examine’). Given these properties, it is not surprising that the verb *cisiha-* ‘instruct’ in (62a) alternates with *kulen cisi-lul ha-* such instruction-ACC do (‘give such an instruction’), as in (62b). Therefore, K. Kim’s conclusion that the *tolok*-clause in the OC construction is an adjunct does not seem to hold.

On the other hand, I agree with K. Kim (1995) in analyzing the *tolok*-clause in the syntactic causative in (61) as an adjunct clause. But what I do not agree on is that the entire sentence in (61) is a syntactic causative construction; instead, I suggest that the *tolok*-clause in this environment is an adjunct clause which denotes the resulting event of the matrix event. In 3.2.2, we have seen that there is more than a *tolok*-clause in Korean, which can be either an unselected adjunct or a selected complement, and that when it is an adjunct, it can denote various meanings such as a purpose, resulting state and temporal end point of the matrix event, etc (C. Suh (2006)). Indeed, K. Kim interprets the tense of the *tolok*-clause in (61) as future with respect to the utterance time, but another reading on which John did something to Mary until she did the work is also perfectly fine depending on the context. This in turn suggests that there is no strong reason to characterize the sentence in (61) as a syntactic causative sentence, unlike what K. Kim argues.

3.3.2.2 Monahan (2003): Backward Control Exists in Korean

Monahan (2003) argues that constructions involving *tolok*-clauses in Korean are obligatory control (OC) constructions, and that not only forward control but also backward control is available in the *tolok*-control constructions. As discussed in Chapter 2, the configuration in (68)
illustrates forward control, where the controller occupies a structurally higher position than the controllee. On the other hand, the configuration in (69) corresponds to backward (or inverse) control, where the controller is in a structurally lower position than the controllee.

(68) **FORWARD CONTROL**

a. CONTROLLER$_i$  V  [Δ$_i$ to VP]  (Subject Control)

b. DP  V  CONTROLLER$_i$  [Δ$_i$ to VP]  (Object Control)

(69) **BACKWARD CONTROL**

a. Δ$_i$  V  [CONTROLLER$_i$ to VP]  (Subject Control)

b. DP  V  Δ$_i$  [CONTROLLER$_i$ to VP]  (Object Control)

Recall from our discussion in the previous subsection that the indirect object in the *tolok*-control construction in Korean allows for three-way case alternations. That is, as shown in (70a-c), it can be not only accusative Case-marked but also nominative or dative Case-marked.

(70) a. Chelswu-nun  Yenghi-ka  kakey-ey  ka-tolok  seltukhay-ss-ta.
    Chelswu-TOP  Yenghi-NOM  store-LOC  go-COMP  persuade-PAST-DECL
    ‘Chelswu persuaded Yenghi to go to the store’

b. Chelswu-nun  Yenghi-lul  kakey-ey  ka-tolok  seltukhay-ss-ta.
    Chelswu-TOP  Yenghi-ACC  store-LOC  go-COMP  persuade-PAST-DECL

c. Chelswu-nun  Yenghi-eykey  kakey-ey  ka-tolok  seltukhay-ss-ta.
    Chelswu-TOP  Yenghi-DAT  store-LOC  go-COMP  persuade-PAST-DECL

Monahan attempts to offer a syntactic account for the nominative-accusative Case alternation exhibited by the indirect object *Yenghi*, suggesting that (70a) and (70b) can be structurally represented as in (71a) and (71b).
According to him, the Case form of the persuadee is correlated with its structural position—that is, the accusative Case-marked persuadee occupies a position in the matrix clause, while the nominative Case-marked persuadee resides in a position inside the tolok-clause. Polinsky and Potsdam (2002) claim that the data from Tsez in (72a) should be defined as ‘backward subject control,’ as represented in (72b). Extending this claim, Monahan argues that the Korean control data in (71a) can be regarded as an instance of ‘backward object control.’

(72) a. [kid-bā ziya b-išr-a] y-oq-si [CONTROL]
   girl.II-ERG cow.III.ABS III-feed-INF II-begin-PAST.EVID

According to Polinsky and Potsdam (2002), Tsez is a pro-drop, head-final and morphologically ergative language. In particular, transitive subjects are ergative case-marked, while direct object and intransitive subjects are absolutive case-marked. Normally, agreement with nonabsolutive arguments is prohibited in this language. However, they observe that there are two verbs –oqa ‘begin’ and –iča ‘continue’, which allow for an unusual agreement pattern, in that they can agree with an ergative argument. Taking –oqa for example, it is ambiguously used as a raising or control predicate. They argue that when the verb serves as a raising verb, as in (i), it assigns no external theta-role to the absolutive NP kid’ ‘girl.III.ABS’ in the matrix subject position, as shown in (ib). This absolutive NP exhibits the subject properties and agrees in noun class with the matrix verb, as expected. Likewise, the embedded verb agrees in noun class with the absolutive NP ziya ‘cow.III.ABS’ in the embedded object position. By contrast, when the verb –iča is a control predicate, it assigns an external thematic role. In addition, the ergative NP kid-bā ‘girl.II.ERG’ unexpectedly agrees in noun class with the matrix verb, although the embedded verb undergoes normal agreement in class with the absolutive NP ziya ‘cow.III.ABS’. See Polinsky and Potsdam (2002) for a full-fledged discussion.

(i) a. kid [ziya b-išr-a] y-oq-si [RAISING]
   girl.II.ABS cow.III.ABS III-feed-INF II-begin-PAST.EVID
   ‘The girl began to feed the cow.’

b. kid [ziya b-išr-a] y-oq-si (= (ia))
   girl.II.ABS cow.III.ABS III-feed-INF II-begin-PAST.EVID
   ‘The girl began to feed the cow.’

Polinsky and Potsdam (2002: 249)
‘The girl began to feed the cow.’

b. $\Delta_{\text{erg}}$ [kid-bāi ziya b-išr-a] y-oq-si

\begin{tabular}{ll}
\text{girl.II-ERG} & \text{cow.III.ABS} \\
\text{III-feed-INF} & \text{II-begin-PAST.EVID} \\
\end{tabular}

‘The girl began to feed the cow.’ Polinsky and Potsdam (2002: 246)

Notice, however, that if it is the case that while the nominative Case-marked controller resides in the \textit{tolok}-clause, the null controllee stays upstairs, it would be a challenge for the standard PRO theory of control (Chomsky (1981)) and any other approaches adopting PRO (e.g., Chomsky and Lasnik (1993)). This is because the null controllee, \textit{PRO}, is prohibited to occur in a governed or structural Case-marked position but the empty element in (71a) is evidently in a governed position. For this reason, just as Polinsky and Potsdam do, Monahan adopts Hornstein’s (1999) Movement Theory of Control to analyze the forward and backward control cases in (71). Before discussing Monahan’s analysis of the control patterns in (71), let me present his arguments for the claim that in (71a), the controller appears in the lower clause while the null controllee is in a position in the higher clause.

Potentially, there are two possible ways to analyze the case patterns exhibited by the persuadee \textit{Yenghi} in (71): one way is to argue that the persuadee DP always receives nominative Case or accusative Case in the same position, particularly, the matrix object position; another way is to maintain that the case form available for the persuadee DP varies depending on its structural position—that is, nominative Case in the embedded subject position while accusative Case in the matrix object position. Following Monahan, let us call the first approach the Object Analysis (OA) and the second view the Subject/Object Analysis (SOA).\footnote{Note that unless otherwise specified, the data provided in the remainder of this subsection is drawn from Monahan (2003) with minor modification.} As argued by Monahan, the SOA is superior to the OA in that it makes more correct predictions for certain empirical facts, as well as the availability of backward control in the \textit{tolok}-control constructions.
First, as shown in (73), in the mono-clausal context, the accusative Case-marked persuadee is allowed, while the nominative Case-marked persuadee is not.

(73) Chelswu-nun Yenghi-lul/*ka seltukhay-ss-ta.
    Chelswu-TOP Yenghi-ACC/NOM persuade-PAST-DECL
‘Chelswu persuaded Yenghi.’

The OA incorrectly predicts that the persuadee in the either form of Case should be available, since the DP is taken to invariably appear in the matrix object position. On the other hand, the SOA readily captures the unavailability of the nominative Case-marked persuadee, since its distribution is confined to the subject position of the embedded clause, which is absent in this sentence.

Second, as shown in (74), the accusative Case-marked persuadee DP can precede the temporal adverbial *nayil* ‘tomorrow’ modifying the matrix predicate, while the nominative Case-marked persuadee DP cannot, as in (74). According to the OA, since the nominative Case-marked persuadee DP is considered to occupy the matrix object position, it should also be able to precede the matrix adverbial, which is not the case. On the contrary, under the SOA, given that the nominative Case-marked persuadee is allowed only in the embedded subject position, there is no point in the derivation where the DP can precede the temporal adverb in the matrix clause.

    Chelswu-TOP Yenghi-ACC/NOM tomorrow store-Loc every day go-COMP persuade-FUT-DECL.INFORM
‘Chelswu will persuade Yenghi tomorrow to go to the store every day’

Third, the *tolok*-clause can be scrambled stranding the accusative Case-marked persuadee, while it cannot if the nominative Case-marked persuadee is stranded as in (75). According to the
OA, since both the nominative Case-marked and accusative Case-marked persuadee occupy the matrix object position, scrambling of the tolok-clause should be possible without pied-piping the persuadee regardless of its Case form. However, unlike this prediction, only the accusative Case-marked persuadee can be stranded when scrambling takes place.

(75)  
\[
\text{Chelswu-nun} \quad \text{kakey-ey ka-tolok} \quad k \quad \text{Yenghi-lul/*ka} \quad t_k \quad \text{seltukhay-ss-ta.}
\]

‘Chelswu persuaded Yengh to go to the store’

On the other hand, the SOA correctly explains why the tolok-clause cannot be scrambled if the persuadee DP is nominative Case-marked. That is, the persuadee DP in the nominative Case can only appear in the embedded subject position, scrambling of VP out of the lower CP is prohibited; given the assumption that the verb raises to the complementizer, if the VP were extracted stranding the nominative persuadee, the standard condition on movement, namely that only constituents can be a target of movement, would not be satisfied (cf. Radford (1988) for a general introduction of constituency tests, D. Chung (2009) for the same claim on the Raising-to-Object construction in Korean; see Chapter 4 more discussion of the ban on scrambling of part of the CP).

(76)  
\[
\text{Chelswu-nun} \quad [\text{XP kakey-ey ka-tolok}]_i \quad \text{Yenghi-ka} \quad t_i \quad \text{seltukhay-ss-ta.}
\]

‘Chelswu persuaded Yengh to go to the store’

In a nutshell, it has been shown that the SOA is superior to the OA. That is, only the former correctly captures the following empirical facts: first, the nominative Case-marked persuadee DP cannot appear in the mono-clausal context, as in (73); second, it cannot follow the
temporal adverb modifying the matrix verb, as in (74); and third, it cannot be stranded when the 
tolok-clause is scrambled, as in (75). Given this fact, Monahan draws the conclusion that the 
persuadee DP in the nominative Case in (70a) is a constituent of the embedded clause, while the 
persuadee DP in the accusative Case in (70b) is a constituent of the matrix clause.

If the nominative Case-marked persuadee DP stays put in the embedded clause, the 
empty category, referentially dependent on the persuadee DP, should appear in the matrix object 
position, as illustrated in (71a) above. Then, the question one can ask is what would be the 
evidence revealing the presence of the null controllee in the matrix clause. Monahan offers two 
pieces of evidence in favor of the presence of the null controllee, but I will discuss only one of 
them here. It has been observed that a head noun and a postnominal quantifier within the same 
clause must agree in Case in Korean, as in (77).

(77) Mary-ka haksayng-tul-ul motwu-lul/*ka sohwanhay-ss-ta.
Mary-NOM student-PL-ACC all-ACC/NOM call-PAST-DECL
‘Mary called all the students’ S. Cho (2000: 194)

Given this observation, he argues that the availability of the accusative Case-marked 
postnominal quantifier in the matrix clause suggests that there is a null category in the matrix 
clause, which the quantifier modifies. That is, as shown in (78a) below, the postnominal 
quantifier in the accusative Case can appear in the matrix clause, although the persuadee DP in 
the nominative Case appears in the embedded clause. If no empty category controlled by the 
nominative-marked persuadee exists in the matrix clause, it would be puzzling how the 
postnominal quantifier can be licensed in this sentence. Therefore, he suggests that an empty 
category is present in the matrix clause, as illustrated in (78b), and the category can license the
postnominal quantifier as it is referentially connected to the nominative Case-marked persuadee DP in the embedded clause.\(^{22}\)

\[(78)\]

\begin{align*}
\text{a. } & \quad \text{Chelswu-nun} \quad \texttt{[ai-tul-i kakey-ey ka-tolok]} \quad \texttt{motwu-lul} \\
& \quad \text{Chelswu-TOP} \quad \text{child-PL-NOM} \quad \text{store-LOC} \quad \text{go-COMP} \quad \text{all-ACC} \\
& \quad \text{persuade-PAST-DECL} \\
& \quad \text{'Chelswu persuaded all the children to go to the store'} \\
\text{b. } & \quad \text{Chelswu-nun} \quad \texttt{[ai-tul-i \_i kakey-ey ka-tolok]} \quad \Delta_i \quad \texttt{motwu}_{-\text{i-lul}} \\
& \quad \text{Chelswu-TOP} \quad \text{child-PL-NOM} \quad \text{store-LOC} \quad \text{go-COMP} \quad \text{all-ACC} \\
& \quad \text{persuade-PAST-DECL} \\
& \quad \text{'Chelswu persuaded all the children to go to the store'}
\end{align*}

So far, we have reviewed Monahan’s arguments for the claim that in the case of forward control, an accusative Case-marked controller appears in the matrix clause, but a null controller in the embedded clause, while in the case of backward control, a nominative Case-marked controller is present in the embedded clause, but a null controller in the higher clause. Having established this, Monahan presents a derivational analysis of both control patterns within the framework of the Movement Theory of Control (Hornstein (1999)). As discussed in Chapter 2, under this framework, the obligatory control (OC) dependency is reduced to A-movement of a controller. Accordingly, a controlled subject, which was defined as PRO, is reanalyzed as a DP trace. One important assumption underlying this claim is that thematic roles (or \(\theta\)-roles) on a verbal or predicative phrase are features, which can be checked by A-movement of a controller in a local fashion.\(^{23}\) In addition, Monahan (2003) makes the following assumptions.

\(^{22}\) Notice that if the same quantifier \textit{motwu} ‘all’ precedes the \textit{tolok}-clause, most speakers do not find the reading natural where the quantifier modifies the embedded subject \textit{aitul} ‘children’. See Section 4.3.1 in Chapter 4 for some more discussion about the issue.

\(^{23}\) More discussion about the Movement Theory of Control (Hornstein (1999, 2001, 2003)) will follow in
a. Nominative case is licensed on the subject of [-TENSE] clauses in Korean because of a default nominative case (DNC) mechanism.

b. The DNC inserts nominative case at PF on DPs that do not receive structural case by Spell-Out (Y. Kim (1990), Y. Kang (1998)); however, DPs, though being assigned default case at PF, must be assigned structural case at LF.

c. Movement is driven by the need to delete uninterpretable features a la Chomsky (2000).

d. θ-roles are absorbed by an XP from V^0, and the information of that θ–role is stored on that XP. Monahan (2003: 367-68)

With these assumptions, he suggests that the forward control case in (71b) can be analyzed as in (80).

    Chelswu-TOP Yenghi-ACC store-LOC go-COMP persuade-PAST-DECL
    ‘Chelswu persuaded YenghiACC to go to the store’ (FORWARD CONTROL)

(80) Derivation for forward control

When the DP Yenghi is merged into Spec, vP in the embedded clause, it absorbs the θ-role from the embedded verb ka- ‘go’. At the next step, the DP undergoes Move to Spec, TP in order to delete the uninterpretable ϕ-features of T^0. He assumes that since Spell-Out does not apply at this point, prohibiting the Default Nominative Case (DNC) from being activated, the DP has not yet been assigned Case. Therefore, it must overtly move into the matrix clause for the Case reason. After moving to Spec, VP, it absorbs the internal θ-role from the matrix verb seltukha-

Section 3.4 of this Chapter.
persuade’. Finally, the DP overtly moves to the outer Spec, vP where it deletes the uninterpretable ϕ-features of the matrix v₀ and is assigned accusative Case from the same head.

Turning to the backward control case in (71a), repeated below, Monahan suggests that the persuadee DP Yenghi goes through the derivational steps in (81).

   Chelswu-TOP Yenghi-NOM store-LOC go-COMP persuade-PAST-DECL
   ‘Chelswu persuaded Yenghinom to go to the store’ (BACKWARD CONTROL)

(81) Derivational steps for backward control

\[
\begin{align*}
\text{case}_{1}, & \theta_1 \\
\text{a. Chelswu-TOP } [v_P [\text{VP [TP Yenghi-NOM [v_P Yenghi store go]] COMP persuaded]]] & \text{CASE A-MOVE} \\
\text{b. Chelswu-TOP } [v_P Yenghi-ACC [\text{VP Yenghi [CP [TP Yenghi [v_P Yenghi store go]]}]]] & \text{CASE A-MOVE}
\end{align*}
\]

Given in (81a) is the derivational step taking place by the time Spell-Out applies—that is, in the overt syntax. When the persuadee DP is first merged into the embedded Spec, VP, it absorbs the θ-role from the verb go, just as in the case of forward control. Then, the DP undergoes overt Move to the embedded Spec, TP in order to delete the uninterpretable ϕ-features of T₀. However, unlike the case of forward control, Spell-Out applies and the DNC is activated at this point, as shown in (81a). As a result, the DP Yenghi is assigned default nominative Case at PF. But recall that Monahan assumes that the DP must be assigned structural Case by LF, although it is marked with the DNC. Furthermore, the internal θ-role of the matrix verb persuade has not been absorbed by the DP. For these reasons, the DP has to undergo covert Move to the matrix Spec, VP in the covert syntax and absorbs the θ-role from the matrix verb there. This is illustrated in
To sum up, Monahan’s (2003) work on tolok-control constructions in Korean is advantageous both empirically and theoretically. On the empirical aspect, it correctly observes that the Korean tolok-control constructions allow for not only forward control but also backward control. From the theoretical perspective, his analysis of backward control in terms of the Movement Theory of Control enables us to avoid potential problems for the previous syntactic approaches, for example, the PRO theory of control (Chomsky (1981), Chomsky and Lasnik (1993)). In particular, under the standard PRO theory of control, the backward control sentence in (70a)/(71a) where the null controller occupies the matrix object position should be incorrectly ruled out since it cannot either satisfy the PRO Theorem or receive null Case for its licensing. By contrast, the presence of the empty category in the matrix clause is easily explained under the MTC employed by Monahan, since it is equivalent to one of the copies that make up a chain formed by A-movement of the controller. Furthermore, Monahan’s analysis turns out to be conceptually simpler than the PRO theory of control, in that the control relation in both forward and backward control is reduced to the A-chain relation, and PRO, a theoretically motivated formative, is no longer necessary. More generally, it is possible to get rid of the control module from our grammar.

Despite these empirical and theoretical benefits, there seem to be some technical difficulties in Monahan’s analysis. First, as listed in (79), he assumes that a DP can be marked with Default Nominative Case (DNC) in Korean if it is not assigned structural Case by Spell-Out. However, it is unclear why Spell-Out applies in the backward control case (as in (81a)), but not in the forward control case (as in (80)), by the time the persuadee DP reaches the embedded Spec.
Second, extending Polinsky and Potsdam’s (2002) analysis of backward control in Tsez, Monahan argues that the persuadee DP in backward control, though being marked with the DNC, should undergo covert movement to the matrix clause in order to receive structural Case from $\nu^0$ as well as delete the uninterpretable $\phi$-features of the same head.\(^{24}\) However, this suggestion is not compatible with Chomsky’s Agree-based analysis of Case and $\phi$-features (e.g., Chomsky (2000, 2001a,b)). That is, Monahan explicitly says that he adopts Chomsky’s (2000) idea regarding the motivation for A-movement, but according to Chomsky, uninterpretable features including a Case feature are (valued and) deleted by the operation called ‘Agree,’ not by Move. So, contrary to Monahan’s assumption, covert phrasal movement for the same purpose is no longer necessary. Third, as Monahan (2003: fn.10) also acknowledges, his analysis of backward control forces the persuadee DP marked with the DNC to move out of the embedded clause even after Spell-Out. However, according to Chomsky’s (2000) Phase Impenetrability Condition (PIC), once a propositional syntactic unit called ‘phase’ (such as $\nu$P or CP) is completed, no elements which are not in the edge of the phase are accessible to the operation from outside the phase.\(^{25}\) As shown in (81a), at least the embedded CP, which is defined as a phase, has already been completed. So the application of Move to the persuadee DP after Spell-Out of the embedded CP would not be allowed due to a violation of the PIC, as the DP is not in the edge position of the CP phase. Therefore, these issues should be taken into careful consideration in order for Monahan’s suggested derivation of backward control to work without causing the same

\(^{24}\) Note that Polinsky and Potsdam (2002) argue that in backward control in Tsez, the overt controller in the embedded clause must raise to the matrix object position at LF only for $\theta$-role requirements.

\(^{25}\) The Phase Impenetrability Condition (PIC) can be defined as follows:

\begin{enumerate}
  \item \textbf{PHASE IMPENETRABILITY CONDITION} (Chomsky (2000: p.108))
  
  In phase $P$ with head $H$, the domain of $H$ is not accessible to operations outside $P$, and only $H$ and its edge are accessible to such operations.
\end{enumerate}
problems. I will offer a slightly different account for backward control in Korean under the MTC in Section 3.4, so that these issues can be resolved.

3.3.2.3 Cormack and Smith (2004), H. Choe (2006): Semantic/Pragmatic Approach

Cormack and Smith (2004) argue that control patterns in tolok-control constructions in Korean can be semantically derived. In particular, they suggest that not only forward control but also backward control in these constructions is encoded in Meaning Postulates. H. Choe (2006) claims that Cormack and Smith’s (2004) representation for the backward control case in Korean makes better predictions for some interpretive patterns than Monahan’s (2003) analysis, and that what was viewed as an obligatory control (OC) relation is not a genuine instance of OC, as it does not always involve syntactic binding. Let me review Cormack and Smith’s (2004) and H. Choe’s (2006) analysis, respectively, and then discuss their problems.

As discussed in Polinsky and Potsdam (2002) and Monahan (2003), one alternative way to analyze the backward control case in (71a) is to treat the empty category in the matrix clause as pro, given that Korean allows for pro in object position (Cole (1987), S. Kim (1994); contra J. Huang (1984, 1989)). If this view is adopted for the tolok-control constructions in Korean, the backward control case in (71a) can be represented as in (82a), while the forward control case in (71b) can be paired with (82b).

(82) a. [TP Chelswu [vP tChelswu [VP [DP pro]i [CP [TP Yenghii store go]] persuaded]]] (BACKWARD)
b. [TP Chelswu [vP tChelswu [VP Yenghii [CP [TP [DP pro]i store go]] persuaded]]] (FORWARD)

However, as pointed out by Polinsky and Potsdam (2002), the representation in (82a) for backward control would be problematic since the null object in the matrix clause c-commands the R-expression, causing a violation of Condition C. In order to obviate the Condition C effects,
Cormack and Smith (2004) propose that the *tolok*-clause containing the overt controller involves scrambling to a higher position than *pro*, as illustrated in (83).

\[
\text{(83) } \left[ \text{TP Chelswu } \left[ t_{\text{Chelswu}} \left[ \text{VP Yenghi, store go} \right] \right] \right] \left[ \text{DP pro} \right] \left[ t_{k} \text{ persuaded} \right] \right] \text{ (BACKWARD) SCRAMBLING OF CP}
\]

Given these representations, in explaining how the OC interpretation arises in the forward control (in (82b)) and backward control case (in (83)), Cormack and Smith (2004) suggest that there are Meaning Postulates associated with the control predicate, which require *pro* to fulfill the Agent role in the clausal argument. In particular, the Meaning Postulate for the verb *persuade* is defined in (84).

\[
\text{(84) MEANING POSTULATE 1 (Cormack and Smith (2004: 66))} \\
\text{For all } s, x, y, \text{ if ‘PERSUADE } s y x \text{’ holds then } y \text{ is Agent in Event } s \\
( s \text{ is the Event argument of PERSUADE, } y \text{ the persuadee, } x \text{ the persuader, where } x \text{ and } y \text{ are individuals})
\]

Along the lines of Cormack and Smith’s semantic analysis in terms of Meaning Postulates, H. Choe (2006) claims that Monahan’s movement-based approach to the *tolok*-control constructions is not tenable. In order to support her claim, assuming that (85a) and (85b) are the characterizing properties of OC, she tries to show that what was previously analyzed as OC constructions in Korean exhibit none of these properties.

\[
\text{(85) Two properties of obligatory PRO or obligatory control} \\
a. \text{Syntactic binding (cf. Reinhart (1986)) is involved in obligatory control; and therefore,} \\
\text{obligatroy PRO may trigger the bound variable interpretation, but not the pragmatic coreference.} \\
b. \text{The semantics of a matrix control predicate determines the controller.} \\
\text{H. Choe (2006: 375)}
\]
Beginning with the first property in (85a), she argues that Cormack and Smith’s semantic analysis makes a better prediction than Monahan’s syntactic analysis regarding the range of possible interpretations of the null controllee. Recall that on Monahan’s analysis, whether the *tolok*-control sentence is forward or backward control is determined by which copy of the moved controller is pronounced. That is, when the lower copy in the chain created by A-movement of the persuadee DP remains undeleted, backward control is available, as in (86a). On the other hand, when the higher copy is chosen to be pronounced, forward control is obtained, as in (86b). In a nutshell, one prominent difference that distinguishes the two approaches is that while the null controllee in Cormack and Smith’s analysis is **pro**, the same element in Monahan’s analysis is an NP-trace, which is equivalent to a copy.

(86)  

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>John-TOP</td>
<td>Mary-NOM</td>
<td>leave-COMP</td>
<td>persuade-PAST-DECL</td>
</tr>
<tr>
<td></td>
<td>John-TOP</td>
<td>Mary-ACC</td>
<td>leave-COMP</td>
<td>persuade-PAST-DECL</td>
</tr>
</tbody>
</table>

Given this difference between the two approaches, H. Choe argues that they make different predictions regarding the possible interpretations of the null element in the *tolok*-control constructions, as **pro** cannot only receive a bound variable reading but also allow for pragmatic coreference or deictic interpretation. More specifically, she assumes that just like pronouns in English, the way **pro** is interpreted in Korean varies depending on (i) whether a potential antecedent c-commands it, and (ii) whether it is referential or non-referential/quantificational. The way the two factors affect the interpretive patterns of **pro** is summarized in Table 2 below.
Table 2. Possible Usages and Interpretations of \textit{pro} (cf. H. Choe (2006: (21), p.376))

<table>
<thead>
<tr>
<th>Antecedent</th>
<th>C-commanding</th>
<th>Not c-commanding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Referential</td>
<td>Referential</td>
</tr>
<tr>
<td>C-commanding</td>
<td>Referential \textit{pro}</td>
<td>Referential \textit{pro}</td>
</tr>
<tr>
<td>Non-referential</td>
<td>Bound \textit{pro}; Referential \textit{pro}</td>
<td>Bound variable reading; Deictic reading</td>
</tr>
<tr>
<td>Non-referential</td>
<td>Referential \textit{pro}</td>
<td>Deictic reading; Pragmatic coreference</td>
</tr>
<tr>
<td>Non-referential</td>
<td>Referential \textit{pro}</td>
<td>Deictic reading</td>
</tr>
</tbody>
</table>

Looking at these patterns closely, if a potential antecedent is referential, regardless of whether it c-commands \textit{pro}, the null pronoun is characterized as a referential \textit{pro}, in that it can have a pragmatic coreference reading with the antecedent or pick out something else from the discourse context. On the other hand, if the potential antecedent is not referential, whether it c-commands \textit{pro} or not give rises to different interpretive patterns: that is, the null pronoun behaves as a bound or referential \textit{pro} when c-commanded by the antecedent, while it behaves only as a referential \textit{pro} when not c-commanded by the antecedent.

In order to show which one of Cormack and Smith’s semantic approach and Monahan’s movement approach works better in predicting these patterns, H. Choe (2006) discusses a number of properties of the data. Among them is the sentence in (87), which belongs to the backward control case. Notice that in this sentence, the subject in the \textit{tolok}-complement is a non-referential DP. She argues that the only interpretation available in (87) is a deictic reading, and Cormack and Smith’s analysis, but not Monahan’s analysis, can correctly predict this interpretation pattern.\textsuperscript{26}

\textsuperscript{26} Notice, however, that unlike H. Choe’s (2006) judgment, not all the native speakers of Korean I consulted can get the deictic reading in this sentence. Madigan (2008b: fn. 10, p.92) also mentions that
That is, under Cormack and Smith’s analysis, the sentence in (87) can be represented as in (88b) where the null argument, pro, appears in the matrix clause. Then, the impossibility of the bound variable reading can be easily explained by their analysis, since pro whose potential antecedent is a non-referential element that does not c-command it can receive only the deictic interpretation, as in Table 2.

On the other hand, under Monahan’s approach, sentence (87) would be close to (88a) which has the null controllee, PRO, in the matrix clause. According to H. Choe, however, this representation in (88a) fails to explain why the deictic reading is available in (87). This is because only syntactic binding is available for PRO in Monahan’s approach. Therefore, H. Choe concludes that the null argument in the backward control case is not PRO but pro, and what appears to be the obligatory referential dependency in the same construction is not an instance of some of his own informants can get a bound variable interpretation from the backward control case.

27 It seems that H. Choe’s (2006) interpretation of Monahan’s (2003) analysis is somewhat misleading. Under Monahan’s movement analysis, PRO does not exist since the null controllee is taken to be an NP-trace left behind by A-movement of the controller. Nonetheless, I will strictly follow what she says here.
OC but of pragmatic coreference. To the extent that this conclusion is correct, it follows that the first typical property of OC listed in (85a) is not found in backward control involving the tolok-complement in Korean. She claims that the same conclusion can be extended to the forward control case, but I will not repeat the forward control data discussed by her here.\(^\text{28}\)

Turning to the second property of OC in (85b), H. Choe provides the data in (89) in an attempt to show that controller choice in the tolok-control constructions is not influenced by the semantic meaning of the matrix verb but by the mood marker inside the tolok-complement.

\[\text{(89) a. Chelswu-nun } Yenghi-eykey \text{ [pro ttena-tolok] seltukhayssta.}\]
\[\text{Chelswu-TOP Yenghi-DAT leave-COMP persuaded}\]
\[\text{Lit. ‘Chelswu }_i \text{ persuaded Yenghi}_j \text{ [pro}_j \text{ should leave].’}\]

\[\text{b. Chelswu-nun } Yenghi-eykey \text{ [pro ttena-tolok] tacimhayssta.}\]
\[\text{Chelswu-TOP Yenghi-DAT leave-COMP make.sure}\]
\[\text{Lit. ‘Chelswu }_i \text{ made Yenghi}_j \text{ promise [pro}_j \text{ should leave].’}\]

\[\text{c. Chelswu-nun } Yenghi-eykey \text{ [pro ttena-tolok] yatanchyessta.}\]
\[\text{Chelswu-TOP Yenghi-DAT leave-COMP rebuked}\]
\[\text{Lit. ‘Chelswu }_i \text{ rebuked Yenghi}_j \text{ to make pro}_j \text{ leave.’}\]

\[\text{H. Choe (2006: 383)}\]

According to her judgment, in all these sentences, the empty category which she treats as pro has the matrix object as its antecedent no matter what the matrix verb is. She argues that this object control reading is in fact due to the presence of the marker \(-tolok\) that she considers as a mood marker. Based on the data in (89) (and others not discussed here), H. Choe (2006: 383) concludes that the second characteristic property of OC in (85b) is not found in the tolok-constructions which Monahan defines as the OC constructions.

Notice, however, that both Cormack and Smith’s (2004) analysis and H. Choe’s (2006) analysis experience some problems. The common problem for both approaches is that they

\(^{28}\) See Chapter 5 for more detailed discussion of the other data provided by H. Choe (2006).
should assume that the *tolok*-complement in the backward control case must be scrambled across the null controllee in the matrix clause. That is, since they both take a null controllee to be pro in the Korean control constructions, the backward control sentence in (90) can be represented as in (90a). But the null pronoun c-commands the R-expression in this configuration, which would make Condition C violated. To obviate the Condition C effect, both approaches assume that the *tolok*-complement should be scrambled across the null category.

(90)  Chelswu-nun Yenghi-ka ttena-tolok seltukhay-ss-ta.
      John-TOP Yenghi-NOM leave-COMP persuade-PAST-DECL
      Chelswu-TOP Yenghi-NOM leave-COMP persuade-PAST-DECL
        Lit. ‘Chelswu persuaded proi [Yenghi to leave]’
      Chelswu-TOP Yenghi-NOM leave-COMP persuade-PAST-DECL
        Lit. ‘Chelswu persuaded [Yenghi to leave] proi’

However, as pointed out by Kwon and Polinsky (2006), Condition C effects can hardly be ameliorated by scrambling in Korean (Johnston and Park (2001)), although Condition A effects are influenced by the same operation (H-W Choi (2001)). For example, as shown in (91), whether the R-expression is c-commanded or not, it cannot be coreferential with the pronoun in the same sentence. If this is the case, Cormack and Smith’s and H. Choe’s suggestion that the *tolok*-clause must be scrambled to obviate a Condition C violation in backward control does not seem to be tenable.

      Yenghi-TOP him-ACC Chelswu-gen room-at met
        ‘Yenghi met himi/*j in Chelswu’sj room’
      Yenghi-TOP Chelswu-GEN room-at him-ACC met
        ‘Yenghi met himi/*j in Chelswu’sj room’
      Kwon and Polinsky (2006)
Regarding the specific problem for Cormack and Smith (2004), their semantic analysis in terms of Meaning Postulates makes an incorrect prediction that \textit{pro} in the matrix clause should be construed as the demoted subject with an Agent role in backward control like (92), where the embedded clause is passivized (data adapted from Monahan (2003)).

\begin{equation}
\begin{array}{lllll}
\text{John-un} & \text{Bill-i} & \text{Mary-eykey} & \text{intehbwuy} & \text{pat-tolok} \\
\text{John-TOP} & \text{Bill-NOM} & \text{Mary-by} & \text{intehbwuy} & \text{pass-COMP} \\
\end{array}
\end{equation}

\begin{itemize}
\item[(i)] ‘John persuaded Bill, [e\_i to be interviewed by Mary].’
\item[(ii)] * ‘John persuaded Mary\_i that Bill interview her\_i.’
\end{itemize}

That is, according to Cormack and Smith, the control relation is encoded in a Meaning Postulate with which the control predicate is associated. In particular, as defined in the Meaning Postulate for \texttt{seltukha}- ‘persuade’ in (84), repeated below, only the Agent in the event argument (denoted by the \textit{tolok}-clause) can be referentially linked to the persuadee DP in the matrix clause.\footnote{In fact, Cormack and Smith (2004) acknowledge this problem. In an attempt to resolve this problem, they argue that the Agent of a passivized clause cannot be the demoted subject (i.e., \textit{by}-phrase) since the agentivity is required and obtained by ‘causative coercion.’ However, it would be more desirable if we can explain the interpretive pattern under discussion without making this kind of additional assumption. In this sense, the movement analysis adopted by Monahan (2003) is superior to Cormack and Smith’s semantic approach, as the former does not appeal to such an assumption. See a brief discussion below on the alternative account by the movement approach.}

\begin{equation}
\text{MEANING POSTULATE 1 (Cormack and Smith (2004: 66))}
\begin{align*}
\text{For all } s, x, y, \text{ if ‘PERSUADE } s \ y \ x’ \text{ holds then } y & \text{ is Agent in Event } s \\
( s \text{ is the Event argument of PERSUADE, } y \text{ the persuadee, } x \text{ the persuader, where } x \text{ and } y & \text{ are individuals) }
\end{align*}
\end{equation}
On the other hand, under the movement analysis endorsed by Monahan (2003), the null object in the matrix clause can be correctly interpreted as the derived subject *Bill*, as the former is the deleted copy in the chain created by A-movement of the latter.

Turning to the problems H. Choe’s analysis has, the first problem has to do with her claim that the semantic meaning of a control verb has no role in determining the controller in Korean control including the *tolok*-control constructions. As mentioned in our discussion on the data in (89), she argues that it is not the semantic meaning of the matrix verb but the marker -*tolok* in the subordinate clause which exclusively determines the antecedent of a null subject. However, this claim does not seem to converge with Cormack and Smith’s (2006) analysis which H. Choe’s analysis is also built on. The core idea of Cormack and Smith’s semantic analysis is that the control dependency between a null category and its antecedent is stored in a Meaning Postulate with which the control predicate is paired. According to their view, the control interpretation in (89a-c) is already predetermined in the Meaning Postulates for the matrix predicate in each sentence, which contradicts H. Choe’s claim. The second problem for H. Choe is somehow related to the first problem. As independent evidence for the same claim, she also discusses the following control constructions in Korean, which I label ‘jussive control.’

Chelswu-TOP Yenghi-DAT leave-IMP-COMP said
seltukhayssta.

persuaded

Lit. ‘Chelswu i said to/persuaded Yenghij [pro\textsubscript{i} should leave].’

b. Chelswu-nun Yenghi-eykey [pro] ttena-ca-ko] malhayssta/
Chelswu-TOP Yenghi-DAT leave-EXH-COMP said
seltukhayssta.

persuaded

Lit. ‘Chelswu i said to/persuaded Yenghij [pro\textsubscript{i+j} should leave].’

\[30\] This construction will be discussed at full length in Chapters 5 and 6.
She correctly observes that the antecedent of the null subject in (93a) and (93b) is determined depending on which type of clause is subordinated. That is, the control patterns remain unchanged whether the matrix predicate is the typical object control verb or the utterance verb *malha-* ‘say’—that is, the imperative clause headed by the imperative marker –la induces the object control interpretation, and the exhortative clause headed by the exhortative marker –ca triggers the split control interpretation. She argues that this correlation between the clause type of complement and the type of control interpretation lends support to her claim that the controller choice is determined by the mood marker, not by syntactic binding. However, the uniform treatment of the marker –*tolok* with mood markers (or clause-typing makers) is called into question. This is because the distribution and function of –*tolok* are different from those of five major clause-typing markers such as the promissive –*ma*, imperative –*la*, exhortative –*ca*, declarative –*ta* and interrogative –*nya/-ni*. For example, the marker –*tolok* does not convey any information about the type of clause; clauses headed by –*tolok* cannot be used as a root clause without being embedded; and only this marker is in complementary distribution with the (indirect) quotative complementizer –*ko*, etc. These facts point to the conclusion that the marker –*tolok* is not a mood marker but a complementizer (cf. Section 3.2.2 for more discussion). Furthermore, there are in fact some restrictions on which predicates can select which type of jussive clause: for example, some of the directive verbs like *myenglyenha*- ‘order’ cannot select for an exhortative clause, and verbs of commitment like *yaksokha*- ‘promise’ cannot subordinate an imperative clause, etc.\(^{31}\) These restrictions suggest that it is not the case that the controller

\(^{31}\) Refer Chapters 5 and 6 for more discussion about the restrictions.
choice is exclusively determined only by the semantic meaning of a control predicate or by the
type of an embedded clause.

To summarize, arguing against Monahan’s (2003) movement approach, Cormack and
Smith (2004) provide a semantic analysis of tolok-control constructions in Korean. Cormack and
Smith suggest that the controllee, which appears in the tolok-clause in backward control and in
the matrix clause in forward control is pro, and its controller is semantically encoded in Meaning
Postulates. Along the lines of Cormack and Smith, H. Choe (2006) further argues that not only
tolok-control constructions but also other control constructions in Korean do not exhibit typical
properties of OC. In particular, the control dependency found in the backward control case is
due to other mechanisms than syntactic binding. However, both approaches were shown to be
problematic since they stipulate that scrambling must apply to the tolok-clause in the backward
control case due to Condition C effects. Besides, H. Choe’s claim that the controller choice has
nothing to do with the semantic meaning of a control predicate turns out to be incompatible with
Cormack and Smith’s approach. Thus, it can be concluded that a purely semantic approach does
not work well for capturing the control pattern in the tolok-control constructions in Korean.

3.4 A Movement Analysis of Infinitival Control

I have shown in Section 3.3 that most of the previous approaches suffer from conceptual or
empirical problems in explaining infinitival control constructions in Korean. In this section, I
will offer a syntactic analysis of these constructions within the framework of Hornstein’s (1999,
2001, 2003) Movement Theory of Control which provides a straightforward account for not only
obligatory control (OC) but also non-obligatory control (NOC). The specific research questions
this section will address are listed in (3), repeated below.
In particular, the hypothesis my analysis appeals to in answering these questions with respect to the infinitival control constructions in Korean is stated in (4), repeated from Section 3.1.

(4) Obligatory control in infinitival control contexts in Korean can be reduced to A-chain relations.

Note that as discussed in 3.3.2.2, Monahan (2003) also adopts the MTC in order to analyze the *tolok*-control constructions. Thus, what I propose in this section is somehow similar to his, as both analyses adopt a number of assumptions from the same control theory. However, I will show that my analysis of backward control is different from his in some crucial aspects, and that the empirical coverage of my analysis can also be extended to the subject control constructions involving the *kilo*--, *lyeko*- and *koca*-clauses, all of which are not dealt with by Monahan. To give a snapshot of my analysis of backward control in advance, assuming with Hornstein (1999, 2001, 2002) that a controller in the *tolok*-control construction moves into the matrix clause to check $\theta$-features and Case features, I suggest that Chain Reduction, a PF operation deleting the copies of a chain (Nunes (2004)), can apply multiple times phase by phase (cf. Fujii (2007) for *seem like* constructions in English). As a result, we end up with two surviving copies—one in the chain created in the higher phase and another one in the lower phase. However, one of the survivig copies, particulary, the higher copy, needs to be deleted so that we avoid a contradiction in linear order relative to the other syntactic objects. One important assumption for this idea is that the infinitival $T^0$ in Korean can optionally enter a
derivation with its Case feature specified. I make this assumption by reinterpreting the traditional idea on default Case in Korean (Y. Kang (1988), Y. Kim (1990)) from a derivational view, namely that nominative Case is assigned by default when no other Case is available (see 3.4.5 for detailed discussion).

Furthermore, Monahan does not seriously address the first issue in (3a) in his study of the tolok-control sentences. I will show that the four infinitival clauses at issue pattern alike in that they do not have a functional projection such as Mood Phrase where clause types are encoded, and that the absence of this kind of functional projection follows from some essential properties shared by the infinitival clauses. Coupled with the fact that Korean lacks phi-feature agreement, the absence of such a projection leads me to conclude that the infinitival clauses in this language are transparent, in that they allow a syntactic object to move out of the clauses, just like English OC sentences.

As for the organization of this section, 3.4.1 provides a brief overview of Hornstein’s MTC, although some discussion overlaps with the one given in Chapter 2. Specifically, a number of core assumptions adopted in my analysis will be highlighted. Section 3.4.2 discusses the syntactic structure of the infinitival clauses under discussion, which helps us answer not only (3a) but also (3c) later. After that, the tense property of those infinitival clauses is discussed in 3.4.3, which partly answers the question in (3a). 3.4.4 and 3.4.5 address the remaining two issues in (3b) and (3c). That is, the two sections seek to answer how controllers are determined in the infinitival subject and object control constructions, as well as what the categorial status of controlled subjects in both constructions is. In the meantime, some crucial issues related to each type of control will also be discussed.
3.4.1 Theoretical Background: Movement Theory of Control

This subsection provides a brief review on Hornstein’s (1999, 2001, 2003) Movement Theory of Control (MTC), which I will adopt to analyze the infinitival control constructions in Korean. In the generative literature, it has been maintained since Rosenbaum (1967) that raising constructions like (94a) are different from control constructions like (94b).

\[(94)\]
\[
\begin{align*}
&\text{a. John} & \text{seems} \; [t_i \text{ to have examined Mary}]. & \text{(RAISING)} \\
&\text{b. John} & \text{tried} \; [\text{PRO}_i \text{ to examine Mary}] & \text{(CONTROL)}
\end{align*}
\]

Rosenbaum suggested one famous diagnostic that has been widely used in the literature to distinguish the two constructions. In the case of raising constructions, even after the lower clause is passivized, the meaning of the sentence is not changed, as in (95a). That is, *John* is the examiner and *Mary* is the examinee in both (94a) and (95a). On the other hand, the passivization of the lower clause causes a different meaning in the case of the control construction, as in (95b). While *John* is both the examiner and the person who tried (to examine) in (94b), *Mary* is construed as the person who tried (to be examined) in (95b).

\[(95)\]
\[
\begin{align*}
&\text{a. Mary seems to have been examined by John.} & \text{(Same as (94a))} \\
&\text{b. Mary tried to be examined by John.} & \text{(Not same as (94b))}
\end{align*}
\]

Due to this asymmetry (and other diagnostics developed later), the raising and control constructions are treated as involving different grammatical processes in the literature within generative syntax. In particular, raising is taken to involve movement of an NP out of an infinitival complement, as in (94a), while control is considered as a result of construal rule that connects the empty subject, PRO, to its antecedent, as shown in (94b).
However, as pointed out by Boeckx and Hornstein (2006: 119-20), this way of treating raising and control as different processes is problematic, since it fails to capture the following important fact: that is, the asymmetry between raising and control is not due to an inherent property of grammatical processes such as passivization, movement and construal; rather, it is rooted in the difference between raising and control verbs with respect their thematic roles. Specifically, the raising verb *seem* has at most one thematic role (i.e., proposition), while the control verb *try* carries at least two thematic roles (i.e., agent and proposition). For this reason, Hornstein (1999, 2001, 2003) proposes to view raising and control in a unified way, arguing that both constructions are derived by movement. Under this view, the control sentence in (94b) is reanalyzed as in (96).

(96) John tried [try, to examine Mary]  

As shown above, the null controllee is no longer PRO but an NP-trace. More importantly, the obligatory control (OC) interpretation naturally follows from the chain membership between the controller and its trace without recourse to the control module which the standard PRO theory of control assumes as the locus where the OC interpretation is obtained. In this respect, one ultimate benefit from this unified view is that we can eliminate PRO, a theory-internal formative, and the control module from our grammar.

Note also that, as mentioned in Chapter 2, two kinds of economy considerations, substantive economy and methodological economy, are becoming more important at the advent of the Minimalist Program. According to the first kind of economy consideration, conceptually unnecessary elements (e.g., S-structure, D-structure, X-bar level, etc.) must be eliminated; on the other hand, the second kind of economy consideration forces us to derive maximum effects from
the given source (cf. Chomsky (1995) and subsequent work). Therefore, Hornstein and his followers argue that the uniform approach to raising and control is better suited for the minimalist spirit than other approaches like the PRO theory of control, in that it can explain the same range of data with a smaller number of principles.

For the sake of our discussion, I will repeat the list of core assumptions in (97), which the MTC makes for deriving the OC interpretation.

\[(97)\]

a. θ-roles are features on verbs.

b. Greed is enlightened self interest.

c. A D/NP receives a θ-role by checking the θ-feature of a verbal/predicative phrase that it merges with.

d. There is no upper bound on the number of θ-roles a chain can have.

Hornstein (2001: 37)

Apart from these assumptions, Hornstein claims that Rosenbaum’s (1970) Minimal Distance Principle (MDP) in (98), which has been widely assumed as an important locality constraint imposed on controller choice, can naturally follow from the MTC.

\[(98)\] Minimal Distance Principle  
An infinitive complement of a predicate P selects as its controller the minimal c-commanding noun phrase in the functional complex of P.

as represented by Larson (1991: 115)

That is, according to this constraint, the controller of PRO in the configuration in (99b) must be DP₂, since it is the closest element c-commanding the infinitival complement; on the other hand, DP₁ is trivially picked out as the controller of PRO in the configuration in (99a), since it is the only DP in the matrix clause. But if control dependencies are the residue of A-movement of the controller, its movement is regulated by the economy condition on movement, such as Shortest
Move or Minimal Link Condition (cf. Chomsky (1995)). Therefore, without appealing to the MDP, why DP₂ must be selected as the controller of PRO in (99b) can be naturally explained.

\[
\begin{align*}
\text{(99)} & \quad \text{a. } \text{DP}_1 [V \text{ [PRO}_1 \ldots]] \\
& \quad \text{b. } \text{DP}_1 [V \text{ DP}_2 \text{ [PRO}_2 \ldots]]
\end{align*}
\]

It is worthwhile to note that non-obligatory control (NOC) receives an interesting account under the MTC, although NOC is not the major concern of this dissertation. The immediate question that arises is whether NOC PRO can be treated as an NP-trace just like OC PRO. In Chapter 2, it was shown that NOC PRO has a different cluster of properties from OC PRO: for example, it does not require the presence of an overt antecedent, and the controller needs not be local to NOC PRO, etc. These properties are illustrated in (100) below.

\[
\begin{align*}
\text{(100)} & \quad \text{a. } \text{It was believed that PRO behaving oneself was important.} \\
& \quad \text{b. } \text{John}_i \text{ thinks that it is believed that PRO}_i \text{ getting a Ph.D. is important.} \\
& \quad \text{c. } \text{John}_i \text{’s mother believes that PRO}_i \text{ keeping himself under control is necessary for success in the election.} \\
& \quad \text{d. } \text{John}_i \text{ thinks that PRO}_i \text{ getting his resume in order is crucial and Bill does too.} \\
& \quad \text{e. } \text{The unfortunate believes that PRO getting a medal would be boring.} \\
& \quad \text{f. } \text{Only Churchill remembers that PRO giving the BST speech was momentous.}
\end{align*}
\]

Given that NOC PRO does not exhibit the same properties as OC PRO, the immediate answer to the question raised above is negative. Indeed, if we look closely at the NOC data in (100), it is not difficult to see that NOC PRO cannot be identified with an NP-trace. This is because the configurations where it appears are normally defined as syntactic islands out of which no syntactic object can be extracted (Ross (1967)). In other words, in all the examples, the infinitive clause is a sentential subject that is susceptible to the Sentential Subject Constraint.³²

³² Ross (1967) defines the Sentential Subject Constraint as follows: No element dominated by an S may
This makes it difficult to maintain that something has been moved out of the specifier position of the infinitive clause. For this reason, Hornstein argues that the null subject in the specifier position of the control infinitive in (100) cannot be an NP-trace.

If the null subject is not an NP-trace, what could it be? It cannot be PRO, as the category is superfluous within the movement approach; nor can it be a wh-trace since NOC has little to do with A’-dependency (or operator movement). Then, what we are left with among the null categories available in the grammar is pro, and Hornstein claims that NOC PRO is pro equivalent to a null pronoun found in Romance and East Asian languages. Recall that the standard assumption in the literature is that pro can be licensed only in the limited number of languages called ‘null subject languages’: that is, languages that have inflection rich enough to recover the content of pro, as in Spanish and Italian (Chomsky (1981), Rizzi (1982, 1986)), or those that are discourse-prominent enough to identify the content of pro, as in Chinese, Japanese and Korean (J. Huang (1984, 1989), S. Kim (1994)). Given this standard assumption, one might think that it is strange to claim that there is pro in languages including English, which are traditionally assumed not to be a null subject language.\(^{33}\) However, Hornstein argues that there is empirical evidence in favor of this claim; in particular, he tries to show that the distribution of NOC PRO is not free but confined to island environments out of which elements cannot be easily be moved out of that S if that S is dominated by an NP which itself is immediately dominated by S. For example, the ungrammaticality of (ib), as opposed to (ia), is attributed to a violation of this constraint.

(i)  
(b) *What did [that Washington Nationals beat t] please John?

33 As we have already seen, even before Hornstein (1999, 2001, 2003), some works on control assumed that null subjects in control constructions are pro in English. In particular, Borer (1989) advances the radical view that controlled subjects in both OC and NOC are invariably pro in every language and the obligatory control dependency is due to the ‘anaphoric’ nature of AGR, which in turn licenses pro. Furthermore, there are independent works in the literature, which explore the possibility that English has pro in imperative clauses (e.g., Zanuttini (2008)). According to them, implicit subjects in imperative clauses in English are pro. See Chapter 6 for more discussion.
extracted. First, the predicate \textit{tell} can give rise to both OC and NOC interpretations depending on the clause type of the complement clause, and the NOC reading can arise only when the predicate selects for \textit{wh}-interrogatives that create a syntactic island for extraction. More specifically, arbitrary control is available with the \textit{wh}-interrogative complement, but it is not with the declarative complement, as shown in (101) (adapted from Hornstein (2001: 57)).

(101) a. John told Mary how \textit{PRO} to behave oneself in public.
    b. John told Mary \textit{PRO} to behave herself/*oneself in public.

Secondly, as Hornstein (2003: 50) points out, an overt pronoun can be substituted for PRO in NOC cases other than arbitrary control, as shown in (102a-e), which are identical to (100b-f) except that PRO is replaced with the pronoun. This kind of alternability of NOC PRO with pronouns in (100) and (102) would not be surprising under his view that NOC PRO is a null category akin to \textit{pro}.

(102) a. John\textsubscript{i} thinks that it is believed that his\textsubscript{i}/him\textsubscript{i} getting a Ph.D. is important.
    b. John\textsubscript{i}’s mother believes that his\textsubscript{i}/him\textsubscript{i} keeping himself under control is necessary for success in the election.
    c. John\textsubscript{i} thinks that his\textsubscript{i}/him\textsubscript{i} getting his resume in order is crucial and Bill does too.
    d. The unfortunate believes that his/him getting a medal would be boring.
    e. Only Churchill remembers that his/him giving the BST speech was momentous.

In short, what the data in (100)-(102) demonstrate is that NOC PRO can appear where OC PRO fails to. Given these data, Hornstein draws the conclusion that NOC PRO is allowed only in circumstances forming syntactic islands that prohibit movement out of the infinitive Spec, TP, and that it is not an NP-trace but \textit{pro} that fills up the Spec position in the NOC contexts. His analysis of \textit{pro} as a null subject in NOC contexts can be assimilated to the traditional treatment of \textit{do} support in English.
3.4.2 Syntactic Structure of Infinitival Control Complements

The core data which we are mainly concerned with is provided in (103), repeated from (2) in Section 3.1.

(103) a. John\textit{i-un} Mary\textit{j-eykey} [e\textit{i/*j} \textit{ttena-kilo}] yaksokhay-ss-ta.
   John-TOP Mary-DAT leave-MODAL promise-PAST-DECL
   ‘John promised Mary to leave.’

b. John\textit{i-un} [e\textit{i/*j} \textit{sihem-ey} hapkyekha-\textit{lyeko}] nolyekhay-ss-ta.
   John-TOP exam-at pass-MODAL try-PAST-DECL
   ‘John tried to pass the test.’

c. John\textit{i-un} [e\textit{i/*j} \textit{sihem-ey} hapkeykha-\textit{koca}] palay-ss-ta.
   John-TOP college-to pass-MODAL want-PAST-DECL
   ‘John wanted to pass the test.’

d. John\textit{i-un} Mary\textit{j-lul} [e\textit{ij} \textit{ttena-tolok}] seltukhay-ss-ta.
   John-TOP Mary-ACC leave-MODAL persuade-PAST-DECL
   ‘John persuaded Mary to leave.’

I have shown in Section 3.2.1 that the complement clauses in (103) above can be best characterized as infinitival clauses. In this section, I will closely examine the syntactic structure of these clauses, which has not received a proper analysis in any of the previous studies. It will become clear that the diagnostics employed in this chapter for the finite vs. non-finite distinction shed important light on the internal structure of the infinitival clauses.

Specifically, in Section 3.2.1, I have used the following three properties as diagnostics for determining whether clauses are finite or infinitival in Korean:

- First, whether they allow for tense or aspectual markers;
- Second, whether they allow for clause-typing markers;
- Third, whether they can be uttered as root clauses.
It turned out that the four types of complement clauses in (103a-d) above exhibit a negative result for each diagnostic. Because of the first diagnostic, one might think that there is no TP projection inside these clauses. However, notice that the non-occurrence of tense markers does not always imply the lack of (semantic) tense. As discussed in Chapter 2, it has been observed in the literature that one crucial property that differentiates control infinitives from raising/Exceptional Case Marking (ECM) infinitives in English is that the tense of the former type of infinitives is unrealized with respect to the event time of the matrix clause, while that of the latter type is not (Stowell (1982), Martin (1996), O’Neil (1997), Bošković (1997))). Likewise, in the Korean control constructions in (103a-d) above, the tense of the infinitival complement is not realized with respect to the matrix clause. For example, in (103a), the event of John’s leaving cannot be simultaneous with or prior to his promising event. The same tense property is also found in the other three infinitival complements. So it would not be a problem to generalize that the infinitival clauses in (103a-d) have unrealized tense with respect to the matrix tense. More discussion on this issue will be provided in the following subsection. Following the standard view, I suggest that semantic tense information must be encoded in an independent functional projection, and it is TP that does this job in the infinitival complements in (103a-d).

In addition, the idea that a TP is projected inside the infinitival complements can be supported by an independent observation that clausal negation requires a local T node (Zanuttini (1996); cf. Shim and den Dikken (2007) for the same argument for the existence of a TP in unselective resultatives in Korean). As shown in Section 3.2.1, the four infinitival clauses can be negated independently of whether the matrix verbs are negated.\footnote{Notice, though, that the presence of a T node which is indicated by the availability of negation does not necessarily entail that the node is specified $ [+\text{TENSE}]$ feature. For instance, ECM/raising infinitival clauses can be negated, which suggests that there is a T node in those clauses. Nonetheless, their T node cannot be specified $ [+\text{TENSE}]$ (but $ [-\text{TENSE}]$).} Consider the sentence in (104),

\footnote{It is worth mentioning that this approach contrasts with the one in Section 3.2.1, which assumes that TP is projected inside the infinitival complements in (103a-d).}
where the embedded or matrix clause of (103a) is negated. The long form negation \textit{ci-anh} attached to the lower predicate takes scope only over the \textit{kilo}-complement clause in (104a). On the other hand, when the same type of negation is attached to the matrix verb, it takes scope over the entire clause, as in (104b).

\begin{align*}
(104) \text{a. } & \text{John} \text{-un Mary} \text{-eykey } [e_{i/*j} \text{tena-} \text{ci-anh-kilo}] \text{ yaksokhay-ss-ta.} \\
& \text{John-TOP Mary-DAT leave-NML-NEG-COMP promise-PAST-DECL} \\
& \text{‘John promised Mary not to leave.’} \\
\text{b. } & \text{John} \text{-un Mary} \text{-eykey } [e_{i/*j} \text{tena-kilo}] \text{ yaksokha-ci-anh-ass-ta.} \\
& \text{John-TOP Mary-DAT leave-COMP promise-NML-NEG-PAST-DECL} \\
& \text{‘John did not promise Mary to leave.’}
\end{align*}

Secondly, the lack of clause-typing particles in the infinitival complements in (103a-c) is also suggestive in uncovering the internal structure of those clauses. That is, in the literature on Korean syntax, it has been argued (e.g., Ahn and Yoon (1989), Whitman (1989), Cinque (1999)) that there is a functional category, Mood Phrase, in the clause that encodes clause types (or sentential mood) such as declarative or interrogatives. Assuming that this claim is correct, we can take the absence of clause-typing markers in the infinitival complements as evidence that the Mood Phrase is absent from these clauses. Note also that Chapters 5 and 6 discuss clause types, promissives, imperatives and exhortatives, which have distinctive properties from other major clause types such as declaratives and interrogatives: for example, the three clause types convey a directive force and the clause type marker of each clause is correlated with the person feature borne by its subject, etc. In those chapters, to capture these properties, I argue drawing on Pak et al. (2007, 2008) and Zanuttini et al. (2011) that there is a functional projection labeled ‘Jussive Phrase’ the head of which encodes the sentential mood. What is relevant to the current
discussion is that just like declaratives and interrogatives, these three clauses can appear not only in root contexts but also in embedded contexts, as shown in (105) and (106).

(105) a. [NP e] hakkyo-ey ka-

ma.

school-to go-PRM

‘/we/*you

SG,PL/*he/*she/*they promise to go to school.’

b. [NP e] hakkyo-ey ka-

la.

school-to go-IMP

‘(You SG,PL/*I/*he/*she/*we/*they) go to school!’

c. [NP e] hakkyo-ey ka-

ca.

school-to go-EXH

‘Let us/*me/*you/*him/*her/*them go to school.’

(106) a. John-un Mary-ykey [pro

i*j hakkyo-ey ka-

ma-ko] yaksokhay-ss-ta.

John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL

‘John promised Mary to go to school.’

b. John-un Mary-ykey [pro

i*j hakkyo-ey ka-

la-ko] seltukhay-ss-ta

John-TOP Mary-DAT school-to go-IMP-COMP persuade-PAST-DECL

‘John persuaded Mary to go to school.’

c. John-un Mary-ykey [pro

i*j hakkyo-ey hamkkey ka-

ca-ko]

John-TOP Mary-DAT school-to together go-EXH-COMP ceyanhay-ss-ta.

canon-PAST-DECL

‘John proposed to Mary to go to school together.’

Given this fact, we can draw the generalization that only clauses that can be uttered as root clauses may have a functional category that encodes the sentential mood (or clause type). This in turn suggests that the infinitival complements in (103a-c), which fail to serve as root clauses, do not have a functional category that is equivalent to the Mood Phrase or Jussive Phrase. To put it differently, the infinitival complements are not typed, so they cannot be classified into any of the major clause types in Korean (see Chapter 5 for more discussion on the clause types in Korean). To summarize, the discussion so far leads me to assume the clause structure in (107a) for the kilo-, lyeko- and koca-clauses, in which the Mood Phrase or Jussive Phrase is missing.
On the other hand, the structure of finite declarative or interrogative clauses can be depicted as in (107b). Some more discussion on the structure of declaratives and interrogatives, as well as that of jussive clauses, will be provided in Chapters 5 and 6.

3.4.3 **Tense of Infinitival Control Complements**

As briefly mentioned in the previous subsection, the four infinitival clauses headed by –kilo, -lyeko, –koca and –tolok have unrealized tense with respect to the matrix clause, a property not found in raising/ECM or resultative constructions in Korean. Because of this property, I suggest that T₀ in the infinitival complements in Korean has the \( \text{FURURATE} \) feature, which can be an answer to the question in (3a) about the licensing condition for controlled subjects.

Recall from our discussion in Chapter 2 that Stowell (1982) observes that control infinitives are different from ECM/raising infinitives in English with regards to their temporal interpretations. That is, in control constructions like (108), the time of the event denoted by the infinitival clause cannot coincide with the time of the matrix event; rather, the former must take place after the latter. For example, in (108b), the time of Kim’s party-going event must follow the time of her decision-making event. On the other hand, in ECM/raising constructions like...
the time of the event or state denoted by the infinitival clause must overlap with that of the matrix event. For instance, in (109b), the interval of Bill’s being sick overlaps with the time of the event of the doctor’s showing.

(108) a. Ginny remembered [PRO to bring the wine].
    b. Kim decided [PRO to go to the party].
    c. Romário promised Bebeto [PRO to pass the ball].

    Martin (1996: 51)

(109) a. Everyone believed [Rebecca to be the best basketball player at UConn].
    b. The doctor showed [Bill to be sick].
    c. The defendant seemed to the DA [t_i to be a conspirator].

    Martin (1996: 53)

In an attempt to capture the interpretive difference between the control infinitives and ECM/raising infinitives, Stowell (1982) proposes to distinguish these two types of infinitive clauses in terms of the [±TENSE] feature. That is, T₀ in the control infinitives has the [+TENSE] feature, while the same head in the ECM/raising has the [-TENSE] feature. Drawing on this idea, Martin (1996) argues that only the control infinitives with the tensed T₀ can license PRO, since it bears null case that can be checked by PRO.

Turning to the Korean infinitival control data in (103), it seems clear that the infinitive complements pattern similarly with the English control infinitives with regard to their temporal interpretations. Taking (110a) and (111a), for example, the time of the embedded event cannot coincide with that of the matrix event. Notice first that in (110a), the time of John’s leaving is obviously after the time of his promising event. Likewise, in (111a), the time of Mary’s leaving must be preceded by the time of John’s persuading event. The ungrammaticality of (110b) and (111b) makes the same point—that is, the reason that the two sentences are ungrammatical is that the embedded event cannot precede the matrix event in time. It should be further noted that the
embedded event must take place not only after the time of the matrix event but also after the utterance time, as shown in (110c) and (111c).

(110) a. il.cwuil cen-ey John-i un Mary-j-eykey [e_i/*j i ku taum.nal
tenna-kilo](yaksokhayssta.
leave-COMP promised
‘A week ago, John promised Mary to leave the next day.’ (cf. (103a))
b. *onul John-i un Mary-j-eykey [e_i/*j ecey ttena-kilo]
tenna-kilo(yaksokhayssta.
promised
Intended: ‘Today, John promised Mary to leave yesterday.’
c. ecey John-i un Mary-j-eykey [e_i/*j nayil ttena-kilo]
yaksokhayssta.
promised
‘Yesterday, John promised Mary to leave tomorrow.’

(111) a. il.cwuil cen-ey John-i un Mary-j-lul [e_i/*j ku taum.nal
tenna-tolok](seltukhayssta.
leave-COMP persuaded
‘A week ago, John persuaded Mary to leave the next day.’ (cf. (103d))
b. onul John-i un Mary-j-lul [e_i/*j ecey ttena-tolok]
tenna-tolok(seltukhayssta.
persuaded
‘Today, John persuaded Mary to leave yesterday.’
c. ecey John-i un Mary-j-lul [e_i/*j nayil ttena-tolok]
Seltukhayssta.
persuaded
‘Yesterday, John persuaded Mary to leave tomorrow.’

However, we have not seen yet whether the future-oriented tense with respect to the matrix tense (as well as the utterance time) is unique only to the control infinitival clauses.
Therefore, let us consider the temporal interpretations of the apparently similar constructions in Korean, particularly, the Raising to Object (RTO) or resultative constructions. That is, unlike the case of control infinitives, the tense of the embedded clause in the RTO and resultative constructions does not have to be unrealized with respect to that of the matrix clause. For instance, the time of Mary’s being smart overlaps with the interval of John’s belief in the RTO construction in (112a). Likewise, the span of John’s throat’s being hoarse overlaps with the time of John’s screaming event in the resultative construction in (112b).

   John-TOP Mary-ACC be.smart-DECL-COMP believe-PAST-DECL
   ‘John believed Mary to be smart.’
   = John had a belief at t such that Mary was smart at t.’

   John-TOP throat-NOM be.hoarse-TOLOK shout-PAST-DECL
   ‘John screamed himself hoarse.’ (Lit. ‘John screamed so that his throat got hoarse.’)
   = John screamed at t such that his throat got hoarse at t.’

Given the contrast between (110)/(111) and (112), we can draw the conclusion that the infinitival control complements under discussion always have unrealized tense with respect to the matrix tense. However, unlike what Martin (1996) argues, I suggest that it is not the [+TENSE] feature but the [FUTURATE] feature on T0 that makes the control infinitive clauses special with regard to their temporal properties.36 Recall our discussion in Chapter 2 that one

35 Raising-to-Object constructions in Korean are known to behave differently at least from those in English, in that the complement clauses allow for the tense marker –ess/-ass, as in (i). Although it is not uncontroversial whether –ess/-ass is a real tense or aspectual marker, I will treat the marker as a tense marker, which suggests the existence of tense in the complement clauses in the Korean RTO.

36 I will use the term ‘FUTURATE’ instead of ‘IRREALIS,’ the latter of which is often used in the syntax
important motivation for defining the control infinitival $T^0$ as $[+\text{TENSE}]$ in Martin’s analysis is to explain why only the $T^0$ in the control infinitive clauses can check null case. However, it turned out that his analysis experiences some problems which make it hard to maintain his suggestion that the control $T^0$ is specified $[+\text{TENSE}]$, thus being able to check null case of PRO. In particular, his null case approach does not correctly predict the availability of overt subjects in Korean control complements. As shown below, the control sentence embedding the imperative clause in (113a) and the one subordinating the *tolok*-clause in (113b) allow for the overt controllee marked nominative Case. According to Martin’s null case approach, both sentences should be ruled out since null case is assumed to be compatible only with PRO.

Note, though, that as discussed in Pesetsky and Torrego (2002), it is not the case that all the control infinitives allow for the irrealis interpretation, the observation attributed to Stowell (1982) and Pesetsky (1989), among others. That is, when control infinitives appear in the non-subject position, they can be not only irrealis or generic but also realis depending on the type of selecting predicates, as in (i). On the other hand, when they appear in the subject position, they should be irrealis or generic, which explains the unacceptability of (ii,e) – (ii,g).

(i) Non-subject CPs: Realis or irrealis infinitives
   a. Mary wanted [PRO to learn the election results]. (IRREALIS)
   b. Mary would hate [PRO to lose the game].
   c. Mary hates [PRO to lose the game]. (GENERIC)
   d. Mary hated [PRO to learn the election results]. (REALIS: factive)
   e. Mary managed [PRO to lose the game]. (REALIS: implicative)

(ii) Subject CPs: Only irrealis/generic infinitives
   a. [PRO to learn the election results] would shock me. (IRREALIS)
   b. [PRO to lose the game] would prove they are idiots.
   c. [PRO to learn election results early] is a crime. (GENERIC)
   d. [PRO to lose games like this] annoys the public. (GENERIC)
   e. ??[PRO to learn the election results] shocked me. (REALIS: factive)
   f. ??[PRO to lose the game] proved they were idiots.
   g. *[PRO to lose the game] was managed by the team. (REALIS: implicative)

Pesetsky & Torrego (2002: 9)
(113) a. John-un Mary-eykey [caki-ka swukcey-lul ha-la-ko]
   John-TOP Mary-DAT self-NOM homework-ACC do-IMP-COMP
   sultukhay-ss-ta.
sultukhay-ss-ta.
   persuade-PAST-DECL
   ‘John persuaded Mary that self (Mary) would do homework.’

b. John-j-un e Mary-ka swukcey-lul ha-tolok
   John-TOP Mary-NOM homework-ACC do-COMP
   sultukhay-ss-ta.
sultukhay-ss-ta.
   persuade-PAST-DECL
   ‘John persuaded Mary to do homework.’

Therefore, I argue that the [FUTURATE] feature on T₀ forces the control infinitives interpreted as
future-oriented relative to the matrix tense. At this point, one might wonder how the overt
subject in the tolok-complement in (113b) can be marked with nominative Case. As for this
question, rather than tying the presence of the [+TENSE] feature on T₀ to the availability of case
(null or nominative), I make the hypothesis that in Korean, the structural Case of a DP (e.g., a
subject DP) can be valued (and deleted) by a local functional head (e.g., T₀) even if the DP does
not establish agreement with the local head. Building on this hypothesis, I will suggest that
nominative Case in backward control in (113b) is available since there is a T₀ node in the tolok-
clause which is characterized as infinitival. I will return to this issue later in 3.4.5.

Before proceeding to the next subsection, it should be pointed out that it is not only the
[FUTURATE] feature on T₀ but also the availability of multiple θ-roles that licenses null subjects
in the infinitival control complements, which I take to be NP-traces. Given these two conditions,
we can explain why only the infinitival clauses in control contexts require the future-oriented
temporal interpretation and why they give rise to obligatory referential dependencies.
3.4.4 Deriving Subject Control into *kilo*-, *lyeko*- and *koca*-complements

This subsection defends the Movement Theory of Control (MTC) and provides an analysis of infinitival subject control constructions like (103a-c). To this end, I basically adopt the four assumptions in (114), repeated from (97), as the underlying assumptions.

(114)  

a. $\theta$-roles are features on verbs.  
b. Greed is enlightened self interest.  
c. A D/NP receives a $\theta$-role by checking the $\theta$-feature of a verbal/predicative phrase that it merges with.  
d. There is no upper bound on the number of $\theta$-roles a chain can have.  

Hornstein (2001: 37)

Apart from these assumptions, this chapter also assumes a copy theory of movement, which Chomsky (1993) revives. Under this theory of movement, the trace is considered as a copy of the moved element, which is deleted by a principle of the PF component. This view on the trace conforms to the minimalist principles—in particular, Inclusiveness Condition. According to this condition, no elements can be added in the course of a derivation unless they have been introduced from the lexicon into a lexical subarray, which is called the numeration (Chomsky (1995)). However, if it is not a trace but a copy that is left behind by overt movement of a syntactic object, it would seem difficult to determine the linear order of the copies in the chain, since the copies are non-distinct and their phonological forms are identical, as shown in (115a).

(115)  

a. John$_i^j$ was arrested John$_i^j$.  
b. John$_i^j$ was arrested John$_i^j$.  

In particular, under the view on linear ordering, which was originally suggested by Kayne (1994) and adopted by many subsequent studies, the linear order of two syntactic objects is determined
in terms of the asymmetric c-command relation between them, as required by the Linear Correspondence Axiom (LCA) in (116).\(^{37}\)

(116) **LINEAR CORRESPONDENCE AXIOM**

Let X, Y be nonterminals and x, y terminal such that X dominates x and Y dominates y. Then if X asymmetrically c-commands Y, x precedes y.

Kayne (1994: 33)

Then, the two copies of *John* in (115a) end up both preceding and following each other, yielding a contradiction in their ordering. For this reason, one of the copies should be deleted at PF, as in (115b). I assume with Nunes (2004) that the deletion operation taking place at PF is “Chain Reduction.” In unmarked cases, only the highest copy survives after Chain Reduction applies to the chain, just as in the case of (115b) above. In short, two more assumptions regarding the chain and linear order in (117) are added as part of the machinery for deriving the subject (as well as object) control interpretation.

(117) a. Traces are copies of the moved element.
    b. All but one copy in the chain CH is deleted at PF by Chain Reduction

3.4.4.1 Controller Choice in the Infinitive Subject Control Constructions

In this subsection, I will discuss (103b) in order to illustrate how the proposed analysis captures the subject control interpretation in the infinitival control constructions. Since this sentence has identical syntactic properties and temporal interpretation to the one in (103c), the suggested account for the former can be easily extended to the latter. However, the sentence in (103a)

---

\(^{37}\) According to Kayne (1994), the Linear Correspondence Axiom dictates that linear order is determined by a hierarchical structure, in particular, in terms of the asymmetric command relation.
invokes an issue having to do with locality, so it will be discussed separately in the next subsection.

    ‘John promised Mary to leave.’

    ‘John tried to pass the test.’

    ‘John wanted to pass the test.’

As listed in (114) above, since θ-features are assumed to be formal features on predicates, the DP John should move to check the θ-features of both the embedded verb and matrix verb in (103b). Thus, the DP based-generated in the lyeko-clause should undergo successive-cyclic movement up to the matrix Spec, TP position. The derivational steps for this sentence are provided in (118). Note that the linear order at each derivational step is based on that of the English counterpart, and elements enclosed with angled brackets indicate copies left behind by the movement of a controller at the previous step(s).

(118) Derivational steps for (103b)
   a. Merge of John for θ-feature checking against the embedded verb
      [vP John_{θ}1 [vP pass the exam]]
          ↑
      [TP John_{θ}0 [vP <John_{θ}01> pass the exam]]
   b. Move of John to the lower Spec, TP
      [CP John_{θ}0 [C' C0 lyeko [TP <John_{θ}01> [vP <John_{θ}01> pass the exam]]]]
   c. Move of John to the lower Spec, CP
      [vP tried [CP John_{θ}0 [C' COMPlyeko [TP <John_{θ}01> [vP <John_{θ}01> pass the exam]]]]]
e. Move of *John* to the matrix Spec, vP for \( \theta \)-feature checking against the matrix verb

\[
\text{\[vP <John_{01,02}> \text{[VP tried [CP <John_{01}>] [C' C0 lyeko [TP <John_{01}>] [vP <John_{01}> pass the exam]]]]}\]
\]

f. Move of *John* to the matrix Spec, TP for NOM Case checking

\[
\text{\[TP John_{NOM,01,02} T^0 \text{[vP <John_{01,02}> [VP tried [CP <John_{01}>] [C' C0 lyeko [TP <John_{01}>] [vP <John_{01}> pass the exam]]]]]\]
\]

g. Chain linearization by Chain Reduction

\[
\text{\[TP John_{NOM,01,02} T^0 \text{[vP <John_{01,02}> [VP tried [CP <John_{01}>] [C' C0 lyeko [TP <John_{01}> [vP <John_{01}> pass the exam]]]]]\]
\]

As shown in (118a), at the first step in the derivation, the controller DP *John* is first merged with the lower VP and receives a \( \theta \)-role (marked with \( \theta_1 \)) from the verb *hapkyekha*—‘pass’—by checking it against the verb.\(^{38}\) At the next step, *John* undergoes Move to the Spec, TP of the embedded clause as in (118b). After that, the DP moves up to the Spec, CP, as in (118c), and Merge of the embedded CP with the matrix verb takes place at the next step, as in (118d). Subsequently, the DP raises to the matrix Spec, vP, as in (118e), where it acquires another \( \theta \)-role (marked with \( \theta_2 \)) by checking it against the matrix predicate *nolyekha*—‘try.’ Then, the DP continues to move to the matrix Spec, TP, checking a nominative Case feature against the matrix \( T^0 \), as in (118f). I assume that a DP enters the derivation with a Case feature but the specific value of the feature is fixed when it is in a local configuration (particularly, in a Spec-head relation) with a relevant functional head, \( T^0 \) for nominative Case and \( v^0 \) for accusative Case, etc.

\(^{38}\) Notice that in explaining how DPs acquire \( \theta \)-features from predicates, Hornstein (1999, 2001, 2003) does not appeal to Agree suggested by Chomsky (2000, 2001a,b). Instead, he implicitly assumes that a Spec-head relation, one of the checking relations (in Chomsky’s (1995) sense), makes \( \theta \)-features and Case features checked. I assume that Chomsky’s (1993) feature checking works for most of the cases in Korean, except for the case of jussive clauses. Please refer to Chapter 6 for more discussion of the derivations of jussive clauses.
Finally, at PF, all but the highest copy in the chain created by movement of *John* are deleted by Chain Reduction for the chain linearization, yielding the correct word order.

Notice that there is one important issue concerning the derivational steps which requires clarification. As illustrated in (118c) through (118e), the controller DP *John* drops by the lower Spec, CP when it moves from the embedded Spec, TP to the matrix Spec, vP position. Notice that this type of movement, which can be roughly schematized as in (119), is analogous to the English sentence in (120a).

![Diagram](image)

(119) \[
\begin{array}{c}
\alpha \ldots \\
\text{\textit{A-MOVE}}
\end{array}
\]

The sentence in (120a) is obviously ungrammatical, and there have been two ways in the literature to explain the ungrammaticality of this sentence (cf. Fujii (2007)): one way is to attribute it to a violation of the ban on A-movement from a Case-marked position, which is also called the ‘Case freezing effect’ (e.g., Chomsky (1986, 2000, 2001a,b)); and another way is to blame a violation of the ban on A-movement across the CP boundary for it (e.g., Aoun (1981), Bošković (1997)). Beginning with the first view, in Chomsky’s (2000, 2001a,b) Agree-based theory, the Case freezing effect can be attributed to a violation of the Activation Condition or of the Phase (Impenetrability) Condition. That is, according to Chomsky’s theory, a functional head can agree with a DP only if all the four conditions in (121a-d) are respected (as summarized by Baker (2008: Ch 1)). As shown in (120b), the finite T^0 in the higher clause cannot agree with
the DP John in the lower Spec, TP, since the Case feature of the DP has already been (valued and) deleted, thus violating the Activation Condition in (121d). Alternatively, the Phase (Impenetrability) Condition in (121c) disallows any syntactic objects to be accessed by a functional head from outside the phase unless they are in the edge position of the phase. But the embedded CP is a typical instance of phase, and the head and the DP John are not in the same phase, as shown in (120b). Therefore, the Phase (Impenetrability) Condition in (121c) is violated if the higher T° attracts the DP John.

(121) A functional head H agrees with XP only if
   a. H c-commands XP.  
      (C-COMMAND CONDITION)  
   b. There is no YP such that H c-commands YP, YP c-commands XP, and YP has phi-
      features.  
      (INTERVENTION CONDITION)  
   c. H and XP are contained in all the same phases (e.g., full CPs).  
      (PHASE CONDITION)  
   d. XP is made active for agreement by having an unchecked Case feature.  
      (ACTIVATION CONDITION)  

On the other hand, according to the second view, the DP John has reached the matrix Spec, TP through the lower Spec, CP as depicted in (120c), but this type of movement is regarded as improper, since A’-movement is disallowed to be followed by A-movement. The constraint that rules out this type of movement is often called ‘the ban on improper movement’ in the literature.

Then, under the second view on the ungrammaticality of (120a), the proposed analysis of (103b) would be problematic, since it assumes A-movement of the controller John out of the CP, i.e., the lyeko-clause. In fact, Hornstein’s MTC analysis of the English counterpart of (122a) faces the same problem, since the controller John should go through the embedded Spec, CP position to reach the matrix Spec, vP, and eventually, to the matrix Spec, TP position. Given that the specifier of the CP is a typical A’-position, the movement of John in (122a) can be said to be
improper, as A’-movement of John to the Spec, CP position is followed by A-movement of the same DP, as shown in (122b).

(122) a. John tries to pass the exam.
   b. [TP Johni [v P ti v-tries [CP ti [TP ti to pass the exam]]]].
   c. [TP Johni [v P ti v-tries [TP ti to pass the exam]]].

In order to avoid this problem, Hornstein (2001) proposes that infinitival control complements that do not accompany an overt complementizer are bare TPs in English. Then, since movement of the controller John does not cross the CP boundary, as in (122c), the problem related to the ban on improper movement does not arise. Note that in the standard PRO theory of control, control infinitives are considered as CPs (e.g., Chomsky (1981), Chomsky and Lasnik (1993)); otherwise, the controlled null subject PRO is governed by the matrix verb, which would induce a violation of the PRO Theorem. But since the PRO Theorem is not valid under the framework of MTC, it would not be a problem even if the control infinitives are considered as TPs.

Turning to the Korean infinitival control sentence in (103b), if the controller John undergoes Move out of the lower CP to the matrix Spec, vP by way of the intermediate Spec, CP, it would end up involving improper movement, as shown in (119). Notice also that it would be difficult to extend Hornstein’s solution to resolve the problem, since the Korean infinitival control constructions under discussion obviously involve complementizers like –kilo, -lyeko, -koca and –tolok, which indicates that they are CPs. Instead of adopting Hornstein’s solution, I rather suggest that there is an additional specifier position in the embedded CP in Korean if it is not an interrogative clause, and the specifier is characterized as an A-position. This idea has
already been proposed in many studies on the Raising-to-Object (RTO) constructions in various languages, where a DP raises out of the finite clause (e.g., Tanaka (2003) for Japanese; S. Hong (2005) for Korean RTO). The common property found in the RTO constructions in those languages is that a DP can move from a Case position inside the lower clause to another Case position in the matrix clause. Given in (123) below are Korean RTO sentences where the DP Mary takes either accusative Case or nominative Case without changing the sentence meaning. In Chapter 4, I show that the Case form of the DP Mary is correlated with its structural position, and when marked with nominative Case, the DP stays put in the complement clause (see Chapter 4 for more discussion on the RTO constructions in Korean).

    John-TOP Mary-NOM be.smart-DECL-COMP believe-PRES-DECL  
    ‘John believes that Mary is smart.’

    John-TOP Mary-ACC be.smart-DECL-COMP believe-PRES-DECL

What is intriguing here is that the infinitival control constructions, in particular, the tolok-control sentence, seem to pattern with the RTO constructions in Korean, in that a DP in the embedded Spec, TP position can be nominative Case-marked in both constructions. Since I find no strong evidence against the presence of an extra CP layer in the embedded clause, I argue that not only the complement clause in the RTO constructions but also the one in the infinitival control constructions have an extra layer in the CP. Then, (119) can be modified as follows:

(124) \[
\begin{array}{c}
\text{\textit{vP} } \alpha^i \ldots \text{[CP2} \alpha^i \text{[CP1} \alpha^i \ldots \\
\text{\textit{A-MOVE}} \text{\textit{A-MOVE}}
\end{array}
\]
To sum up, we can now answer the question in (3c), namely, how the controller is determined in the Korean infinitival control constructions. As shown in the derivational steps in (118), the obligatory referential dependency between the matrix subject *John* and the null subject in the *lyeko*-clause in (103b) can be obtained as the result of A-movement of the former. That is, the movement of the controller creates a chain leaving behind copies in the syntax, and all the copies except for the highest one are deleted by Chain Reduction for chain linearization at PF. Therefore, the obligatory control (OC) relation between the controller and the null subject can be reduced to the A-chain relation. In addition, as for the issue in (3b), which is about the categorial status of controlled subjects, the answer naturally follows: that is, since the OC dependency can be obtained as the result of A-movement of the controller on the present analysis, the null controller should be reanalyzed as a copy of the moved controller, which was traditionally called a trace in the Government and Binding (GB) era.

### 3.4.4.2 Promise-type Control and Locality Issue

This subsection shows how the proposed analysis can derive the subject control interpretation in (103a), repeated below.

(103) a. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [e\textsubscript{i*j} ttena-\textbf{kilo}] yaksokhay-ss-ta.

\begin{tabular}{llll}
  John & Mary & leave & promise-PAST-DECL \\
  TOP & DAT & & \\
\end{tabular}

‘John promised Mary to leave.’

Just as in (103b), the controller *John* in the above sentence starts out as the subject of the embedded predicate, undergoing successive-cyclic movement to the matrix Spec, TP position, yielding the subject control reading. Thus, it is expected that the derivational steps for this sentence would be identical with those in (118) for (103b) (which are also applicable to (103c)).
However, an acute reader can notice a difference between (103a) and (103b): while there is only one argument in the matrix clause in (103b), more than one argument appears in the matrix clause in (103a). So when the embedded CP is merged with the matrix verb in the course of the derivation for (103a), as in (125a), there will be at least two options to continue the derivation: the first option is to combine Mary with the VP via pure Merge, as in (125b); and the second option is to move John and combine it with the matrix VP, as in (125c).

(125) a. Merge of the lower CP with the matrix verb

\[
[\text{VP promised} [\text{CP2 John}_{01} [\text{CP1 C'} \text{COMP}_{kilo} [\text{TP <John}_{01}> [\text{vP <John}_{01}> \text{pass the exam}]]]]
\]

b. Option #1 for continuation of (125a): Merge of Mary into the matrix Spec, VP

\[
[\text{VP Mary}_{02} [\text{VP promised} [\text{CP2 John}_{01} [\text{CP1 C'} \text{COMP}_{kilo} [\text{TP <John}_{01}> [\text{vP <John}_{01}> \text{pass the exam}]]]]]
\]

c. Option #2 for continuation of (125a): Move of John into the matrix Spec, VP

\[
[\text{VP John}_{01,02} [\text{VP promised} [\text{CP2 <John}_{01}> [\text{CP1 C'} \text{COMP}_{kilo} [\text{TP <John}_{01}> [\text{vP <John}_{01}> \text{pass the exam}]]]]]
\]

These two options lead to different results. To begin with, if we take the second option in (125c), Mary drawn from the numeration is merged with the matrix VP and receives the external \(\theta\)-role from the verb yaksokha- ‘promise’. Note that once a syntactic object is selected into the numeration for a certain derivation, it must be exhausted for that derivation (cf. Chomsky (1995, 2000, 2001a,b)). Therefore, Mary must be taken from the numeration. Then, since Mary in the Spec, vP is closer to the matrix T\(^0\) than John in the Spec, VP, Mary moves up to the matrix Spec, TP position at the next step, as in (126b). At PF, Chain Reduction applies to the chain of Mary and that of John, respectively, as in (126c); as a result, we end up with the sentence Mary promised John to pass the exam, which is completely different from (103a).
(126)  

a. Merge of Mary into the matrix Spec, vP

\[
[vP \text{Mary}_03 \; [vP \text{John}_{01,02} \; [vP \text{promised} \; [CP_2 <\text{John}_{01}> \; [CP_1 C' \; \text{COMP}_{\text{kilo}} \; [TP <\text{John}_{01}> \; [vP <\text{John}_{01}> \; \text{pass the exam}]])]]
\]

b. Move of Mary to the matrix Spec, TP

\[
[TP \text{Mary}_{03,\text{NOM}} \; T^0 \; [vP <\text{Mary}_03> \; [vP \text{John}_{01,02} \; [vP \text{promised} \; [CP_2 <\text{John}_{01}> \; [CP_1 C' \; \text{COMP}_{\text{kilo}} \; [TP <\text{John}_{01}> \; [vP <\text{John}_{01}> \; \text{pass the exam}]])]]
\]

c. Chain linearization by Chain Reduction

\[
[TP \text{Mary}_{03,\text{NOM}} \; T^0 \; [vP <\text{Mary}_03> \; v-\text{promised} \; [vP \text{John}_{01,02} \; [vP t_{\text{promised}} \; [CP_2 <\text{John}_{01}> \; [CP_1 C' \; \text{COMP}_{\text{kilo}} \; [TP <\text{John}_{01}> \; [vP <\text{John}_{01}> \; \text{pass the exam}]])]]]
\]

On the other hand, if we choose the first option in (125b), there are two candidates to move: that is, either Mary or John can be moved into the matrix Spec, vP position. One might think that it is not John but Mary that must be moved to that position, since the latter is closer to the target position than the former. However, if Mary moves, we would end up with the same linear order as (126c), which accompanies an unwanted reading—that is, ‘Mary promised herself that John would pass the exam.’ By contrast, if John is chosen to be raised to the matrix Spec, vP position, we can have the wanted reading, but locality constraints such as the Minimal Distance Principle (Rosenbaum (1970)), which can be subsumed under the Minimal Link Condition (Chomsky (1995)) in the Movement Theory of Control, would not be satisfied. This is demonstrated in (127) below, where John can only reach the matrix Spec, vP position only by crossing the intervening argument, Mary, in the Spec, VP position.

(127) Move of John to the matrix Spec, vP for 0-feature checking against the matrix verb

\[
[vP \text{John}_{01,03} \; v-\text{promised} \; [vP \text{Mary}_{02} \; [vP t_{\text{promised}} \; [CP_2 <\text{John}_{01}> \; [CP_1 C' \; \text{COMP}_{\text{kilo}} \; [TP <\text{John}_{01}> \; [vP <\text{John}_{01}> \; \text{pass the exam}]])]]]
\]

A - MOVE (OK?)
Given this, if I wish to maintain the proposed analysis which adopts the MTC, I should be able to evade the problem related to the locality condition. There are at least two possible ways that could be employed in order to resolve this issue. One of them is to assume with Larson (1991) that promise-type control predicates have the same structure as double object verbs like give and send. According to Larson (1991), the promise-type predicates can fall under the double object verbs in many respects, an observation that he attributes to Bowers (1973) and Stowell (1981). First, the verb promise basically subcategorizes a DP and an infinitive clause, as in (128c), and the linear order between the two internal arguments can be reversed as in (128d). More importantly, the same type of verb also subcategorizes two DPs, as in (128a), and the indirect object can alternate with an oblique PP as in (128b). The fact that two internal arguments can be DPs or one of them can be a PP is a unique property to double object verbs like give, as in (129) (cf. Larson (1988)).

\[(128)\]
\begin{align*}
\text{a. } & \text{John promised [DP Mary] [DP a sports car].} \\
\text{b. } & \text{John promised [DP a sports car] [PP to Mary].} \\
\text{c. } & \text{John promised [DP Mary] [}_a \text{ e to leave].} \\
\text{d. } & \text{John promised [}_a \text{ e to leave] [PP to Mary].}
\end{align*}
\hspace{1cm} \text{Larson (1991: 104)}

\[(129)\]
\begin{align*}
\text{a. } & \text{John gave [DP Mary] [DP a gift].} \\
\text{b. } & \text{John gave [DP a gift] [PP to Mary].}
\end{align*}

On the other hand, the persuade-type verbs show the sharp contrast with respect to this property. They cannot subcategorize two DPs as its complements, as in (130a) and (130c), nor can they select for an oblique dative object, as in (130b) and (130d).

\[39\] Note that Larson (1991) does not commit himself to any particular view regarding whether an infinitive clausal argument is a CP or VP, and whether the null subject in the infinitive clause is PRO or something else.
Secondly, the \textit{promise}-type verbs also behave similarly to the double object verbs, in that the indirect/Goal argument, but not the direct object, is omissible. That is, when one of the internal arguments of a \textit{promise}-type verb is an infinitive clause, the Goal argument can be deleted as in (131a), but not the infinitival complement, as in (131b). The parallelism between the \textit{promise}-type verbs and the double object verbs becomes clearer if we consider the data in (132): when the two internal arguments of the verb \textit{promise} are DPs, the deletion of the direct object is prohibited, just as in the case of the double object verb \textit{give}.

(131) a. John promised $\emptyset$ to leave.
    b. ??John promised Mary $\emptyset$.

(132) a. John promised/gave $\emptyset$ a donation.
    b. ??John promised/gave the charity $\emptyset$. \hfill Larson (1991: 105)

By contrast, although the \textit{persuade}-type verbs allow for the omission of an infinitive clause, as in (133b), they do not allow the DP object (or the Patient/Theme argument) to be deleted, as in (133a).

(133) a. *John persuaded $\emptyset$ to leave.
    b. John finally persuaded Mary $\emptyset$.
    c. *John forced $\emptyset$ to leave.
    d. John finally forced Mary against her will. \hfill Larson (1991: 106)

Given these pieces of evidence, along with some others not discussed here, Larson (1991) argues that while the \textit{promise}-type verbs fall under double object verbs, the \textit{persuade}-type verbs
do not. Specifically, the underlying structure of the *promise*-type verbs in D-structure is analogous to that of the double object verbs: for example, the sentence *John promised Mary to leave* is represented as in (134a). On the other hand, the sentence *John persuaded Mary to leave* has (134b) as its underlying structure, where *Mary* is the subject of a small predicate *persuade to leave*.

As for the structure in (134a), the verb *promise* and the indirect object *Mary* move up to V₁ and the Spec, VP₂, respectively, later in S-structure. However, after the indirect object *Mary* reaches the Spec, VP₂ in S-structure, the subject is no longer the closest argument to the null subject of the infinitive clause in (134a). For this reason, he suggests that the control dependency must be established in D-structure. In the case of (134b), the verb *persuade* undergoes head movement to V₁ to yield the expected word order in S-structure. Unlike the case of (134a), the indirect object *Mary* is invariably the closest argument to the null subject in both D- and S-structure.

Although Larson’s (1991) idea that the *promise*-type verbs can fall under the double object verbs is quite intuitive, it seems unclear how to technically implement his idea in a way that fits in well with the proposed analysis. To begin with, Larson assumes D-structure and S-
structure, arguing that the control relation must hold in D-structure. But in the minimalist framework adopted here, both D- and S-structure are eliminated due to lack of conceptual necessity (see Chomsky (1995); Hornstein et al. (2005)). The more critical problem seems to be that under Larson’s analysis, the outer object in the double object construction and the infinitive clause in the promise-verb construction in (134a) are regarded as an adjunct adjoined to a V’ node. But it has been widely accepted that adjuncts are opaque domains for extraction in narrow syntax (cf. J. Huang (1982)). Therefore, it would make little sense to argue that the controller John has moved out of an infinitival clause which is in an adjunct position. Moreover, even if we put aside the issue of adjuncthood of the infinitival clause, an additional problem related to ‘cyclicity’ would arise. That is, the movement of John out of the infinitival clause should be followed by that of the verb promise and the indirect object Mary, and this kind of countercyclic derivation is prohibited in the current minimalist framework.

Turning to the second way to resolve the minimality problem with the promise-type control predicate, Hornstein (2003) proposes that the indirect object selected by promise in English is in fact a PP the head of which is a null preposition to be incorporated into the verb later. That is, he observes that other promise-type verbs such as vow and commit subcategorizes a PP and an infinitival complement as in (135). Given the parallelism of these

---

40 Nevertheless, Manzini and Roussou (2000) try to adopt Larson’s (1991) idea in order to handle obligatory control within the minimalist framework.

41 There is another way to approach the apparent minimality problem. Hornstein (1999, 2003) also suggests that the Minimal Distance Principle or Minimal Link Condition is a ‘markedness condition’ for promise-type verbs (cf. Rosenbaum (1967)). According to him, promise-type verbs (e.g., promise, vow, commit) are a marked class in comparison with persuade-type verbs, in that the former type are reported to be harder to acquire than the latter type (Chomsky (1969)), and only a small set of transitive verbs trigger subject control crosslinguistically (cf. Larson (1991)). Therefore, he argues that the promise class needs to be treated as marked control predicates with respect to the minimality constraints, unlike other transitive control verbs like persuade.
verbs with *promise*, he suggests that the verb promise also subcategorizes a PP as its indirect object, as shown in (135b).

(135)  

\[ \begin{align*} 
\text{a. } & I_i \text{ vowed/commited } *(\text{to) } & \text{Bill} [e_{v^*j} \text{ to leave}] \quad \text{Hornstein (2003: 34)} \\
& \text{b. } John [PP P \theta \text{ Mary}] [e_{v^*j} \text{ to leave}] \\
& \text{c. } [vP John [v \text{ promise }] [VP [PP P \theta \text{ Mary}] t_{\text{promise}} [CP ti \text{ to leave}]]] \\
\end{align*} \]

If this is correct, the indirect object *Mary* does not compete with the controller *John* inside the infinitival complement, since the former cannot be closer to the matrix *v* as it fails to c-command into the infinitival clause; therefore, *John* can reach the matrix Spec, *vP* across *Mary* without triggering a violation of the MDP or MLC, as in (135c). Hornstein argues that these examples are analogous to English raising constructions like (136). Unlike many other languages (e.g., Spanish and Icelandic), English allows the lower subject to move across the indirect object to receive an Experience role in the raising constructions (e.g., Chomsky (1995)).

(136)  

\[ \begin{align*} 
& \text{John seemed/appeared} [PP \text{ to Mary}] [TP ti \text{ to be nice}] \\
\end{align*} \]

Extending this idea to the Korean data under discussion, I suggest that the dative Case-marked object subcategorized by the verb *promise* in (103a) is not a DP but a PP.\(^{42}\) Notice, however, that the distribution of dative Case-marked arguments in Korean seems to be wider than that of the oblique phrase, i.e., *to*-phrase, in English. That is, as shown in (137) through (140), the dative Case-marked argument can appear in a variety of environments: they can be a possessor (e.g., (137a)), a Goal (e.g., (138a)), an Experiencer (e.g., (139a)) or an Agent (e.g., (140a)), etc.

\(^{42}\) I have not yet found any other languages where the *promise*-type verb always subcategorizes a PP.
For this reason, one might think that it would be hard to treat the dative Case-marked argument in Korean in a similar way to the to-phrase in English. However, despite the apparent similarity between the dative arguments in their form in (137a)–(140a) above, there is one reason to believe that their categorial status is not identical: in particular, I suggest that in Korean, whether dative Case-marked arguments are DPs or PPs is determined by whether they allow for the alternation of dative Case with a different Case such as nominative or accusative Case. One case that lends support to this idea comes from the contrast between (137b) and (140b). Note that the dative Case of the subject John-eykey in (137a), which is construed as a possessor, can freely alternate
with nominative Case without triggering a change in meaning of the sentence, as in (137b). On the other hand, *kangto-eykey* ‘by a burglar’ in the passive sentence in (140a) is equivalent to the *by*-phrase in English, but cannot appear in nominative nor accusative Case, as in (140b). I attribute this contrast between (137b) and (140b) to the difference in the categorial status of the dative arguments: that is, while the dative argument in (137b) is a DP, the one in (140b) is a PP. Furthermore, the dative arguments in (138a) and (139a) do not allow for Case alternation, either, as in (138b) and (139b), respectively. Thus, we can conclude that they should be categorized as a PP rather than a DP. Returning to (103a), if the suggestion that the indirect object subcategorized by *yaksokha*- ‘promise’ is a PP in Korean is correct, it is predicted that the dative object *Mary-eykey* ‘Mary-DAT’ in (103a) cannot alternate in its Case form. This prediction is indeed borne out, as shown in (141a). One final note is that the case pattern of the indirect object of the verb *promise* is not identical to that of the indirect object of the verb *sultukha*- ‘persuade’, in that only the latter allows for both accusative and dative Case (although there is some variation among the speakers), as in (141b). This contrast seems to suggest that the *promise*-type verbs are different from the *persuade*-type verbs in their subcategorization properties in Korean, an issue I will not further examine here.

\[(141) \begin{align*} 
\text{(a)} \quad & \text{John-}i\text{-un} & \text{Mary}_{j}\text{-eykey}/\text{lul} & [e_{i}\text{ ttena-}kilo] & \text{yaksokhay-ss-ta}. \\
& \text{John-}\text{TOP} & \text{Mary-}\text{DAT/ACC} & \text{leave-}\text{COMP} & \text{promise-}\text{PAST-DECL} \\
& \text{‘John promised Mary to leave.’} \\
\text{(b)} \quad & \text{John}_{i}\text{-un} & \text{Mary}_{j}\text{-eykey}/\text{lul} & [e_{j}\text{ hakkyo-}ey\text{ ka-}\text{tolok}] & \text{seltukhayssta}. \\
& \text{John-}\text{TOP} & \text{Mary-}\text{DAT/ACC} & \text{school-to} & \text{go-}\text{COMP} & \text{persuaded} \\
& \text{‘John persuaded Mary to go to school.’} 
\end{align*} \]

This being said, if we continue the derivation in (127), we end up having (142b), which produces the correct linear order and interpretation for (103a).
a. Move of John to the matrix Spec, TP for NOM Case checking

\[
\text{[TP } \text{John}_{01,03,\text{NOM}} \text{T}^0_{\text{NOM}} \text{TP } <\text{John}_{00,01}> \text{v-pPromised } [\text{VP } \text{Mary}_{02} \text{TP } t\text{promised } [\text{CP2 } <\text{John}_{01}> \text{vP } <\text{John}_{01}> \text{pass the exam}]]]]
\]

b. Chain linearization by Chain Reduction

\[
\text{[TP } \text{John}_{01,03,\text{NOM}} \text{T}^0_{\text{NOM}} \text{TP } <\text{John}_{00,01}> \text{v-pPromised } [\text{VP } \text{Mary}_{02} \text{TP } t\text{promised } [\text{CP2 } <\text{John}_{01}> \text{vP } <\text{John}_{01}> \text{pass the exam}]]]]
\]

3.4.5 Deriving Object Control into tolok-complements

This subsection aims to show how the object control interpretation in the tolok-control constructions can be derived under the Movement Theory of Control (MTC). Just as we did for deriving the subject control interpretation, we are making the assumptions in (114) and (117), which are repeated below for the sake of convenience.

(114)

a. \(\theta\)-roles are features on verbs.
b. Greed is enlightened self interest.
c. A D/NP receives a \(\theta\)-role by checking the \(\theta\)-feature of a verbal/predicative phrase that it merges with.
d. There is no upper bound on the number of \(\theta\)-roles a chain can have.

Hornstein (2001: 37)

(117)

a. Traces are copies of the moved element.
b. All but one copy in the chain CH is deleted at PF by Chain Reduction.

In particular, I will demonstrate that the proposed analysis that appeals to the MTC enables us to capture both forward and backward control in the tolok-control constructions.

3.4.5.1 Controller Choice in Forward Control

Consider the sentence in (103d), repeated below. As we have shown in 3.2.2 and 3.4.2, the tolok-clause in this sentence is an infinitival complement. Thus, there is no reason that keeps us
from applying the movement analysis to derive the object control. Then, the object control interpretation can be obtained by the movement of the controller Mary out of the lower clause.

\[103\text{d. }\text{John-\text{TOP} Mary-\text{ACC} [e\text{-}ij ttena-\text{tolok}] seltukhay-\text{COMP} persuade-\text{PAST-DECL}}\]

‘John persuaded Mary to leave.’

The derivational steps for (103d) can be represented as in (143). It should be noted again that for expository purposes, the linear order here is based on that of the English counterpart, and elements enclosed with angled brackets are copies of a moved element.

\[143\text{Derivational steps for (103d)}\]

1. Merge of Mary for \(\theta\)-feature checking against the embedded verb

\[
[\text{\[vP Mary}_{01}\text{ [vP leave]]}] \\
\]

2. Move of Mary to the lower Spec, TP

\[
[\text{TP Mary}_{01}\text{ T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]] \\
\]

3. Move of Mary to the outer Spec, CP

\[
[\text{CP2 Mary}_{01}\text{ [CP1 [C- }C^0_{\text{tolok}} [\text{TP } \text{<Mary}_{01}\text{> T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]]]]}] \\
\]

4. Merge of the lower CP with the matrix verb

\[
[\text{VP persuaded [CP2 Mary}_{01}\text{ [CP1 [C- }COMP_{\text{tolok}} [\text{TP } \text{<Mary}_{01}\text{> T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]]]]}] \\
\]

5. Move of Mary to the matrix Spec, VP for \(\theta\)-feature checking against the matrix verb

\[
[\text{VP Mary}_{01,02}\text{ [v- persuaded [CP2 } \text{<Mary}_{01}\text{> [CP1 [C- }C^0_{\text{tolok}} [\text{TP } \text{<Mary}_{01}\text{> T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]]]]}]] \\
\]

6. Move of John to the matrix Spec, vP for \(\theta\)-feature checking against the matrix verb

\[
[\text{VP John}_{03}\text{ v- persuade}_{\text{ACC}} [\text{VP Mary}_{01,02}\text{ [v- }t_{\text{persuade}} [\text{CP2 } \text{<Mary}_{01}\text{> [CP1 [C- }C^0_{\text{tolok}} [\text{TP } \text{<Mary}_{01}\text{> T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]]]]}]]] \\
\]

7. Move of Mary to the outer Spec, vP for ACC Case checking against v-persuade

\[
[\text{VP Mary}_{01,02,ACC}\text{ [v- persuade}_{\text{ACC}} [\text{VP Mary}_{01,02}\text{ [v- }t_{\text{persuade}} [\text{CP2 } \text{<Mary}_{01}\text{> [CP1 [C- }C^0_{\text{tolok}} [\text{TP } \text{<Mary}_{01}\text{> T}^0 [\text{TP } \text{<Mary}_{01}\text{> leave}]]]]}]]] \\
\]

\[250\]
h. Move of *John* to the matrix Spec, TP for NOM Case checking

\[
[T_P \text{John}_{03, \text{NOM}}, T^0 \text{Spec}, \text{TP} [v_P <\text{John}_{03}> \text{V-\text{persuade}}_{\text{ACC}} [v_P <\text{Mary}_{01, 02}>]]] \\

[\text{v'} _\text{tpersuade} [\text{CP}_2 <\text{Mary}_{01}>] [\text{CP}_1 [C^0 _\text{tolok} [T_P <\text{Mary}_{01}> T^0 [v_P <\text{Mary}_{01}> \text{leave}]]]]]
\]

\[\text{i. Chain linearization by Chain Reduction}\\
[TP \text{John}_{03, \text{NOM}}, T^0 \text{Spec}, \text{TP} [v_P <\text{John}_{03}> \text{V-\text{persuade}}_{\text{ACC}} [v_P <\text{Mary}_{01, 02}>]] \\
[\text{v'} _\text{tpersuade} [\text{CP}_2 <\text{Mary}_{01}>] [\text{CP}_1 [C^0 _\text{tolok} [T_P <\text{Mary}_{01}> T^0 [v_P <\text{Mary}_{01}> \text{leave}]]]]]
\]

At the first step in (143a), the controller *Mary* is merged with the verb in the *tolok*-complement, and acquires a θ-feature from the verb by checking the feature against it. At the second step, the same DP moves up to the Spec, TP position, as in (143b), and raises further up to the outer Spec, CP (labeled CP_2), as in (143c). I suggested in 3.4.4.1 that the complement CP in Korean can optionally have an extra layer, which is an A-position, and a DP can move into an A-position in the matrix clause through this position without violating the ban on improper movement. At the next step, the matrix verb *seltukha*- ‘persuade’ is combined with the *tolok*-complement, as in (143d). After that, the controller *Mary* can undergo Move to the matrix Spec, VP for checking another θ-feature against the matrix verb, as in (143e). An acute reader might notice that just as in the case of (103a), which was discussed in 3.4.4.2, there could be an alternative way to expand the structure from step (143d): that is, since *John* in the numeration has not yet been exhausted in the derivation, it can be taken out of the numeration and merged into the matrix Spec, VP, as in (144). Furthermore, this alternative option appears to fit better into the standard assumption that *Merge* is less costly than *Move* (Chomsky (1995, 2000, 2001a,b))

(144) Merge of *John* to the matrix Spec, VP (Alternative continuation of (143c))

\[
[\text{VP} \text{John}_{02} [\text{v'} \text{persuaded} [\text{CP}_2 \text{Mary}_{01}] [\text{CP}_1 [C^0 _\text{tolok} [T_P <\text{Mary}_{01}> T^0 [v_P <\text{Mary}_{01}> \text{leave}]]]]]]
\]
However, if we opted for Merge of John at this point, since it is the only argument in the matrix clause, John would move all the way up to the matrix Spec, TP; as a result, we would wind up with an incorrect reading like ‘John persuaded himself that Mary would leave.’ For this reason, the option of merging John with the matrix verb is excluded, and instead, Mary in the Spec, CP₂ should be raised to the matrix Spec, VP, as shown in (143e).

Subsequently, an argument has to be merged into the Spec, VP for checking another θ-feature of the matrix verb, and since John has not been taken out of the numeration, it can be selected and merged into the target position, as in (143f). At the next step, Mary moves up to the outer Spec, vP for checking accusative Case against v⁰-promise. Notice that I assume that this kind of overt movement for accusative Case checking is (optionally) required only for Korean, since Case features are acquired by establishing a local configuration for feature checking (Chomsky (1993)) rather than for Agree (Chomsky (2000, 2001a,b)); on the other hand, in other languages like English, both uninterpretable Case and φ-features, but not θ-features, can be valued and deleted by Agree, and thus, Move of the object does not necessarily apply for accusative Case checking. Note also that since Korean is a head-final language, even though the indirect object moves up to the outer Spec, vP for Case reasons, as in (143g), it can never precede the matrix verb persuade, a welcome result. ⁴³ After that, the controller moves up to the matrix Spec, TP and checks nominative Case against the finite T⁰, as in (143h). Once the derivation ends in narrow syntax, Chain Reduction applies to the copies of John and Mary at PF, producing the correct linear order for (103d), as in (143i).

⁴³ The actual linear order for the step in (143g) can be roughly represented as follows:

(i) [vP Mary [vP John [vP <Mary> [CP₂ <Mary> [CP₁ [TP <Mary> [vP <Mary> leave]] C-tolok]] t persuaded]] v-persuaded]
To sum up, as in the cases of subject control constructions like (103a-c), the controller choice in the object control construction involving the *tolok*-clause is made by A-movement, which is an answer to (3c); put it differently, the OC dependency can be reduced to the A-chain relation, as stated in (4). As for the question in (3b), the controlled subject inside the *tolok*-clause is defined as a copy left behind by A-movement of the controller. To the extent that this is correct, it can be concluded that the proposed analysis adopting the MTC is conceptually superior to comparable approaches like the PRO theory of control, since, more than anything else, we do not need to postulate the control module for controller choice or a theory-internal formative PRO, etc. Under the MTC, since OC relations are closely related to the structure of control sentences and derivations, the illegitimate OC interpretations can be ruled out by a small set of grammatical principles such as the Minimal Link Condition. In the upcoming subsection, it will be demonstrated that the current analysis is empirically superior as well, in that it can capture the availability of backward control in the *tolok*-control constructions in Korean.

3.4.5.2 Cyclic Linearization and Controller Choice in Backward Control

In sentences like (103d), the Theme argument of the verb *seltukha*- ‘persuade’ can appear not only in accusative Case but also in nominative Case, as in (145a). As discussed in 3.3.2.2, it has been argued in the literature that this is an instance of backward control where the controller occupies the structurally lower position than the controllee, as represented in (145b) (Monahan (2003), Kwon and Polinsky (2006)).

    John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
    ‘John persuaded Mary to leave.’

    John-TOP Mary-NOM leave-COMP persuade-PAST-DECL
In the same subsection, it was shown that a number of diagnostics using adverb placement, scrambling and omission of the tolok-clause point to the conclusion that the nominative Case-marked element stays put in the tolok-clause. In addition, the requirement for Case matching between a postnominal quantifier and its head noun was taken as the evidence that there is a null category in the matrix clause. We also discussed that the availability of a nominative Case-marked subject in the infinitival clause and the presence of a null category referentially linked to the subject cast doubt on versions of PRO theory of control. However, this pattern of control can be easily predicted by the movement approach, and I will show how the pattern at stake can be handled by the movement analysis.

Notice that my analysis of the backward control case shares certain assumptions with Monahan’s (2003), as both analyses draw on Hornstein’s Movement Theory of Control. Nonetheless, as discussed in 3.3.2.2, Monahan’s analysis has some issues to be resolved: for example, he stipulates that Spell-Out applies to the tolok-clause only in the case of backward control, and the nominative Case-marked subject of the tolok-clause undergoes covert movement after Spell-Out, etc. In order to avoid these problems, I make the following suggestions.

(146) a. A T₀ node in the infinitival clause may optionally value the Case feature of a DP.⁴⁴

As mentioned in 3.4.4.1, an embedded subject in the Raising-to-Object (RTO) construction in Korean exhibits Case alternations, as in (i) below. In Chapter 4, I argue that the Case alternations reflect the structural position of a Case-alternating DP: that is, the nominative Case-marked subject in (ia) stays put in the embedded clause, while the accusative Case-marked subject in (ib) has moved into the matrix clause where it can get accusative Case. Furthermore, I assume that the movement of the lower subject is driven by the need to check an accusative Case feature, but the accusative Case feature on the matrix v₀ is optionally specified. Then, my view on Case alternations amounts to saying that the Case alternations in both the RTO and tolok-constructions in Korean are possible since either the matrix v₀ or the infinitival T₀ can optionally bear a Case feature.

    John-TOP      Mary-NOM  be.smart-DECL-COMP    believe-PRES-DECL
    ‘John believes that Mary is smart.’
b. Chain Reduction must apply cyclically to a chain with multiple θ-features if the chain contains more than a Case feature.

c. Only copies that bear both Case and θ-features can survive deletion by Chain Reduction for linearization.

The first suggestion in (146a) is based on the traditional view on nominative Case in Korean. According to this view, Korean employs nominative Case as a default case where no other Case features are available (e.g., Y. Kang (1988), Y. Kim (1990), Schütze (1997), *inter alia*). But I reinterpret this view from a derivational perspective here, by saying that the infinitival T⁰ can optionally check nominative Case in the course of a derivation.⁴⁵

As for the second suggestion in (146b), I have assumed so far that Chain Reduction for chain linearization applies to copies in a chain after all the syntactic operations like Move and Merge have applied in narrow syntax. However, given the standard assumption that a chain can be defined as a set of syntactic objects created by movement, one of which is in a θ-position and another of which is in a Case position (Chomsky (1986b, 1995), among others), nothing seems to preclude us from assuming that Chain Reduction can apply to a chain for linearization if the copies of the chain are uniform with respect to θ-features and one of them obtains a Case feature. To the extent that this line of thinking is correct, chain linearization always takes place in one fell swoop in English, as it never allows cases where a chain ends up with more than a Case feature.⁴⁶ In Korean, on the other hand, the backward control case belongs to such cases where a...
chain contains more than a Case feature. Therefore, although the copies of a moved element constitute a single chain on the LF side, it is required that chain linearization take place at PF every time any of the copies with the same $\theta$-feature in a chain gets its Case feature valued, satisfying the standard condition for chain formation—namely, at least one member must be in a Case position while another member being in a $\theta$-position. Furthermore, notice that in languages permitting multiple Case checking, the syntactic domain where Case assignment/checking is possible coincides with $vP$ and $CP$, which are known to be ‘phases’ (Chomsky (2000, 2001a,b)). This means that if chain linearization applies cyclically, it should be done by phase. However, there is one caveat: whether Chain Reduction for linearization can cyclically apply to a chain created in a phase is determined when the next higher phase is completed. This is because Chomsky’s (2001a) phase interpretation/evaluation principle in (147) requires that (the domain of) the lower phase be spelled-out only when the next higher phase is completed.

\begin{equation}
\text{(147) PH1 is interpreted/evaluated at next relevant phase PH2.} \quad \text{Chomsky (2001a: 14)}
\end{equation}

Finally, the third idea in (146c) is borrowed from Nunes (2004). According to his system of chain linearization, Chain Reduction must not delete a copy which has checked a higher number of uninterpretable features due to economy considerations. I have implicitly assumed this idea for chain linearization so far, and as shown in (142) and (143), the copies that are not allowed (and in fact, necessary). In particular, he takes seem-like constructions like (i) below to belong to such cases. He suggests that the pronominal subject inside the lower clause is the morphological spell-out of a copy left behind by A-movement of the matrix subject, and proposes that Chain Reduction should apply cyclically in order to derive these sentences correctly. I will not attempt to evaluate his analysis here, so interested readers are referred to Fujii (2007) for more discussion.

(i) a. Mary$_1$ seems [as if she$_1$ is intelligent].
b. This car$_1$ looks [like it$_1$ is difficult to drive].
c. [Naomi and Bill]$_1$ seem to me [as if they$_1$ are in trouble].
d. This building$_1$ appears [as though it$_1$ is under construction]. \quad \text{Fujii (2007: 295)}
deleted by Chain Reduction bear a higher number of formal features, including both \( \theta \)-features and Case features, than the other chain members. Therefore, if Chain Reduction applies multiple times, a copy with a higher number of features must be preserved in a chain created in each phase. This means that the number of surviving copies is identical to the nume of times Chain Reduction applies: for example, if Chain Reduction applies twice to a chain created in a lower phase and another one produced in a higher phase, at least two copies can in principle survive. However, one of the surviving copies must also be deleted to avoid a contradiction in word order, and the way one of them is deleted will be discussed shortly.

Given the suggestions in (146), the reason the copy of *Mary* in the lower subject position must be preserved in the backward control case can be readily explained. Let us consider the step-by-step derivations for the backward control case in (145b). Note that the same conventions regarding the word order and representation of the copies hold for this derivation.

(148) Derivational steps for (145b)

a. Merge of *Mary* for \( \theta \)-feature checking against the embedded verb

\[
[\ellvP \text{Mary}_{\theta_1}] \quad [\text{VP leave}]
\]

b. NOM Case checking by Move of *Mary* to the lower Spec, TP

\[
[\text{TP}\text{Mary}_{\theta_1,\text{NOM}} \ellT^0 <\text{VP} <\text{Mary}_{\theta_1}> \text{leave}>]
\]

c. Move of *Mary* to the outer Spec, CP

\[
[\ellCP^2 \text{Mary}_{\theta_1}] \quad [\ellCP^1 \ellC' \ellC^0 \elltolok [\ellTP <\text{Mary}_{\theta_1,\text{NOM}}> \ellT^0 <\ellvp <\text{Mary}_{\theta_1}> \ell\text{leave}>]]]
\]

d. Merge of the lower CP with the matrix verb

\[
[\ellvp \text{persuaded} [\ellCP^2 \text{Mary}_{\theta_1}] [\ellCP^1 \ellC' \ellCOMP \elltolok [\ellTP <\text{Mary}_{\theta_1,\text{NOM}}> \ellT^0 <\ellvp <\text{Mary}_{\theta_1}> \ell\text{leave}>]]]]]
\]

e. Move of *Mary* to the matrix Spec, VP for \( \theta \)-feature checking against the matrix verb

\[
[\ellvp \text{Mary}_{\theta_1,\theta_2}] \quad [\ell\ellvP \ell\text{persuaded} [\ellCP^2 <\text{Mary}_{\theta_1}>] [\ellCP^1 \ellC' \ellCOMP \elltolok [\ellTP <\text{Mary}_{\theta_1,\text{NOM}}> \ellT^0 <\ellvp <\text{Mary}_{\theta_1}> \ell\text{leave}>]]]]]
\]
As illustrated above, the derivational steps for the backward control case in (145b) are different from those for the forward control case in (103d) (presented in (143)), in that the non-finite T0 is specified for [NOM] only in the former. At the first step, just as in the forward control case, Mary is merged with the lower predicate and receives a θ-feature by checking it, as in (148a). However, at the next step, the infinitive T0 enters the derivation with a nominative Case feature specified, as stated in (146a), and Mary checks this feature via Move into the Spec, TP position, as in (148b). At the third step, Mary further moves up to the outer Spec, CP position but strands the nominative Case feature in the embedded Spec, TP, as illustrated in (148c). I adapt this idea from Béjar and Massam (1999) which claim that only languages allowing for multiple Case checking (MCC) can take this option.47 Although they do not explicitly include Korean as an

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47 Béjar and Massam (1999) provide a typological survey on multiple Case checking (MCC) in a number of languages (e.g., Hungarian, Niuean, Norwegian, Icelandic, etc.). In particular, they investigate constructions where raising out of a Case position is allowed. Observing that such type of raising accompanies MCC, they make the claim that whether MCC is permissible in a certain language is correlated with whether the language allows for Case stranding. See Béjar and Massam (1999) and
instance of such languages, I argue that Case stranding is available also in Korean as it permits raising out of a finite clause in the construction known as the Raising-to-Object (RTO) construction (cf. Tanaka (2003) for Japanese).

At the next step, the lower CP is merged with the matrix verb *seltukha*—‘persuade,’ as in (148d). Subsequently, *Mary* undergoes Move to the matrix Spec, VP, checking a second θ-feature against the matrix verb, as in (148e). After that, *John* is merged into the matrix Spec, vP, as in (148f), where it checks a θ-feature against the same verb. Recall that because of the phase interpretation/evaluation principle in (147), we can determine at this point whether Chain Reduction has to apply cyclically or in one fell swoop. Unlike the forward control case, the copies of the DP *Mary* are uniform with respect to their θ-feature (labeled θ₁ here) and one of them has already acquired a Case feature inside a lower phase, namely, the embedded CP. Thus, the condition for cyclic application of Chain Reduction in (146b) forces it to apply only to the chain of *Mary* created in the downstairs clause, which I represent as “CH₁(Mary) = <Maryθ₁, Maryθ₁,NOM, Maryθ₁>.” In particular, when Chain Reduction targets the chain of *Mary* in the downstairs clause, only the copy in the lower Spec, TP position can be kept undeleted, as in (148g), since it has more features than the other two copies in CH₁(Mary), thus respecting the condition for copy deletion in (146c).

Then, the derivation continues, raising *Mary* further to the outer Spec, vP for checking accusative Case, as in (148h), and then, *John* also undergoes Move to the Spec, TP for checking nominative Case, as in (148i). Since every syntactic operation has applied in the higher phase, the last step is to apply Chain Reduction at PF. But notice that we need to apply Chain Reduction twice at PF in the higher phase, one for the chain of *John* and another for the second

Chapter 4 of this dissertation for more information.
chain of *Mary*, respectively. This is because the chain created by Move of *Mary* in the higher phase consists of the copies which are uniform with respect to their \( \theta \)-features (i.e., \( \theta_1 \) and \( \theta_2 \)) and one of them ends up being in another Case position, namely in the outer Spec, \( \nu P \). This chain will be represented as “\( \text{CH}_2(\text{Mary}) = <\text{Mary}_{01,02}, \text{Mary}_{01,02,\text{ACC}} > \)” It seems straightforward that in the case of the chain of *John*, it is the highest copy in the matrix Spec, TP that should be kept undeleted by Chain Reduction, as in (149a), since it has more features than the other copy.

(149)  

a. Linearizaion of the chain of the copies of *John* with \( \theta_3 \)

\[
\begin{align*}
[\text{TP John}_{03,\text{NOM}} & \ T^0_{\text{NOM}} \ [\nu P \ <\text{Mary}_{01,02,\text{ACC}} \ > \ v-\text{persuade}_{\text{acc}} \ [\nu P \ <\text{Mary}_{01,02}> \\
[\nu v \ t_{\text{persuade}} \ & \text{CP}_{2} <\text{Mary}_{01}> \ [\text{CP}_{1} \ [C' \ C_{0} \ \text{to} \text{lok} \ [\text{TP} \ <\text{Mary}_{01,\text{NOM}} > \ T^0_{\text{NOM}} \ [\nu P <\text{Mary}_{01}> \\
& \ \text{leave}]]]]]]]\end{align*}
\]

b. Linearizaion of the chain of the copies of *Mary* with \( \theta_1, \theta_2 \)

\[
\begin{align*}
[\text{TP John}_{03,\text{NOM}} & \ T^0_{\text{NOM}} \ [\nu P \ <\text{Mary}_{01,02,\text{ACC}} \ > \ v-\text{persuade}_{\text{acc}} \ [\nu P \ <\text{Mary}_{01,02}> \\
[\nu v \ t_{\text{persuade}} \ & \text{CP}_{2} <\text{Mary}_{01}> \ [\text{CP}_{1} \ [C' \ C_{0} \ \text{to} \text{lok} \ [\text{TP} \ <\text{Mary}_{01,\text{NOM}} > \ T^0_{\text{NOM}} \ [\nu P <\text{Mary}_{01}> \\
& \ \text{leave}]]]]]]]\end{align*}
\]

On the other hand, as for the second chain of *Mary*, i.e., \( \text{CH}_2(\text{Mary}) \), both copies should be deleted by Chain Reduction, as shown in (149b) (where the double strikethrough indicates the deleted copies of *Mary* in the higher phase); otherwise, a contradiction would arise in linear order between the surviving copies of *Mary*. That is, if the higher copy in \( \text{CH}_2(\text{Mary}) \) remains undeleted, we end up with two copies of the identical form—one in the embedded Spec, TP and another in the outer Spec, \( \nu P \). As a result, the PF component cannot fix the appropriate linear order, since *Mary* both precedes and follows *Mary*. In order to avoid this word order paradox, it might be possible to delete either the surviving copy in \( \text{CH}_1(\text{Mary}) \) or the one in \( \text{CH}_2(\text{Mary}) \). However, if we leave out the former copy, maintaining the latter one, we would encounter another contradiction: that is, a syntactic object that precedes *Mary* in the lower phase may end up following the same DP in the higher phase.
It would be hard to see this effect in the sentence under discussion, as Korean is a head-final language. However, examples like (150) seem to make the point very clearly. That is, (150) is almost identical with (145b) except that a temporal adverb precedes Mary-ka ‘Mary-NOM’ in the tolok-clause. Since Mary in the lower clause gets its Case feature valued, Chain Reduction can cyclically apply to the chain in the lower phase. Then, the resulting linear order would look like (150a) where the temporal adverb onul ‘today’ precedes Mary. But if Chain Reduction applies to the second chain of Mary in the higher phase, this time keeping the highest copy undeleted, the temporal adverb onul would be preceded by Mary, as in (150b). This is an unwelcome result, as the linear order fixed in the lower phase is reversed in the higher phase.48

yesterday John-TOP today Mary-NOM leave-COMP persuaded
‘Yesterday, John persuaded Mary to leave today.’

a. Linear order in the lower phase: onul < Mary
b. Linear order in the higher phase: Mary < onul
→ Contradiction in linear order between onul and Mary

In order is a brief comment on how the referential dependency between the nominative Case-marked subject in the lower clause and the null copy in the higher clause is established. Although Chain Reduction applies to the chains of Mary, keeping only one of the copies

48 It seems that this idea may gain support from the Principle of Cyclic Linearization suggested by Fox and Pesetsky (2005). They suggest this principle in order to prohibit a contradiction between the linear order fixed in the previous spell-out domain and that in the next spell-out domain. Their core ideas underlying this principle can be summarized as follows:

(i) a. Linearization of syntactic structure applies cyclically, to spell-out domains (phases).
b. Spell-out domains are CP, VP/vP, and DP.
c. Linearization adds new ordering statements to the set of statements established by the linearization of previous spell-out domains.
d. A new ordering statement generated in a spell-out domain must not contradict an ordering statement of a previous spell-out domain.

as represented in Müller (2007)
undeleted at PF, all the copies of Mary in both chains are accessible to the LF component. Therefore, the surviving copy in the lower clause is correctly interpreted as coreferential with the null copy in the outer Spec-vP position.

3.5 Conclusion

In this chapter, I have provided a syntactic account for infinitival control in Korean under the framework of Hornstein (1999, 2001, 2003). The core data discussed in this chapter are provided in (151) and (152) below.

(151) SUBJECT CONTROL INTO INFINITIVE CLAUSE
   John-TOP Mary-DAT leave-COMP promise-PAST-DECL  
   ‘John promised Mary to leave.’

   John-TOP exam-at pass-COMP try-PAST-DECL  
   ‘John tried to pass the test.’

   John-TOP college-to pass-COMP want-PAST-DECL  
   ‘John wanted to pass the test.’

(152) OBJECT CONTROL INTO INFINITIVE CLAUSE
   John-TOP Mary-ACC leave-COMP persuade-PAST-DECL  
   ‘John persuaded Mary to leave.’

   John-TOP Mary-NOM leave-COMP persuade-PAST-DECL  
   ‘John persuaded Mary to leave.’

Unlike the previous approaches to these constructions, this chapter has thoroughly examined the syntactic structure of the embedded clauses as well as their tense properties. As mentioned at the beginning of this chapter, making a proper characterization of these constructions is very
important in order to appropriately test the fundamental hypothesis proposed in this dissertation: namely that controlled subjects in control complements are not be homogeneous, and whether they are PRO, pro, or an A-trace is contingent upon the nature of the syntactic structure of the complement clauses where they appear. It was clearly shown that the four embedded clauses in (151) and (152) can be best defined as infinitival clauses headed by the complementizers in terms of three suggested diagnostics such as (i) whether tense or aspectual markers can be attached to the verb, (ii) whether the clauses can be uttered as a root clause, and (iii) whether cause-typing markers are allowed. I also demonstrated with a couple of tests that the infinitival clauses headed by -kilo, -lyeko and –koca in (151a-c) cannot be treated in the same way as serial verb constructions (SVCs) or auxiliary verb constructions (AVCs). In a similar vein, the infinitival clauses headed by –tolok in (152a-b) cannot be identified with resultative or syntactic causative constructions. Then, by applying six standard diagnostics for obligatory control (OC), I showed that the infinitival complements in (151) and (152) are OC complements.

Having identified the exact syntactic nature of the infinitival complement clauses in (151) and (152) above, I sought to find appropriate answers to the following three questions.

(153) a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
    b. What are controlled subjects? (Categorial status of controlled elements)
    c. How are controllers determined? (Controller choice)

For this purpose, I surveyed a number of previous works on these infinitival constructions, trying to figure out which analysis makes a better prediction for the data. I showed that most of the previous studies suffer from some problems: for example, only a mere generalization is made about the way controlled subjects are interpreted in the kilo-, lyeko- and koca-complements (S. Kim (1994)), the complementizer –lyeko is miscategorized as clause-typing markers like the
imperative clause marker –la (Madigan 2008b), and the tolok-control constructions are mistakenly identified with causative constructions (K. Kim (1995), Madigan (2008b)), etc. On the other hand, it turned out that Monahan’s (2003) analysis which capitalizes on Hornstein’s (1999) Movement Theory of Control (MTC) provides a plausible account for the so-called backward control in the tolok-control constructions. So I extended his analysis not only to the tolok-control constructions in (152) but also to the three subject control constructions in (151). In particular, in answering the questions about the controller choice and categorial status of controlled subjects in (153b) and (153c), respectively, I adopted the following hypothesis from Hornstein (1999, 2001, 2003).

(154) Obligatory control in infinitival control contexts in Korean can be reduced to A-chain relations.

The logic underlying this hypothesis is that if a controlled subject appears in a syntactically transparent environment, namely, in an infinitival complement, which is not a syntactic island, the control dependency is in fact the by-product of A-movement of the controller. If this is correct, we can have a more optimal grammar, in that it is not necessary to postulate PRO, a theoretical formative, the PRO Theorem or null Case assignment as a licensing condition for PRO, and the control module as a locus where the control interpretation is achieved. Given this hypothesis, I adopted a few assumptions from Hornstein’s MTC, and one essential assumption is that θ-roles are formal features to be checked.

Furthermore, drawing on Nunes (2004), I suggested that once every syntactic operation ends, a chain created by Move must undergo deletion at PF for linearization, and that Chain Reduction, a PF deletion operation, deletes the copies of a chain except for one copy which has the highest number of checked formal features. Under this system, the forward control cases in
(51a-c) and (52a) are naturally dervied. However, to avoid the problems with Monahan’s (2003) movement analysis of the backward control case in (52b), I proposed that chain linearization must apply in a cyclic way by phase, since the *tolok*-control construction permits a Case position in each phase—i.e., the outer Spec, vP in the higher phase and the Spec, TP in the lower phase. After Chain Reduction applies to the chains of *Mary* in both phases, one copy is supposed to survive in each chain. Then, since a contradiction in linear order relative to the other syntactic objects arises, the surviving copy in the chain created in the higher phase must be deleted, yielding the correct order for (152b).

In conclusion, our hypothesis for the controller choice in (154) was proven to be correct, and the questions in (154c) and (154b) can be readily answered: that is, the control dependency can be derived by A-movement of the controller in the infinitival control constructions, and it follows that a null subject referentially connected to the controller is an A-trace—more precisely, a copy left behind by A-movement of the controller. As for the licensing condition for the controlled subject, I have shown in 3.4.3 that the infinitival complements in (151) and (152) have unrealized tense with respect to the tense of the matrix clauses.
Chapter 4  
Word Order Asymmetry between Obligatory Control and Raising to Object Constructions in Korean

4.1 Introduction

4.1.1 Case Alternations, Scrambling and Word Order Asymmetry in RTO and OC

In the last three decades, it has been observed in the literature on Korean syntax that a single DP may take different forms of Case without changing the truth-conditional meaning of a sentence in constructions like Raising-to-Object (RTO) and Obligatory Control (OC) constructions (Y-H Kim (1985), J. Lee (1992), K-H Kim (1994), J. Yoon (1996), S. Hong (2005) for RTO; Monahan (2003), Kwon and Polinsky (2006) for OC). For example, the embedded subject in the RTO construction (in Postal’s (1974) sense) and the controller in the OC construction can appear in nominative or accusative Case, as in (1a) and (1b), respectively.\(^1\)

\[(1) \quad \text{a. John-}i \quad \text{Mary-}ka/lul \quad \text{yeppu-ess-ta-ko} \quad \text{sayngkakhay-ss-ta} \]
\[
\text{John-NOM} \quad \text{Mary-NOM/ACC} \quad \text{be.pretty-PAST-DECL-COMP} \quad \text{think-PAST-DECL} \\
\text{‘John thought that Mary was pretty.’}
\]

\[(1) \quad \text{b. John-}i \quad \text{Mary-}ka/lul \quad \text{ttena-tolok} \quad \text{selukhay-ss-ta}. \]
\[
\text{John-NOM} \quad \text{Mary-NOM/ACC} \quad \text{leave-COMP} \quad \text{persuade-PAST-DECL} \\
\text{‘John persuaded Mary to leave.’}
\]

In the RTO construction in (1a), the embedded subject *Mary* is marked with nominative Case – *ka* or accusative Case – *lul*, but both sentences are interpreted in the same way.\(^2\) Likewise, in the

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1 The same observation has been made on the RTO construction in Japanese (Kuno (1976), Saito (1985), Tanaka (1998), and Hiraiwa (2003), *inter alia*). However, it is reported that the controller in the OC construction does not exhibit the same type of Case alternation in Japanese as in Korean.

2 In fact, it is not uncontroversial whether Case-alternating DPs receive different interpretations in the RTO construction, and there is a different view on this issue in the literature. In particular, observing that elements other than subjects in the embedded clause exhibit Case alternations, as in (i) below, some researchers claim that the raised objects are interpreted as a discourse topic or theme which the lower
OC construction in (1b), it is possible to switch the Case form of the controller *Mary* without triggering a meaning difference between the two sentences.

To my knowledge, however, no one has provided a discussion at full length about the fact that although the two constructions appear to pattern alike regarding Case alternations, when a syntactic operation called ‘scrambling’ alters their word orders, they do not behave in the same way. On the one hand, in the case of the RTO construction, regardless of the Case form of the embedded subject, the sentences do not allow scrambling of the complement clause with the embedded subject stranded. (2a) exemplifies the case where local scrambling of the complement clause is prohibited when the nominative Case-marked subject is stranded, and (2b) corresponds to the instance where the same operation fails to front the complement clause by leaving the accusative Case-marked subject behind.

(2)  a. PATTERN 1 (with NOM-marked subject stranded)

\[
\begin{align*}
\text{[yeppu-ess-ta-ko]}, & \quad \text{John-i} \quad \text{Mary-ka} \quad t_i \quad \text{sayngkakhay-ss-ta.} \\
\text{be.pretty-PAST-DECL-COMP} & \quad \text{John-NOM} \quad \text{Mary-NOM} \quad \text{think-PAST-DECL} \\
\text{Lit. ‘[was pretty], John thought Mary t_i’}
\end{align*}
\]

(b) The native speakers of Korean I consulted do not have consistent judgments on the difference in meaning between the raised and non-raised DPs in the RTO construction. So, abstracting away from this debate, the scope of this chapter will be limited to cases like (1a), leaving it open for future research how cases with a raised non-subject element like (ia,b) can be analyzed.

(i) a. INITIAL NP IN POSSESSION-TYPE MULTIPLE NOMINATIVE CONSTRUCTION

Na-nun Cheli-lul meli-ka coh-ta-ko mit-nun-ta.
I-TOP Cheli-ACC head-NOM be.good-DECL-COMP believe-PRES-DECL
‘I believe Cheli to be smart.’

b. INITIAL SCENE-SETTING ADVERBIAL NP (LOCATIVE ADVERB)

Na-nun L.A.-lul (mikwuk-eyse) hankwuksalam-i kacang
I-TOP L.A.-ACC U.S.A.-in Koreans-NOM most
manhi sa-n-ta-ko mit-nun-ta.
many live-PRES-DECL-COMP believe-PRES-DECL
‘I believe L.A. has the greatest number of Koreans in the U.S.’

J. Yoon (2007)
On the other hand, in the case of the OC construction, if we apply scrambling to the complement clause with the controller stranded, we have different results depending on the Case form of the stranded controller. For instance, as shown in (3a), when the controller is nominative Case-marked, the sentence becomes bad if the complement clause is scrambled, leaving the controller behind. By contrast, as represented in (3b), when the controller is accusative Case-marked, the sentence maintains its grammaticality even though the complement clause has been scrambled without pied-piping the controller.

4.1.2 Goals and Claims

The research questions that this chapter will address are motivated by the novel observation described in the previous subsection, namely that local scrambling of a complement clause without pied-piping a Case-alternating DP invariably renders the RTO sentences ungrammatical, as in (2), while the same operation brings about diverging results in the OC sentences, as in (3). Specifically, the primary goal of this chapter is to answer the two questions in (4a) and (4b).
(4) a. How can a single DP optionally appear in different Case forms without changing the truth-conditional meaning of a sentence in both the RTO and OC constructions?
b. Where does the asymmetry between the RTO construction in (2) and the OC construction in (3) come from?

Regarding the first question in (4a), one might argue that a certain DP can receive two different Case values in the same structural position. If it is correct, at least two different Case-assigning heads should be accessible to the DP at the same time. However, it is in principle impossible for more than a Case-assigning head to compete for a single DP in the standard Case theory couched within Government-Binding (GB) theory (Chomsky (1981, 1986)) and the Minimalist Program (MP) (Chomsky (1995, 2000, 2001a,b)). This is because it is assumed in those frameworks that the structural Case of a DP can only be assigned (or checked) by a local functional head—for example, nominative Case is assigned by finite T⁰ to the specifier position of TP and accusative Case by a transitive verb to the complement position of the verbal head.³

For this reason, this chapter claims that the Case forms of a Case-alternating DP in both the RTO and OC construction are correlated with its structural position (cf. Y-H Kim (1985), K-H Kim (1994), J. Lee (1992), S. Hong (2005), J. Yoon (1996) for the RTO construction; Monahan (2003), Kwon and Polinsky (2006) for the OC construction). The implications of this claim are non-trivial. First, if the source of accusative Case is a transitive verb, the subject marked with accusative Case in the RTO construction must be able to move from a Case position where nominative Case is assigned by finite T⁰ to another Case position where accusative Case is available. However, in the Minimalist Program, it is stipulated (in terms of either the Chain Condition in Chomsky (1995) or the Activation Condition in Chomsky (2000, 2001a,b)) that once a DP is assigned Case, it cannot undergo further movement, particularly, into another Case position.

³ As for the terminology, this chapter will continue to use either Case assignment or checking as long as there is a local relationship between a Case-assigning head and a DP that receives Case.
position. Therefore, if the claim that Case alternation in the RTO construction reflects the structural position of the Case-alternating DP is correct, it can be a challenge for the standard Case theory. Although tentative, a few possible solutions to this problem will be discussed in Section 4.2.

Second, as extensively discussed in Chapters 2 and 3, the so-called backward control sentences where the controller DP appears in the downstairs clause and is assigned nominative Case calls for an alternative analysis to the PRO theory of control. Given that object control verbs such as *seltukha-* ‘persuade’ or *myenglyengha-* ‘order’ obligatorily select for two internal arguments and that nominative Case is not normally assigned by a transitive verb, an implicit argument (traditionally treated as ‘PRO’) that receives reference from the nominative Case-marked controller should be postulated in the matrix clause. However, in the standard PRO theory of control (Chomsky (1981, 1986)), the PRO Theorem prohibits PRO from being in a governed position. Therefore, we would incorrectly predict that the *tolok*-control sentence with the nominative Case-marked controller in Korean is ungrammatical. Likewise, under the null Case approach (Chomsky and Lasnik (1993), Martin (1996)), PRO must receive a special kind of Case called ‘null Case’ from a non-finite $\text{T}^0$ specified $[+\text{TENSE}]$, but there seems to be no way for the null argument to get a null Case in the object position of the upstairs clause. In order to avoid this kind of theory-internal problem, just as does Chapter 3, this chapter also adopts the movement approach to OC (Hornstein (1999, 2001, 2003)).

Turning to the second research question in (4b), I will divide the data in (2) and (3) into two patterns in terms of the Case form of the stranded DP. Then, I will argue that the ungrammaticality of both (2a) and (3a) (labeled ‘PATTERN 1’) is due to a violation of the ban on the movement of a non-constituent (D. Chung (2009) for the Korean RTO; cf. Radford (1988))
for general discussion of this constraint). On the other hand, I will propose that the asymmetry between (2b) and (3b) (labeled ‘PATTERN 2’) can be explained in terms of the difference between the accusative Case-marked DPs in their landing sites. To this end, building on Hiraiwa (2003, 2010), I will make a slight modification to Chomsky’s (2000, 2001a,b) phase-based theory of locality, and show that a revised version of the Phase Impenetrability Condition (PIC) gives us a principled account for why the difference in the landing site between the Case-alternating DP in (2b) and the one in (3b) leads to the difference in grammaticality. Simply put, the accusative Case-marked DP in the RTO construction moves to a position which renders the complement CP spelled-out and inaccessible to scrambling, while the one in the OC construction raises to a relatively lower position, which does not make the complement CP spelled-out.

Furthermore, this chapter will show that the proposed analysis has both theoretical and empirical consequences. On the theoretical side, we can explain the asymmetry between (2b) and (3b) under a derivational model of grammar that appeals to a more strict version of PIC. So it becomes possible to eliminate the Proper Binding Condition (Fiengo (1977)), which stipulates that traces must be bound; this is because the PBC would incorrectly rule out both (2b) and (3b) as the complement clauses involve an unbound trace. On the empirical side, the suggested analysis makes an interesting prediction for the Raising-to-Subject (RTS) and Raising-to-Object (RTO) construction in Japanese. That is, since the two constructions contrast with respect to the landing site of an element moving out of the lower clause, it is predicted that only the RTS construction allows for remnant scrambling, as the derived subject in the RTS ends in a position lower than the derived object in the RTO. The prediction will be shown to be correct in 4.4.2.

At this point, it seems necessary to clarify how the present discussion of the parallelism and differences between the RTO and OC constructions fits in the goal of the entire dissertation.
As stated in Chapter 1, this dissertation aims to examine the clause structure of complement clauses and null subjects in those complements in the so-called ‘control constructions’ in Korean. However, the scope of the investigation of this dissertation includes not only the cross-linguistically common type of control complements, namely, infinitival control complements discussed in Chapter 3, but also the language-specific type of control complements, namely, jussive complements to be dealt with in Chapters 5 and 6. One strong reason that this dissertation takes the jussive complements to fall under a group of control complements is that the null subject in those complements establishes the obligatory referential dependency with the matrix argument(s). This being said, to the extent that the movement approach to the RTO construction is correct, sentences with an accusative Case-marked object like (1b) can be said to be analogous to the aforementioned two types of control constructions, in that the empty category which occupies the lower Spec, TP position in the RTO construction is obligatorily construed as the matrix object. Of course, as already seen in Chapter 3, the standard diagnostics such as the active-passive synonymy test prove that the RTO construction should be kept apart from the OC construction, which is attributed to the difference in thematic properties of the matrix predicates. Nonetheless, under the movement approaches, the RTO construction with the accusative Case-marked object and the OC construction with the accusative Case-marked controller look similar in their basic word order, and it is only when the complement clause is fronted that the difference between the two constructions emerges on the surface. Therefore, a proper account is required as to why the two constructions behave differently with respect to remnant scrambling, as in (2b) and (3b). In this respect, the current investigation of the asymmetry between the RTO and OC constructions in their derived word order can be said to have enough motivation.
As for the organization of this chapter, Section 4.2 will show that the movement approach to Case alternation of the embedded subject in the RTO construction makes the correct prediction for the empirical data, and that the ungrammaticality of (2a) and (2b) can be explained in terms of the standard condition on movement and the Proper Binding Condition (PBC), respectively. In Section 4.3, I will discuss how the movement approach can account for Case alternation in the OC construction. In particular, I will attribute the ungrammaticality of (3a) to a violation of the constraint on the movement of a non-constituent, but demonstrate that the PBC makes an incorrect prediction for the grammaticality of (3b) as opposed to (2b). In Section 4.4, I will show how a strict version of PIC (termed ‘Cyclic Spell-Out’) can explain the otherwise puzzling asymmetry between (2b) and (3b) with respect to the PBC effect—in particular, by appealing to the difference between the two constructions regarding the landing sites of the accusative Case-marked DPs (Sec 4.4.1). After that, the empirical consequence of the proposed analysis will be discussed (Sec 4.4.2). Finally, Section 4.5 concludes the chapter.

4.2 Derived Word Order Patterns in RTO Construction

In this section, I will first show how the movement approach adopted here handles Case alternation in the Raising-to-Object (RTO) construction in Korean (Sec 4.2.1), and demonstrate that the movement approach makes more correct predictions for empirical data than the non-movement approach does (Sec 4.2.2). Then, I will offer an account for the ungrammaticality of (2a) and (2b) under the movement analysis (Sec 4.2.3).

4.2.1 Movement Analysis of Case Alternation in RTO

Drawing on the movement approach (e.g., Y-H Kim (1985), J. Yoon (1996), S. Hong (2005)), this chapter argues that the Case alternation in the RTO construction in Korean is correlated with

Let us see how the movement analysis accounts for the Case alternation observed in the RTO construction. According to the movement approach, the Case form of the lower subject is contingent upon its structural position. On the one hand, if the embedded subject is marked with nominative Case, it should stay put inside the embedded clause, as in (5a). The diagram in (5b) is part of the structure of (5a), and as shown in this diagram, movement of Mary ends in the embedded Spec, TP position where it gets nominative Case.

   John-NOM Mary-NOM be.pretty-PAST-DECL-COMP think-PAST-DECL
   ‘John thought that Mary was pretty.’

b. Part of the structure of (5a)

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4 Although not exactly identical with the movement approach adopted here, these studies also assume that the accusative Case-marked DP occupies a higher position than the nominative Case-marked DP in the Korean RTO construction. However, the details of their analyses are different with respect to where the lower subject gets accusative Case or how the accusative Case-marked subject is interpreted. For example, J. Lee (1992) argues that the Case-alternating DP lands in the extra Spec, CP position to which the matrix verb assigns accusative Case. K-H Kim (1994) also posits the extra Spec-CP position, but suggests that movement of the Case-alternating DP to that position is driven by the need to check a [+FOCUS] feature. Finally, J. Yoon (2007) argues that the same DP is base-generated in the left periphery of the lower CP and later raises into the matrix clause for a Case reason, while J. Yoon (1996) maintains that the raised object reaches the matrix Spec, VP via not only the Spec, TP position but also the Spec, CP position to which accusative Case is assigned by the higher verb under government.
On the other hand, if the embedded subject is marked with accusative Case, I take it to have moved out of the embedded clause, as shown in (6a). Unlike in the case of (5b), the lower subject Mary first raises to the embedded Spec, TP position, and then undergoes further movement to the outer Spec, vP position to check the accusative Case feature, as shown in (6b).

   John-NOM Mary-ACC be.pretty-PAST-DECL-COMP think-PAST-DECL
   ‘John thought that she was pretty.’

b. Part of the structure of (6a)

As mentioned in 4.1.2, my analysis of Case alternations in the Korean RTO construction calls for some revisions to the standard Case theory (cf. Chomsky (1981, 1986, 1995, 2000, 2001a,b)). First of all, under the movement analysis, the embedded subject Mary should be able to move from the Spec position of the finite TP to another Case position, as shown in (6b). Then, one might ask the question of how a single DP gets Case multiple times, nominative Case from the finite T⁰ and accusative Case from the matrix verb.⁵ According to the Chain Condition

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⁵ Since Korean (and Japanese) does not show syntactic agreement between a subject and a verb, it is not so easy to test whether the embedded clause in the RTO construction is finite. Furthermore, since
(Chomsky (1986)) or the Activation Condition (Chomsky (1995, 2000, 2001a,b)), a DP that has been assigned structural Case is not eligible for further movement. However, a close look at cross-linguistic data seems to suggest that movement from a Case position to another Case position is not completely unavailable in human language. As Fujii (2005: 3.2) extensively discusses, many studies have independently revealed that multiple Case checking is quite robust. More importantly, Massam (1985: Ch 2) examines the RTO constructions in a variety of languages, such as Berber, Blackfoot, Fijian, Greek, Ilokano, Kipsigis, Malagasy, Moroccan Arabic, Niuean, and Quechua, etc. In particular, she reports that a number of languages allow reflexives such as caki ‘self’ in Korean (and zibun ‘self’ in Japanese) allow for long-distance binding, anaphor binding cannot be an appropriate diagnostic for the finiteness either. Recall, however, that I suggested in Chapter 3 that there are at least three diagnostics that distinguish finite from non-finite clauses in Korean as an agreement-less language: first, the former allows for the occurrence of tense or aspectual markers; second, they also allow for clause-typing markers such as the declarative or interrogative marker, and third, they can be uttered as a root clause. Given these diagnostics, the embedded clauses in the RTO in Korean can be defined as a finite clause. Indeed, they permit the past tense marker –ass as well as the declarative marker –ta, as in (ia). In addition, they can be uttered without being embedded as in (ib).

(i)  

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>John-NOM Mary-NOM/ACC be.pretty-PAST-DECL-COMP think-PAST-DECL</td>
<td>Mary-NOM/ACC be.pretty-PAST-DECL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lit. ‘John thought that Mary was pretty.’</td>
<td>‘Mary was pretty.’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observe that there are a number of researchers that maintain the same view on the finiteness of the embedded clause in the RTO in Korean and Japanese: e.g., J. Lee (1992), M. Park (1994), H. Sohn (1999), and J. Yoon (1996, 2007) for the Korean RTO; Kuno (1976), Saito (1992), and Tanaka (2002) for the Japanese equivalent.

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6 Fujii (2005) reviews several studies of languages with multiple Case checking. Among them are Ura’s (1998) study of Igbo and Moore’s (1998) study of Turkish. Fujii claims that the English seem like construction should be considered as another instance of multiple Case checking. See Fujii (2005) for detailed arguments for his claim.
the embedded subject to move overtly out of ‘finite’ complement clauses. Among them are Niuean, Kipsigis, and Bauan Fijian (data adapted from Davies and Dubinsky (2004: 239)).

(7) **NIUEAN**

a. To maeke [ke lagomatai he ekekafo e tama ē].
   
   `FUT possible SBJ help ERG doctor ABS child this`
   
   ‘The doctor could help the child.’

b. To maeke e **ekekafo** t [ke lagomatai t e tama ē].
   
   `FUT possible ABS doctor SUJ help ABS child this`
   
   ‘The doctor could help the child.’

(8) **KIPSIGIS**

a. mocè Mú:sá [á-lápát].
   
   `want M. 1SG.SUBJ-run`
   
   ‘Musa wants that I run.’

b. moc-ɔ:n Mú:sá [á-lápát].
   
   `want-1SG.OBJ M. 1SG.SUBJ-run`
   
   ‘Musa wants me to run.’

(9) **BAUAN FIJIAN**

a. Au j a vinakata [mo mokuti Timoci pro] proj.
   
   `1SG PAST want SUBJ.2SG hit T`
   
   ‘I wanted you to hit Timothy’

b. Au j a vinakata ikoi [mo mokuti Timoci t i] proj.
   
   `I SG PAST want you SUB.2SG hit T`
   
   ‘I wanted you to hit Timothy’

In all three languages, the embedded subject has moved out of the finite complement clauses, as shown in (7b), (8b) and (9b). In Niuean, as in (7b), the embedded subject ekekafo ‘doctor’ has moved out of the finite clause and gets absolutive Case from the matrix predicate maeke ‘possible’. Similarly, in Kipsigis, as shown in (8b), accusative Case is assigned from the matrix.

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7 According to Branigan (2005), other languages like Algonquian and Romanian apparently take finite complements in the Exceptional Case-Marking (ECM) construction but allow the subject base-generated inside those complement clauses to optionally take different Case forms. Please refer to Branigan (2005) for more information.
verb ‘want’ to the pronominal subject that is realized as a 1st person singular agreement morpheme attached to the matrix verb but is an argument of the embedded verb ‘run.’ In Bauan Fijian, as in (9b), the personal pronoun *iko* ‘you’ has been displaced out of the complement clause and receives accusative Case from the matrix verb *vinakati* ‘want.’

Given these cross-linguistic data in (7) through (9), I argue that the Case alternation in the Korean RTO construction can also be treated as an instance where multiple Case checking takes place. In particular, following Béjar and Massam’s (1999) analysis of multiple Case checking, I assume that a DP enters the derivation with a Case feature but the value of its Case feature is not specified (cf. Chomsky’s (2000, 2001a,b) Agree-based analysis of Case and ϕ-features). The DP instead receives nominative Case when it is in a Spec-head relation with the finite T₀ in the course of a derivation, a procedure which is quite common across languages. Crucially, unlike in languages prohibiting multiple Case checking, in the Korean RTO construction, a DP can optionally raise further into the matrix clause and get accusative Case from the matrix verb in the outer Spec-νP position.

However, notice that if a DP can check Case multiple times and all the Cases the DP has obtained are morphologically realized, we would expect that the DP extracted out of the downstairs clause ends up with more than one Case marker. Although cases where a single DP can have more than a Case value are not usual across languages, it has been reported that there are a number of languages that permit this option, known as ‘Case stacking’ (Gerdts and Youn (1988), C. Youn (1990), J. Yoon (1996, 2004); cf. Schütze (1996, 2001)).

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8 A number of studies, including Gerdts and Youn (1988), C. Youn (1990) and J. Yoon (1996, 2004), among others, have argued that Korean falls under a group of languages that allow for the so-called ‘Case stacking,’ where a DP is marked with more than one Case form. In particular, it is reported that some dyadic unaccusative verbs that select an Experiencer/Location argument and a Theme argument allow the former to take not only Dative Case but also Nominative Case, as shown in (ia)-(ic).
note that there are two empirical generalizations about Case stacking, which are made by those studies: first, constructions licensing ‘Case alternation’ also allow for ‘Case stacking’ in Korean (Gerdts and Youn (1988), C. Youn (1990); cf. J. Yoon (2004)); second, except for a very few languages (e.g., Cuzco Quechua), Case stacking is by and large banned in the environments where a DP checks more than one ‘structural’ Case feature—in other words, a DP can seldom appear in two structural Cases even in languages that arguably permit Case stacking (J. Yoon (1996)). Given these generalizations, it would not be a problem to argue that the raised object in the Korean RTO construction involves multiple Case checking. In order to capture the fact that the object raised out of a finite complement in the Korean RTO construction can only be marked with the second Case, namely, accusative Case, I assume that if a DP undergoes multiple Case checking, say, in a Case position $P_1$ and another Case position $P_2$ later, it does not pied-pipe the first Case feature acquired in $P_1$ before moving into $P_2$. This idea is adopted from Béjar and Massam’s (1999) analysis of multiple Case checking in languages like Niuean and Hungarian, which pattern with Korean in that only the second Case of two structural Cases checked by a raised DP is morphologically realized. Later at PF, when Chain Reduction (in Nunes’s (2004)

(i) a. Cheli-\textit{eykey-ka} ton-i manh-ta.  
\quad Cheli\text{-DAT-NOM} money\text{-NOM} a\text{-lot}\text{-DECL}  
\quad ‘It is Cheli who has a lot of money.’  

\quad Cheli\text{-DAT-NOM} Yenghi\text{-NOM} fearsome\text{-DECL}  
\quad ‘It is Cheli who is scared of Yenghi.’  

\quad Cheli\text{-DAT-NOM} money\text{-NOM} necessary\text{-DECL}  
\quad ‘It is Cheli who needs money.’  

As can be seen in (ia-c), Case stacking in Korean is permitted when a DP with I(nherent)-Case (e.g., dative) is additionally assigned S(tructural)-Case (e.g., nominative or accusative). According to Gerdts and Youn (1988) and C. Youn (1990), the reason that Case stacking is available in Korean is that parameterized strategies for resolving Case conflict (which they call ‘Case resolution strategies’) do not apply in this language. On the other hand, languages like Icelandic, which also allow for dative subjects like Korean, do not tolerate Case stacking, since one of the Case resolution strategies works in Icelandic in such a way that I-Case always takes precedence over S-Case when the two types of Cases compete.

279
sense) applies to linearize the chain of the moved element, the lower copy in \( P_1 \) is deleted, which also deletes the Case feature obtained in that same position.\(^\text{10}\)

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Note also that J. Yoon (1996) reports that in a few languages such as Cuzco Quechua, a DP can be marked with two S-Cases, genitive and accusative Case, in a row. According to him, the difference between Korean and Cuzco Quechua with regards to the possible combination of stacked Cases stems from the difference in the number of morphological slots for structural Case for DPs: that is, there is only one slot for structural Case in Korean, but not in Cuzco Quechua. Furthermore, he also suggests that the unavailability of Case stacking in the RTO construction in Korean, as opposed to Cuzco Quechua, can also be attributed to the same morphological restriction.

However, there are some studies that argue against the view that Korean allows for Case stacking. Capitalizing on J. Yoon’s (1996) observation that DPs with stacked Cases in examples like (ia-c) tend to receive focus interpretation, Schütze (1996, 2001) argues that the second particle –\( \text{ka} \) on the DPs is not a pure Case marker but a focus particle. Since it is the beyond the scope of this chapter, I will not attempt to determine which view would be better suited for Korean Case stacking data (see J. Yoon (2004) regarding this issue). Notice, though, that there is in fact much variation in native speakers’ judgments on Case stacking data like (ia-c); even for me, the same data do not sound so natural as reported in the studies listed above. Thanks to Peter Sells for pointing out to me about the availability of Case stacking in many languages, as well as relevant discussions of the issue.

\(^9\) Béjar and Massam (1999) explain differences among several languages in the availability of multiple Case checking (MCC) in terms of two parameters—namely, (a) whether or not Case features are carried along with NPs, and (b) whether or not PF has access to entire chains. Directly relevant to the current discussion is the first parameter in (a). According to them, languages like Niuean and Hungarian, which permit MCC, are negatively specified for this parameter, while those like English, which fail to license MCC, are positively specified for the same parameter. Given this, they suggest that MCC is allowed in the former type of languages since a structural Case checked at an earlier stage of a derivation can be stranded, which makes another Case checked (and realized) at a later stage. On the other hand, MCC is not available in the latter type since a Case checked at an earlier stage must be carried along with a moving DP but another Case available at a later stage cannot be checked as each DP has only one slot for structural Cases. Extending Béjar and Massam’s analysis, I suggest that Korean belongs to the Niuean-type languages which allow a DP to move by stranding its Case feature.

\(^{10}\) If Korean has an option of leaving a structural Case behind, one can ask how sentence (ia) with the subject DP raised from a Case position to another Case position can be ruled out. According to the proposed analysis here, \( \text{John} \) is assigned a Theme role and accusative Case when it merges into the complement position of the verb. Then, it raises to the Spec, \( \text{vP} \) to check an Agent role, moving further to the Spec, \( \text{TP} \) position where nominative Case is assigned. Note that unlike in bi-clausal contexts such as the RTO and OC constructions, there is only one ‘phase’ in (i), and thus, Chain Reduction can apply only one time. Then, both the higher copy of \( \text{John} \) in Spec, \( \text{TP} \) and the lower copy in the complement position of the verb must not be deleted at PF for chain linearization, since both copies have checked the same number of Case and \( \theta \)-features. But if both copies undeleted, Condition C would be violated since the higher copy c-command the lower one, as in (ib). Thanks are due to Paul Portner for raising this question.

\[(i) \quad \text{a.} \ 	ext{John-i} \ ti \ kewul-lo \ po-ass-ta. \ (t_i \neq \text{pro})
\]

Intended: ‘John saw himself in the mirror.’
At this point, I want readers to recall that I argued in Chapter 3 that in the backward control case involving the tolok-complement in Korean, Chain Reduction cyclically applies by phase. On the other hand, the same operation applies only in one fell swoop in the RTO construction. I suggest that this difference follows from the fact that the Case-alternating DP in this construction ends up with only one θ-position, which prevents the raised DP from creating an independent chain in each of the two phases, namely, the lower CP and the matrix vP. Therefore, when the DP has moved out of the lower clause in the RTO construction, Chain Reduction always applies once, deleting all the copies but the highest one in the matrix outer Spec, vP position at PF, as it checks the highest number of formal features.

Turning to the second issue, which is closely related to the first issue, it is necessary to clarify how A-movement for Case checking can take place across the CP boundary in the Korean RTO construction. Recall that the standard Case theory forces a DP to be frozen once it receives Case from a certain head and consequently, A-movement for Case checking is clause-bounded. However, if multiple Case checking is allowed in Korean, a natural prediction is that the embedded subject should be able to undergo A-movement across the clause boundary. Although it will be shown that this prediction is borne out in the Korean RTO construction (Sec 4.2.2), a theoretical problem for this prediction seems to arise: that is, any type of movement across the CP boundary would violate the locality condition, particularly, the Phase Impenetrability Condition (PIC) in (10).11

   John-NOM John-ACC mirror-with see-PAST-DECL
   Intended: ‘John saw John in the mirror.’

11 In Section 4.4.1, I will discuss how the Phase Impenetrability Condition works and what is a glitch that the original version of this condition has.
PHASE IMPENETRABILITY CONDITION (Chomsky (2000: 108))

In phase P with head H, the domain of H is not accessible to operations outside P, and only H and its edge are accessible to such operations.

As far as I can tell, there are two possible ways to explain how the accusative Case-marked subject can move out of CP without violating this locality condition. The first way would be to assume that the lower subject passes through the Spec, CP position to move from the embedded Spec, TP to the outer Spec, vP position in the matrix clause. However, this type of movement (i.e., movement from an A-position to an A’-position followed by subsequent movement to another A-position) is apparently improper movement, which is prohibited in the grammar. In order to get around the improper movement problem, I suggest that the embedded CP involves an extra layer that is an A-position, and the embedded subject moves to the outer Spec, vP position via this extra Spec-CP position. The idea is that when the C head does not have a [+wh] feature, the extra Spec, CP position serves as an escape hatch for the embedded subject to undergo successive-cyclic A-movement. The way the embedded subject moves into the matrix clause can be schematized as in (11).

This idea is based on the similar proposal made by a number of researchers in the literature: for example, Massam (1985) assumes that the lower Spec, CP in the RTO construction in various

12 Being aware of this problem for the movement approach to the RTO construction in Korean, several researchers, such as J. Lee (1992) and K-H Kim (1994), suggest an hybrid analysis, which argues that the accusative Case-marked subject raises only to Spec, CP and the matrix verb assigns Case to it. Although this line of analysis may avoid the theoretical problems, it seems to fail to capture some empirical facts, which will be discussed shortly in Section 4.2.2.
languages (some of which are presented above) is an A-position; and J. Yoon (1996) and S. Hong (2005) makes the same assumption for the Korean RTO construction, while Tanaka (2002) for the Japanese equivalent. Only difference between my analysis and the analysis suggested by the previous works is that the former posits an additional Spec, CP position, whereas the latter simply takes the Spec, CP position as an escape hatch.

Another way of explaining the absence of the locality effects would be to assume that the complement clause loses its phasehood when a verbal head moves to T⁰ and further to C⁰. Although both empirical and theoretical justifications are still required, this chapter will take the first option and assume that an extra Spec, CP position enables the embedded subject to move out of the finite CP in the Korean RTO construction.¹³

To sum up, what I have suggested is that the alternating forms of the embedded subject in Case reflect its structural positions, and overt movement of the subject out of the complement

¹³ It might be the case that the suggested extra CP corresponds to one of the various functional projections in the CP area (such as ForceP, FinP or TopP), which have been suggested in the literature since Rizzi (1997). For now, I do not have any empirical data which helps us determine which category the extra CP would be equivalent to. Nevertheless, it seems clear that the raised object in the Korean RTO construction exhibits the properties of A-chains. For example, as shown in (i), the nominative Case-marked pronoun does not trigger Condition B effects, while the accusative Case-marked pronoun does. Given that only A-movement affects binding effects, the contrast between (ia) and (ib) can be taken as a token that the object marked with accusative Case has undergone A-movement. This can also be confirmed if we consider the data in (ii) where the lower object does not cause Condition B effects even when it has been displaced into the matrix clause via long-distance scrambling, which is taken to A’-movement (J. Yoon (1996, 2004)).

   John-TOP he-NOM be.smart-DECL-COMP think-PRES-DECL
   ‘Johni thinks that he is smart.’
   John-TOP he-ACC be.smart-DECL-COMP think-PRES-DECL
   John-TOP Mary-NOM he-ACC like-PRES-DECL-COMP think-PRES-DECL
   ‘Johni thinks that Mary likes him.’
   John-TOP he-ACC Mary-NOM like-PRES-DECL-COMP think-PRES-DECL
clause is motivated by the need to check accusative Case.\footnote{However, since movement of the complement subject is optional, something need to be said about what would happen to the accusative Case feature of the matrix $v^0$ if the subject remains inside the complement clause. In that case, what might be problematic is the way in which the matrix $v$ discharges its accusative Case feature. One of the possible ways is to adopt a Greed version of Last Resort on a par with Bošković (2007). That is, whether or not an element $\alpha$ undergoes movement to a target $\beta$ depends on the mover’s need. Therefore, insofar as the embedded subject gets nominative Case by the finite $T^0$ without further movement, there would be nothing wrong with a derivation. A simpler way might be to assume that the accusative Case feature is optionally carried by the matrix $v^0$. I am tentatively adopting the second strategy, but will leave it open for future study which way fits better into our grammar.} I have called this analysis the ‘movement approach (or analysis),’ and in the next subsection, I will show that the movement approach makes more correct predictions for empirical facts than the non-movement approach which assumes that a DP optionally takes different Case forms in the same position.

4.2.2 Predictions of the Movement Analysis

The first piece of evidence comes from the fact that the adverb *papokachi* ‘stupidly’ modifying the matrix verb can follow the accusative Case-marked complement subject, as in (12b), but not the nominative Case-marked one, as in (12a) (data adapted from S. Hong (2005: 81) and Tanaka (2002: 637)).

\begin{align*}
(12) & \quad \text{a. John-}i & (\text{papokachi}) & [\text{Mary-ka} & \quad (*\text{papokachi}) & \text{chencayta-ko}] & \text{sayngkakhanta.} \\
& & \text{John-NOM} & \text{stupidly} & \text{Mary-NOM} & \text{stupidly} & \text{be.genius-COMP} \\
& & \text{think-PRES-DECL} \\
& & \text{Intended reading: ‘John stupidly thinks that Mary is a genius’} \\
& \quad \text{b. John-}i & \text{Mary-lul}_{i} & \text{papokachi} & \quad [t_{i} & \text{chencayta-ko}] & \text{sayngkakha-n-ta.} \\
& & \text{John-NOM} & \text{Mary-ACC} & \text{stupidly} & \text{be.genius-COMP} & \text{think-PRES-DECL} \\
& & \text{Intended reading: ‘John thinks of Mary stupidly as a genius’}
\end{align*}

Under the non-movement approach, the embedded subject *Mary* stays put inside the complement clause and should be able to receive two different Case forms in the same position. Therefore, sentence (12b) is predicted to be ungrammatical, contrary to fact. On the other hand, under the
movement approach, the nominative Case-marked DP *Mary-ka* resides in a different clause from the matrix adverb *papokachi* ‘stupidly,’ while the accusative Case-marked DP *Mary-lul* appears in the same clause as the matrix adverb. Therefore, the contrast between (12a) and (12b) is naturally predicted. Notice furthermore that the hybrid analysis (see footnote 11) seems to fail to explain the surface word order between *Mary-lul* and *papokachi* in (12b) because the embedded subject moves only to Spec, CP and the matrix verb assigns accusative Case to it.

Secondly, the movement approach makes a correct prediction for the asymmetry between the nominative Case-marked and accusative Case-marked DP in the availability of scrambling (cf. S. Hong (2005: 82-3) and Tanaka (2002: 638)). On the one hand, when the embedded subject is assigned nominative Case, as in (13a), it cannot undergo scrambling across the matrix subject, as in (13b). On the other hand, when the complement subject appears in accusative Case, as in (14a), it can be scrambled across the matrix subject, as illustrated in (14b)

(13)  
\[
\begin{align*}
\text{a. } & \text{John-i } \text{Mary-ka } \text{chencayta-ko } \text{sayngkakha-n-ta.} \\
& \text{John-NOM Mary-NOM be.genius-COMP think-PRES-DECL} \\
& \text{Lit.: ‘John thinks that Mary is a genius’} \\
\text{b. } & \text{*Mary-ka}_i \text{ John-i } t_i \text{ chencayta-ko } \text{sayngkakha-n-ta.} \\
& \text{Mary-NOM John-NOM be.genius-COMP think-PRES-DECL} \\
& \text{Lit.: ‘Mary, John thinks of } t_i \text{ as a genius’}
\end{align*}
\]

(14)  
\[
\begin{align*}
\text{a. } & \text{John-ka } \text{Mary-lul } \text{chencayta-ko } \text{sayngkakha-n-ta.} \\
& \text{John-NOM Mary-ACC be.genius-COMP think-PRES-DECL} \\
& \text{Lit.: ‘John thinks of Mary as a genius’} \\
\text{b. } & \text{Mary-lul}_i \text{ John-i } t_i \text{ chencayta-ko } \text{sayngkakha-n-ta.} \\
& \text{Mary-ACC John-NOM be.genius-COMP think-PRES-DECL} \\
& \text{Lit.: ‘Mary, John thinks of } t_i \text{ as a genius’}
\end{align*}
\]

As Saito (1985) observes, the embedded subject is incapable of undergoing long-distance scrambling in Japanese and Korean, and the ungrammaticality of (13b) seems to follow from this
observation. If that is the case, we are left with a question of why the accusative Case-marked subject can undergo long-distance scrambling, as in (14b). Under the non-movement approach, since the embedded subject should remain in the same position regardless of the Case form, it is incorrectly predicted that the long-distance scrambling of *Mary-lul* should be prohibited in (14b).

By contrast, the asymmetry between (13b) and (14b) can be readily explained under the movement approach. That is, the embedded subject *Mary* has moved out of the embedded clause to get accusative Case in (14b), as opposed to (13b), and thus, can be further fronted across the matrix subject by local scrambling.

The third piece of evidence comes from NPI licensing. In Korean, the NPI *-pakkey* ‘only’ is licensed by the negative marker *anh* ‘not’ in the same clause, as in (15) and (16) (data adapted from Tanaka (2002: Sec 2.5); cf. K. Sohn (1994), Sells (2006)).

\[(15)\]
\begin{enumerate}
\item a. *Mary-
\textit{pakkey} \ chakhay-ss-ta.
\hspace{1cm} \text{Mary-only \ be.good-PAST-DECL}
\hspace{1cm} \text{Intended reading: ‘Nobody but Mary was good’}

\item b. Mary-
\textit{pakkey} \ chakha-ci-\textit{anh}-ess-ta.
\hspace{1cm} \text{Mar-only \ be.good-NML-NEG-PAST-DECL}
\hspace{1cm} ‘Nobody but Mary was good.’
\end{enumerate}

\[(16)\]
\begin{enumerate}
\item a. *John-i [Mary-
\textit{pakkey} \ chakhata-ko]  \ malha-ci-\textit{anh}-ass-ta.
\hspace{1cm} \text{John-NOM \ Mary-only \ be.good-COMP \ say-NML-NEG-PAST-DECL}
\hspace{1cm} \text{Intended reading: ‘John said that nobody but Mary is good’}

\item b. John-i [Mary-
\textit{pakkey} \ chakha-ci-\textit{anh}-ta-ko]  \ malhay-ss-ta.
\hspace{1cm} \text{John-NOM \ Mary-only \ be.good-NML-NEG-PAST-DECL \ say-PAST-DECL}
\hspace{1cm} ‘John said that nobody but Mary is good’
\end{enumerate}

Recall that the nominative Case-marked subject *Mary-ka* cannot be followed by the matrix adverb *papokachi* ‘stupidly,’ as in (12a), while the accusative Case-marked *Mary-lul* can, as in (12b). Given this contrast, compare the following sentences in (17).
The grammaticality contrast between (17a) and (17b) can be naturally accounted for under the movement approach. On the one hand, in (17a), since Mary-pakkey is inside the embedded clause, the negative marker in the same clause can license the NPI –pakkey. In (17b), on the other, Mary-pakkey is expected to reside in the matrix clause in the same way as is the accusative Case-marked Mary-lul in (12b); as a result, the negative marker in the embedded clause fails to license the NPI –pakkey, rendering the sentence ungrammatical. By contrast, under the non-movement approach, it is unclear why the NPI –pakkey cannot be licensed in (17b), since Mary-pakkey should invariably remain inside the embedded clause.

Fourth, the asymmetry between the nominative Case-marked subject and the accusative Case-marked one regarding quantifier scope interactions with the matrix quantifier makes the same point (cf. Tanaka (2002: 638)). Consider first the mono-clausal context in (18a), where the universal quantifier in the object position can freely have scope over the existential quantifier.

(18) a. nwukwunka-ka motwu-lul cohaha-n-ta.
   someone- NOM all-ACC like-PRES-DECL
   Lit. ‘Someone loves everyone’
   (✓∃>∀; ✓∀>∃)

   someone-NOM all-NOM be.genius- COMP think-PRES-DECL
   Lit. ‘Someone thinks that all are genius’
   (✓∃>∀; ✗∀>∃)
c. nwukwunka-ka motwu-lul [t]i cencayta-ko sayngkakah-n-ta.
someone-NOM all-ACC be.genius-COMP think-PRES-DECL
Lit. ‘Someone thinks of all as genius’

However, in (18b), where the universal quantifier motwu ‘all’ is assigned nominative Case, it cannot have wide scope over the existential quantifier nwukwunka ‘someone.’ The lack of inverse scope in (18b) suggests that the nominative marked subject remains inside the embedded clause. By contrast, in (18c), when the universal quantifier is assigned accusative Case, it can have scope above the matrix subject, which supports the claim that the accusative Case-marked subject has moved out of the complement clause.

In this subsection, I have presented a number of empirical facts, which point to the conclusion that the movement approach is superior to the non-movement approach. I will discuss in the next subsection how the movement approach can explain the derived word order patterns found in the RTO construction.

4.2.3 Scrambling the Embedded CP in RTO

Recall that if we apply scrambling to the complement clause without pied-piping the embedded subject in the RTO construction, the derived sentences are invariably unacceptable regardless of the Case form of the subject DP, as in (2a) and (2b), repeated here.

(2) a. PATTERN 1 (with NOM-marked subject stranded)
be.pretty-PAST-DECL-COMP John-NOM Mary-NOM think-PAST-DECL
Lit. ‘[was pretty], John thought Mary
b. PATTERN 2 (with ACC-marked subject stranded)
be.pretty-PAST-DECL-COMP John-NOM Mary-ACC think-PAST-DECL
Lit. ‘[was pretty], John thought Mary

Let us begin with the illegitimate derived word order in (2a). If it is correct that the Case alternation in the RTO construction reflects the structural positions of the embedded subject, the ungrammaticality of (2a) can be explained in terms of the standard condition on movement: that is, only a constituent can be the target of movement (see D. Chung (2009) for the same conclusion about the Korean RTO construction; cf. Radford (1988) for a general introduction to constituent tests). Given that Korean is an agglutinative language, a verb should be attached to sentential-final particles as well as a complementizer, so the verb sayngkakha- ‘think’ overtly raises to a C position that is occupied by the complementizer –ko, as illustrated in (19). 15 Furthermore, since the nominative Case-marked subject remains in the embedded Spec-TP position, it is difficult to pull out part of the embedded CP, which is not a constituent, and front it by scrambling.

15 Whether or not Korean allows for overt verb movement is not an uncontroversial issue. A group of researchers provide a lexical analysis of verbal inflections, namely that in East Asian languages including Japanese and Korean, various sentence-final or pre-final particles such as tense markers and clause-typing markers, etc., are put together with verbal stems in the lexicon and cannot be separated in narrow syntax (e.g., Sells (1995), Yu-Cho and Sells (1995)). On the other hand, other researchers argue that they are combined by a series of head movements in the syntax (e.g., J-M Yoon (1990), Otani and Whitman (1991), J. Lee (1995), K. Choi (2003)). As extensively discussed in K. Choi (2003), there seem to be a couple of reasons to think that the head movement approach is superior to the lexical analysis. One piece of evidence comes from the fact that VP can be repeated in Korean, as in (i) (data adapted from K. Choi (2003)). Under the lexicalist view, the sentences in (i) should be ruled out contrary to fact, as the verb stem manna- ‘meet’ is separated from the tense morpheme –ass, the subject-oriented honorific marker –si, and the declarative ending –ta. This seems to suggest that the lexicalist view is not on the right track. Thus, I will take the head movement view in this chapter.

    Chelswu-NOM Yengmi-ACC meet-NML-TOP meet-PAST-DECL
    Lit. ‘As for meeting, Chelswu met Yengmi.’

    Park professor.HON-NOM Yengmi-ACC meet-NML-TOP meet-HON-PAST-DECL
    Lit. ‘As for meeting, Prof. Park met Yengmi.’
(19) Abstract structure of (2a)

Turning to the case of (2b), if scrambling fronts the complement clause without pied-piping the accusative Case-marked subject, the derived word order is not allowed, either. It seems that the traditional notion of the Proper Binding Condition (PBC) defined in (20) can explain the illegitimacy of this pattern of derived word order.

(20) PROPER BINDING CONDITION
Traces must be bound.  

Fiengo (1977)

Given the claim that the accusative Case-marked subject is raised out of the complement clause, the trace (more precisely, the copy) of the displaced subject Mary-lul ‘Mary-Acc’ is left behind inside the complement clause. Consequently, if the remnant clause is fronted to the left periphery, there is no way for the trace to be bound, as shown in (21), which renders the Proper Binding Condition (PBC) violated. That is, the scrambled clause that contains the trace of Mary
is structurally higher than its antecedent, making it impossible for the former to be bound by the latter.

(21) Abstracted structure of (2b)\textsuperscript{16}

To summarize, I made the claim that the Case alternation of the lower subject in the RTO construction is a reflection of its structural position, and in particular, the accusative Case-marked subject has moved out of the complement clause (Sec 4.2.1). It has been shown that a number of empirical facts support this claim, which pave the ground for the movement approach (Sec 4.2.2), and that under the movement approach, the illegitimate word orders in (2a) and (2b) can be explained in terms of the ban on the movement of a non-constituent and the Proper Binding Condition, respectively (Sec 4.2.3).

\textsuperscript{16} In fact, the moving subject Mary should drop by the extra specifier position of the lower CP, but for the sake of convenience, I omit this step of movement on the diagram here.
4.3 Derived Word Order Patterns in OC

In this section, I will show how the movement approach to the Object Control (OC) construction adopted here explains the Case alternation in the Korean OC construction (Sec 4.3.1). After discussing some pieces of empirical evidence in favor of the movement approach to the OC construction (Sec 4.3.2), I will provide an account of the illegitimate word order of (3a) with the nominative Case-marked controller in terms of the standard condition on movement, and demonstrate that the representational notion of the Proper Binding Condition (PBC) incorrectly rules out (3b) with the accusative Case-marked controller (Sec 4.3.3).

4.3.1 Movement Analysis of Case Alternation in OC

Just like the Case alternation in the RTO construction, there could be at least two possible approaches to the Case alternation in the OC construction: that is, a non-movement approach (e.g., PRO theory of control) and a movement approach (e.g., Movement Theory of Control) (see Chapter 2 for a comprehensive review of specific studies taking each approach). On the one hand, according to the PRO theory of control (Chomsky (1981), Chomsky and Lasnik (1993), Martin (1996), among many others), the controller should always be in the matrix clause, regardless of its Case form, while the controllee (i.e., PRO) invariably resides in the embedded clause. Under the Movement Theory of Control (MTC) (Hornstein (1999, 2001, 2003)), on the other hand, the controller may appear in a different position depending on its Case form.

However, as briefly mentioned in 4.1.2, the PRO theory of control appears to have difficulty explaining how the Case forms of the controller are altered in the Korean OC construction. To begin with, if we adopt the PRO theory, it is unclear how a persuadee DP marked with nominative Case is licensed in the OC construction. That is, given that nominative
Case cannot be assigned by the transitive verb *seltukha*- ‘persuade,’ we would not expect *Mary-ka* ‘Mary-NOM’ in (22a) (repeated from (1b)) to appear in the matrix object position. This in turn suggests that PRO instead occupies that position, as illustrated in (22b). However, it is incorrectly predicted that sentence (22b) should be ungrammatical since PRO appears in a governed position where accusative Case is available. More specifically, the PRO Theorem which bans the occurrence of PRO in a governed position would be violated (Chomsky (1981)).

(22) a. John-i Mary-*ka/lul* ttena-tolok seltukhay-ss-ta. (= (1b))
    John-NOM Mary-NOM/ACC leave-COMP persuade-PAST-DECL
    ‘John persuaded Mary to leave.’

    John-NOM Mary-NOM leave-COMP persuade-PAST-DECL
    ‘John persuaded Mary to leave.’

Related to this problem is that even if we do not care about the PRO Theorem as the notion ‘government’ is no longer valid in the Minimalist framework, there is no way for PRO in (22b) to receive a special kind of Case that is called ‘null Case’ (Chomsky and Lasnik (1993), Martin (1996)). This is so because null Case is assumed to be assigned by non-finite T$^0$, not by a transitive verb.

By contrast, the movement approach (represented by Hornstein’s MTC) enables us to avoid these problems. Notice that departing from the PRO theory of control, the movement approach does not posit PRO as an implicit argument inside the complement clause, and crucially assumes that the obligatory control (OC) relation can be established by A-movement of a controller. Drawing on the movement approach, this chapter claims that the Case form of a controller in the Korean OC construction is correlated with its structural position; that is, when nominative Case-marked, the controller appears in the downstairs clause, as in (23b), but when
accusative Case-marked, it has moved out of the complement clause, ending up in a position in
the upstairs clause, as in (23c).

(23)  

John-NOM Mary-NOM/ACC store-LOC go-COMP persuade-PAST-DECL

‘John persuaded Mary to go to the store.’


John-NOM Mary-NOM store-LOC go-COMP persuade-PAST-DECL

‘John persuaded Mary to go to the store.’


John-NOM Mary-ACC store-LOC go-COMP persuade-PAST-DECL

‘John persuaded Mary to go to the store.’

Let us now see how the two sentences in (23b) and (23c) are derived under the movement
approach. On the one hand, the OC sentence with the nominative Case-marked controller in
(23b) can be obtained by deleting a higher copy of the A-chain, as illustrated in (24). Just as in
the case of the RTO, the movement of the Case-alternating DP out of the embedded clause
necessarily crosses the CP boundary, which would induce a violation of the locality constraint,
particularly, the Phase Impenetrability Condition (PIC). So I also assume that there is an extra
layer in the embedded CP, which is an A-position, and the moving DP drops by this position in
its way to the final landing site. Notice, though, that this intermediate step of movement is not
represented on the diagram in (24).
As depicted above, *Mary* is selected for by the embedded predicate and checks a theta-feature (which is equivalent to a Theme role) undergoes movement to the Spec-VP position, and this movement is motivated by the need to check another theta-feature (which also corresponds to a Theme role) against the matrix verb *seltukha-* ‘persuade.’ After *Mary* moves out of the *tolok*-clause leaving its copy behind, if the copy in the embedded Spec, TP to which nominative Case is assigned survives, then we end up having the nominative Case-marked controller; consequently, the obligatory control relation is trivially established between *Mary-ka* ‘Mary-NOM’ and its trace because they are members of the single A-chain, as illustrated in (24).\(^\text{17}\)

---

\(^\text{17}\) Notice that unlike the RTO construction, the *tolok*-clause cannot be treated as a finite one. In particular, according to the suggested diagnostics for distinguishing finite from infinitive clauses in Korean, the *tolok*-clause can be best identified as an infinitive clause, in that it does not allow for the occurrence of tense or aspectual markers and cannot stand alone without being embedded. For this reason, I proposed in Chapter 3 that nominative Case assigned to the controller in sentences like (23b) is available only when the non-finite T\(^0\) enters a derivation with Case, which I assume is optional.

In addition, as for the way the copies of the moving DP are deleted for chain linearization at PF, just as in Chapter 3, this chapter assumes with Nunes (2004) that a copy that can survive in unmarked cases is the one that has the highest number of formal features checked. On the other hand, if a chain
On the other hand, the OC sentence with the accusative Case-marked DP in (23c) can be derived by deleting a lower copy of the same chain, as represented in (25).

(25) Part of the structure of (23c)

Just as in the OC sentence with the nominative Case-marked controller in (23b), Mary undergoes successive-cyclic A-movement to the matrix Spec-VP position to check a theta-feature in (23c). In the end, after every movement is done, the highest copy Mary-lul ‘Mary-ACC’ survives, so we are left with the OC construction in which the controller is marked with accusative Case.\(^{18}\)

---

\(^{18}\) Recall also that the type of Control in (23c)/(25) is labeled as ‘forward control,’ while the one in (23b)/(24) is called ‘backward (or inverse) control.’ See Chapter 3 for an extensive discussion of backward control in Korean (cf. Monahan (2003), Kwon and Polinsky (2006)).
Crucially, the proposed analysis of the Case alternation in the Korean OC construction requires us to clarify three issues. First, as mentioned above, this chapter is assuming that the accusative Case-marked controller in Korean has undergone A-movement to check a theta (θ)-feature against the matrix predicate. This assumption is adopted from Hornstein’s Movement Theory of Control (MTC). Recall from our discussion in Chapter 3 that in order to reduce the property of OC relation to A-movement, Hornstein (1999, 2001, 2003) explores the parallelism between Obligatory Control and A-movement, suggesting that the former is created by the latter. He particularly claims that theta-roles are not just semantic roles but formal (or grammatical) features, which need to be checked (or assigned) in the course of a derivation.\(^{19}\)

Secondly, although Case alternations in both RTO and OC constructions are derived by A-movement of the embedded subject or the controller out of the complement clause, we should make a distinction between the two constructions, in particular, with respect to the target position in the upstairs clause. On the one hand, in the case of the RTO construction, when the embedded subject undergoes (optional) movement, it targets the outer Spec-vP position for a Case reason. In the case of the OC construction, on the other, the embedded subject involves obligatory A-movement, targeting the matrix Spec-VP position for theta-feature checking. This distinction is not arbitrarily drawn, but stems from the difference between the matrix predicates of two constructions regarding their selectional properties. In other words, matrix predicates in the

\(^{19}\) Given below are the list of core assumptions made in Hornstein’s (1999, 2001, 2003) Movement Theory of Control. See Chapter 3 (Sec 3.4) for more information about the MTC.

(i) a. θ-roles are features on verbs.
    b. Greed is enlightened self interest.
    c. A D/NP receives a θ-role by checking a θ-feature of a verbal/predicative phrase that it merges with.
    d. There is no upper bound on the number of θ-roles a chain can have.

Hornstein (2001: 37)
RTO construction select for only one internal argument (i.e., a proposition), while those in the OC construction take two internal arguments (i.e., a Theme (or Patient) and a Proposition). One of the tests for distinguishing control from raising predicates is the so-called active-passive synonymy test (see Monahan (2003) for Korean; Rosenbaum (1967), Boeckx and Hornstein (2006) for English). In the case of the RTO sentence in (26a), even if we passivize the embedded clause, the meaning of the active sentence is kept in the passive counterpart, as in (26b). This suggests that the nominative Case-marked argument Mary is not selected by the matrix verb but the embedded predicate.

   John-NOM Mary-NOM Sue-ACC meet-PAST-DECL-COMP thought
   ‘John thought that Mary met Sue’

   b. John-i Sue-ka Mary-ey.wuyhay manna-ci-ess-ta-ko
      sayngkakhayssta.
      John-NOM Sue-NOM Mary-by meet-PASS-PAST-DECL-COMP thought
      ‘John thought that Sue was met by Mary’ (= (26a))

By contrast, in (27a) where the complement clause is active, Mary is interpreted as a ‘persuadee.’ On the other hand, in (27b) where the complement clause is passivized, it is not Mary but Sue that is interpreted as a ‘persuadee.’ The lack of active-passive synonymy suggests that the Case-alternating DP in the OC construction is an internal argument that is directly selected by the matrix verb seltukha- ‘persuade.’

    John-NOM Mary-NOM/ACC Sue-ACC interview do-COMP persuaded
    ‘John persuaded Mary, [PROi to interview Sue]’ (persuadee = Mary)

      John-NOM Sue-NOM Mary-DAT interview PASS-COMP persuaded
      ‘John persuaded Sue, [PROi to be interviewed by Mary]’ (persuadee = Sue)
Thirdly, given that OC predicates select two internal arguments, if the nominative Case-marked controller stays put inside the complement clause in the OC construction, the question arises as to what constitutes the evidence for the existence of an implicit argument in the matrix clause. That is, although it has been justified that the nominative Case-marked controller remains inside the complement clause, independent evidence is required to show that there is an empty category in the matrix clause, functioning as a controllee; otherwise, it would be difficult to explain how the selectional properties of the verb \textit{seltukha-} ‘persuade’ are satisfied. Notice first that, as Monahan (2003) points out, post-nominal quantifiers in Korean must take the same Case form as the DPs that they modify, as in (28).

\begin{align}
\text{(28)} & \quad \text{Mary-ka} \quad \text{haksayng-tul-ul} \quad \text{motwu-lul}/*\text{ka} \quad \text{sohwanha-ess-ta.} \\
& \quad \text{Mary-NOM student-PL-ACC all-ACC/NOM call-PAST-DECL} \\
& \quad \text{‘Mary called all the students’} \\
& \quad \text{S. Cho (2000: 194)}
\end{align}

Given this requirement, the grammaticality of (29a) regarding the Case form of the post-nominal quantifier can be trivially explained. However, the availability of the accusative Case-marked post-nominal quantifier \textit{motwu-lul} ‘all-ACC’ in (29b) strongly suggests that there is an empty category in the matrix clause, which receives accusative Case from the matrix verb and agrees with the quantifier in Case, as shown in (30a). The way in which the accusative Case marked on the post-nominal quantifier is licensed is depicted in (30b). In short, the nominative Case-marked controller \textit{ai-tul-i} ‘children-Nom’ feeds a referent to the null argument in the matrix clause, which in turn agrees with the post-nominal quantifier in Case.\footnote{One might ask whether the quantifier \textit{motwu} ‘all’ in (29b) can only be used as a post-nominal quantifier. In fact, the same quantified expression can be selected as an independent argument, as in (ia) and (ib).}
(29)  
\[\begin{array}{ll}
\text{a.} & \text{John-i} \quad \text{[kakey-ey ka-tolok]} \quad \text{ai-tul-ul} \quad \text{motwu-lul} \\
& \text{John-NOM store-LOC go-COMP child-PL-ACC all-ACC} \\
& \text{seltukhay-ss-ta.} \\
& \text{persuade-PAST-DECL} \\
& \text{‘John persuaded all the children to go to the store.’ (ACC Controller)} \\
\text{b.} & \text{John-i} \quad \text{[ai-tul-i kakey-ey ka-tolok]} \quad \text{motwu-lul} \\
& \text{John-NOM child-PL-NOM store-LOC go-COMP all-ACC} \\
& \text{seltukhay-ss-ta.} \\
& \text{persuade-PAST-DECL} \\
& \text{‘John persuaded all the children to go to the store.’ (NOM Controller)} \\
\end{array}\]

(30)  
\[\begin{array}{ll}
\text{a.} & \text{John-i} \quad \text{[ai-tul-i kakey-ey ka-tolok]} \quad \Delta_i \quad \text{motwu-lul} \quad (= (29b)) \\
& \text{John-NOM child-PL-NOM store-LOC go-COMP all-ACC} \\
& \text{seltukhay-ss-ta.} \\
& \text{persuade-PAST-DECL} \\
& \text{‘John persuaded all the children to go to the store.’} \\
\text{b.} & \text{DP} \quad \text{[DP-NOM VP]} \quad \Delta_i \quad \text{QP-ACC} \quad \text{persuade} \\
& \text{CONTROL} \quad \text{CASE AGREEMENT} \\
\end{array}\]

Interestingly, if the tolok-complement is preceded by the same kind of quantified expression, as in (ii), most speakers tend to have a different interpretation than the one in (29b)—specifically, the NOC reading in (ii-b) where the quantifier motwu before the tolok-clause is not referentially connected to the subject inside the tolok-complement is more natural than the OC reading in (ii-a) where the same quantifier co-refers to the lower subject. I suggest that this can be attributed to a Condition C violation. Furthermore, one plausible way to capture the NOC reading from sentences like (ii) would be to assume that the tolok-clause here is not an infinitival OC complement but a purposive adjunct clause. The relevant diagnostic introduced in Chapter 3 (which is adopted from Shim and den Dikken (2007)) seems to confirm this line of analysis, as in (iii), although the judgment is less than crystal clear. That is, sentence (ii) does not become degraded when VP topicalization only targets the tolok-clause, and this suggests that the tolok-clause in (ii) is an adjunct. I am grateful to Peter Sells for raising this issue.

(ii)  
\[\begin{array}{ll}
\text{a.} & \text{John-un} \quad \text{motwu-lul} \quad \text{silheha-n-ta.} \\
& \text{John-TOP all-ACC hate-PRES-DECL} \\
& \text{‘John hates all/everyone.’} \\
\text{b.} & \text{motwu-ka} \quad \text{John-ul} \quad \text{silheha-n-ta.} \\
& \text{all-NOM John-ACC hate-PRES-DECL} \\
& \text{‘Everyone hates John.’} \\
\end{array}\]

(iii)  
\[\begin{array}{ll}
\text{[VP motwu-lul seltukha-ki-nun],} \quad \text{John-un} \quad \text{[ai-tul-i kakey-ey ka-tolok] hayssta.} \\
& \text{all-ACC persuade-NML-TOP John-TOP children-nom store-LOC go-COMP did} \\
\end{array}\]
In this subsection, building on Hornstein’s Movement Theory of Control (MTC), I have suggested that the Case alternation in the Korean OC construction is the reflex of the structural position of a controller DP. More specifically, the OC sentence with the accusative Case-marked controller is made possible when the highest copy of an A-chain driven by theta-feature checking survives, whereas the OC sentence with the nominative Case-marked controller is available when the intermediate copy remains undeleted. In the next subsection, I will show that three empirical facts can be naturally explained by the movement approach. Note that the data to be presented are those adapted from Monahan (2003), which were also discussed in Chapter 3.

4.3.2 Empirical Evidence for the Movement Analysis

First, let us consider the Case pattern in the mono-clausal context. As shown in (31), accusative Case is available to the persuadee DP, while nominative Case is not.

\[(31) \quad \text{John-}^i \quad \text{Mary-}^{*\text{ka/lul}} \quad \text{seltukha-ess-ta.}\]

John-NOM Mary-NOM/ACC persuade-PAST-DECL

‘John persuaded Mary’

The unavailability of nominative Case in (31) is predicted under the movement approach, given that it is only accusative Case that can be assigned by the transitive verb \textit{seltukha-} ‘persuade.’ On the other hand, according to the non-movement approach to control, which assumes that the persuadee DP is invariably selected by the verb \textit{seltukha-}, the persuadee DP should be able to appear in nominative Case as well, which is not the case.

The second piece of evidence in favor of the movement approach to the Case alternation has to do with the adverb placement. As in (32), the accusative Case-marked DP \textit{Mary-lul} can
be followed by the matrix adverb *kanghakey* ‘strongly,’ while the nominative Case-marked DP *Mary-ka* cannot.

(32) John-i Mary-*ka/lul kanghakey kakey-ey mayil ka-tolok
    John-NOM Mary-NOM/ACC strongly store-LOC every.day go-COMP
    seltukha-keyss-ta.
    persuade-will-DECL

    ‘Peter will strongly persuade Mary to go to the store every day’

On the one hand, in the case where the persuadee DP is accusative Case-marked, both the movement and non-movement approach correctly predict that it can precede the matrix adverb. This is because both analyses assume that the accusative Case-marked DP resides in the upstairs clause. On the other hand, when the persuadee DP is marked with nominative Case, the two analyses make different predictions about grammaticality. According to the non-movement approach, since the persuadee DP is invariably selected by the verb *seltukha-* , it is incorrectly predicted that the nominative Case-marked DP can precede the matrix adverb. However, under the movement analysis, because the nominative Case-marked DP is analyzed as remaining inside the embedded clause, it is correctly predicted that it cannot precede the matrix adverb.

The final piece of evidence in support of the movement approach comes from the asymmetry between the OC sentence with a nominative Case-marked controller and the one with an accusative Case-marked controller regarding the applicability of scrambling, which is similar to the contrast between (3a) and (3b). That is, if the complement clause is scrambled, the accusative-marked persuadee DP can be stranded, as in (33b), while the nominative-marked persuadee DP cannot, as in (33a).

    John-NOM store-LOC go-COMP Mary-NOM persuade-PAST-DECL
When the persuadee DP is accusative Case-marked, as in (33b), both movement and non-movement approach make a correct prediction that the complement clause can be scrambled by stranding the controller. This is because the persuadee DP is analyzed as appearing in the matrix clause on both analyses. However, when the controller DP is assigned nominative Case, as in (33a), the two analyses make different predictions about the grammaticality of the given sentence. On the one hand, the unavailability of scrambling of the complement clause stranding the nominative Case-marked controller DP is correctly expected under the movement approach because the DP should be an element inside the embedded clause. On the other hand, the non-movement incorrectly predicts that scrambling of the complement clause stranding the nominative-marked DP should be allowed. This is because even the nominative Case-marked persuadee DP is invariably analyzed as appearing outside the embedded clause.

In this subsection, we have seen three pieces of empirical evidence which point to the conclusion that the movement approach makes more correct predictions than the non-movement approach. In the next subsection, I will show how the movement approach can explain the derived word order patterns in the OC construction.

4.3.3 Scrambling the Embedded CP in OC

As shown in the introduction, unlike the case of the RTO construction, the OC construction yields bifurcating results if scrambling fronts the complement clause by stranding the controller DP. That is, when the controller is nominative Case-marked, the complement clause cannot be
scrambled without pied-piping it, as in (3a); however, when the controller is accusative Case-marked, the complement clause can freely be fronted without pied-piping it, as in (3b).

(3) a. PATTERN 1 (with NOM-marked controller stranded)
   leave-COMP John-NOM Mary-NOM persuade-PAST-DECL
   Lit. ‘[to leave], John persuaded Mary t_i’

b. PATTERN 2 (with ACC-marked controller stranded)
   leave-COMP John-NOM Mary-ACC persuade-PAST-DECL
   Lit. ‘[to leave], John persuaded Mary t_i’

Let me begin with the illegitimate word order in (3a). If it is correct that Korean allows the so-called ‘backward control’ construction with the nominative Case-marked controller in the tolok-clause and the verb overtly moves up to the complementizer, then the illegitimacy of (3a) can be attributed to a violation of the ban on the movement of a non-constituent, just as in the case of (2a). That is, since ttena-tolok ‘to leave-COMP’ cannot be a constituent if the nominative Case-marked controller in the embedded Spec-TP position is excluded, scrambling fails to front the complement clause stranding the controller, as illustrated in (34) below.
Turning to the legitimacy of the derived word order in (3b), notice first that if the OC construction with the accusative Case-marked controller is derived by deleting a higher copy of an A-chain, as argued in this chapter, it seems puzzling why the application of local scrambling to the remnant complement clause in (3b) does not give rise to PBC effects, as opposed to (2b). That is, as illustrated in (35) below, since the accusative Case-marked controller has raised out of the complement clause, if scrambling fronts the remnant CP, it is predicted that the trace of the controller *Mary contained in the fronted CP cannot be bound, violating the PBC. However, this prediction is not borne out, and as in (3b), the sentence is judged grammatical. In Section 4.4, I will take up this issue, and by slightly modifying Chomsky’s (2000, 2001a,b) phase-based theory
of locality, I will provide an account of where the unexpected asymmetry between (2b) and (3b) regarding the PBC effects come from.

(35) Abstracted structure of (3b)

4.4 Phase, Cyclic Spell-Out and Word Order Asymmetry

In this section, I will first recapitulate the core data that we have discussed so far, which have been divided into two sub-groups in terms of the Case form of the stranded DP. In particular, by amending Chomsky’s (2000, 2001a,b) phase-based theory of locality, I will provide a derivational account for the asymmetry regarding PBC effects between the RTO and OC construction in terms of the difference in the landing site of the accusative Case-marked DP (Sec 4.4.1). After that, an empirical consequence of the proposed analysis will be discussed (Sec 4.4.2).
4.4.1 Explaining the Word Order Asymmetry between RTO and OC

To begin with, when the stranded DP is nominative Case-marked, the word order driven by scrambling is not permissible in both RTO and OC constructions, as shown in (2a) and (3a) (labeled as Pattern 1), respectively.

(2) a. PATTERN 1 (with NOM-marked subject stranded)
   *[yeppu-ess-ta-ko], John-i Mary-\textit{ka} \textit{ti} sayngkakhay-ss-ta.
   \textit{be.pretty-PAST-DECL-COMP} John-NOM Mary-NOM think-PAST-DECL
   Lit. ‘[was pretty], John thought Mary \textit{ti},’

   b. PATTERN 2 (with ACC-marked subject stranded)
   *[yeppu-ess-ta-ko], John-i Mary-\textit{lul} \textit{ti} sayngkakhay-ss-ta.
   \textit{be.pretty-PAST-DECL-COMP} John-NOM Mary-ACC think-PAST-DECL
   Lit. ‘[was pretty], John thought Mary \textit{ti},’

(3) a. PATTERN 1 (with NOM-marked controller stranded)
   *[tteena-tolok], John-i Mary-\textit{ka} \textit{ti} seltukhay-ss-ta.
   \textit{leave-COMP} John-NOM Mary-NOM persuade-PAST-DECL
   Lit. ‘[to leave], John persuaded Mary \textit{ti},’

   b. PATTERN 2 (with ACC-marked controller stranded)
   *[tteena-tolok], John-i Mary-\textit{lul} \textit{ti} seltukhay-ss-ta.
   \textit{leave-COMP} John-NOM Mary-ACC persuade-PAST-DECL
   Lit. ‘[to leave], John persuaded Mary \textit{ti},’

As discussed in 4.2.3 and 4.3.3, respectively, we can rule out the illegitimate derived word order in (2a) and (3a) by appealing to the ban on the movement of a non-constituent. Recall that in both constructions, the nominative Case-marked DP stays put inside the complement clause, and the verb undergoes overt head movement to the complementizer; as a result, if we are to scramble the remnant clause stranding the nominative Case-marked DP, the standard condition prohibiting non-constituent movement predicts that the derived word orders are not legitimate, which is confirmed by the ungrammaticality of (2a) and (3a). This is summarized in Table 1.
### Table 1. Predictions made by the ban on the movement of a non-constituent about (2a) and (3a)

<table>
<thead>
<tr>
<th>DATA</th>
<th>PREDICTIONS</th>
<th>ACTUAL JUDGMENT</th>
<th>DISCREPANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2a)</td>
<td>Ungrammatical</td>
<td>Ungrammatical</td>
<td>NO</td>
</tr>
<tr>
<td>(3a)</td>
<td>Ungrammatical</td>
<td>Ungrammatical</td>
<td>NO</td>
</tr>
</tbody>
</table>

By contrast, as also discussed in 4.2.3 and 4.3.3, when the stranded DP is accusative Case-marked, the derived word order is disallowed in the case of RTO construction, while the similar word order is allowed in the OC construction, as in (2b) and (3b) (labeled as Pattern 2), respectively. However, the Proper Binding Condition predicts that the trace cannot be bound in both constructions because it is embedded inside the remnant clause and ends up being in a higher position than its antecedent. Therefore, it is mysterious why the PBC makes a different prediction about the second pattern of the derived word order, which is summarized in Table 2.

### Table 2. Predictions made by the Proper Binding Condition about (2b) and (3b)

<table>
<thead>
<tr>
<th>DATA</th>
<th>PREDICTIONS</th>
<th>ACTUAL JUDGMENT</th>
<th>DISCREPANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2b)</td>
<td>Ungrammatical</td>
<td>Ungrammatical</td>
<td>NO</td>
</tr>
<tr>
<td>(3b)</td>
<td>Ungrammatical</td>
<td>Grammatical</td>
<td>YES</td>
</tr>
</tbody>
</table>

In order to offer an alternative analysis without recourse to the PBC, I would like to direct readers’ attention to the difference between raising and control predicates with respect to their selectional properties, which in turn leads to the difference in the landing site of the accusative Case-marked DP. Then, I will show what consequence this difference between the two types of predicates brings about under Chomsky’s (2000, 2001a,b) phase-based theory of locality, by making a slight modification to the original definition of the Phase Impenetrability Condition (PIC).

Chomsky (2000, 2001a,b) claims that a phase (roughly equivalent to a ‘barrier’) is a syntactic domain by which a derivation proceeds, and proposes the Phase Impenetrability
Condition (PIC) to capture locality effects in agreement and movement, which is defined in (36a), repeated from (10).

(36) **PHASE IMPENETRABILITY CONDITION** (Chomsky (2000: 108))

a. In phase $\alpha$ with head $H$, the domain of $H$ is not accessible to operations outside $\alpha$, only $H$ and its edge are accessible to such operations.

b. $\alpha = CP$ or $vP$

\[
\begin{array}{c}
\text{XP} \\
\text{X}^0 \\
\text{HP (}=\alpha) \\
\text{H} \\
\text{YP (}= \text{Domain of H}) \\
\text{INACCESSIBLE} \\
\text{\ldots} \beta \ldots
\end{array}
\]

Given this condition, for example, we can easily rule out the impermissible long-distance *wh*-movement in (37b). That is, the matrix $C^0$ cannot have a syntactic relation with the *wh*-phrase *what* because the latter was inside the domain of a phase due to the existence of another *wh*-phrase *when* in the embedded Spec, CP.

(37) a. What does John think $[CP$ \textit{t'}\textit{what} that Bill bought \textit{t}t\textit{what}]$?
b. *What does John think $[CP$ when Bill bought \textit{t}t\textit{what} \textit{t}t\textit{when}]$?

Although Chomsky’s notion of phases and PIC are correct in preventing an operation from applying to any element inside the domain, it seems unclear whether the domain itself is accessible to an operation outside the phase. In order to fill in this gap, this chapter assumes with Hiraiwa (2003, 2010) that the domain of a phase should be spelled-out (or transferred) as soon as the phase is completed with its edge being extended; drawing on his idea, this type of Spell-Out will be referred to as ‘Cyclic Spell-Out.’
If the edge of a Phase (=α) is extended by Re-Merge/Move of β from inside the domain, the domain (=YP) should be spelled-out immediately.

The way in which Cyclic Spell-Out works is illustrated in the abstract structures in (39). That is, as soon as the phase edge is extended by Merge of an element which has been moved out of the domain, the domain must be spelled-out or shifted over (to PF). After that, any operations outside the phase HP cannot have access to the domain itself, let alone elements inside the domain, as illustrated in (39b).²¹

(39) a. Before phase edge extended

b. After phase edge extended

²¹ One might wonder why spelled-out elements are not accessible to syntactic operations. As laid out in Chapter 1, this dissertation adopts an inverted Y-model where syntactic objects are sent to PF and LF after Spell-Out. Thus, once Spell-Out takes place and ships elements over to PF for linearization, syntactic operations including Move cannot manipulate the linearized elements at PF, as they are assumed to be operative only in narrow syntax, which consists of overt syntax and LF. Thanks to Paul Portner for bringing up this issue to me.
As discussed in 4.2.1, the embedded subject undergoes movement, which targets the outer Spec-vP position for checking accusative Case against $v^0$; this movement ends up extending the edge of a phase, namely, the matrix $vP$ here. This makes the remnant clause inaccessible to any further operation including scrambling, since the clause is already transferred in accordance with the Cyclic Spell-Out in (38). The abstracted structure for (2b) is provided in (40). Crucially, in Step 2, the upstairs VP that is the domain of the matrix $v^0$ is spelled-out because the movement of the lower subject has extended the edge of the phase in Step 1. As a result, the remnant CP cannot undergo scrambling, which explains the ungrammaticality of (2b).

(40) Abstracted structure of (2b): $\mathbb{1} < \mathbb{2} < \mathbb{3}$ (where ‘$<$’ stands for ‘precedes’)

\[\text{John-NOM} \rightarrow \text{vP (= PHASE)} \rightarrow \text{vP (= PHASE)} \rightarrow \text{vP (= PHASE)} \rightarrow \text{v-thought}\]

\[\mathbb{1} \text{EDGE-EXTENDING MOVE (for ACC checking)} \rightarrow \mathbb{2} \text{SPELL-OUT} \rightarrow \mathbb{3} \text{SCRAMBLING of the lower CP}\]
Now, let us consider the legitimate word order in (3b) which the PBC, the representational constraint on the application of movement, fails to explain.

(3) b. [ttena-tolok], John-i Mary-[lul ti seltukhay-ss-ta.
   leave-COMP John-NOM Mary-ACC persuade-PAST-DECL
Lit. ‘[to leave], John persuaded Mary ti’

As we have discussed in 4.3.1, the raising of the controller in the OC construction targets the specifier position of the matrix VP to check a theta-feature, and this movement does not extend the edge of the phase (i.e., vP). Therefore, even after the raising of the controller out of the embedded clause, the remnant clause remains accessible to local scrambling, as in (3b). The abstracted structure of (3b) is depicted in (41).

(41) Abstracted structure of (3b): ① < ②

① NON-EDGE-EXTENDING Move of Mary (for θ-feature checking)

② ✓ SCRAMBLING of the lower CP
Notice that as shown in (41), the matrix VP is not spelled-out until the remnant CP is fronted by scrambling in Step 2, since the movement of Mary in Step 1 does not extend the edge of the phase—that is, the matrix vP. But since scrambling of the remnant CP in Step 2 would extend the phrase edge, one can ask the question of how the raised controller, Mary, can check an accusative Case feature against v^0 (to which the verb persuaded adjoins). As briefly mentioned in Chapter 1, I assume in this dissertation that accusative Case can be checked (and assigned) either in a Spec-Head or a Head-Complement relation (cf. J. Yoon (2004)). Recall that in the examples of OC discussed in Chapter 3, the raised controller out of an infinitival complement was taken to move further up to the outer Spec, vP to check accusative Case. However, under a bit relaxed Case system assumed for Korean (and Japanese) here, there is no reason the controller cannot get the same type of Case without moving to the outer Spec, vP in (3b); in other words, accusative Case can in principle be assigned to the controller in the matrix Spec, VP where a θ-feature is also checked. Specifically, although not explicitly represented in (41), Mary can check accusative Case when it moves up to the matrix Spec, VP in Step 1. In short, the raised controller can get its Case without a problem although local scrambling adjoining the remnant CP to the matrix vP in Step 2 extends the phase edge, making the matrix VP spelled-out.

Before summarizing this subsection, let me address one interesting issue which is concerned with the availability of remnant scrambling in subject control sentences. Consider the subject control sentence in (42a) where the verb yaksokha- ‘promise’ selects for the infinitival complement headed by the complementizer –kilo. Notice that just as in object control sentences like (3b), local scrambling of the infinitival complement does not render the sentence ungrammatical, as in (42b).
(42) a. John$_i$-un Mary$_j$-eykey $[e_{i/*j} \text{tena-kilo}]$ yaksokhay-ss-ta.
   ‘John promised Mary to leave.’
b. $[e_{i/*j} \text{tena-kilo}_k]$ John$_i$-un Mary$_j$-eykey $t_k$ yaksokhay-ss-ta.
   ‘[to leave]$_k$ John promised Mary $t_k$.‘

According to the movement-based analysis of infinitival control, the controller *John* has moved out of the infinitival complement, leaving its copy in the lower clause. Given that *John* ends up with an Agent role in the matrix clause (in addition to a Theme role obtained in the lower clause), it should target the matrix Spec, *vP* position when it moves out of the infinitival complement. Then, the question arises whether my analysis proposed in this subsection correctly captures the fact that the infinitival complement in subject control sentences like (42a) can be scrambled across the controller as shown in (42b). In other words, it should be clarified whether the movement of *John* to the matrix Spec, *vP* position extends the edge, a crucial factor that determines the availability of remnant scrambling in the proposed analysis. I assume that although the inner specifier of *vP* can be in principle defined as an edge of a phase, Move or Merge of an element into that position does not count as an instance where phase edges are extended; otherwise, no movements which displace a syntactic object from inside a domain, including object shift, *wh*-object movement or object scrambling, would be allowed. Put differently, only when the secondary (or higher) specifier of *vP* is filled with an element by Move (also called Re-Merge) or Merge (also called pure Merge), the principle of Cyclic Spell-Out in (38) forces the matrix VP, the domain of the matrix *vP*, to be spelled-out. Then, we can safely conclude that the proposed analysis here correctly predicts the availability of scrambling of the infinitival complement in the subject control sentence in (42b).$^{22}$

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$^{22}$ I would like to thank Peter Sells for directing my attention to this issue.
To sum up, Section 4.4.1 has provided a solution to the puzzle of why the derived word order in the OC construction in (3b) does not give rise to the PBC effects, as opposed to the one in the RTO construction in (2b). For this purpose, capitalizing on Hiraiwa’s (2003, 2010) idea, I slightly modified Chomsky’s (2000, 2001a,b) PIC, so that the asymmetry between (2b) and (3b) can be reduced to the difference between the two constructions regarding the landing site of the accusative Case-marked DP. In 4.4.2, we will briefly discuss some empirical consequence of the proposed analysis.

4.4.2 Cross-linguistic Consequence of the Current Analysis

The current analysis predicts that if there is any language that has a pair of constructions, which involve the contrast between the moved elements regarding their landing sites, the asymmetry would emerge between the two constructions when the remnant clause is fronted. Indeed, Hiraiwa (2003, 2010) makes a similar observation in Japanese, in particular, on the asymmetry between Raising-to-Subject (RTS) and Raising-to-Object (RTO) constructions regarding the applicability of scrambling to the remnant clause.

Consider the following two sets of examples among what Hiraiwa discusses. First, (43a) is an instance of the RTS construction where the embedded subject *Taro* undergoes movement from the embedded Spec-TP to the matrix Spec-TP. If scrambling applies to the remnant CP later, the sentence remains grammatical, as in (43b).

(43) Raising-to-Subject (RTS) Construction

a. \[TP \text{Taro-ga}_{i} \] minna-ni \[CP \text{ti} \] baka-da to] omow-arete-iru].
   Taro-NOM everyone-DAT foolish-PRES COMP think-PASS-PRES
   ‘Taro is considered to be stupid by everyone’

b. \[CP \text{ti} \] baka-da to\[(-wa)] \[TP \text{Taro-ga}_{i} \] minna-ni \[\text{ti} \] omow-arete-iru].
   foolish-PRES COMP-TOP Taro-NOM everyone-DAT think-PASS-PRES
On the other hand, (44a) is an instance of the RTO construction where the complement subject Hanako raises to the outer Spec-\(v_P\) position in the matrix clause. Notice, however, that if we apply scrambling to the remnant CP, the sentence becomes ungrammatical, as shown in (44b). Since the scrambled CPs in (43b) and (44b) commonly include a trace of the raised subject, it is predicted that the Proper Binding Condition effects would arise in both, which is not the case.

If it is the case that Cyclic Spell-Out in (38) holds cross-linguistically, since the raising of the complement subject in RTS in (43a) targets Spec-TP, which is not a phase, it cannot extend any phase edge, as schematized in (45). Therefore, the remnant CP remains accessible to a further syntactic operation, i.e., scrambling, which explains the grammaticality of (43b).

On the other hand, the movement of the complement subject in RTO in (44a) targets the outer Spec-\(v_P\) position, which corresponds to an edge-extending operation, and thus, renders the complement domain of the phase head immediately spelled-out, as illustrated in (46). As a result, the embedded CP becomes inaccessible to any further syntactic operation, so scrambling of the remnant CP leads to the ungrammaticality of (44b).
In 4.4.2, I have shown that the proposed analysis in terms of a strict version of the Phase Impenetrability can make a correct prediction about the asymmetry between the Japanese RTS and RTO constructions with respect to the PBC effects.

4.5 Conclusion

I have claimed that the Case alternations in Korean Raising-to-Object (RTO) and obligatory control (OC) constructions are made possible by the movement of the Case-alternating DPs, which lends support to the movement approach (cf. Y-H Kim (1985), J. Yoon (1996), S. Hong (2005) for RTO; Monahan (2003), Kwon and Polinsky (2006) for OC). In addition, it was shown that the movement approach makes correct predictions for empirical facts, which the non-movement approach does not.

More importantly, with the movement analysis of the Case alternation in RTO and OC constructions, this chapter argued that the ungrammaticality of (2a) and (3a) can be explained in terms of the ban on the movement of a non-constituent, and that the asymmetry between (2b) and (3b), which the Proper Binding Condition (in Fiengo’s (1977) sense) fails to explain, follows from a derivational model of grammar that relies on a strict version of the Phase Impenetrability Condition (PIC). That is, the raising of the embedded subject in (2b) extends the edge of the phase, thus the subsequent application of scrambling to the remnant clause is prohibited; on the other hand, the movement of the controller in (3b) does not extend phase, leaving the remnant clause accessible to scrambling. Thus, the theoretical consequence of the current analysis is to enable us to eliminate the representational notion of the PBC.
On the empirical side, it was demonstrated that the proposed analysis based on the strict version of the PIC can make correct predictions about cross-linguistic data. Particularly, the proposed analysis correctly predicts that scrambling of the remnant clause in the Japanese RTS construction does not give rise to PBC effects, while the same operation applied in the Japanese RTO construction does (cf. Hiraiwa (2003, 2007)). This is because the asymmetry between the two constructions can be reduced to the difference in the landing site of the raised DP.
Chapter 5
Jussive Clauses and Obligatory Control in Korean

5.1 Introduction

5.1.1 Core Data: Control into Jussive Complements in Korean

The primary goal of this chapter is to introduce another major control construction investigated in this dissertation and present the unique properties of this construction, which I will call the “jussive control construction.” This chapter also provides a critical review of several previous approaches to complement control in order to see why we need an alternative formal account, which will be developed in the next chapter. Note that a great deal of studies on control into complement clauses have shown that in order to build up the control dependency between (an) argument(s) in the matrix clause (called a ‘controller’) and an understood null argument in the subordinate clause (called a ‘controllee’), languages employ different strategies with respect to what kind of clauses are subordinated (see Y. Huang (2000) for a comprehensive review). The most uncontroversial case where infinitive clauses are selected by control predicates is prevalent in English, as in (1). However, in many Balkan languages like Modern Greek, subjunctive clauses that are headed by na are complemented by control verbs, as in (2) (Philippaki-Warburton (1987), Terzi (1997), Landau (2004, 2006), Spyropoulos (2007), inter alia). Moreover, it is reported that some languages, such as Modern Hebrew, allow tensed clauses to be embedded as control complements, as in (3) (Borer (1989), Landau (2004, 2006)).

(1) ENGLISH
   a. John tried/hoped to leave. (SUBJECT CONTROL)
   b. John persuaded/recommended Mary to leave. (OBJECT CONTROL)
However, there are not many languages where different kinds of clauses are embedded as control complements within a language, and Korean appears to be among those few instances discussed in the literature on control. Recall that sentences most frequently examined in the literature on Korean control are those subordinating tolok-clauses (N. Kim (1978, 1984), D. Yang (1984, 1985), K. Kim (1994), Monahan (2003), H. Choe (2006), Kwon and Polinsky (2006), Polinsky et al. (2007), Madigan (2008b), J. Park (2009a,c, 2010a)). As I have argued in Chapter 3, the tolok-clauses can be characterized as infinitive clauses, in that they do not allow tense markers, as in (4a), and cannot be uttered unless they are subordinated, as in (4b).¹

¹ Notice, though, that tolok-clauses are often uttered as a root clause in special social contexts. They are used as an imperative to give a command by a person who has the authority, particularly, in the military setting. However, the tolok-clauses in such contexts that are apparently unembedded are not complete sentences but sentence fragments that can be licensed by the discourse context.
On the other hand, a few researchers have observed that Korean employs a unique way in which core patterns of obligatory control interpretation, such as subject control, object control and split control, are influenced by the clause type of a subordinated clause which is manifested by a distinct sentence-final particle in this language. More specifically, when three types of clauses such as promissives, imperatives and exhortatives, which are grouped by the name of ‘jussive clauses’ in Pak (2006), Pak et al. (2007, 2008) and Zanuttini et al. (2011), are subordinated under control-creating predicates (e.g., *yaksokha-* ‘promise,’ *seltukha-* ‘persuade,’ and *ceyanha-* ‘propose,’ etc.), different types of control interpretation are obtained depending on the clause type of the subordinated clause (Gamerschlag (2007), Madigan (2008a,b); cf. Fujii (2006) for Japanese). For example, subject control is induced if a promissive clause ending in *–ma* is embedded, as in (5), while object control is triggered if an imperative clause marked by *–la* is subordinated, as in (6). In addition, a sentence whose complement is an exhortative clause ending in *–ca* gives rise to split antecedent control, as in (7).

(5) **SUBJECT CONTROL**
John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL
‘John promised Mary to go to school.’

(6) **OBJECT CONTROL**
John 요한-un Mary 요한-J  eykey [e-ij hakkyo-ey ka-**la**-ko] myenglyenghay-ss-ta
John-TOP Mary-DAT school-to go-IMP-COMP order-PAST-DECL
‘John ordered Mary to go to school.’

(7) **SPLIT (ANTECEDENT) CONTROL**
John 요한-un Mary 요한-J  eykey [e-i+j hakkyo-ey hamkkey ka-**ca**-ko]
John-TOP Mary-DAT school-to together go-EXH-COMP
ceyanhay-ss-ta.
propose-PAST-DECL
‘John proposed to Mary to go to school together.’
Notice, however, that as pointed out in J. Park (2009d, 2010b), while most of the aforementioned studies are basically correct in recognizing the significant role of clause-typing particles in controller choice, their respective analysis poses some problems, to which we will return later in Sections 5.5 and Chapter 6.

Interestingly enough, it has also been observed in the literature (Pak et al. (2007)) that the same interpretive patterns arise even when the three clause types at issue are subordinated by a verb of communication (or an utterance verb) like malha- ‘say/tell’. That is, as illustrated in (8a-c), the antecedent of a null subject varies depending on the type of the embedded clause: the subject of a promissive complement is linked to the matrix subject, that of an imperative complement to the matrix object, and that of an exhortative complement to the matrix subject and object. By contrast, the reference of the null subject of a declarative complement under the same predicate is determined by the context, as in (9). Therefore, we can conclude that three subtypes of jussive clauses embedded under the verb of communication contribute in a non-trivial way to the determination of the reference of a null subject.

   John-TOP Mary-DAT school-to go-PRM-COMP say-PAST-DECL
   ‘John told Mary that he (John) would go to school.’

   b. John-un Mary-eykey [e*i/j hakkyo-ey ka-la-ko] malhay-ss-ta
   John-TOP Mary-DAT school-to go-IMP-COMP say-PAST-DECL
   ‘John told Mary that she (Mary) would go to school.’

   John-TOP Mary-DAT school-to together go-EXH-COMP say-PAST-DECL
   ‘John told Mary that they (John and Mary) would go to school together.’

(9) John-un Mary-eykey [ejk ejk say hem-ey hapkyekhay-ss-ka]
    John-TOP Mary-DAT exam-in pass-PAST-DECL-COMP
Although the data in (8a-c) are not treated as OC in Pak et al. (2007), I argue that they are basically the same phenomena as those in (5)-(7), since the referential dependency between a null subject and (a) matrix argument(s) in both sets of data is obligatory and it is correlated with the clause type of a complement clause (Gamerschlag (2007), Madigan (2008a,b) for the same observation). If this claim is correct, the data in (8a-c) are more intriguing than those in (5)-(7), as the former clearly show how languages are parameterized with respect to the way to establish OC relations. Compare the sentences in (8a-c) with the English OC data in (10) below. As shown in (10), it is evident that in English, the type of OC (e.g., subject control or object control, etc.) is cued by the lexical meaning of a control predicate, as embedded clauses are invariably infinitival: for instance, verbs of commitment (e.g., promise, pledge) or verbs of suggestion (e.g., propose, suggest) result in subject or split control, as in (10a) and (10c), respectively, while directive verbs (e.g., order, persuade, permit) yield object control, as in (10b).\(^2\) Simply put, OC constructions embedding jussive clauses in Korean are different from those subordinating infinitival clauses in English, in that the lexical meaning of a matrix verb generally determines the type of control in the latter, while not only the lexical meaning of a matrix verb but also the clause-typing particle of an embedded clause affects the control type in the former.

\(^2\) There are different ways of classifying control predicates proposed in the literature. See Farkas (1988), Sag and Pollard (1991) and Landau (1999) for classes of control inducing predicates.
Returning to the data (5)-(7), there are in fact some other markers discussed in the literature that are taken to play the similar role to –ma, –la and –ca. Specifically, it has been argued by some researchers that the modal marker –keyss forces a null subject to be construed as a matrix subject (D. Yang (1984, 1985), S. Kim (1994), Gamerschlag (2007), Madigan (2008b)), and the subordinators such as –kilo and –lyeko also contribute to producing the subject control interpretation (see C. Lee (1973), S. Kim (1994) for -kilo; Borer (1989), S. Kim (1994), Madigan (2008b) for –lyeko).\(^3\) Provided in (11) and (12) are the relevant examples, the latter two of which have already been discussed in Chapter 3.

    ‘John told Mary that he (John) would go to college.’

(12) a. John-i-un [e_{i}\^{\#}j} sihem-ey hapkyekha-lye(ko)] nolyekhay-ss-ta.
    ‘John tried to pass the exam.’

    ‘John promised Mary to leave.’

\(^3\) Most of these studies also discuss the imperative marker –la among the jussive markers (C. Lee (1973), D. Yang (1984, 1985), S. Kim (1994)).
instance, in an attempt to give a unified analysis of null subjects in both control and non-control contexts, S. Kim (1994) suggests a mechanism for the interpretation of the null subjects in various control constructions including the case of jussive control subordinating the imperative clause, but the suggested mechanism seems to be nothing but a mere generalization of part, not all, of the paradigms illustrated in (5)-(7).⁴

More importantly, it is evident that markers like –keyss, -lyeko and –kilo contribute to controller choice, but as discussed in Chapter 3, they cannot be treated in the same way as the three clause-typing particles exemplified in (5)-(7), for their syntactic distributions and semantic functions are not identical. To rehearse some arguments here for the sake of discussion, clauses headed by the markers –lyeko and –kilo, but not those by the marker –keyss, are disallowed to be used as root clauses whether or not the lexical subject is present, as given in (13a,b).

(13) a. *(John-un) sihem-ey hapkyekha-lye(ko). (cf. (12a))
   John-TOP exam-at pass-COMP

b. *(John-un) ttena-kilo. (cf. (12b))
   John-TOP leave-COMP

There seem to be some cases where these two markers can appear in root contexts, but it is obvious that those cases are at most sentence fragments rather than complete sentences. They can be produced by an interlocutor, for example, in response to a question from another interlocutor.

---

⁴ The interpretive mechanism that S. Kim (1994) proposes for controlled null subjects is provided in (i) below, repeated from Chapter 3 (see Sec. 3.3.1 for detailed discussion about her analysis and its problems).

(i) The Recovery Procedure of pro
   a. The interpretation of pro in control constructions is determined by lexical semantics.
   b. When there is no lexically determined interpretation, pro is interpreted by picking up its reference either from a c-commanding NP or from a pragmatically salient NP. In this case, the fixing the referent of pro is largely determined by pragmatic and semantic factors.

S. Kim (1994: 100)
in conversational situations like (14) and (15).

(14) A: John-un way kongpwulul yelsimhi ha-nya?
   John-TOP why study-ACC hard do-INT
   ‘Why does John work hard?’
B: sihem-ey hapkyekha-lyeko.
   exam-at pass-COMP
   ‘(He works hard) in order to pass the exam.’

(15) A: John-un Mary-eykey olhay-ey-nun mwues-ul ha-kilo
   promise-PAST-INT
   yaksokhay-ss-nya?
   every.day do.exercise-COMP
   ‘What did John promise Mary to do in this year?’
B: mayil.mayil wuntongha-kilo.
   every.day  do.exercise-COMP
   ‘(He promised Mary) to do exercise every day.’

Turning to the marker –keyss, there is no doubt that its semantic function is to express the speaker’s volition in the environment where the subject control interpretation arises, as in (11) above. However, the same marker can also be found in many other contexts in which it has nothing to do with the speaker’s volition or obligatory subject control, but instead conveys the speaker’s degree of (un)certainty about a proposition, as shown in (16).

   John-TOP   Mary-DAT exam-in pass-MOD-DECL-COMP
   say-PAST-DECL
   ‘John told Maryj that proij/k might pass the exam.’
b. mekkwulum-i    mahun-kes-ul   po-nikka,    pi-ka
   dark.cloud-NOM be.abundant-REL-NOML-ACC  see-because rain-NOM
   kot   o-keyss-ta.
   soon  come-MOD-DECL
   ‘Seeing that there are a lot of dark clouds, (I think) it might rain soon.’
When it comes to the syntactic distribution of –keyss, on the other hand, one could say that the marker is closer to the three clause-typing markers at issue than to –lyeko and –kilo, since it can freely appear in both root and embedded clauses (whether it expresses the speaker’s volition or epistemic attitude). Nevertheless, the marker –keyss, as opposed to the three clause-typing particles, can co-occur with the declarative or interrogative marker, as shown in (16a,b) and (17), respectively.

(17) a. John-un Mary-eykey [e i hakyoy-ey ka-keyss-nya-ko]  
    John-TOP Mary-DAT school-to go-MOD-INT-COMP  
    mwul-ess-ta.  
    ask-PAST-DECL  
    ‘John asked Mary whether she (Mary) would go to school.’

b. Mary-nun hakkyo-ey ka-keyss-nya?  
   Mary-TOP school-LOC go-MOD-INT  
   ‘Will Mary go to school?’

Given these differences, we can draw the conclusion that three clause-typing particles such as –ma, -la and –ca should be treated differently from the subordinators, -lyeko and –kilo, as well as the modal marker –keyss. It follows from this conclusion that the Movement Theory of Control-based analysis of control sentences whose complements involve –lyeko and –kilo would not be easily extended to those whose complements are headed by three jussive clause particles. In order to capture the unique properties of these clause-typing particles, a different line of analysis will be advanced in Chapter 6. But it will be shown that the analysis to be proposed does not contradict the analysis of the infinitival control constructions employed in Chapter 3, since the nature of the syntactic structure of infinitival complements is not identical to that of complement clauses headed by the three particles.

Recall from our previous discussion in Chapters 2 and 3 that since Rosenbaum (1967),
theories of obligatory complement control in generative grammar, which was originally labeled ‘EQUI,’ have developed centering on three major issues below:

\[(18)\]

\begin{itemize}
  \item a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
  \item b. What are controlled subjects? (Categorial status of controlled elements)
  \item c. How are controllers determined? (Controller choice)
\end{itemize}

Any successful analysis of the control data in (5)-(7) should be able to properly answer these questions. But in order to find appropriate answers to these questions, we need to have a correct understanding of the exact nature of the three types of clauses embedded in (5)-(7). As pointed out in Chapter 3, this is a very important task since one of the primary goals of this dissertation is to attest the hypothesis that controlled subjects may not be homogeneous across languages or within a language, and their categorial status varies depending on the structure of complement clauses where they appear. Therefore, before directly addressing the three issues in (18) later in Chapter 6, this chapter aims to show what grammatical properties are shared by the three types of clauses subordinated in (5)-(7), and whether the three clause types in embedded contexts are different from those in root contexts. Then, I will apply several standard OC diagnostics to the core data in order to figure out whether they are genuine instances of OC. After that, I will provide a critical survey on some of the previous syntactic or semantic approaches to complement control, so that we can find whether any of them is suited for capturing the obligatory referential dependencies that arise in (5)-(7).

\subsection*{5.1.2 Organization of Chapter 5}

The organization of Chapter 5 is as follows. Section 5.2 discusses several grammatical properties which the three types of subordinate clauses in (5)-(7) share in common. The properties will
lead us to classify them as a homogeneous group by the name of ‘jussive clauses’ (Pak (2006), Pak et al. (2007), Zanuttini et al. (2011)). Section 5.3 takes up the issue of whether the subordinate clauses in (5)-(7) are embedded promissives, imperatives or exhortatives, or direct quotes. In the literature, there has been a debate for a long time on whether or not imperative clauses are embeddable across languages. Thus, I should clarify here whether imperative clauses can be embedded in Korean. Otherwise, it would make little sense to appeal to works like Pak et al. (2007) and Zanuttini et al. (2011) in order to develop a formal account of (5)-(7), since the goal of those studies is to provide a syntactic account for the subject restrictions in person in jussive clauses in root contexts. I will show with several pieces of evidence that the subordinate clauses in (5)-(7) are embedded promissives, imperatives or exhortatives. In Section 5.4, six standard linguistic diagnostics that are widely adopted for distinguishing obligatory control (OC) from non-obligatory control (NOC) will be applied to each type of jussive control, and the test results will confirm the observation that the subordinate clauses in (5)-(7) are OC complements (cf. Madigan (2008a,b) for Korean; Fujii (2006) for Japanese). In Section 5.5, I critically review a couple of syntactic analyses dealing with the jussive control data at issue, and also discuss three representative semantic approaches to complement control. In so doing, it will become clear what problems each of them encounters. Finally, Section 5.6 concludes the chapter.

5.2. What are Jussive Clauses?: Grammatical Properties of Jussive Clauses

Korean has been characterized as a language in which clause types are marked by independent sentence-final particles (Ahn and Yoon (1989), C. Suh (1996), H. Sohn (1999), among many others). Although there is no consensus among Korean linguists, it is generally accepted in the literature that there are at least five clause types in this language—that is, declaratives, interrogative...
tives, imperatives, promissives and exhortatives (C. Suh (1996)). As illustrated below, each type of clause ends in a different particle in Korean.

(19) (Na-nun) ecey hakkyo-ey ka-ess-\textit{ta}. \textbf{(DECLARATIVE)}
I-TOP yesterday school-to go-PAST-DECL
‘I went to school yesterday’

(20) (Ne-nun) ecey hakkyo-ey ka-ess-\textit{nya}? \textbf{(INTERROGATIVE)}
you-TOP yesterday school-to go-PAST-INT
‘Did you go to school yesterday?’

(21) Hakkyo-ey \textit{ka-la}. \textbf{(IMPERATIVE)}
school-to go-IMP
‘Go to school!’

(22) Nayil hakkyo-ey \textit{ka-ma}. \textbf{(PROMISSIVE)}
tomorrow school-to go-PRM
‘I promise to go to school tomorrow.’

(23) Nayil hakkyo-ey \textit{ka-ca}. \textbf{(EXHORTATIVE)}
tomorrow school-to go-EXH
‘Let’s go to school tomorrow!’

Because of different forms of clause-final endings, we are tempted to think that it might be difficult to view the five clause types in a uniform way, but recently, it has been argued that only three clause types in Korean can be treated as a homogeneous group (Pak (2006), Pak et al. (2007), Zanuttini et al. (2011)). The idea that imperatives, promissives and exhortative clauses should be kept apart from declarative and interrogative ones is well supported by Pak’s (2006) observation. According to Pak, imperative, promissive and exhortative clauses that mainly concern us in this chapter share several grammatical properties. I will rehearse some of the supporting arguments from Pak (2006) and Pak et al. (2007). Then, one additional piece of evidence, not discussed by them, will be presented.
First, unlike declarative and interrogative clauses, tense markers cannot be attached to imperative, promissive and exhortative particles, as exemplified in (24).

(24)  

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<tbody>
<tr>
<td></td>
<td>school-to</td>
<td>go-PAST-IMP/go-FUT-IMP/go-PRES-IMP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>*Hakkyo-ey</td>
<td>ka-ess-ma/ka-ul-ma/ka-nun-ma.</td>
<td>(PROMISSIVE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>school-to</td>
<td>go-PAST-PRM/go-FUT-PRM/go-PRES-PRM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>*Hakkyo-ey</td>
<td>ka-ess-ca/ka-ul-ca/ka-nun-ca.</td>
<td>(EXHORTATIVE)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>school-to</td>
<td>go-PAST-EXH/go-FUT-EXH/go-PRES-EXH</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I will not attempt to explain why the tense markers cannot appear in these three clause types, but sentences in (24) clearly show that the three clause-typing particles at issue fail to be preceded by the past tense marker –ess, future tense marker –(u)l or present tense marker –nun.

Second, apart from the clause-typing markers, Korean has various kinds of sentence particles by which a speaker signals his or her epistemic attitude toward a proposition. Among them are –te and –kwun, which are called evidential and evaluative particles, respectively (H. Sohn (1999)). Roughly speaking, the primary function of the evidential particle is to convey information about what kind (and degree) of evidence the speaker has regarding his/her utterance, while with the evaluative particle, an addressee can easily tell whether the speaker’s knowledge about this utterance is presupposed or not. As shown below, however, neither of these two particles can co-occur with the imperative, promissive and exhortative particles.

(25) 

<p>| | | | | |</p>
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</thead>
<tbody>
<tr>
<td>a.</td>
<td>*Ney-ka</td>
<td>ecey</td>
<td>hakkyo-ey</td>
<td>ka-te-la/ka-kwun-la.</td>
</tr>
<tr>
<td></td>
<td>you-NOM</td>
<td>yesterday</td>
<td>school-to</td>
<td>go-EVID-IMP/go-EVAL-IMP</td>
</tr>
<tr>
<td>b.</td>
<td>*Nay-ka</td>
<td>ecey</td>
<td>hakkyo-ey</td>
<td>ka-te-ma/ka-kwun-ma.</td>
</tr>
<tr>
<td></td>
<td>I-NOM</td>
<td>yesterday</td>
<td>school-to</td>
<td>go-EVID-PRM/go-EVAL-PRM</td>
</tr>
<tr>
<td>c.</td>
<td>*Wuli-ka</td>
<td>ecey</td>
<td>hakkyo-ey</td>
<td>ka-te-ca/ka-kwun-ca.</td>
</tr>
<tr>
<td></td>
<td>we-NOM</td>
<td>yesterday</td>
<td>school-to</td>
<td>go-EVID-EXH/go-EVAL-EXH</td>
</tr>
</tbody>
</table>
Third, when the three clause types in question are embedded, overt elements are not freely substituted for null subjects of the lower clauses, as in (26c)-(26e). On the other hand, when the declarative or interrogative clauses are subordinated, overt subjects can occupy the embedded subject position in a relatively unrestricted manner, as in (26a) and (26b).

(26)  

John-TOP Mary-DAT you-NOM leave-PAST-DECL-COMP say-PAST-DECL  
‘John told Mary that you left.’  

John-TOP Mary-DAT you-NOM leave-PAST-INT-COMP ask-PAST-DECL  
‘John asked Mary whether you left.’  

(26a) (DECLARATIVE)  
(26b) (INTERROGATIVE)  

332  

Fourth, as mentioned in the previous section, the three jussive clauses can be said to be minimally different from one other in that the person value of the (null) subject (represented as ‘[e]’) is tightly correlated with the clause-typing particle, as in (27a-c), while this correlation does not hold for the other two clause types, as in (27d, e).

(27)  

a. [NP e] sihem-ey hapkyekha-ma.  
exam-in pass-PRM  
(PROMISSIVE)  

5 Notice, though, that it is not the case that pronominal (or anaphoric) elements are never allowed in the subject position of embedded imperative, promissive or exhortative clauses. For example, first person pronouns can occupy the lower subject position, as long as their antecedents are the pronouns of the same type and stress or focus is assigned (cf. Madigan (2008b), Pak et al. (2007)). See Chapter 6 (Sec 6.4) for more discussion about a possible range of overt subjects available in jussive complements as well as restrictions imposed on them.
As shown above, the subject of the promissive should be first person singular or plural exclusive of the addressee, that of the imperative is necessarily second person singular or plural, and that of the exhortative must be first person plural inclusive of the addressee. On the other hand, the subject of the declarative and interrogative clause is not fixed and is rather determined according to the contextual information.

Based on these properties shared by the imperatives, promissives and exhortatives, Pak (2006), Pak et al. (2007, 2008) and Zanuttini et al. (2011) suggest that these three clause types should be dealt with in a parallel way, thus being grouped under the name of “jussive clauses.” Pak et al. further argue that their common properties, though there being some minimal difference in the person feature of a subject, are encoded in a functional category called ‘Jussive Phrase,’ and that the category is projected in between CP and TP only in these three jussive clauses.

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6 Pak (2006) and Zanuttini et al. (2011) discuss some other data showing that a particular type of negative element with a deontic meaning, namely, mal ‘not,’ is restricted to the three clause types at issue, and that these clause types can be coordinated with one another. However, these arguments will not be repeated here, as they appear to be weaker than those discussed above.
Before illustrating the clause structure for the three clause types, let me quickly discuss one more property that can be added to the list of common properties shared by them. Note that the copular-like predicate \(-\text{iss}\) ‘be/exist’ in Korean can express not only location but also possession. What is important for our current discussion is that when the predicate denotes a possession relation, it can be legitimately used in the declaratives and interrogatives, while it cannot be licensed in the imperatives, promissives and exhortatives, as in (28).\(^7\)

\[(28)\]

\begin{align*}
a. \text{*Ne-eykey} & \quad \text{ttal-i} \quad \text{iss(e)-la} & \text{(IMPERATIVE)} \\
\text{You-DAT} & \quad \text{daughter-NOM exist-IMP} \\
\text{Intended: ‘You have a daughter!’} \\

b. \text{*Na-eykey} & \quad \text{ttal-i} \quad \text{iss(u)-ma} & \text{(PROMISSIVE)} \\
\text{I-DAT} & \quad \text{daughter-NOM exist-PRM} \\
\text{Intended: ‘I promise to have a daughter’} \\

c. \text{*Na-wa} & \quad \text{ney-ka} \quad \text{ttal-i} \quad \text{iss-ca} & \text{(EXHORTATIVE)} \\
\text{I-and you-NOM daughter-NOM exist-EXH} \\
\text{Intended: ‘Let you and I have a daughter’}
\end{align*}

To summarize, we have just seen several empirical facts showing that three clause types in Korean, imperatives, promissives and exhortatives, share morphosyntactic and semantic properties in common. Those facts have led Pak (2006), Pak et al. (2007, 2008) and Zanuttini et al. (2011) to treat the three types of clauses as a group under the name of “jussive clauses.” Especially, Pak et al. propose that there is a functional category labeled ‘Jussive Phrase’ right on top of TP, which projects only in the jussive clauses. As discussed in Zanuttini et al. (2011), the Jussive Phrase appears to be similar to the Mood Phrase in its role (Ahn and Yoon (1990), Whitman (1989), Cinque (1999)) since the heads of both phrases house the clause-typing particles: the

\(^7\) It is suggested in J. Park (2009b) that the predicate \(-\text{iss}\) ‘exist’, which denotes a possession relation between two selected arguments, cannot be licensed in jussive clauses since the dative argument cannot be agentive. See J. Park (2009b) for more discussion about this issue.
former dominates the three different jussive particles, while the latter hosts the declarative or interrogative particle.

However, as argued by Zanuttini et al. (2011), the Jussive Phrase should be distinguished from the Mood Phrase since only the former carries syntactically active person features, particularly, first person, second person and first person plural (inclusive of the addressee). The evidence in favor of this claim about the unique role of the Jussive Phrase can also be found in the empirical facts we have just reviewed, namely that the person features of jussive subjects are valued independently of the contexts. In addition, the binding facts found in English imperatives in (29) and (30) lend further support to their idea (data from Zanuttini et al. (2011: 7-8) with minor changes).8

(29)  a. Wash yourself, won’t you!     (IMPERATIVE)
     b. John, will wash *yourself/himself, won’t *you/he? (DECLARATIVE)

(30)  a. Everyone, wash yourself!      (IMPERATIVE)
     b. Everyone, will wash *yourself/himself. (DECLARATIVE)

As shown in (29a) and (30a), the imperative subject should always be second person, regardless of whether it is null or quantificational. This is shown by the fact that the reflexive pronoun in the object position, as well as the subject of a tag question following the imperative sentence is second person, as in (29a). Likewise, despite the occurrence of the quantificational DP in the subject position, the reflexive pronoun in the object position must be second person, as in (30a). This is in sharp contrast with the declarative sentences in (29b) and (30b), where the person feature of the pronoun varies depending on the person feature of the subject. Jussive clauses in Ko-

---

8 As Zanuttini et al. (2011) point out, not all the native speakers of English have the same judgment on the form of the agreeing pronoun when the subject is a quantified NP. Some speakers rather judge the sentence like `Everyone wash himself!’ as acceptable, an issue that will not be discussed any further. For more information, please refer to Zanuttini (2008) and Zanuttini et al. (2011), as well as references therein.
rean pattern with English imperatives in this respect, and the pronominal binding in the promissive clause in (31a) where the subject is a third person lexical DP illustrates the point ((31a) from Zanuttini et al. (2011: (15a)); (31b) from Zanuttini et al. (2011: (16b))).

(31)  a. PROMISSIVE

   emmna-ka\textsubscript{i} nay\textsubscript{j}/*kunye-uy\textsubscript{i} chinkwu-lul teliko.\textsubscript{o}-ma.
   mother-NOM my/her friend-ACC bring.come-PRM

   ‘Mother promises to bring my friend’ ($mother =$ speaker)

b. DECLARATIVE

   *emmna-ka\textsubscript{i} nay\textsubscript{j} sinpal-ul sin-nun-ta.
   mother-NOM my friend-ACC put.on-PRES-DECL

   Intended: ‘Mother\textsubscript{i} is putting on her\textsubscript{j} shoes’ ($mother =$ speaker)

As shown in (31a), the pronoun agreeing with the subject must be first person in the promissive clause although the subject is third person. In the declarative clause in (31b), on the other hand, the agreeing pronoun cannot be first person although the subject is the same as the one in (31a).

Along the lines of Pak et al. (2007, 2008) and Zanuttini et al. (2011), the current study will assume the clause structure in (32a) for jussive clauses (i.e., promissives, imperatives and exhortatives), and the structure in (32b) for non-jussive clauses (i.e., declaratives and interrogatives), although some modifications will be made to both structures in Chapter 6 (Sec 6.2, 6.4).

(32)  a. JUSSIVE CLAUSES

   \[
   \begin{array}{c}
   \text{CP} \\
   \text{C'} \\
   \text{JussiveP} \\
   \text{T'} \{-la/-ma/-ca\} \\
   \text{Jussive}\textsubscript{0}
   \end{array}
   \]

b. NON-JUSSIVE CLAUSES

   \[
   \begin{array}{c}
   \text{CP} \\
   \text{C'} \\
   \text{MoodP} \\
   \text{T'} \{-ta/-nya\}
   \end{array}
   \]
At this point I would like to direct readers’ attention to my claim in Chapter 3 that there are cases in Korean where a functional category dominating the clause-typing particles is absent; among them are infinitive clauses headed by subordinators such as –tolok, -lyeko and –kilo, etc. This view in fact departs from Pak’s (2006) assumption that all embedded clauses are typed in one way or another (cf. Madigan (2008b: 167)). Especially, I suggested in Chapter 3 that the failure of the infinitival clauses to stand as a root clause entails the absence of a particular functional projection that hosts the clause-typing particles. Now, it turns out that the functional projection not explicitly identified in that chapter corresponds to Jussive Phrase or Mood Phrase. Then, what I suggested in Chapter 3 regarding clause typing amounts to saying that only clauses which are typed can have MoodP or JussiveP projected, and that not all the subordinate clauses are typed with respect to their sentential mood.

5.3 Jussive Clauses are Embeddable in Korean

5.3.1 Evidence for the Embeddability of Jussive Clauses in Korean

It was argued for a long time in the literature that imperatives are not embeddable across languages (e.g., Sadock and Zwicky (1985), Palmer (1986), Rivero and Terzi (1995), Platzack and Rosengren (1998), C. Han (1998/2000), to name a few). However, some recent studies have claimed that some languages allow imperatives to be embedded (e.g., Fujii (2006) for Japanese; Pak (2004), Portner (2004, 2007) for Korean; Platzack (2007) for Old Scandinavian; Rus (2005) for Slovenian; Crinč and Trinh (2010) for English). In this subsection, I will argue, following Pak (2004) and Portner (2004, 2007), that imperatives are embeddable in Korean, and present a number of pieces of evidence in favor of this claim (cf. Gamerschlag (2007: Sec 5.3) for Korean; Crinč and Trinh (2010) for English). If our claim is correct, given the parallelism between im-
peratives and the other two subtypes of jussives, it is predicted that promissives and exhortatives in the context of jussive control would pattern alike with respect to the same diagnostics, showing that they are also genuine instances of embedded clauses, not direct quotations.

Starting with a jussive sentence involving an imperative clause in (33a), one can argue that the lower clause is a direct quotation, which can be represented as in (33b). However, there are a number of facts showing that this line of analysis is not on the right track.

   John-TOP Mary-DAT mom-DAT call-IMP-COMP said-DECL
   ‘John told Mary that she would call mom.’

   John-TOP Mary-DAT mom-DAT call-IMP QUOT said-DECL
   ‘John said to Mary, “Call mom!”’

First, notice that direct quotes in Korean are followed by the quotative marker –lako (or –hako) as in (33), which accompanies a pause right before it. This marker cannot be used in place of the complementizer –ko in (33a), the latter of which does not require a pause before it and generally co-occurs with embedded declarative or interrogative clauses. As predicted, the quotative marker fails to be preceded by a promissive and exhortative, as in (34a) and (34b), respectively.

   John-TOP Mary-DAT mom-DAT call-PRM-COMP/QUOT said-DECL
   ‘John told Mary that he (John) would call mom.’

   John-TOP Mary-DAT mom-DAT call-EXH-COMP/QUOT said-DECL
   ‘John told Mary that they (John and Mary) would call mom.’

---

9 The complementizer –ko that embeds various types of clauses in Korean is sometimes called the “quotative marker” in the literature. In order to distinguish this marker from the direct quote marker –lako (or –hako), the term “indirect quotative marker” will be reserved for the complementizer –ko in this dissertation.
Second, when indexicals such as pronouns (e.g., he, she, it, they) or deictic adverbs (e.g., here, there, yesterday) are contained in a quote, they cannot be evaluated with respect to the actual speech act but the reported speech act (cf. Kaplan (1989)). For instance, in English sentences like John said, “I went to the ball park yesterday,” the first person pronoun I cannot be the speaker of the actual speech act, but that of the reported (or original) speech act whose speaker is John. Likewise, the temporal adverb yesterday cannot be construed as the day before the actual speech time (i.e., today), but as the day before the reported speech time when John uttered the sentence. This fact enables us to distinguish direct quotes from embedded imperatives in Korean as well. Consider the contrast between (35a) and (35b).

(35) a. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [e-i\textsubscript{j} ku\textsubscript{i}-uy atul-eykey cenhwaha-\textbf{la}-ko] malhayss-ta.
\begin{flushleft}
John-TOP Mary-DAT he-GEN son-DAT call-IMP-COMP said-DECL
\end{flushleft}
‘John\textsubscript{i} told Mary that she (Mary) would call his\textsubscript{i} son.’

b. #John\textsubscript{i}-un Mary\textsubscript{j}-eykey “ku\textsubscript{i}-uy atul-eykey cenhwahay-\textbf{la}” lako malhayss-ta.
\begin{flushleft}
John-TOP Mary-DAT he-GEN son-DAT call-IMP QUOT said-DECL
\end{flushleft}
‘John\textsubscript{i} said to Mary, “Call his\textsubscript{i} son!”’ (Intended: ‘John\textsubscript{i} said to Mary, “Call my\textsubscript{i} son!”’)

As shown in (35b), the third person pronoun inside a quote accompanying the direct quotative marker –lako cannot be coreferential with the matrix subject John; rather, the same pronoun must be interpreted with respect to the original speech act. Given that John is the speaker of the original speech act contained in the direct quote, it is expected that only the first person pronoun can be used inside the direct quote in order to refer to John. The prediction is confirmed by the fact that if ku-uy ‘his’ were replaced with na-uy ‘my,’ the sentence would become felicitous. On the other hand, the third person pronoun in the embedded clause followed by the complementizer –ko in (35a) allows for a reading that interprets it as coreferential with the subject John. The felicity of (35a) with such a reading reveals that what is embedded in the sentence is not a direct
quote. The same argument can be used to show that embedded promissives and exhortatives are not direct quotes, as illustrated in (36) and (37), respectively.

   John-TOP Mary-DAT he-GEN son-DAT call-IMP-COMP said-DECL
   ‘Johni told Mary that he (John) would call hisi son.’

   b. \#Johni-un Maryj-eykey “ku i-uy atul-eykey cenhwa-\textbf{ma}” lako malhayss-ta.
   John-TOP Mary-DAT he-GEN son-DAT call-IMP QUOT said-DECL
   ‘Johni said to Mary, “I promise to call hisi son!”’ (Intended: ‘Johni said to Mary, “I promise to call myi son!”’)

   John-TOP Mary-DAT he-GEN son-DAT call-\textbf{EXH-COMP} said-DECL
   ‘Johni told Mary that they (John and Mary) would call hisi son.’

   b. \#Johni-un Maryj-eykey “ku i-uy atul-eykey cenhwa-\textbf{ca}” lako malhayss-ta.
   John-TOP Mary-DAT he-GEN son-DAT call-\textbf{EXH} QUOT said-DECL

Similarly, the fact that demonstratives, another kind of deictic expression, cannot be evaluated with respect to the actual speech act helps us distinguish direct quotes from embedded imperatives. Suppose that the speaker who utters (38a) and (38b) is looking at a picture in his hand, pointing at a college campus in the picture. In this situation, the direct quote containing \textit{i tayhak} ‘this college’ cannot be felicitous, as in (38b), since the demonstrative contained in the direct quote must be interpreted from the viewpoint of the original speaker—in this case, John. More precisely, the demonstrative \textit{i} ‘this’ can normally be used to indicate the physical (or emotional) proximity of an entity to the speaker, but the entity denoted by the same kind of demonstrative in (38b) is proximate to the speaker of the actual speech act, not that of the original speech act. Therefore, the use of the demonstrative \textit{i} ‘this’ in the direct quote renders the sentence infelicitous. On the other hand, the same expression can be felicitously used in (38a) whose complement
is followed by the complementizer –ko. This contrast points to the conclusion that the embedded clause in (38a) is not a direct quote.

(38) **Situation**: The speaker is pointing at a college in the picture in his hand.

   John-TOP Mary-DAT this college-to go-IMP-COMP said-DECL
   ‘John told Mary that she (Mary) would go to this college.’

b. #John-un Mary-j-eykey “i tayhak-ey ka-la” lako malhayss-ta.
   John-TOP Mary-DAT this college-to go-IMP QUOT said-DECL
   ‘John said to Mary, “Go to this college!”’

Given this contrast, the prediction is that embedded promissives and exhortatives that are uttered in the identical situation should allow for the use of the same expression. This prediction is borne out as shown in (39) and (40).

   John-TOP Mary-DAT this college-to go-PRM-COMP said-DECL
   ‘John told Mary that he (Mary) would go to *this* college.’

b. #John-un Mary-j-eykey “i tayhak-ey ka-ma” lako malhayss-ta.
   John-TOP Mary-DAT this college-to go-PRM QUOT said-DECL
   ‘John said to Mary, “I promise to go to *this* college.”’

   John-TOP Mary-DAT this college-to go-EXH-COMP said-DECL
   ‘John told Mary that they (John and Mary) would go to *this* college.’

b. #John-un Mary-j-eykey “i tayhak-ey ka-ca” lako malhayss-ta.
   John-TOP Mary-DAT this college-to go-EXH QUOT said-DECL
   ‘John said to Mary, “Let us go *this* college.”’

Third, direct quotes are known to constitute an opaque domain for a variety of syntactic operations (Fujii (2006), Crinč and Trinh (2010)). To begin with, a direct quote does not allow

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10 Crinč and Trinh (2010) present two other diagnostics than those provided here for distinguishing a direct quote from an embedded imperative: that is, (i) a focused element inside a direct quote cannot be as-
a *wh*-phrase to move out of it (before or after spell-out), failing to be indirect question. For example, if a *wh*-element appears inside a direct quote in Korean, it cannot have scope beyond the quote, failing to make the quoted sentence interpreted as indirect question, as in (41b). By contrast, it is possible for a *wh*-phrase inside an embedded imperative to establish a relation with the interrogative C in the matrix clause, allowing for the question interpretation, as in (41a).

(41)  

a. John\textsubscript{i}-un  Mary\textsubscript{j}-eykey  \[e_{i\leftrightarrow j} \text{ nwukwu-eykey cenhwhaha-\textit{la}-ko}\]  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-IMP-COMP  said-INT  
‘Who is x such that John told Mary that she (Mary) would call x?’

b. *John\textsubscript{i}-un  Mary\textsubscript{j}-eykey  “nwukwu-eykey cenhwhahay-\textit{la}” lako  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-IMP  QUOT  said-INT  
‘Who is x such that John said to Mary, “Call x”?’

Again, as expected, the same contrast turns out to hold for promissives and exhortatives. While an embedded promissive and exhortative can be interpreted as an indirect question, a direct quote cannot, as shown in (42) and (43).

(42)  

a. John\textsubscript{i}-un  Mary-eykey  \[e_{i\leftrightarrow j} \text{ nwukwu-eykey cenhwhaha-\textit{ma}-ko}\]  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-PRM-COMP  said-INT  
‘Who is x such that John told Mary that he (John) would call x?’

b. *John\textsubscript{i}-un  Mary\textsubscript{j}-eykey  “nwukwu-eykey cenhwhahay-\textit{ma}” lako  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-PRM  QUOT  said-INT  
‘Who is x such that John said to Mary, “I promise to call x”?’

(43)  

a. John\textsubscript{i}-un  Mary-eykey  \[e_{i\leftrightarrow j} \text{ nwukwu-eykey cenhwhaha-\textit{ca}-ko}\]  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-EXH-COMP  said-INT  
‘Who is x such that John told Mary that they (John and Mary) would call x?’

b. *John\textsubscript{i}-un  Mary\textsubscript{j}-eykey  “nwukwu-eykey cenhwhahay-\textit{ca}” lako  malhayss-nya?  
John-TOP  Mary-DAT  who-DAT  call-EXH  QUOT  said-INT  
‘Who is x such that John said to Mary, “Let us call x”?’

 Associated with other element outside the quote; and (ii) a negative polarity item inside a direct quote cannot be licensed by a negative quantifier outside the quote. See Crinč and Trinh (2010) for detailed discussion.
In addition, a pronoun inside a quote cannot receive a bound variable interpretation, as shown in (44b). On the other hand, the same pronoun can be interpreted as a bound variable if it appears inside an embedded imperative followed by the complementizer –ko, as in (44a).

(44)  


“For every x, x a director, x told the reporters that they (the reporters) would watch x’s movie.”


“For every x, x a director, x said to the reporters, “Watch x’s movie!””

We can also predict that the same contrast can be found with promissives and exhortatives. This prediction is borne out by (45) and (46).

(45)  


“For every x, x a father, x told the kids that x would take care of x’s health.”


“For every x, x a father, x said to the kids, “I promise to take care of x’s health.””

(46)  


“For every x, x a husband, x told the wife that they (x and wife) would live with x’s parents.”

mo-si-ca” lako malhayss-ta.

live.with-HON-EXH-COMP QUOT said-DECL

“For every x, x a husband, x said to the wife, “Let us live with x’s parents.””

To summarize, I have shown that three subtypes of jussive clauses subordinated in the jussive control constructions in Korean are not direct quotes but genuine instances of embedded clauses.11 For this purpose, I have run the diagnostics that are standardly used to distinguish di-

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11 C. Han (2000: Ch 4, Sec 4.2) argues that what appears to be jussive clauses in the embedded context are not genuine imperatives, so Korean cannot be a counterexample to the generalization that imperatives are not embeddable. Her point is that a root imperative is in fact formulated in a different way from what looks like an embedded imperative. That is, in the root context, the presence of what is known as the imperative ending –la is not sufficient, as in (i, a); rather, whether the ending –la is present or not, the vowel –a- must be attached to the stem, as in (i, b). On the other hand, in the embedded context, while the ending –la is required, the same vowel –a- is prohibited, as in (ii).

(i) a. ppalli o-la. b. ppalli o-a(-la).
   quickly come-IMP quickly come-VL-IMP
   Intended: ‘Come quickly!’ ‘Come quickly!’

(ii) Na-nun Mary-eykey [ppalli o-(a-)la-ko] myenglyenghay-ss-ta.
   I-TOP Mary-DAT quickly come-VL-IMP-COMP order-PAST-DECL
   ‘I ordered Mary to come quickly.’ cf. C. Han (2000: 120)

Notice, however, that in some special contexts, sentences like (i, a) can be legitimately used: for example, they are often found in flyers made by the North Korean military to urge South Korean soldiers serving in the national border area to seek asylum to North Korea, as in (iii).

(iii) hyengcey-tul-iye, ese-tul pwuk-ulo o-la.
     brother-PL-VOC quickly-PL North.Korea-to come-IMP
     ‘Brothers, come to North Korea quickly!’

Observe also that not only the vowel –a- but also other vowels such as –e- should be attached to the verbal stem to make an imperative sentence in the root context, as in (iv) (where the vowel –e- is phonologically changed into –y- in (b)). Thus, the more correct generalization would be that at the plain speech level, we can form an imperative sentence by adding a vowel $VL$ or $VL$-la, where the form of $VL$ varies depending on the form of the preceding stem. Furthermore, there are even cases where a vowel different from the one required in the root context must be attached to the stem in the embedded context, as in (v).

(iv) a. ppalli cemsim-ul mek-*(e-)la.
   quickly lunch-ACC eat-VL-IMP
   ‘Finish lunch quickly!’
   b. ppalli wuncenha-*(y-)la.
   quickly drive-VL-IMP
   ‘Drive quickly!’

(v) a. Chomsky-uy chaky-tul-ul ilk-*(e-)la.
   Chomsky-gen book-PL-ACC read-VL-IMP
   ‘Read Chomsky’s books!’

rect quotes from genuine instances of complements: for example, in the direct quotes, as opposed to the complements, the unique quotative marker –lako is attached, deictic elements should be interpreted with respect to the reported speech act, and no syntactic operations such as wh-movement or variable binding are permitted, etc. Later in Section 5.4, I will show with several standard diagnostics that jussive clauses embedded under communication and control-creating verbs are obligatory control complements.

5.3.2 Notes on Selectional Restrictions on Jussive Complements

We have just seen that what are subordinated in (5)-(7), repeated below, are embedded jussive clauses. This suggests that our initial observation that each subtype of jussive clause contributes to the determination of the type of control interpretation is on the right track. That is, the embedded promissive forces the null subject to be construed as the matrix subject, as in (5), the embedded imperative connected to the matrix object, as in (6), and the embedded exhortative interpreted as both the matrix subject and object, as in (7).

\[ (5) \text{ SUBJECT CONTROL} \]
\[ \text{John}_{\text{TOP}} \quad \text{Mary}_{\text{DAT}} \quad \text{[e}_{\text{i/*j}} \quad \text{hakkyo-ey} \quad \text{ka-ma-ko]} \quad \text{yaksokhay-ss-ta}. \]
\[ \text{John-TOP} \quad \text{Mary-DAT} \quad \text{school-to} \quad \text{go-PRM-COMP promise-PAST-DECL} \]
‘John promised Mary to go to school.’

\[ b. \text{ Na-un \quad John-eykey \quad [Chomsky-uy \quad chakyk-ul \quad ilk-*(u)-}\quad \text{la-ko]} \quad \text{seltukhayssta}. \]
\[ I-\text{TOP} \quad \text{John-DAT} \quad \text{Chomsky-GEN} \quad \text{book-ACC} \quad \text{read-VL-IMP-COMP persuaded} \]
‘I persuaded John to read Chomsky’s books.’

Given these facts, the contrast between (i) and (ii) reported by C. Han (2000) does not seem to be sufficient to support her conclusion that the complement in (ii) is not an imperative clause. One possible way to analyze the epenthetic vowel at stake is to treat it as a speech style particle (e.g., M. Pak (2008)). According to this view, the plain style imperative can be formed by adding a speech style vowel followed by the imperative marker –la, the latter of which is optional. Then, the reason the vowel is prohibited in the embedded imperative in (ii) is that no speech style particles are allowed in the embedded context in Korean. On the other hand, the vowel –u- obligatorily inserted in (v, b) can be viewed as a phonologically conditioned vowel.
(6) OBJECT CONTROL
John-\textit{un} Mary-\textit{eykey} [e\textsubscript{\textit{i}}/*j hakkyo-\textit{ey} ka-\textit{la-ko}] myenglyenghay-ss-ta
John-TOP Mary-DAT school-to go-\textit{IMP-COMP} order-PAST-DECL
‘John ordered Mary to go to school.’

(7) SPLIT (ANTECEDENT) CONTROL
John-\textit{un} Mary-\textit{eykey} [e\textsubscript{\textit{i}}/+j hakkyo-\textit{ey} hamkkkey ka-ca-ko]
John-TOP Mary-DAT school-to together go-\textit{EXH-COMP}
propropose-PAST-DECL
cyanhay-ss-ta.
‘John proposed to Mary to go to school together.’

Before showing that the obligatory referential dependencies detected in these sentences are instances of OC, let me quickly discuss some important facts which seem to reveal that there are some constraints regulating the way jussive clauses are embedded, although we do not have enough information yet about whether the constraint is purely syntactic, semantic or pragmatic.

First, when jussive clauses are embedded under typical control predicates such as commitment verbs (e.g., \textit{promise}, \textit{pledge}), directive verbs (e.g., \textit{persuade}, \textit{order}) or suggestion verbs (e.g., \textit{propose}, \textit{suggest}), the indirect quotative marker –\textit{ko} (which is different from the direct quotative marker –\textit{lako} or –\textit{hako}) can be selected as a complementizer, but other subordinators such as the resultative –\textit{tolok} or causative –\textit{key} cannot, as in (47) (where IQ stands for ‘indirect quotative’).

(47) a. John-\textit{un} Mary-\textit{eykey} [e\textsubscript{\textit{i}}/*j hakkyo-\textit{ey} ka-\textit{ma-ko/*-tolok/*-key}]
John-TOP Mary-DAT school-to go-PRM-IQ/RES/CAUS
yaksokhay-ss-ta.
promise-PAST-DECL
‘John promised Mary to go to school’
b. John-\textit{un} Mary-\textit{eykey} [e\textsubscript{\textit{i}}/*j hakkyo-\textit{ey} ka-\textit{la-ko/*-tolok/*-key}]
John-TOP Mary-DAT school-to go-\textit{IMP-IQ/RES/CAUS}
myenglyenghay-ss-ta.
order-PAST-DECL
‘John ordered Mary to go to school’

\[ \text{John-TOP Mary-DAT school-to go-EXH-IO/RES/CAUS ceyanhay-ss-ta.} \]

‘John proposed to Mary to go to school’

Second, given that the indirect quotative marker –ko heads the jussive complements, it is predicted that verbs of communication (or utterance verbs), which naturally co-occur with the same complementizer, can embed jussive clauses. It has already been shown that this prediction is confirmed. Consider the sentences in (8)-(10), repeated below, which have the utterance verb *malha-* ‘say’ as the matrix verb in common.

(8) \[ \text{John\textsubscript{\text{TOP}} Mary\textsubscript{\text{DAT}} [e\textsubscript{ij} hakkyo-ey ka-\textbf{ma-ko}] malhay-ss-ta} \]
\[ \text{‘John told Mary that he (John) would go to school.’} \]

(9) \[ \text{John\textsubscript{\text{TOP}} Mary\textsubscript{\text{DAT}} [e*i*j hakkyo-ey ka-\textbf{la-ko}] malhay-ss-ta} \]
\[ \text{‘John told Mary that she (Mary) would go to school.’} \]

(10) \[ \text{John\textsubscript{\text{TOP}} Mary\textsubscript{\text{DAT}} [e*i+j hakkyo-ey hamkkey ka-\textbf{ca-ko}] malhay-ss-ta.} \]
\[ \text{say-PAST-DECL} \]

What these data suggest is that the interpretive patterns of control sentences subordinating a jussive clause are predictable by the clause type of the embedded clause. Because of this fact, one might think that matrix predicates do not impose any restrictions on the type of jussive clause to be subordinated. However, it is not difficult to show that it is not the case. Consider sentences like (48a)-(48c) below. In these sentences, unlike those in (8)-(10), the matrix predicates are not utterance verbs but typical control predicates. In particular, these sentences are constructed from
those in (5)-(7) by manipulating the ways control predicates pair with jussive complements. But
the sentences in (48) turn out to be ungrammatical, and from the contrast between (48a)-(48c)
and (5)-(7) in grammaticality, it can be concluded that the sentential force of a jussive com-
ment must be compatible with the meaning of a matrix predicate (cf. Madigan (2008b: Ch 4) for
virtually the same observation).

(48)  a. *John-un Mary-eykey [eij hakkyo-ey ka-la-koko]
      John-TOP Mary-DAT school-to go-IMP-COMP
      yaksokhayssta. (*promise-type verb + imperative –la)
   
      b. *John-un Mary-eykey [eij hakkyo-ey ka-ma-koko]
      John-TOP Mary-DAT school-to go-PRM-COMP ordered/
      cisihayssta. (*order-type verb + promissive –ma)
   
      c. *John-un Mary-eykey [eij hakkyo-ey hamkkey ka-ca-koko]
      John-TOP Mary-DAT school-to together go-EXH-COMP
      myenglyenghayssta/cisihayssta. (*order-type verb + exhortative –ca)

To be more specific, an imperative clause cannot be selected by a verb of commitment,
including yaksokha- ‘promise’ or ceyanha- ‘propose,’ as in (48a). We can roughly say that by
uttering an imperative sentence, a speaker aims at getting a subject, i.e., the addressee(s), to en-
gage in an action denoted by the predicate. On the other hand, the verb promise requires a sub-
ject to commit him/herself to performing an action denoted by a complement clause. Conse-
quently, the promise-type verb and the imperative marked by –la in (48a) cannot be combined
due to the mismatch between the person making a promise and the one required to do an action.
Put it differently, (48a) is ruled out since a single person cannot be requested to go to school
while making a promise of doing the same action at the same time. Similarly, a promissive
clause and exhortative clause do not match a directive verb, such as myenglyengha- ‘order’ or
cisiha- ‘instruct,’ etc., as in (48b) and (48c). The problem that these two sentences run into appears to be essentially the same as (48a). Note that a speaker ordinarily utters a promissive and exhortative clause to make a promise of doing an action and to propose to an addressee that they participate in an action together, respectively. By contrast, what the directive verb requires a subject to do is to get an indirect object to engage in an action denoted by a complement clause. Specifically, in (48b), the person who was directed to go to school may not be the same as the one who made a promise of doing the same action. Likewise, in (48c), the person who was ordered to go to school is at most one member of the pair of individuals who were supposed to commit themselves to going to school.

Given the data in (5)-(7) and in (8)-(10), along with those in (48), one can draw a conclusion that the controller choice is determined by the interaction between the clause type of an embedded jussive clause and the lexical meaning of a subordinating verb (cf. Madigan (2008b), J. Park (2009d, 2010b)). Notice, however, that although it seems true that there is a restriction imposed by the matrix verb on the type of an embedded clause, the aforementioned way to capture the ungrammaticality of the sentences in (48a-c) does not appear to be sufficient. For example, there are in fact cases where a person can make a promise about what (s)he has been told (or ordered) to do.12 Thus, in order to rule out the cases in (48a-c) properly, rather than simply relying on a semantic account of the kind layed out above, we also need to take into consideration what is going on in the syntax proper.

To summarize this subsection, the fact that matrix control predicates place selectional restrictions on the type of jussive complements lead us to raise the following two questions that are somehow related to each other (see Madigan (2008b: 227) for similar questions).

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12 Thanks are due to Paul Portner for pointing this out to me.
1. Why is it the case that only a limited class of predicates can subcategorize a particular type of jussive clause?
2. How can we capture the restrictions imposed on the embedded jussive clause by the matrix predicate?

I will come back to these two questions later in Section 6.4 of Chapter 6.

The next section aims to show that jussive clauses embedded under verbs of utterance or other types of control predicates are OC complements. To support this claim, I will run standard diagnostics that are traditionally used for distinguishing Obligatory Control from Non-Obligatory Control (NOC) in English.

### 5.4 Applying OC Diagnostics to Jussive Control in Korean

This section will examine whether diagnostics designed for keeping OC apart from NOC constructions in English confirm our observation in Section 5.1 that the referential dependency between the null subject of an embedded jussive clause and the matrix argument(s) in Korean is an instance of OC dependency. It will turn out that sentences with the jussive complements pass the diagnostics that only OC constructions can satisfy (cf. Madigan (2008a,b) for Korean jussive control; Fujii (2006) for Japanese equivalents). The list of the standard diagnostics we have discussed in Chapter 2 is repeated below in Table 1.

<table>
<thead>
<tr>
<th>DIAGNOSTICS</th>
<th>OC</th>
<th>NOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. No Arbitrary Control</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>B. No Long-distance Control</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>C. C-command Requirement</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>D. No Strict Reading under VP Ellipsis</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>E. No Invariant Reading with Only-NP</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>F. No <em>De Re</em> Reading</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

**Table 1. Diagnostics for OC vs. NOC**
5.4.1 No Arbitrary Control with OC (Property A)

The OC subject does not allow an arbitrary controller, but must have its controller in the (immediately) higher clause, while the NOC subject is not subject to the same condition. Let us begin with the control sentence embedding a promissive clause in (5), repeated below as (49), with minor modification.

(49) SUBJECT CONTROL (= (5))

John-un Mary-j-eykey [e_{i>j*arb} hakkyo-ey ka-ma-ko] yaksokhay-ss-ta.

‘John promised Mary to go to school.’

As shown above, the null subject co-occurring with the promissive marker –ma in the embedded clause refers to the matrix subject, John. What is crucial here is that the subject can not only be construed as John, but also must be so. In other words, there is no other person than John in (49) who both could make a promise and could be going to school. Thus, another reading that interprets Mary as a controller of the null subject is ruled out, and an arbitrary reading where John made a promise that anyone would go to school is not available for (49), either.

Second, when the same diagnostic applies to the sentence with an embedded imperative clause in (6), repeated here as (50), we can easily see that the ban on arbitrary controllers is respected, just as the sentence subordinating the promissive does.

(50) OBJECT CONTROL (= (6))

John-un Mary-j-eykey [e_{i>j*arb} hakkyo-ey ka-la-ko] myenglyenghay-ss-ta

‘John ordered Mary to go to school.’
As marked by the indices above, the null subject in the lower clause is obligatorily (and exhaustively) construed as the matrix object, *Mary*, for she is the only person in the sentence that was given an order to go to school. On the other hand, *John* cannot be interpreted as the person who was ordered to go to school, and an arbitrary reading on which John ordered Mary that anyone should go to school is unlikely to be obtained.

Third, the ban on arbitrary control works positively for the sentence with an exhortative complement in (7), repeated here as (51), in a parallel fashion to those with the promissive and imperative complement above.

(51) **SPLIT (ANTECEDENT) CONTROL (= (7))**

   John,*un* Mary,*eykey* [e*i+j/*k/*j+k/*k+l/*arb* hakkyo-ey* hamkkey*  
   John- TOP Mary- DAT  school-to together*  
   go-EXH-COMP propose-PAST-DECL*  
   ‘John proposed to Mary to go to school together.’

As briefly discussed in 2.3.2.2 in Chapter 2, both the matrix subject and indirect object in this sentence must be included in the set of individuals that the null subject refers to. Therefore, no other reading than the one where *John* and *Mary* are construed as the only pair of individuals to go to school is permitted in the sentence in (51). The parallel behavior exhibited by these three subtypes of jussive control with respect to the ban on arbitrary control is contrastive with the behavior by a non-obligatory control (NOC) sentence, as shown below.

(52) John,*un* Mary,*eykey* [e*i+j/*arb* ilccik paksa hakwuy-lul pat-nun-kes]-i  
   John- TOP Mary- DAT  early doctor degree-ACC receive-REL-NML-NOM  
   ywuriha-ta-ko]  
   be.advantageous-DECL-COMP say-PAST-DECL  
   ‘John told Mary that [e*i+j/*arb* receiving a Ph.D. degree early] is advantageous.’
5.4.2 No LD Antecedent with OC (Property B)

Recall that the OC subject must take a local controller, while the NOC subject does not have to. Let us look into how the three subtypes of jussive control behave regarding this diagnostic, namely the ban on LD antecedents. Beginning with a sentence subordinating an imperative as the lowest clause, the null subject in the most deeply embedded clause cannot be referentially related to the highest subject, *Bill*, but to the subject in the intermediate clause, *John*, as indicated in (53).

(53) **SUBJECT CONTROL**

\[
\text{Bill}_i \text{-un} [\text{John}_k \text{-i} \text{Mary}_k \text{-eykey}] [e^{i,j,k/m} \text{tena-ma-ko}]
\]

\[
\text{Bill-TOP John-NOM Mary-DAT leave-PRM-COMP}
\]

\[
yaksokhay-ss-ta-ko] \text{sayngkakhay-ss-ta.}
\]

\[
promise-PAST-DECL-COMP think-PAST-DECL
\]

‘Bill thought that John promised Mary that he (John/*Bill/*Mary) would leave.’

Second, if an imperative clause is embedded as the lowest clause, as in (54), the null subject co-occurring with the imperative marker –*la* in the same clause fails to induce other readings than the reading where the indirect object in the immediately higher clause (i.e., *Mary*) is the person who was given a command to leave.

(54) **OBJECT CONTROL**

\[
\text{Bill}_i \text{-un} \text{Stacey}_j \text{-eykey} [\text{John}_k \text{-i} \text{Mary}_m \text{-eykey}] [e^{i,j,k/m} \text{tena-la-ko}]
\]

\[
\text{Bill-TOP Stacey-DAT John-NOM Mary-DAT}
\]

\[
ttena-la-ko] \text{myenglyenghay-ss-ta-ko} \text{malhay-ss-ta.}
\]

\[
leave-IMP-COMP order-PAST-DECL-COMP say-PAST-DECL
\]

‘Bill told Stacey that John ordered Mary that she (Mary/*someone else) should leave.’

Third, given the similarities among the three subtypes of jussive clauses with respect to the first diagnostic, it is predicted that when an exhortative clause is embedded multiple times,
the null subject should have as its controllers both the subject and indirect object in the immediately higher clause. Indeed, this prediction is borne out by the following example.

(55) **SPLIT CONTROL**

\[
\begin{align*}
\text{Bill}_i \text{-un} & \quad \text{Stacey}_j \text{-eykey} \quad [\text{John}_k \text{-i} \quad \text{Mary}_m \text{-eykey} \quad \text{e}_* i+j/k+m/*i+k/*j+k/*i+m/*j+m] \\
\text{Bill-TOP} & \quad \text{Stacey-DAT} \quad \text{John-NOM} \quad \text{Mary-DAT} \\
\text{hammkkey} & \quad \text{tena-} \text{ca-ko} \quad \text{ceyanhay-ss-ta-ko} \quad \text{malhay-ss-ta.}
\end{align*}
\]

\[
\begin{align*}
together \quad \text{leave-IMP-COMP} \quad \text{propose-PAST-DECL-COMP} \quad \text{say-PAST-DECL} \\
\text{‘Bill told Stacey that John proposed to Mary that they (John & Mary) should leave.’}
\end{align*}
\]

As shown above, the null subject of the verb *tena- ‘leave’ combined with the exhortative marker –ca in the lowest clause must refer to both *John and *Mary in the clause immediately higher up, and the sentence would become ungrammatical if the null subject were identified with other individual(s) than the pair of *John and *Mary in the sentence.

On the other hand, it can be easily shown that the same property is not exhibited by NOC constructions. Given below is an example illustrating that sentences with the NOC subject in Korean are not subject to the ban on the LD antecedent.

(56) \[
\begin{align*}
\text{John}_i \text{-un} & \quad [\text{Mary}_j \text{-ka} \quad [[\text{e}_{i/j/k} \text{ ppali colepha-nun-kes]-i} \\
\text{John-TOP} & \quad \text{Mary-NOM} \quad \text{quickly graduate-REL-NML-NOM} \\
\text{yuliha-ta-ko} & \quad \text{saynkakhay-ss-ta]-ko} \quad \text{mit-ess-ta.}
\end{align*}
\]

\[
\begin{align*}
\text{be-advantageous-DECL-COMP} \quad \text{think-PAST-DECL-COMP} \quad \text{believe-PAST-DECL} \\
\text{‘John}_i \text{ believed that Mary}_j \text{ thought that } [\text{e}_{i/j/k} \text{ graduating quickly} \text{ would be advantageous.’}
\end{align*}
\]

In this sentence, the null subject of the lowest clause whose predicate is not combined with any jussive marker does not have to be coreferential with *Mary, the most local antecedent, and it can also be construed either as *John, the highest subject, or someone else not present in the sentence.
5.4.3 No Non-C-command Controller with OC (Property C)

The NOC subject can be controlled by an antecedent whether or not the latter c-commands the former, but the OC subject is prohibited from being controlled by the non-c-commanding controller. It seems clear that a null subject in the embedded jussive clause can establish an obligatory referential dependency with (a) matrix argument(s) only if the former is c-commanded by the latter. Starting from a sentence taking a promissive clause, the null subject in the jussive complement cannot refer to Mary but to John’s friend, as shown below, and this suggests that the c-command requirement must be satisfied in order for an element in the matrix subject position to control the null subject in the case of jussive control embedding the promissive clause.

(57) \[\text{John}-\text{uy} \text{ chinkwu}]_{-\text{ka}} \text{ Mary}_{\text{k-eykey}} [e_{i/j/k}^{*}\text{ttena-ma-ko}] \\
John-GEN  friend-GEN    Mary-DAT       leave-PRM-COMP  \\
\text{yaksokhay-ss-ta.}  \\
\text{promise-PAST-DECL}  \\
\text{‘John’s friend promised Mary that he (John’s friend/*John/*Mary) would leave’}

Secondly, the c-command condition is also required for a control relation in a sentence with an embedded imperative complement clause. As shown below, it is not Mary but Mary’s sister that can be in a c-command relation with the null subject in the imperative clause, and indeed, only Mary’s sister can be referred to by the null subject.

(58) \text{John}^{*}_{\text{un}} [\text{Mary}_{\text{uy}} \text{ tongsayng}]_{\text{k-eykey}} [e_{i/j/k}^{*}\text{ttena-la-ko}] \\
John-TOP Mary-GEN sister-DAT       leave-IMP-COMP  \\
\text{myenglyenghay-ss-ta.}  \\
\text{order-PAST-DECL}  \\
\text{‘John ordered Mary’s sister that she (Mary’s sister/*Mary/*John) should leave’}

Third, a sentence subordinating an exhortative clause marked by –ca behaves in the same way as the two sentences above in whether the c-command requirement is met. We can think of
four possible sentences to test whether this is true, but it would suffice for our current purposes to consider the following pair of sentences.

(59)  

a. [John\textsubscript{i-uy chinkwu}]\textsubscript{j-ka} Mary\textsubscript{k-eykey} \[e_{i+jj+k}^*\text{tena-ca-ko}\]  
John-GEN friend-NOM Mary-DAT leave-EXH-COMP  
ceyanhay-ss-ta.  
propose-PAST-DECL  
‘John’s friend proposed to Mary that they (John’s friend & Mary/*John & Mary) would leave together.’

b. John\textsubscript{i-i} [Mary\textsubscript{i-uy chinkwu}]\textsubscript{k-eykey} \[e_{i+jj+k}^*\text{tena-ca-ko}\]  
John-NOM Mary-GEN friend-DAT leave-EXH-COMP  
ceyanhay-ss-ta.  
propose-PAST-DECL  
‘John proposed to Mary’s friend that they (John & Mary’s friend/*John & Mary) would leave together.’

As in (59a), a person who proposed to Mary to leave together cannot be John but John’s friend that is capable of c-commanding the null subject in the exhortative complement. Likewise, Mary that fails to c-command the lower subject cannot be the person who could both be given a proposal and leave together with John in (59b); instead, it is Mary’s friend that is qualified for being one of the referents of the null subject. The fact that the non-c-commanding controller in the matrix clause is prohibited suggests that the c-command requirement, one of the inherent properties to OC constructions, must be satisfied in order for the matrix arguments to control the null subject in the embedded exhortative clause.

By contrast, the same condition does not hold for NOC constructions, so the null subject can even be interpreted as coreferential with an antecedent that does not c-command it. As shown below, the NOC subject in the sentential subject is either interpreted as Bill’s sister or Bill, the latter of which fails to fulfill the c-command requirement.
5.4.4 No Strict Identity with OC (Property D)

When VP ellipsis applies, the OC subject does not permit a strict (identity) reading to arise, while the NOC subject allows for both the strict and sloppy reading. Consider first a sentence where VP ellipsis applies to a sentence subordinating a promissive clause. As shown in (61b), if reconstructed at LF, a sloppy reading where the null subject inside the elided VP refers to John, the subject in the same conjunct, can be obtained without difficulty. On the other hand, it is impossible to obtain a strict reading where the null subject inside the ellipsis site is construed as Bill, the subject of the matrix clause in the first conjunct, as in (61a).

(61) Bill-un Maryj-eykey [e_j ttena-ma-ko] yaksokhayss-ko,
    Bill-TOP Mary-DAT leave-PRM-COMP promised-CONJ
    John-to Mary-eykey kulayssta.
    John-also Mary-DAT did.so
a. Strict: *'Bill promised Mary that he (Bill) would leave, and John promised Mary that he (Bill) would leave.'
    b. Sloppy: ‘Bill promised Mary that he (Bill) would leave, and John promised Mary that he (John) would leave.’

Second, when ellipsis leaves out a VP along with an imperative clause dominated by it, as in (62), a strict reading is not admitted, which explains why the null subject inside the deleted VP cannot refer to the indirect object of the matrix clause in the first conjunct, as in (62a). On the other hand, a sloppy reading is readily available, as shown in (62b), where the null subject of
the embedded imperative in the second conjunct refers back to the indirect object of the matrix clause in the second conjunct, not in the first conjunct.

(62) Bill\textsubscript{i} un Stacey\textsubscript{j} eykey \textsubscript{[ej ttena-la-ko]} myenglyenghayss-ko, Bill-TOP Stacey-DAT leave-IMP-COMP ordered-CONJ John-to Mary-eykey kulayssta. John-TOP Mary-DAT did.so

(a.) Strict: *‘Bill ordered Stacey that she (Stacey) should leave, and John ordered Mary that she (Stacey) should leave.’

(b.) Sloppy: ‘Bill ordered Stacey that she (Stacey) should leave, and John ordered Mary that she (Mary) should leave.’

Third, it seems that the ban on strict identity in the VP ellipsis context also works for a sentence where a VP dominating an embedded exhortative clause is deleted by the ellipsis operation, as exemplified in (63).

(63) Bill\textsubscript{i} un Stacey\textsubscript{j} eykey \textsubscript{[e\textsubscript{i+j} hamkkey ttena-ca-ko]} ceyanhayss-ko, Bill-TOP Stacey-DAT together leave-EXH-COMP proposed-CONJ John-to Mary-eykey kulayssta. John-To Mary-DAT did.so

(a.) Strict: *‘Bill proposed to Stacey that they (Bill and Stacey) would leave together, and John proposed Mary that they (Bill and Stacey) would leave together.’

(b.) Sloppy: ‘Bill proposed to Stacey that they (Bill and Stacey) would leave together, and John proposed to Mary that they (John and Mary) would leave together.’

As shown in the sentence above, a strict reading on which the null subject inside the elided VP in the second conjunct refers to the two arguments of the matrix clause in the first conjunct (i.e., \textit{Bill} and \textit{Stacey}) is prohibited, while a sloppy reading is naturally obtained where the same null subject can have as its referents the subject and indirect object of the higher clause in the second conjunct (i.e., \textit{John} and \textit{Mary}).
Before moving to the next diagnostic, let us quickly see if NOC sentences behave differently than OC sentences in whether they are subject to the ban on the strict reading under VP ellipsis. Consider the following sentence.

(64) Bill-un [[e ilccik colepha-nun-kes]-i ywuliha-ta-ko] 
    Bill-TOP early graduate-REL-NML-NOM be.advantageous-DECL-COMP 
    syangkakhay-ss-ko, John-to kulayssta. 
    think-PAST-CONJ John-also did.so 

a. Strict: Bill thought that his (Bill’s) graduating early would be advantageous, and John thought that his (Bill’s) graduating early would be advantageous.  
b. Sloppy: Bill thought that his (Bill’s) graduating early would be advantageous, and John thought that his (John’s) graduating early would be advantageous.

Unlike the jussive control sentences, this sentence where the null subject appears in a sentential subject admits not only the sloppy reading but also the strict reading, as shown above. Thus, the null subject inside the elided VP can be construed either as the local subject, John, in the same conjunct, as in (52b), or as the distant subject, Bill, in the first conjunct, as in (52a).

5.4.5 No Invariant Reading with OC (Property E)

When a controller is focused by only, the referent of the OC subject varies depending on the value of the operator, while the value of the NOC subject can either vary according to the value of the operator, or have its fixed value independently of the operator’s value (cf. Higginbotham (1980, 1992)). It appears to be difficult to construct a sentence subordinating an exhortative clause to which this diagnostic is applicable, since control sentences embedding the exhortative clause necessarily require both of the matrix arguments to be the controllers of the null subject. So I will apply the fifth test only to control sentences subordinating a promissive and imperative sentence. Consider first the following sentence embedding a promissive clause where the matrix
subject takes the form of *only*-NP which is equivalent to the DP in Korean where the delimiter –
*man* ‘only’ is attached to the head noun.

(65)  \[\text{John-}\text{man} \quad [\text{e} \quad \text{ttena-}\text{ma-ko}] \quad \text{yaksokhay-ss-ta}.\]
John-only leave-PRM-COMP promise-PAST-DECL

a. Covariant: For no x, x different from John, x promised that x would leave.
b. Invariant: *For no x, x different from John, x promised that John would leave.

As described in the interpretations above, an invariant reading where John promised that *he (John)* would leave and no one else promised that *John* would leave is hard to obtain. Instead, the natural reading would be a covariant reading where John promised that *he (John)* would leave and no one else promised that *they* would leave.

The second example below is the one where an imperative clause is embedded while the delimiter –*man* ‘only’ being attached to the indirect object of the higher verb.

(66)  \[\text{John-un} \quad \text{Mary-eykey-}\text{man} \quad [\text{e} \quad \text{ttena-}\text{la-ko}] \quad \text{myenglyenghay-ss-ta}.\]
John-TOP Mary-DAT-only leave-IMP-COMP order-PAST-DECL

a. Covariant: ‘For no x, x different from Mary, John ordered x that x would leave.’
b. Invariant: *‘For no x, x different from Mary, John ordered x that Mary would leave.’

Once again, while a covariant reading where John ordered Mary that *she (Mary)* would leave and John ordered no one else that *they* would leave, is possible, as in (66a), an invariant reading on which John ordered Mary that *she (Mary)* would leave and John ordered no one else that *she (Mary)* would leave, is not obtainable as shown in (66b).

On the other hand, given the different behaviors exhibited by sentences with the NOC subject, one can predict that they allow not only for the covariant, but also the invariant reading, and this prediction is borne out by the following sentence.
Unlike the sentences subordinating the jussive clauses, this sentence that does not subordi- 
nate a jussive clause can be interpreted in an ambiguous way: in particular, an invariant reading where 
John thought that his (John’s) leaving early would be safe and no one else thought that his 
(John’s) leaving early would be safe is considered as natural as a covariant reading on which 
John thought that his (John’s) leaving early would be safe and no one else thought that their 
leaving early would be safe.

5.4.6 No De Re Belief with OC (Property F)

Finally, sentences where the OC subject appears in a clause subordinated under attitude verbs, 
such as *expect* and *want*, can be interpreted as felicitous only when a *de se* belief about the self is 
available (cf. Lewis (1979), Chierchia (1990), Higginbotham (1992), Schlenker (2009)). On the 
other hand, sentences where the NOC subject appears in a clause under the same type of predi- 
cate can be judged as true by a *de re* belief of a certain individual denoted by the higher subject. 
Notice, however, that since the control predicates such as *yesangha*- ‘expect’ and *wenha*- ‘want’ 
are unable to complement jussive clauses in Korean, I will construct sentences that only impli- 
cate the attitudes or epistemic states indirectly (cf. Higginbotham (1992: 88) for discussion about 
sentences where matrix verbs are directive verbs such as *persuade*).
Let us first begin with a sentence that subordinates a clause marked by the promissive particle –ma. Consider the following situation which is based on the scenario we have already seen in Section 2.2.2.1 of Chapter 2.

(68) John is a world-famous scientist for his research on stem cell, who succeeded in creating human embryonic stem cell by cloning two years ago. However, John had a car accident a year later, so he has suffered from amnesia since then. Recently, the Royal Swedish Academy of Sciences announced that it would include John as one of the nominees for the Nobel Prize in Medicine for 2010. John was invited to a city in Sweden where the Laureate of the Nobel Prize in Medicine is to be announced, so his wife, Mary, took him there. They waited for the final decision at the award ceremony, although John is still unable to identify himself with the person who is among the nominated candidates. But it turned out that he was not the person who won the prize this time.

receive-PRM-COMP promise-PAST-DECL
‘John promised Mary to win the Nobel Prize next time.’

As indicated above, under the scenario given in (68), the controller, John, cannot have the de se belief (or direct thought about the self) due to amnesia. Therefore, the control sentence subordinating the promissive clause in (69) cannot be true unless some magic suddenly cures him of his mental disorder. This in turn suggests that the de re belief is not sufficient for the promissive control sentence to be felicitous in the given situation.

Turning to the last subtype of jussive control where an exhortative clause is embedded, consider the following scenario which is adapted from Madigan (2008a: 495).

(70) John, who recently suffered from amnesia, is watching TV with his wife Mary. They are watching a program where they are shown in an ongoing courtroom case. Furthermore, it seems as if both of them may go to jail. Suddenly, John thought that Mary and the man
on TV, who he does not recognize is himself, should lie in order to avoid going to jail.

\[(71)\] 
\[
\text{John-}\underline{\text{TOP}}\quad \text{Mary-}\underline{\text{DAT}}\quad \text{perjure-}\underline{\text{EXH-COMP}}\quad \text{propose-}\underline{\text{PAST-DECL}}
\]

‘John proposed to Mary to perjure themselves’

According to the native speakers of Korean whom I consulted, the sentence in (71) cannot be viewed as felicitous under the given scenario. This suggests again that the sentence with a complement clause whose predicate is combined with the exhortative particle –ca requires the de se belief, a property shared by the OC constructions. This being said, I will not apply the de se belief test to the case of object control embedding an imperative clause, as the same result would be obtained for it.

However, it is still necessary to see whether NOC sentences behave differently from OC sentences with respect to the requirement for the de se beliefs as a felicitous condition. Consider the following NOC sentence as a continuation of the same scenario as in (70) above.

\[(72)\] 
\[
\text{John-}\underline{\text{TOP}}\quad \text{Mary-}\underline{\text{DAT}}\quad \text{perjure-REL-NOML-NOM}\quad \text{be.advantageous-will-DECL-COMP}
\]
\[
\text{malhay-ss-ta-ko}
\]

\[\text{say-PAST-DECL}\]

‘John told Mary that perjuring themselves would be beneficial.’

As predicted, the sentence that does not embed a jussive clause can be judged true under the given scenario, although John is unable to have the de se belief, and this in turn confirms our generalization that the NOC sentences, as opposed to the OC sentences, are not subject to the ban on de re beliefs.
5.4.7 Summary: Jussive Complements are OC Complements

So far, in order to see if sentences subordinating jussive clauses are instances of OC, the sentences embedding each type of jussive clause have been tested against the standard diagnostics (listed in Table 1) that have been developed for distinguishing OC from NOC in the literature. The test results revealed that the sentences embedding jussive clauses have the OC properties. Given these results, the next step we need to take is to develop an analysis by which we can explain how OC dependencies between matrix arguments and null subjects in jussive complements are derived. However, before presenting my own analysis in Chapter 6, I will discuss a couple of syntactic analyses in Section 4.4, which directly deal with (some subtypes of) jussive control in Korean and Japanese. It will be shown that those analyses cannot be taken as a proper analysis of jussive control. In addition, we will discuss some of the semantic analyses, and it will turn out that we still need a syntactic approach to capture the role of jussive complements in determining the interpretive patterns in jussive control in Korean.

5.5 Previous Approaches

In this section, I will first discuss some previous syntactic approaches in Section 5.5.1 which directly investigate Korean jussive clauses and Japanese equivalents in control contexts under the minimalist framework. In particular, just as I did for reviewing major syntactic theories of control in Chapter 2, I will go over each study by focusing on the three core issues given in (18), repeated below.

(18)  a. What licenses controlled subjects? (Syntactic environments (or Licening condition))
b. What are controlled subjects? (Categorial status of controlled elements)
c. How are controllers determined? (Controller choice)
After that, some of the semantic approaches to control in English, which were not discussed in Chapter 2, will be reviewed in Section 5.5.2 to see if any of them can be extended to jussive control in Korean. At the end of this section, it will be clear why we need to have a fine-grained syntactic analysis in order to capture the correlation between the type of jussive complements and the control interpretation in jussive control.

5.5.1 Syntactic Approaches to Jussive Control in Korean

5.5.1.1 H. Choe (2006)

As we have seen in Chapter 3, the core claim made by Choe (2006) is that Korean does not employ obligatory control (OC) and PRO is not available in this language. In that chapter, we particularly looked into whether H. Choe’s arguments against Monahan’s (2003) Movement Theory of Control (MTC)-based analysis of Korean control constructions involving \textit{tolok}-complements are tenable, and it was revealed that her approach encounters some problems. However, in addition to the \textit{tolok}-control constructions, H. Choe also discusses control constructions subordinating some of the jussive clauses including imperatives and exhortatives, and argues that these cases lend support to her claim that the OC phenomena, let alone PRO, do not exist in Korean. This section will be devoted to a discussion of how she analyzes jussive control and whether her analysis is on the right track.

H. Choe basically assumes that (73a) and (73b) are the characterizing properties of OC, and tries to show that what were previously analyzed as OC constructions in Korean exhibit none of these properties.

(73) Two properties of obligatory PRO or obligatory control
a. Syntactic binding (cf. Reinhart (1986)) is involved in obligatory control; and therefore, obligatory PRO may trigger the bound variable interpretation, but not the pragmatic
coreference.
b. The semantics of a matrix control predicate determines the controller.

H. Choe (2006: 375)

Let me begin by briefly reviewing her analysis of the *tolok*-control constructions here again, and then look at how she treats the jussive control constructions. She compares Monahan’s (2003) movement approach with Cormack and Smith’s (2004) semantic analysis, claiming that the latter is superior to the former in capturing the interpretive patterns found in the *tolok*-control constructions in Korean. Monahan (2003) argues under the framework of Movement Theory of Control that OC dependencies in the *tolok*-control constructions can be reduced to A-chain relations. According to his analysis, the *tolok*-control sentence in (74a) with the Case-alternating persuadee DP is analyzed as forward control (FC) as in (74b) and backward control as in (74c), respectively. Recall, on the other hand, that Cormack and Smith (2004) reanalyze the FC case and the BC case as (75a) and (75b), respectively. In particular, they treat the null arguments in both cases as pro, not PRO or NP-traces. But since the configuration in (75b) for the BC case causes a violation of Condition C, they have to assume that the *tolok*-complement should be scrambled across the null category in the higher clause, as illustrated in (75c).

    John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
    ‘John persuaded Mary to leave.’
    John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
c. John-un ti [Mary,-ka ttena-*tolok*] seltukha-ess-ta. (BACKWARD)
    John-TOP Mary-NOM leave-COMP persuade-PAST-DECL

(75) a. John-un Mary,-lul [pro,] ttena-*tolok* seltukhay-ss-ta.
    John-TOP Mary-ACC leave-COMP persuade-PAST-DECL
    Lit. ‘John persuaded Maryi [pro, to leave]’
   John-TOP Mary-NOM leave-COMP persuade-PAST-DECL
   Lit. ‘John persuaded pro₁ [Mary₁ to leave]’

   John-TOP Mary-NOM leave-COMP persuade-PAST-DECL
   Lit. ‘John persuaded [Mary₁ to leave] pro₁’

Given the two competing views, H. Choe raises the question of which one makes a better prediction for the interpretations in FC and BC in Korean, and in order to answer this question, she examines the possible usages and interpretations of ‘pro’ in terms of whether a potential antecedent c-commands pro and it is referential or not. This is because Cormack and Smith’s analysis is distinguished from Monahan’s in that the null subject in the tolok-complements is taken to be pro. H. Choe argues that the obligatory referential dependency between pro and Mary in the BC case in (75c) is nothing but an instance pragmatic coreference, which is available for the referential pro and its referential antecedent whether or not the latter c-commands the former.

What is crucial for our current discussion is that in order to buttress her claim that FC in Korean does not involve obligatory control but is rather dictated by pragmatics, H. Choe discusses two of the jussive control constructions (in our terms)—particularly, the cases where the imperative and exhortative clause are subordinated by the utterance verb malha- ‘say,’ as in (76a) and (76b), respectively.

(76) a. Chelswu-nun Yenghi-eykey pro ttena-la-ko malhayssta.
   Chelswu-TOP Yenghi-DAT leave-IMP-COMP said
   Lit. ‘Chelswu said to Yenghi [pro should leave].’

b. Chelswu-nun Yenghi-eykey pro ttena-ca-ko malhayssta.
   Chelswu-TOP Yenghi-DAT leave-EXH-COMP said
   Lit. ‘Chelswu said to Yenghi [pro and should leave].’

H. Choe (2006: 382)
Secondly, she also observes that the interpretation patterns of the null subjects in (76) are kept unaltered even if the matrix verb in each sentence is replaced with the typical (object) control verb *seltukha*- ‘persuade,’ as shown in (77).

Chelswu-TOP Yenghi-DAT leave-IMP-COMP persuaded
Lit. ‘Chelswu persuaded Yenghij [proj should leave].’

Chelswu-TOP Yenghi-DAT leave-EXH-COMP persuaded
Lit. ‘Chelswu persuaded Yenghij [proi+j should leave].’

H. Choe (2006: 382)

Given this observation, she claims that the referent of the null subject in the embedded jussive clause, which she takes to be pro, is not determined by the semantics of the matrix predicate but is pragmatically determined, depending on the choice of the mood or force marker.

Third, as supporting evidence that the null subject in the jussive complement is pro, H. Choe provides direct quotation sentences involving the persuade-type predicate in (78), where the overt pronoun appears in the lower subject position.

Chelswu-TOP Yenghi-DAT you-NOM leave-IMP-COMP persuaded
Lit. ‘Chelswu persuaded Yenghi, “you should leave”.’ (you = Yenghi/hearer)

Chelswu-TOP Yenghi-DAT leave-EXH-COMP persuaded
Lit. ‘Chelswu persuaded Yenghi, “we should leave”.’ (we = Chelswu + Yenghi or the hearer + the speaker)

According to her, just like the utterance verb, the persuade-type verb can co-occur with the direct quote in Korean, and the verb ha- ‘do’ can optionally appear in the same context. She takes the compatibility of the persuade-type verb with the direct quote to be another token that the determination of the referent of the lower subject, pro, is correlated with the type of the mood marker rather than with the semantic meaning of the higher verb.

Finally, H. Choe adds the following data to the list of evidence showing the importance of the role of the mood marker in controller choice.

                 Chelswu-TOP Yenghi-DAT leave-COMP persuaded
     Lit. ‘Chelswu persuaded Yenghi [proj should leave].’

                 Chelswu-TOP Yenghi-DAT leave-COMP make.sure
     Lit. ‘Chelswu made Yenghi promise [proj should leave].’

                 Chelswu-TOP Yenghi-DAT leave-COMP rebuked
     Lit. ‘Chelswu rebuked Yenghi to make proj leave.’


As shown above, the null subjects in the lower clauses are uniformly construed as the matrix object regardless of the meaning of the matrix verb. So she argues that it is the marker –tolok (which she defines as the ‘mood marker’) that forces the lower subjects to take the matrix objects as their antecedents. Based on the data in (79), along with those in (76)-(78), H. Choe (2006: 383) draws the conclusion that the second property exhibited by obligatory control in (73b), which has to do with the role of the semantic meaning of the control predicate in controller choice, does not hold in the constructions previously defined as control in Korean.

To summarize H. Choe’s analysis of jussive control against the three core issues in (18), she first argues that controlled null subjects are pro, denying the existence of PRO in Korean.
Second, she does not explicitly discuss the licensing conditions for the null subjects. Third, as for the controller choice, she suggests that the determination of the referent of a null subject is dependent on the type of the mood marker of a complement clause where the subject appears, and that it is not subject to syntactic binding but pragmatic factors. Notice that my analysis shares a couple of aspects with H. Choe’s analysis: for example, in both analyses, null subjects in jussive complements are treated as pro, which readily explains the alternability with overt pronouns; and the interpretation of pro is taken to be influenced by the choice of a mood marker. However, my analysis should be distinguished from her analysis in other aspects. Among others, although I also take the role of clause-typing markers to be essential in controller choice, I assume that ‘syntactic binding’ is involved in the process of identifying controllers. In addition, as discussed in Chapter 3, I adopt the movement approach to infinitival control constructions including the tolok-control construction. Note, however, that I will not extend the movement approach to the jussive control constructions due to the differences in the nature of their syntactic structures.\(^{13}\)

In fact, it would not be difficult to show that her pragmatic approach poses some problems which keep us from endorsing it as a proper analysis of the Korean jussive control constructions. Let me briefly discuss what I think is problematic with her analysis. First, with the data in (79) where the tolok-clauses are subordinated, she argues that the semantic meaning of a matrix verb has no influence on the reference resolution for a null subject in the subordinate clause. However, the parallel interpretation (i.e., object control reading) in (79a) and (79c) is predictable since the matrix verb seltukha- ‘persuade’ and yatanchi- ‘rebuke’ in Korean can subordinate not

\(^{13}\) See Section 6.4 in Chapter 6 for details of the current analysis of the jussive control constructions. In addition, in the next subsection, I will review Fujii’s (2006) movement analysis of Japanese equivalents of jussive control, showing what precludes us from adopting the movement approach to the Korean jussive control constructions.
only the *tolok*-clauses but also the imperative clause, just as other object control predicates. On the other hand, the example in (79b) does not sound natural to me; that is, given that the predicate *tacimha*—‘make sure, pledge’ falls under verbs of commitment like *promise* in Korean, the promissive clause or the *kilo*-clause rather than the *tolok*-clause would make the sentence sound more natural as an instance of subject control. More importantly, her claim about the absence of influence of the semantic meaning of the matrix verb on controller choice does not hold for the jussive control constructions. Recall from the discussion in Section 5.3.2 that the range of clause types of complement clauses is not arbitrarily determined but is somehow restricted by the meaning of a higher verb. For example, an imperative clause cannot be subordinated under by the *promise*-type verb, a promissive clause cannot be embedded by the *order*-type verb, and an exhortative clause cannot co-occur with the *order*-type verb. Each case is illustrated in (48a), (48b), and (48c), respectively, which are repeated below.

(48)  

John-TOP Mary-DAT school-to go-IMP-COMP promised  

b. *John* i-un *Mary* eykey [eij hakkyo-ey ka-*ma*-ko] myenglyenghayssta/ 
John-TOP Mary-DAT school-to go-PRM-COMP ordered/  
instructed  

(48)  

(48)  

John-TOP Mary-DAT school-to go-IMP-COMP promised  

b. *John* i-un *Mary* eykey [eij hakkyo-ey ka-*ma*-ko] myenglyenghayssta/ 
John-TOP Mary-DAT school-to go-PRM-COMP ordered/  
instructed  

(48)  

given this fact, it would be an oversimplification if one claims that a subordinating verb plays no role in fixing the referential value of a null subject inside the jussive complement. So an appro-
riate analysis should be able to capture the fact that a subordinating verb imposes a kind of selec-
tional restriction on the clause type of a complement clause in jussive control.

Second, according to her, what are subordinated in (78) are direct quotations, which op-
tionally accompany the verb *ha* ‘do’ followed by the complementizer. However, contrary to her 
judgment, my informants do not take the data in (78) acceptable unless the matrix verb *seltukha-
‘persuade’ is substituted for the utterance verb *malha*– ‘say.’ Furthermore, she mentions that the 
use of the verb *ha* is optional in the same data, but unlike what she reports, the first singular and 
plural pronoun cannot appear in the lower subject position if the verb *ha* is omitted. This seems 
to suggest that the verb *ha* (which is phonologically changed into *–lako* when combined with the 
complementizer *–ko*) is obligatory for direct quotes. Thus, the omission of the verb *ha* from (78) 
changes the lower clauses into jussive complements, and the first person singular and plural pro-
noun would be prohibited inside them, as their antecedents are not the actual speaker and/or ad-
dressee but the subject and/or object in the matrix clause (see Section 5.3.1 for more information 
about the differences between direct quotes and complement clauses).

Third, H. Choe does not discuss another core pattern of jussive control, which involves 
the promissive clause where the promissive marker *–ma* appears, and instead, includes the fol-
lowing two sentences as instances of subject control.

\[ (80) \]
\[
\begin{align*}
\text{a. Chelswu-nun} & \quad \text{Yenghi-eykey [pro} \quad \text{ttena-}n\text{-ta-ko]} \quad \text{malhayssta/}.
\end{align*}
\]

Chelswu-TOP
seltukhayssta.
persuaded.

Lit. ‘Chelswu said to/persuaded Yenghi [pro, was going to leave].’

\[
\begin{align*}
\text{b. Chelswu-nun} & \quad \text{Yenghi-eykey [pro} \quad \text{ttena-}L\text{kela-ko]} \quad \text{malhayssta}.
\end{align*}
\]

Chelswu-TOP
seltukhayssta.
persuaded

Lit. ‘Chelswu said to/persuaded Yenghi [pro, would leave].’
Notice, however, that unlike what she reports, the control predicate seltukha- ‘persuade’ in fact cannot be used as the subordinating predicate in this environment. In addition, it is not always the case that the null subjects in these two sentences are obligatorily controlled by the matrix arguments. For example, suppose that two interlocutors A and B are watching the show in the situation given in (81). At some point, B says the sentences in (a) and (b) in response to A’s question. Notice, however, that in both sentences, the null subject in the lower clause does not refer to either the matrix subject or object but something else, i.e., the North Pole, which is not present in the matrix clause.

(81) **Scenario**: On a TV show, Chelswu talked with Yenghi about global warming, and he (Chelswu) told Yenghi that the North Pole would disappear in the near future if we human beings do not take appropriate actions to reduce air pollution, which is particularly caused by carbon monoxide.

A: Chelswu-ka Yenghi-eykey mwues-i-la-ko malhay-ss-nya?
Chelswu-NOM Yenghi-DAT something-BE-DECL-COMP say-PAST-INT
‘What did Chelswu say to Yenghi?’

B:  
  a. Chelswu-nun Yenghi-eykey [pro kot salaci-n-ta-ko]  
     Chelswu-TOP Yenghi-DAT soon disappear-INFL-MOOD-COMP  
     malhay-ss-e.  
     say-PAST-DECL.INFORMAL  
     Lit. ‘Chelswu said to Yenghi [pro*i/*j/*k is going to disappear soon].’
  b. Chelswu-nun Yenghi-eykey [pro kot salaci-l.kela-ko]  
     Chelswu-TOP Yenghi-DAT soon disappear-will- COMP  
     malhay-ss-e.  
     say-PAST-DECL.INFORMAL  
     Lit. ‘Chelswu said to Yenghi [pro*i/*j/*k would disappear soon].’

The optionality of referential dependency between pro and the matrix argument in the above data suggests that the sentences in (80a,b) are not instances of jussive control, and that pro in these
sentences must not be treated in the same way as pro in the genuine jussive control cases where the promissive, imperative and exhortative clause are subordinated.

In short, I have reviewed H. Choe’s (2006) analysis of the jussive control constructions in Korean, which claims that null subjects in the jussive complements are pro whose interpretations are subject to pragmatic factors, not syntactic binding. But it has been revealed that her approach has some problems, which preclude us from adopting her view.

5.5.1.2 Fujii (2006)

This subsection reviews Fujii’s (2006) analysis of Japanese equivalents of jussive control constructions. Although he does not discuss the Korean jussive control constructions, since his approach to the Japanese data is based on a movement theory of control that Hornstein (1999 and subsequent work) proposes, reviewing Fujii’s approach to the Japanese counterparts would help us figure out whether the same approach works for the Korean jussive control constructions. According to him, Japanese also has OC constructions which subordinate clauses with a mood particle. Although Japanese does not have as many mood particles as Korean, the imperative particle –e/-ro (or -yo) triggers object control, as in (82a), while the mood particle –(y)oo, roughly interpreted as ‘be willing to’ or ‘be ready to,’ gives rise to subject control and split control depending on the type of the higher verb, as in (82b) and (82c), respectively.14

(82)  MOOD CONTROL CONSTRUCTIONS (JAPANESE)
a. Yoko-wa Hiroshi-ni  [ei/j boku-no beeguru-o tabe-ro-to] meireisita  (yooda) ordered  seems

Yoko- TOP Hiroshi-DAT I-GEN bagel-ACC eat-IMP-COMP

14 According to Fujii (2006: 100), in Japanese, the imperative mood particle is realized as –e when preceded by consonant-final verbs and as –ro when preceded by vowel-final verbs. On the other hand, -yo can be used in formal speech.
‘(It seems that) Yoko ordered Hiroshi to eat my bagel.’

b. Yoko-wa [e_1 boku-no beeguru-o tabe-yoo-to]
Yoko-top I-GEN bagel-ACC eat-YOO-COMP
keikakusita (yooda) (SUBJECT CONTROL)
planned seems
‘(It seems that) Yoko planned to eat my bagel.’

c. Yoko-wa Hiroshi-j-ni [e_j boku-no beeguru-o tabe-yoo-to]
Yoko-TOP Hiroshi-DAT I-GEN bagel-ACC eat-YOO-COMP
teiansita (yooda) (SPLIT CONTROL)
proposed seems
‘(It seems that) Yoko proposed to Hiroshi to eat my bagel.’

Fujii (2006: 18)

In order to make sure that the three sentences in (82) are instances of OC, Fujii (2006) shows that they pass the same diagnostics, which are listed in Table 1 in Section 5.3: that is, each type of control sentence respects the ban on non-c-commanding antecedents, the prohibition on long distance antecedents, the ban on invariant reading with Only-NP antecedents, the absence of strict reading in ellipsis contexts, and the ban on non-de se reading (see Fujii (2006: Ch 3, 102-110) for discussion in detail).

Fujii assumes that in the Japanese control constructions involving mood markers, there is a functional projection MoodP right above TP, and the head of the MoodP hosts different forms of mood marker. As for semantic and pragmatic functions of the mood markers, he follows Portner (2004) and Portner and Zanuttini (2005) which suggest that imperative sentences do not denote propositions but properties, and the sentential force of the imperatives is to update a To-Do List of the addressee, which consists of a set of properties. Notice that the imperative clause in (880a) is not a root clause but a subordinated one. But as discussed in 5.3.1, whether or not imperative clauses can be embedded is debatable (cf. Sadock and Zwicky (1985), Palmer (1986), Rivero and Terzi (1995), Platzack and Rosengren (1998)). Following C. Han (1998/2000), Fujii argues that imperative clauses are embeddable in Japanese, so are the other types of mood claus-
es. Given this assumption, he argues that since embedded mood clauses are indirect quotations, To-Do Lists that are to be updated are those of the speakers and addressees of the indirect speech. In this respect, it can be said that his perspective on the meaning of embedded mood clauses (i.e., jussive clauses in my terms) is parallel with the view taken in this dissertation.

To explain how OC can be achieved in (82a)-(82c), Fujii adopts Hornstein’s (1999 and subsequent work) Movement Theory of Control (MTC), which reduces OC to be an A-chain dependency and takes PRO to be a trace left behind by A-movement of its controller. Before we look at the way Fujii analyzes each construction in (82), it should be pointed out that the subject control sentence in (82b) is not an exact counterpart of the Korean subject control. On the one hand, as shown in (83), repeated from (5), in Korean, the promissive clause ending in the promissive marker –ma can be subordinated under yaksokha- ‘promise.’

(83) SUBJECT CONTROL WITH A PROMISSIVE (KOREAN)

John-un Mary-j-eykey [e_{i/*j} hakkyo-ey ka-ma-ko] yaksokhay-ss-ta.
John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL
‘John promised Mary to go to school.’

By contrast, if the clause marked by the mood particle –(y)oo is embedded under the Japanese verb equivalent to the Korean verb yaksokha- ‘promise,’ the null subject in the complement clause cannot be interpreted as the matrix subject, and the sentence itself is judged ungrammatical, as in (84a). On the other hand, the degree of acceptability of the sentence improves if the embedded mood clause is replaced with a nominalized complement headed by the nominalizing complementizer –koto, as in (84b).

---

15 In order to show that the complement clause in (82a) is not a direct quotation but an embedded imperative, Fujii (2006: 111-13) applies a couple of diagnostics, which appeal to the scope of wh-phrases and the interpretation of indexicals (e.g., pronouns). The same issue has been addressed in 5.3.1 of this chapter.
(84) SUBJECT CONTROL WITH A PROMISSIVE (JAPANESE)

a. *John-wa Mary-ni/to [e i kare-no kao-o sikame-yoo-to]
   John-TOP Mary-DAT/with his face-ACC screw.up-YOO-COMP
   promised
   Intended: ‘John promised Mary to screw up his face.’

b. ?John-wa Mary-ni/to [e i kare-no kao-o sikame-ru-\textit{koto}-o]
   John-TOP Mary-DAT/with his face-PRES-COMP-ACC
   promised
   ‘John promised Mary to screw up his face.’
Fujii (2006: 130)

Fujii labels the embedded mood clause marked by –\textit{(y)oo} in (82b) the ‘intentive’ clause, and observes that this type of clause can be embedded by verbs of intention such as \textit{plan}, \textit{decide}, and \textit{think}, etc. Sentence (85) below illustrates an additional example where the intentive clause is embedded in Japanese.

(85) SUBJECT CONTROL WITH AN INTENTIVE (JAPANESE)

Taro-wa [e i boku-no koto-ni zibun-no me-o hikarase-te ok-oo-to] omotta/kimeta \textit{yooda}
Taro-TOP I-GEN ring-to self-GEN eye-ACC keep.brightening-YOO-COMP thought/decided seems

‘(It seems) that Taro {thought of keeping, decided to keep} his eye on me.’
Fujii (2006: 126)

In order to capture the fact that the intentive clause cannot be embedded under the \textit{promise}-type verb, as in (84a), while the same type of clause can be under such verbs as \textit{intent} and \textit{think}, as in (82b) and (85), respectively, he suggests that the ungrammaticality of the former can be attributed to a violation of the Minimal Distance Principle (MDP) in Rosenbaum’s (1967, 1970) sense whose definition of which is given in (86), repeated below from Chapter 3 for the sake of convenience.
MINIMAL DISTANCE PRINCIPLE
An infinitive complement of a predicate P selects as its controller the minimal c-commanding noun phrase in the functional complex of P.

as represented by Larson (1991: 115)

That is, since the matrix subject John in (84a) is not closer to the null subject than the matrix indirect object Mary, if the null subject is referentially linked to John across Mary, as required by the higher verb, the MDP cannot be respected, as schematized in (87a). On the other hand, since there is only one argument in the matrix clause in (82b), the controller, Yoko, can move out of the downstairs clause up to the matrix subject position without triggering the MDP effect.¹⁶

(87) a. John₁ Mary₁ [CP [MoodP e₁ … MoodₚՅ০] C₀₁] Vpromised (= (84a))

No A-movement (*MDP)

b. Yoko₁ [CP [MoodP e₁ … MoodₚՅ০] C₀₁] Vplanned (= (82b))

A-movement OK (√MDP)

At this moment, I do not have a clear answer to why Japanese behaves differently from Korean (and English) with respect to whether the null subject embedded under the promise-type verb can or cannot be linked to the matrix subject. So I will leave it open for future research.

Then, under Fujii’s analysis, it becomes straightforward how the null subject in the object control construction in (88a), where the imperative clause is subordinated, can be interpreted as

¹⁶ Fujii (2006) assumes that complement clauses in mood control constructions in Japanese do not prevent lower subjects from moving out of them, since the MoodP dominating the TP does not assign structural Case, just as in infinitive clauses in English. The reason the embedded mood clauses are treated as infinitive ones on his analysis is that a past tense marker cannot appear in those clauses. However, the present study takes a different position from his, in that jussive complements, at least in Korean, are an opaque domain out of which subjects cannot be extracted. As will be discussed in Chapter 6, this is because the present analysis assumes with Pak et al. (2007, 2008) and Zanuttini et al. (2011) that jussive particles are the reflex of syntactic agreement between a null subject and a functional head, namely, Jussive⁰. In particular, I argue that the agreement of this sort is different from the one found in Indo-European languages, in that the former takes place at the CP level while the latter at the IP level (cf. Miyagawa (2010) for the similar view). See Section 6.2 in Chapter 6 for relevant discussion in greater detail.
the indirect object in the matrix clause. That is, since the indirect object is obviously closer to the null subject than the matrix subject, the MDP selects the former as the local antecedent for the null subject without causing a violation of the MDP. This is illustrated in (88).

\[(88)\] Yoko_i Hiroshi_j \[\text{[CP [MoodP e_j \ldots Mood}_{ro}] C^0]} \text{ V ordered \, (= (82a))}\]

A-movement OK (\(\checkmark\) MDP)

Now we are left with the last case of mood control construction in Japanese, namely, the case of split antecedent control in (82c). Recall from our discussion in Chapter 2 that there is not a general consensus regarding whether split antecedent control is an instance of OC. Before Landau (1999), split control was considered as a typical property of NOC (e.g., Williams (1980), Martin (1996), Hornstein (1999)). On the other hand, Landau (1999) argues that split control is a subtype of OC, and that some control predicates in English, such as propose and ask, force the null subject to refer to both the subject and the indirect object. However, Hornstein (2003) points out that the judgments by native speakers of English on Landau’s data of split control are not uniform. In this respect, it seems very suggestive that in Japanese, as well as Korean, split control arises when there is a particular type of mood particle called the exhortative marker, -oo in the former and –ca in the latter, and that the native speakers’ judgments are consistent in both languages. Then, the question is how the split control interpretation can be obtained in these languages. Notice, though, that the availability of split antecedent control in Japanese appears to be puzzling under Fujii’s analysis that adopts the MDP to rule out illegitimate control patterns. In particular, unlike the subject control case in (82b) and object control in (82a), split control associated with the exhortative particle –(y)oo in (82c) apparently violates the MDP, since the controllers of the null subject include not only the closest DP Hirosh but also the DP
Yoko which is farther than Hiroshi from the null subject. For this reason, claiming that (82c) does not in fact violate the MDP, Fujii (2006: Ch 3, Sec 4) proposes (89) as a derivation for the sentence.

\[
(89) \quad [vP \begin{array}{l} \alpha \\ \end{array} \ [vP \begin{array}{l} \alpha + \beta \end{array} \ V \ [CP C^0 \ [\text{MoodP} \ \alpha + \beta \ (Y)OO \ldots ]]]] \quad (\text{cf. (88c)})
\]

Fujii (2006: 133)

In the above representation (which is given in a head-initial format), both \( \alpha \) and \( \beta \) are base-generated as conjoined elements and move together to Spec, MoodP in the lower clause; after that, they move further up to the matrix object position checking an internal \( \theta \)-feature of the verb, and then, \( \alpha \) is alone extracted out of the conjoined DPs, ending up in Spec, \( vP \) which renders the external \( \theta \)-feature of \( v^0 \) checked.

In order to make his proposal work, Fujii has to make three assumptions some of which appear to be problematic. First, he assumes with Schlenker (2003) that bound pronouns are variables and may be conjoined in syntax. For instance, according to this assumption, the null subject in (82c) can be decomposed into ‘Yoko+Hiroshi’.\(^{17} \) Second, \( \alpha \) and \( \beta \) in (89) must be equidistant in two crucial steps of movement. To be more specific, the movement of \( \beta \) must not be blocked by \( \alpha \) in the step where ‘\( \alpha+\beta \)’ move from Spec, MoodP to the matrix Spec, VP. This is because it is ‘\( \alpha+\beta \)’ that should be interpreted as a Theme or Goal, and thus, the internal \( \theta \)-feature

\(^{17}\) According to Fujii (2006: 133), Schlenker (2003) cites the following data as evidence in favor of the decomposition analysis of the bound variable.

\( (i) \quad \) Each of my colleagues is so difficult that at some point or other we’ve had an argument.

This sentence can be roughly interpreted as ‘For each of the speaker’s colleagues \( x \), \( x \) is so difficult that the speaker and \( x \) had an argument.’ The point here is that the pronoun \( we \) in (i) above can be decomposed into ‘\( I+x \)’. Fujii also mentions that Kayne (2002) pursues the similar line of analysis where bound plural pronouns are reanalyzed as combined traces of moved split antecedents.
of the matrix verb should be checked by $\beta$. Accordingly, $\alpha$ should be pied-piped when $\beta$ raises to the matrix Spec, VP position. By contrast, in the next step, $\beta$ must not prohibit movement of $\alpha$ from Spec, VP to Spec, $vP$ in the matrix clause; otherwise, the external $\theta$-role of the matrix $v^0$ fails to be checked by $\alpha$. However, it seems unclear how we can formally define the notion of ‘equidistance’ in this case, and furthermore, it should be clarified how syntax knows that two elements, $\alpha$ and $\beta$, are equidistant in one step, while $\alpha$ is closer to a target position than $\beta$ in another step. Third, as depicted in (89), $\alpha$ is extracted stranding $\beta$ in the Spec, VP position when it moves up to the matrix Spec, $vP$. Notice that this step involves movement out of a displaced element, but such kind of movement should be prohibited due to a violation of a condition called the Condition on Extraction Domain (J. Huang (1984), Takahashi (1994)). Runner (2006) remarks that any analysis within the framework of Movement Theory of Control (MTC) makes an incorrect prediction for the grammaticality of sentences like (90) where subextraction of a $wh$-phrase out of a derived element takes place.

(90) Which famous person did Martha persuade [DP a friend of $ti$] to sign the program?  
Fujii (2006: 135)

That is, the MTC-based approach takes the controller, a friend of which famous person, to have been raised out of the lower clause in (90); it is thus predicted that further extraction of the $wh$-phrase out of the controller DP should be banned. However, as shown in (90), this prediction is not borne out, and with the grammaticality of the sentence, Runner argues against the MTC approach that the null subject and its controller DP can hardly be linked to each other by A-movement. Regarding this issue, Fujii remarks that the grammaticality of (90) might not be a real problem for the MTC-based approach if we assume that movement out of a derived position
is constrained by J. Huang’s (1982) Condition on Extraction Domain (CED) rather than by Takahashi’s version—the former prohibits subextraction out of a position governed by a functional head, while the latter rules out movement failing to keep each chain link minimal. To put it differently, if J. Huang’s version of CED is adopted, the subextraction of which famous person out of the controller in (90) does not violate the CED, since the preposition of dominating the wh-phrase inside the controller DP is not a functional head.

In summary, we have seen that just as in Korean, there are control constructions in Japanese where control patterns are influenced by the type of mood marker, except that for triggering the subject control interpretation, the intentive, rather than promissive, clause is embedded in the latter. As just reviewed above, Fujii (2006) basically appeals to the MTC in deriving control patterns in the mood control constructions, and as for the first issue in (18a), i.e., the categorial status of controlled null subjects, he treats them as A-traces. Second, Fujii does not explicitly address the issue in (18b), which is about the licensing condition for null subjects in mood complements, but he makes the assumption that MoodP is projected in mood clauses in Japanese where structural Case is not available. Given this assumption, it can be presumed that the non-availability of structural Case is an important condition for null subjects to be licensed. Finally, each type of control interpretation, such as subject control, object control and split control, is obtained by A-movement of controller(s).

Notice that Fujii (2006) is one of the few studies maintaining that split control can be considered as a subclass of OC (cf. Landau (1999), Madigan (2008a,b)), and that he is correct in arguing that the availability of split control as a subtype of OC is correlated with the presence of a mood marker that signals the semantic or pragmatic function of the clause where the marker

\[18\] Note, however, that examining other control constructions than mood control constructions in Japanese, Fujii (2006: Ch 2) explicitly states that the unavailability of structural Case, which he assumes is crucially tied to the availability of tense alternation, is a necessary condition for controlled null subjects (p.91).
appears. Nonetheless, as pointed out above, the way he derives the control interpretation, specifically, the split control interpretation, has turned out to have some problems. Furthermore, his assumption that null subjects of a predicate combined with a couple of mood markers in Japanese cannot be assigned Case does not make a correct prediction for the Korean jussive control sentences at issue. That is, according to his assumption, lexical controllees in the jussive complements should not be permissible, which is not the case. These problems keep us from extending Fujii’s movement analysis to the Korean jussive control constructions.

5.5.2 Semantic Approaches

This subsection surveys three representative semantic approaches to complement control. In particular, in order to see how the semantic approaches differ from the syntactic approaches, the discussion will touch on the following issues: (i) whether a control complement is considered as clausal in the syntax and/or propositional in the semantics; (ii) whether a null category is independently postulated as the subject of a control complement; and (iii) what mechanism determines controllers. In so doing, it will be shown that the semantic approaches to be reviewed here face some difficulty explaining one specific control pattern, namely split antecedent control.

5.5.2.1 Chierchia (1984/88, 1989)

Chierchia (1984/88, 1989) advances a semantic analysis of obligatory control which suggests that controllers are determined by a semantic entailment that appeals to a hierarchy of thematic roles. Under his analysis, control is not a syntactic relation between a null category in the subject position of a clausal complement and the co-indexed argument in the matrix clause; rather,
this view explores how control predicates, semantically defined as ‘properties,’ can pick out their controllers based on a thematic hierarchy.

I will not attempt to provide an exhaustive review of Chierchia’s approach, but will discuss issues that only pertain to our present discussion. Chierchia basically assumes that a proposition is represented by the elements that it consists of, which need to be listed in an ordered $n$-tuple. For example, sentence (91a) whose meaning is equivalent to (91b) is represented in terms of the ordered $n$-tuple in (91c) under Chierchia’s analysis.

(91) a. John loves Mary.
b. loves’ (j, m)
c. <loves’, j, m>

Chierchia refers to such a kind of list as an ‘eventuality.’ In addition, he defines a $\theta$-role as a partial function from an eventuality to one of its constituents (or participants). For instance, he defines Agent, Theme, Goal and Source as in (92a), (92b), (92c) and (92d), respectively.

(92) For any eventuality $\beta$
   a. $\text{Ag}(\beta) = x_i$ for that unique $x_i \in \beta$ whose action causes $\beta$ (or, if you prefer, the event classified by $\beta$) to occur. If there is no such $x_i$, $\text{Ag}(\beta)$ is undefined.
   b. $\text{Th}(\beta) = x_i$ for that unique $x_i \in \beta$ such that whenever $\beta$ occurs, $x_i$ moves, changes possession or is acted upon by $\text{Ag}(\beta)$. If there is no such $x_i$, $\text{Th}(\beta)$ is undefined.
   c. $\text{Go}(\beta) = x_i$ for that unique $x_i \in \beta$ such that whenever $\beta$ occurs, $\text{Th}(\beta)$ moves towards $x_i$. If there is no such $x_i$, $\text{Go}(\beta)$ is undefined.
   d. $\text{So}(\beta) = x_i$ for that unique $x_i \in \beta$ such that whenever $\beta$ occurs, $\text{Th}(\beta)$ moves from $x_i$. If there is no such $x_i$, $\text{So}(\beta)$ is undefined.

Chierchia (1989: 139)

However, in order to properly use $\theta$-roles defined in terms of eventualities for proposition interpretations, there must be a way to link eventualities to propositions. For this reason, Chier-
chia (1989: 137) appeals to homomorphism and makes the assumption stated in (93), where \( E(\beta) \) indicates a proposition that is read as ‘it is the case that \( \beta \).’

\[
(93) \quad \text{If } \beta \text{ is an eventuality (i.e., if } \beta = <R^n, x_1, \ldots, x_n>, \text{ then } E(\beta) = R^n(x_1, \ldots, x_n).
\]

Given this, the general control entailment for subject control sentences like (94a), where the controller is an Agent in the matrix clause, can be represented as in (94b). In (94b), \( P \) represents a predicate, while \( P^* \) is assumed to be equivalent to \( \lambda x<P, x> \).\(^{19} \) Note also that the notation \( \beta_r[\alpha] \) represents an eventuality \( \beta \) of type-\( r \) that has \( \alpha \) as one of its constituents, and \( \beta_r[\gamma/\alpha] \) indicates an eventuality \( \beta \) of type-\( r \) whose constituent \( \gamma \) has been replaced with \( \alpha \).

\[
(94) \quad \text{a. John tried to swim.}
\quad \text{b. } E(\beta_r[P]) \rightarrow E(\beta_r[P/P^*(Ag(\beta))])
\]

To be more specific, what (94b) means is that whenever an eventuality \( \beta \) of type-\( r \) (i.e., a try-eventuality) that has a predicate \( P \) (i.e., ‘to swim’) as one of its constituents is the case, then an interpretation of the proposition \( E(\beta_r) \) is entailed where the eventuality \( <P, Ag(\beta)> \) is also the case. This representation appears to correspond to the interpretation that we can get from the sentence in (94a).

Notice, however, that the representation for subject control in (94b) cannot be easily extended to other cases of control without making an additional assumption, since there are many cases where subcategorized predicates select other matrix arguments than an Agent as an obliga-

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\(^{19} \) ‘*’ is used as a general type-shifting operator in Chierchia (1989). The definition of the type-shifting operation is provided in (ia), and the meaning of the verb \textit{hug} can be represented as in (ib) in terms of this operation.

\[
(i) \quad \text{a. } R^n* = \lambda x_1, \ldots, \lambda x_n <R^n, x_1, \ldots, x_n>.
\quad \text{b. } \text{hug}^* = \lambda x\lambda y<\text{hug}', x, y>
\]

Chierchia (1989: 136)
tory controller. For example, in *John persuaded Mary to swim*, it is not an Agent but a Theme that the subcategorized predicate ‘to swim’ picks out as its controller. Therefore, Chierchia (1984/88, 1989) proposes that selection of controllers by subcategorized control predicates is achieved by the hierarchy of thematic roles in (95b). In particular, he assumes that it is a $\theta$ variable over the $\theta$-role function that selects the controller, and that the $\theta$ variable in ‘$\theta(\beta)$’ in (95a) chooses a $\theta$-role which is the highest one among those in the eventuality $\beta$.

(95) **GENERALIZED $\theta$-HIERARCHICAL CONTROL**

a. $E(\beta,[P]) \rightarrow E(\beta,[P/P^*(\theta(\beta))])$

b. $\text{Th} > \text{Go} > \text{Ag} \ldots$  

Chierchia (1989: 144)

However, Chierchia’s analysis seems to have some shortcomings most of which can be attributed to his claim that controller choice is determined by the thematic hierarchy. First of all, as Madigan (2008b) also points out, Chierchia’s approach fails to capture split antecedent control.20 As discussed above, according to his approach, a subcategorized control predicate should

20 Note that as explicitly stated in Chierchia (1984/88: 298), he takes the non-availability of split antecedents to be one of the hallmarks of OC, but he also observes that some control predicates in English, which he dubs semi-obligatory control predicates, may allow for split antecedent control in limited contexts. The predicates that he mentions include *decide, signal, tough, and recommend*, etc., and if a specified argument position of control predicates is lexically filled, they give rise to OC interpretations, as shown in (i) below.

(i)  

a. *John* decided to have dinner late.

b. Mary signaled *Tom* to cross the road.

c. To have dinner late is tough *for John*.

d. Mary recommended reading *War and Peace* to *John*.  

Chierchia (1984/88: 298)

However, an argument carrying the particular $\theta$-role specified by these predicates can be omitted as in (ii). What is more important to the current discussion is that if a specified argument position is not overtly present, NOC properties can arise. This is shown in (iii) where split antecedent control arises.

(ii)  

a. It was decided to leave.

b. Mary signaled to cross the road.

c. To have dinner late is tough.

d. Mary recommended reading *War and Peace*.  

Chierchia (1984/88: 299)
pick out the hierarchically highest $\theta$-role as its controller. So in the case of split control in (96) in Korean, since a Goal is a higher $\theta$-role than an Agent on the thematic hierarchy in (95b), it is incorrectly predicted that only Mary, the Goal argument, can be the controller of the subcategorized predicate swuyengha- ‘swim.’

(96) John$_i$-un Mary$_j$-eykey $[e_{i+j}^*/i*/j^*]$ swuyengha-ca-ko] ceyanhayssta.
    John-TOP     Mary-DAT     swim-EXH-COMP   proposed
    ‘John$_i$ proposed to Mary$_j$ $[e_{i+j}^*/i*/j^*]$ to swim.’

Second, it would seem hard to derive the expected interpretation in subject control sentences accompanying the predicate promise (cf. Jones (1991: 207, fn. 6), Sag and Pollard (1991: 106-7), Madigan (2008b: 199) for the same observation). For example, as shown in (97), the controller of a subcategorized predicate should be the matrix subject John. However, Chierchia’s proposal that relies on the thematic hierarchy in (95b) makes an incorrect prediction that Mary with a Goal, not John with an Agent, is the controller, since the former bears a higher $\theta$-role than the latter on the proposed hierarchy.

(97) John$_i$-un Mary$_j$-eykey $[e_{i/*j}^*]$ swuyengha-ma-ko] yaksokhayssta.
    John-TOP     Mary-DAT     swim-PROM-COMP   promised
    ‘John$_i$ promised Mary$_j$ $[e_{i/*j}^*]$ to swim.’

(iii) a. John suggested to Bill to decide to leave together.
    b. John suggested to Bill to signal to leave together.
    c. Mary told Bill that to live together would be tough.
    d. The students of that class told me that their teacher recommended leaving together.

Chierchia (1984/88: 300)

In (iii), the understood subject is interpreted as the group or plural individual, which is evidenced by the use of a group adverbial together. From the interpretive pattern in (iii), he suggests that although the designated argument is not overtly present in each sentence, it is rather reconstructed as the controlling argument of the relevant verb, which is mediated by the context. His observation appears to be on the right track, but he does not provide his own analysis to flesh out the suggestion.
In order to avoid this problem, Chierchia (1984/1988) advances a kind of adjacency condition for controller choice. Assuming a Montague-style ordering of semantic arguments, Chierchia suggests that there is an adjacency condition requiring that the controller be an argument adjacent to the controlled ‘property.’ In addition, Chierchia adopts Bach’s (1980) analysis of *promise* and *persuade*. According to Bach, the complements of different verbs may be combined in different orders, and the controller of a VP complement should be the next argument to the VP in the syntactic combinatorics of the verb. The adjacency condition by Chierchia is designed for producing the same effects in controller assignment as Bach’s analysis. More specifically, after being merged with their VP complement, the *persuade*-type verbs are combined with the object NP and then, with the subject NP. Therefore, the object NP, which winds up being right next to the complement VP, can be the controller of the VP. On the other hand, *promise* merges first with its object NP, then combining with the VP and finally, with the subject NP. As a result, the subject NP is picked out as the controller of the VP, as it is the argument next to the VP. However, it seems unclear whether there is any independent motivation for the assumption that the combination of *promise* with the object NP exceptionally takes place before its merger with the subject NP.\(^\text{21}\)

\(^{21}\) Bach (1980) presents the contrast in (ia) and (ib) as evidence in favor of the distinction between the two classes of verbs with respect to syntactic argument order: that is, the heavy NP object of *persuade* can be extraposed by Heavy NP Shift, as in (ia), while that of *promise* cannot, as in (ib).

(i)  
\begin{itemize}
  \item a. Kim persuaded to resign \([\text{NP the leaders of the dissident groups that had been organizing the workers}]\).
  \item b.*Kim promised to resign \([\text{NP the leaders of the dissident groups that had been organizing the workers}]\).
  \item c.*Jim wanted to resign \([\text{NP the leaders of the dissident groups that had been organizing the workers}]\).
\end{itemize}

However, Sag and Pollard (1991: 104) argue that the contrast between (ia) and (ib) cannot be attributed to the distinction in argument order. This is because, as in (ic), the verb *want* does not allow its heavy NP object to be extraposed just like the verb *promise*, but it induces object control rather than subject control.
Third, Chierchia does not take a control complement as a clause but a VP, and assumes that the complement denotes a property in the semantics. So his approach does not allow direct linking between the unexpressed subject of a lower predicate and its controller, making the former participate in the control relation indirectly. Then, it seems difficult to capture the fact that there is agreement between the unexpressed subject and its controller in person, number and gender, as shown in (98) below.

(98) a. He tried to find himself.
b. *He tried to find herself/themselves/itself.
c. *He tried to find myself/yourself/yourselves.

Pollard and Sag (1994: 283)

More crucially, in Korean control constructions including the jussive control constructions, controlled subjects can alternate with overt pronouns, but there is obviously a restriction on the range of forms that controlled subjects may take, as illustrated in (99) below. However, Chierchia’s system which takes control complements to be VPs in the syntax would have difficulty capturing this restriction, since a null category is not assumed in the lower subject position.

  John- TOP Mary-DAT he-NOM/she-NOM leave-PRM-COMP promised
  ‘John promised Mary that e/he/she would leave.’
  John- TOP Mary-DAT he-NOM/she-NOM leave-PRM-COMP persuaded
  ‘John persuaded Mary that e/he/she would leave.’
c. John-un Mary-eykey [e/*ku-ka/*kunye-ka/kutuli+-i ttena-ca-ko]
  John- TOP Mary-DAT he-NOM/she-NOM/they-NOM leave-EXH-COMP
  cyanhayssta.
  ‘John proposed to Mary that e/he/she/they would leave.’
Summarizing Chierchia’s (1984/88, 1989) analysis against the three issues in (18), as for
the first issue, the framework he adopts does not admit the existence of a null subject neither in
the syntax nor in the semantics (Chierchia (1984/88: 230)). He instead argues that infinitives
(and gerunds as well) should be considered as VPs in the syntax (which he calls ‘verbal argu-
ments’), and they should be treated as ‘properties’ in the semantics. This means that the OC re-
lation has little to do with a ‘configurational’ dependency between the null argument of a subca-
tegorized predicate and its controller. Accordingly, under Chierchia’s system, it would be mean-
ingless to ask what licenses a controlled null subject in the syntax. Finally, as discussed above,
the determination of controllers is achieved by a semantic entailment which appeals to the them-
ic hierarchy, and it is crucially executed in the semantics by the substitution operation. How-
ever, his semantic entailment analysis of OC cannot be adopted at face value, since, as shown
above, it fails to derive the subject control interpretation induced by the promise-type verb let
alone the split antecedent control in Korean.

5.5.2.2 Farkas (1988)

This subsection reviews Farkas’s (1988) lexical semantic theory of control, which crucially relies
on the notion of ‘responsibility’ relation. The major question she addresses is what determines
the choice of the controller in case the set of possible controllers is more than one (Farkas (1988:
28)). By pointing out problems with the previous approaches based on hierarchies of grammati-
cal functions (e.g., Bresnan (1982)) or thematic hierarchies (Chierchia (1984)), she proposes a
semantic analysis in terms of responsibility (RESP)-relation.22 She defines the responsibility re-

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22 Bresnan (1982: 376) claims that the controller choice in unmarked control is made based on a lexical
redundancy rule, the Lexical Rule of Functional Control (LRFC); to put it differently, it is argued that the
controllers are determined by the hierarchy (of grammatical functions) in (i).
lation as a two-place relation, $\text{RESP}(i, s)$, which holds between an individual $i$ and a situation $s$ just in case $i$ brings $s$ about. If $\text{RESP}(i, s)$ holds, $i$ can be said to be both initiating and controlling $s$, since the situation $s$ is brought about as a result of some act performed by the individual $i$ with the intention of causing it. For this reason, the individual $i$, who intentionally brings $s$ about, is called the ‘initiator’ of $s$.

Farkas claims that the $\text{RESP}$-relation is in fact necessary not only for obligatory control but also for other several linguistic phenomena. Let us consider here two phenomena among those discussed by Farkas. First, the distribution of *in order to* rationale (or purpose) clauses involves the $\text{RESP}$-relation, as in (100).

(100) a. John read ‘Anna Karenina’ in order to impress Mary.
    b. The shopwindow has a big sale sign in it in order to attract customers.
    c. #John resembles his father in order to annoy his grandfather.
    d. #The weather has been good lately in order to please the tourists.

Farkas (1988: 39)

Given that the rationale (or purpose) described by the *in order to* clause must be that of the initiator of the situation described by the main clause, it is clear why (100a,b), but not (100c,d), are natural. In (100a), the individual *John* is the initiator of the situation described by the matrix clause, and the purpose for which he read the novel is to impress Mary. Since the initiator’s purpose is identical with the rationale described by the *in order to* clause in (100a), the felicity condition for the *in order to* clause is respected. Likewise, in (100b), though not overtly present, the initiator of the situation described by the main clause—i.e., the person who brought it about that the sign is in the shopwindow—has the purpose of attracting customers, which is compatible

\[ (i) \quad \text{OBJ2} > \text{OBJ} > \text{SUBJ} \]

Given this hierarchy, Bresnan argues that if OBJ2 is present, it will be chosen as a controller over OBJ and SUBJ; if there is no OBJ2, OBJ is chosen, if there is one; if there isn’t, SUBJ is chosen.
with the rationale described by the *in order to* clause. In (100c) and (100d), on the other hand, the same felicity condition fails to be met, since no individual can be the initiator of the situation described by the matrix clause.

Second, the availability of the sentential adverb *intentionally* is strongly correlated with the RESP-relation, as shown in (101).

\[(101) \quad \begin{align*}
    a. \text{John hurt Mary intentionally.} & \quad \text{Farkas (1988: 39)} \\
    b. \#\text{John resembles his father intentionally.} & \quad \text{Farkas (1988: 41)} \\
    c. \text{John was intentionally seen by the best specialist.} & \quad \text{Farkas (1988: 41)}
\end{align*}\]

Assuming with Jackendoff (1972) that the surface subject of a sentence modified by the adverb *intentionally* should be interpreted as being responsible for the situation described by the sentence, Farkas argues that the use of such kind of sentential adverbs imposes the requirement that the participant connected to the first argument slot of the V’ be in the RESP-relation with the situation described by the sentence. According to her, (101a) is felicitous, since *John*, who is the participant connected to the first slot of *hurt*, stands in the RESP-relation with the situation described by the sentence. In (101b), however, the participant connected to the first slot of *resemble* cannot be the initiator of the situation described by the sentence, failing to establish the RESP-relation with the situation. The grammaticality of (101c) is relevant to the discussion right below.

Some comments on the RESP-relation are in order. First, given the data discussed above, one might think that the initiator is similar to the notion of ‘agent.’ However, Farkas argues that the initiator may coincide with an intentional agent, as in (101a,c), but it does not have to. So if the relevant actions of the intentional agent which trigger \(s\) are determined by some other participant in \(s\), that individual is defined as the initiator of \(s\). For those cases where the initiator of \(s\) is...
a different participant than an intentional agent in \( s \) (mostly due to the lack of free will of the intentional agent to cause \( s \)), Farkas (1988: 37) posits \( A(x, a) \), that is, the relation which holds between \( x \) (e.g., the initiator \( i \) of \( s \)) and an intentional agent \( a \) when the former determines the actions of the latter. Second, Farkas argues that the RESP-relation should be distinguished from thematic relations, in that unlike the latter, they do not need to be syntactically represented, as we have already seen in (100b).\(^{23}\) Third, the initiator in RESP(\( i, s \)) is not necessarily placed in subject position, as exemplified in (101c).

Turning to the issue of controller choice, Farkas attempts to provide an account of both unmarked control and marked control cases in terms of the RESP-relation. It is assumed under her system that every predicate is lexically associated with a predicate argument structure (PAS), by virtue of which it can denote \( S \), a set of situations \( s \).\(^{24}\) She further divides the situations into \( s_p \) (participant situation) and \( s_c \) (complex situation), the former being denoted by the infinitival complement while the latter being denoted by the matrix clause. Given these assumptions, Farkas (1988: 41) argues that as the satisfaction conditions of the control predicates, the RESP-relation should be established between the \( s_p \) and and a particular participant in the \( s_c \). In particular, she suggests that the conditions of control predicates listed in (102) can be stated as RESP(\( i, s \)) .

\(^{23}\) According to Farkas (1988: 36), the same argument also holds for the sentence in (i), where \( John \) is the initiator of the situation \( s \) described by the that-clause, although he is not a participant in that situation.

\(^{24}\) Farkas (1988: 33-4) assumes that every predicate \( V \) is lexically associated with a predicate argument structure (PAS), by virtue of which the predicate denotes a set of situations \( S \). The PAS is made up of a member of \( R \), denoted by \( V' \), and a list of ordered argument slots \( (x_1, \ldots, x_n) \), where the number of arguments matches the places of \( V' \). Specifically, a PAS \( V'(x_1, \ldots, x_n) \) denotes a subset of \( S \), \( SV' \), such that in each situation \( s \in SV' \), \( n \) entities stand in the \( V' \)-relation at some spatiotemporal location. For example, the verb \( \text{kiss} \) is associated with the PAS \( \text{kiss}'(x_1, x_2) \), which denotes the set of situations \( Skiss' \). In particular, Farkas argues that a necessary and sufficient condition for a situation \( s \) to belong to \( Skiss' \) is that the situation \( s \) has two participants who are in the \( \text{kiss}' \) relation.
$i$ is an individual connected to a particular argument slot of $V'$ and $s_p$ is the situation described by the complement.\footnote{Farkas (1988: 43) particularly takes $\text{RESP}(p_2, s_p)$ to be the statement included in the satisfaction conditions of the $\text{persuade}$-type predicates, where $p_2$ indicates the participant connected to the second argument slot (i.e., direct object) of the PAS associated with those predicates. On the other hand, $\text{RESP}(p_1, s_p)$ is regarded as the statement included in the satisfaction conditions of the $\text{promise}$-type, where $p_1$ is the participant connected to the first argument slot of the PAS associated with the predicates.}

(102) a. convince, persuade, ask, force, order, help, encourage, tell, advise
    b. promise

For instance, if $x$ persuades/convinces/forces/urges/requires $y$ to VP, $y$ is responsible for bringing about a situation $s_p \in SV'\text{inf}$ (where $V'\text{inf}$ indicates the predicate associated with the infinitive $V$ ($V'\text{inf}$)). According to her, the relation that holds between $y$ and $s_p$ can be established if the former is a particular participant in the complex situation $s_c$ described by the main clause. Likewise, if $x$ promises $y$ to VP, $x$ imposes the obligation upon himself (towards $y$) to bring about a situation $s_p \in SV'\text{inf}$. Given this, she argues that if a participant in $s_c$ (e.g., $y$ in the $\text{persuade}$-type and $x$ in the $\text{promise}$-type) is the initiator of $s_p$, $s_p$ must be intentional. This claim can be supported by the unacceptability of the sentences in (103). The sentences cannot be acceptable since, given our common knowledge about the world, no one can control whom (s)he resembles, his/her height, the color of his/her eyes or the flow of his/her blood; to put it differently, the sentences are ruled out since the situations in $SV'\text{inf}$ cannot be intentional.

\begin{center}
\begin{tabular}{ll}
\{ convinced & \{ to resemble Bill. \\
\text{persuaded} & \text{to be tall.} \\
\text{ordered} & \text{to be blue-eyed.} \\
\text{promised} & \text{to be bleed.} \\
\text{required} & \}
\end{tabular}
\end{center}

\begin{center}
\#John \quad \{ convinced, persuaded, ordered, promised, required \} \quad \text{Peter} \quad \{ to resemble Bill. to be tall. to be blue-eyed. to be bleed. \}
\end{center}

Farkas (1988: 41)
Although the satisfaction conditions of the control predicates have been discussed, we have not yet shown what principles determine controllers under Farkas’s system. Recall that $\text{RESP}(i, s_p)$ is the condition that control $V$’s in (102) have in common as their satisfaction condition. Assuming that $i(V’m)$ denotes the participant required to be the initiator of $s_p$ by the satisfaction condition, she concludes that the controller of the infinitival complements of the control predicates is $i(V’m)$—that is, the participant required to be in the RESP-relation with the situation described by the infinitival complements. This conclusion boils down to the claim that the correlation between controller choice and $i(V’m)$ is not accidental but is rather determined by the RESP-relation. She states this claim in terms of the Principle of Controller Choice, where RESP-inducing $V$’s are verbs that have $\text{RESP}(i, s_p)$ among their satisfaction conditions.

\begin{equation}
\text{(104) PRINCIPLE OF CONTROLLER CHOICE}
\end{equation}
For RESP-inducing $V$’s, the controller of the infinitival complement is the argument linked to $i(V’m)$.  

Farkas (1988: 44)

The crucial point she tries to make with this principle is that controller choice for a RESP-inducing $V’m$ is not determined by grammatical function or thematic roles, but by the RESP-relation which is encoded in the lexical meaning of $V’m$—in other words, which participant corresponds to $i(V’m)$ is specified as part of the $V’m$’s lexical meaning.

Farkas argues that her analysis of controller choice makes correct predictions for empirical data. Let me discuss one of those examples here. Consider the contrast between (105a,b) and (105c,d)

\begin{equation}
\text{(105)}
a. \#\text{John promised (Mary) to be allowed to leave.} \\
b. \#\text{John persuaded Mary to get struck by lightening.}
\end{equation}

\begin{equation}
c. \text{John promised (Mary) to leave.}
\end{equation}
d. John persuaded Mary to be examined by a specialist.  

Farkas (1988: 45)

As mentioned above, the individual denoted by the controller should be in the RESP-relation with $s_p$ (i.e., the situation described by $V^{\text{inf}}$). The same individual should also be a participant in $s_p$, the participant associated with the first argument slot of $V^{\text{inf}}$, which, given the nature of the RESP-relation, must either be an intentional agent in $s_p$ or be in the A-relation with the intentional agent in $s_p$. Notice that the participant associated with the first argument slot of $V^{\text{inf}}$ is an intentional agent in (105c), while it is in the A-relation with the intentional agent in (105d)—i.e., its action is determined by that of the agent. In addition, because of the PCC in (104) and the meaning of $V^{\text{m}}$, the individual in the first argument slot of $V^{\text{m}}$ in (105c) and that in the second argument slot of $V^{\text{m}}$ in (105d), should be in the RESP-relation with $s_p$. Therefore, the subject John and the indirect object Mary are correctly predicted to be the controller in (105c) and (105d), respectively. On the other hand, in (105a) and (105b), the meaning of $V^{\text{inf}}$ prevents the participant connected to the first argument slot of $V^{\text{inf}}$ from being in the RESP-relation with $s_p$, since neither $s_p$ described by $V^{\text{inf}}$ is intentional nor the individual connected to the first argument slot of $V^{\text{inf}}$ is in the A-relation with the intentional agent. However, the PCC in (104) and the meaning of $V^{\text{m}}$ require the same individual to be in the RESP-relation with $s_p$; consequently, the mismatch arises between $V^{\text{m}}$ and $V^{\text{inf}}$ with respect to the RESP-relation in (105a) and (105b). Farkas calls this problem a ‘responsibility clash.’ Observe that what the data in (105) suggest is that a passive infinitival complement is allowed under the control predicates only if $s_p$, the situation described by it, does not cause contradiction with having the participant connected to the first argument slot of the passive verb serving as the initiator of $s_p$. 

396
We have just seen how the PCC in (104) captures the controller choice in unmarked control cases under Farkas’s system: in short, sentences with RESP-inducing control predicates and infinitival complements are felicitous as long as $i(V’m)$ is selected as a possible controller by being linked to a syntactically realized core argument of $V’m$ and as long as no responsibility clash arises. But she observes that there are many cases where controllers may not be determined solely by the PCC, and that speakers have different judgments on the marked control interpretations depending on what the control predicate is. Since this dissertation is not concerned with the cases of marked controller choice, it would be sufficient for our purpose to discuss a couple of sets of data in order to illustrate how she deals with it. First, Farkas observes that sentence (106) can be ambiguously interpreted: that is, while the most salient reading requires the controller to be the indirect object, the subject in the matrix clause can still be picked out as the controller by many speakers of English.

(106) The pupil asked the teacher to leave early. Farkas (1988: 47)
   a. The pupil, asked the teacher, [e] to leave early. (UNMARKED CONTROL)
   b. The pupil, asked the teacher, [e] to leave early. (MARKED CONTROL)

The first reading is readily predicted by the PCC in (104), as the (participant linked to the) indirect object, the controller, is the initiator of the situation described by the infinitival complement (i.e., $s_p$) and the situation $s_p$ is intentional. On the other hand, she argues that the second reading may arise only in case the participant linked to the direct object is in the A-relation with the participant linked to the subject of ask. In order to capture the marked control interpretation like (106b), which is called “control shift” in the literature, Farkas proposes the principle in (107).

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26 As supporting evidence, Farkas (1988: 47) discusses the following cases. Note that in (ia) and (ib), under the normal circumstances, the participants connected to the direct object cannot have the authority or power to control the actions of the participants linked to the subject. Therefore, the marked control inter-
(107) **MARKED CONTROLLER CHOICE**

If $A(i(V^m), x)$, the controller of the infinitival complement is the argument linked to $x$.

Farkas (1988: 48)

The controller selected by this principle is the participant whose actions are determined by the initiator of $V^m$, i.e., $i(V^m)$. Given the ambiguous interpretations from (106), she argues that while the controller choice determined by the MCC is marked, the controller choice affected by the PCC is unmarked, in that the former is available only for a limited number of native speakers of English but the latter is for every speaker. Second, just like *ask*, the predicate *promise* can cause the ambiguous interpretations, as shown in (108).

(108) The mother promised the children to stay up.  
   **Farkas (1988: 48)**  
   a. The mother, promised the children$_j$ [e$_i$ to stay up].  
      (UNMARKED CONTROL)  
   b. The mother$_i$ promised the children$_j$ [e$_j$ to stay up].  
      (MARKED CONTROL)

Some speakers allow for the marked controller choice in (108b), where the direct object rather than the subject is chosen as the controller. This reading is not governed by the PCC but by the MCC, since the participant linked to the subject determines the actions of the participant linked to the direct object. Because of the ambiguity found in *ask* and *promise*, she labels them *ask$_a$* and *promise$_a$*, respectively.

Notice, however, that when *promise* is either passivized or its infinitival complement is passivized, the marked controller choice is not always possible, as shown in (109). For this reason, Farkas argues that *promise* of the kind in (109) is different from *promise$_a$* in (108), and the interpretation where the subject is chosen as the controller can never be obtained.

(i)  a. The officer$_i$ asked the solider$_j$ [e$_i$/j to leave the room].  
    (UNMARKED CONTROL only)  
   b. The guard$_i$ asked the prisoner$_j$ [e$_i$/j to leave the room].  
    (UNMARKED CONTROL only)
former admits the marked controller choice in a limited situation, specifically, when $i(V'm)$ is not a possible controller.

(109) a. John$_i$ was promised [e$_i$ to be allowed to leave]. (MARKED CONTROL)
b. #John$_i$ promised Bill$_j$ [e$_i$ to be allowed to leave].

She takes the acceptability of (109a) to be an instance which shows that the marked controller choice is possible with the non-ambiguous *promise* due to the absence of $i(V'm)$ as a possible controller. By contrast, she suggests that the sentence in (109b) is not felicitous since the responsibility clash arises. That is, the PCC rather than the MCC governs the controller choice for (109b), since the subject, $i(V'm)$, is a possible controller but does not determine the actions of the direct object. Accordingly, the matrix subject should be in the RESP-relation with $s_p$, but the participant linked to the first argument slot of $V'm$ is not in A-relation with an intentional agent nor the situation described by $V'm$ is intentional.

To summarize Farkas’s (1988) analysis in the light of the three issues in (18), the categorial status of the controlled subject does not matter since she assumes that the infinitival complement selected by the control predicate does not need to be clausal, thus no empty subject required to be syntactically represented in the infinitival constituent.  Therefore, what is important for her system is not the licensing condition of the controlled subject but that of the control predicates. Recall that she proposes “RESP($i$, $s_p$)” as the satisfaction condition for the control predicates, which states that the participant linked to the subject or direct object (depending on whether the selecting predicate is the *promise*-type or *persuade*-type) must be in the RESP-relation with the situation described by the $V'$inf. Finally, as for the controller choice, she sug-

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27 Notice that the empty subject $e$ in the examples provided in this subsection is added by me for the expository purpose.
gests two semantic principles, the Principle of Controller Choice (PCC) for the cases of un-marked controller choice and the Marked Controller Choice (MCC) for those of marked controller choice. According to the PCC, the participant linked to the subject or direct object can be the controller only if it can be the initiator of the situation described by the infinitival predicate, V’inf. On the other hand, the MCC picks out the participant that is in the A-relation with i(V’m), the initiator of s_p, only when (i) i(V’m) is not a controller because not being syntactically present (e.g., *John, was promised [e; to be allowed to leave]), or (ii) the application of the PCC leads to a responsibility clash (e.g., *John, persuaded Bill [e; to be allowed to leave]).

Farkas’s lexical semantic analysis in terms of the RESP-relation obviously offers a unified account of how control predicates determine the controllers of infinitival complements according to whether they belong to the promise-type or persuade-type. In addition, she correctly observes that there is variability among speakers regarding the availability of control shift, and develops a plausible theory of control that captures how the marked controller choice is done, as well as where such variability comes from.

Notice, however, that there appears to be one issue which needs careful consideration under Farkas’s lexical semantic approach. That is, although her analysis in terms of the Principle of Controller Choice (PCC) can readily capture three types of control interpretations in (110a)-(110c), it would seem hard to explain why only a limited range of overt elements are allowed in the subject position of embedded jussive clauses.

John-TOP Mary-DAT he-NOM/self-NOM leave-PRM-COMP promised  
‘John promised Mary that e/he/self would leave.’

John-TOP I-DAT I-NOM/self-NOM leave-PRM-COMP persuaded  
‘John persuaded me that e/I/*self would leave.’
That is, as shown (110a), while the controlled null subject can be replaced with either the third pronoun or long distance (LD) anaphor *caki* when the controller is a lexical NP. On the other hand, as shown in (110b) and (110c), when the controller is or includes the first person pronoun, the controlled null subject can be alternated only with the first person, but not with the LD anaphor. In order to capture why this contrast arises, it seems necessary to consider the syntactic properties of both the controller and controllee.

5.5.2.3 Sag and Pollard (1991)

Sag and Pollard (1991) (and Pollard and Sag (1994), a slightly modified version of Sag and Pollard (1991)) develop an integrated theory of complement control in verbal and nominal constructions under the framework of Head-Driven Phrase Structure Grammar (HPSG). In particular, they extend Jackendoff’s (1972, 1974) semantic analysis of control where controllers are claimed to be determined by thematic roles of control predicates. What is essential in Sag and Pollard’s analysis is that controller choice is achieved by the interaction of semantically motivated principles of controller assignment with the principles governing the distribution of anaphors and pronouns (known as binding theory).

Under Jackendoff’s analysis, the information about subcategorizations of a verb is crucial for determining a controller. This is because the subcategorizations of the same class of control verbs uniformly apply the θ-role to the controller. For instance, the controller of the unexpressed subject of the complement selected by *get* is always an argument bearing a Theme, as in (111a)
and (112a), while it is the Agent (or Source) that must be the controller of the unrealized subject of the complement selected by *promise*, as in (111b) and (112b).

(111)  
   a. John got to leave.  (Controller = Theme)  
   b. John promised to leave.  (Controller = Agent/Source)

(112)  
   a. John got Bill to leave.  (Controller = Theme)  
   b. John promised Bill to leave.  (Controller = Agent/Source)

Jackendoff (1972: 214)

However, as Jackendoff argues, if one insists, along the lines of Rosenbaum (1967, 1970), that controller choice is exclusively determined by structural configurations, we would end up having incorrect interpretations for the sentences above. In other words, the controller of the null subject of the infinitive complement of a particular predicate cannot always be identified with the subject or object of the predicate; this is shown by the fact that the predicate *get* switches its controller from the subject (as in (111a)) to the object (as in (112a)). Furthermore, Rosenbaum’s Minimal Distance Principle predicts that the controller of the unexpressed subject of the complement in (112b) should be different from the one in (112b), as the principle forces the closer argument (to the unexpressed subject) to be the controller. However, unlike what the MDP predicts, the subject constantly functions as the controller.

Although Sag and Pollard basically share Jackendoff’s view on control that controller assignment is contingent upon semantic (or thematic) roles, they extend Jackendoff’s role-based semantic analysis in a way that captures a wider range of control data than the one covered by the previous major syntactic and semantic analyses (including Jackendoff’s). One of the primary issues Sag and Pollard address is why certain verbs and their nominal counterparts pattern together in causing control interpretations. To answer this question, Sag and Pollard suggest that
there are three classes of control predicates with respect to the type of relations and the range of available semantic roles. The first class of predicates labeled ‘order/permit-type verbs’ generally (but not unexceptionally) describes a state of affairs (SOA) whose relation is of the INFLUENCE type, where a certain participant (the referent of the object) is influenced by another participant (the referent of the subject) to perform an action denoted by the VP complement. According to them, three semantic roles are found in SOA’s of the INFLUENCE type, which include INFLUENCE (the possibly agentive influncer), INFLUENCED (the typically animate participant influenced by the inflencer) and SOA-ARG (the action that the influenced participant is influenced to perform or not). The second class of predicates called ‘promise-type verbs’ describe a state of affairs (SOA) whose relation is of the COMMITMENT type. This commitment type of SOAS involves two obligatory roles such as COMMITTOR (the typically animate participant) and SOA-ARG (the action the committor commits to performing or not performing), as well as one optional role, the COMMISSSEE (the individual to whom the commitment is made). The third class of predicates dubbed ‘want/expect-type verbs’ describes a SOA whose relation is of the ORIENTATION type, which involves desire, expectation or similar kind of mental orientation toward a given SOA. This third type of relation normally involves two thematic roles such as EXPERIENCER (the partic-

28 The concrete examples of each class of control verbs and the possible kind of control interpretations caused by each class of predicates are given below:

(i) Order/permit type (object control): order, persuade, bid, charge, command, direct, enjoin, instruct, advise, authorize, mandate, convince, impel, induce, influence, inspire, motivate, move, pressure, prompt, sway, stir, talk (into), compel, press, propel, push, spur, encourage, exhort, goad, incite, prod, urge, bring, lead, signal, ask, empower, appeal (to), dare, defy, beg, prevent (from), forbid, allow, permit, enable, cause, force
(ii) Promise type (subject control): promise, swear, agree, contract, pledge, vow, try, intend, refuse, choose, decline, decide, demand, endeavor, attempt, threaten, undertake, propose, offer, aim
(iii) Want/expect type (subject control): want, desire, fancy, wish, ache, hanker, itch, long, need, hope, thirst, yearn, hate, aspire, expect

Sag and Pollard (1991: 65)
iparticipant who experiences the appropriate orientation) and SOA-ARG (the SOA towards which the experiencer is oriented).

With these three types of control predicates, Sag and Pollard then make the semantic generalizations in (113) in order to capture the way in which verbs belonging to each type of predicates determine their controllers.29

(113) Given a nonfinite VP or predicative complement C, whose semantic content C’ is the SOA-ARG of a SOA S whose relation is R, the unexpressed subject of C is linked to:
   a. the INFLUENCED participant of s, if R is of the influence type
   b. the COMMITTOR participant of s, if R is of the commitment type.
   c. the EXPERIENCER participant of s, if R is of the orientation type.

Sag and Pollard (1991: 66)

They flesh out these generalizations under the framework of Head Driven Phrase Structure Grammar, but we will not attempt to go over details of their formal analysis. Nonetheless, it seems meaningful to review some of the data, which they argue are hard to handle under the syntactic or configurational approaches.

One immediate benefit of their role-based semantic approach is that it is possible to capture the parallel behavior between control verbs and their nominal counterparts in the way con

29 A preliminary version of the formal definition of control theory Sag and Pollard (1991: 78) suggest in the Head Driven Phrase Structure (HPSG) framework is given in (i) (see Sag and Pollard (1991: 90) for the revised version):

(i) HPSG CONTROL THEORY
   Given a phrase X[SUBCAT <NP: [INDEX [6]]>: [3],
   and a soa [4] \left\{ \begin{array}{l}
   \text{RELN R}
   \text{SOA-ARG [3]} \end{array} \right.
   A: if R is of sort influence, then [4] [INFLUENCED [INDEX [6]]]
   B: if R is of sort commitment, then [4] [COMMITTOR [INDEX [6]]]
   C: if R is of sort orientation, then [4] [EXPERIENCER [INDEX [6]]].
Consider the following sentences where infinitive phrases are subordinated within nominal constituents.

(114)  

a. Sandy’s promise/attempt to leave the party caused quite an uploar.  
    (COMMITMENT)  
b. Chris’s desire/wish to leave the party bothered Pat.   
    (ORIENTATION)  
c. Rene’s signal/appeal to Jean to leave the room was noticed by everyone. (INFLUENCE)  

Sag and Pollard (1991: 67)

According to Sag and Pollard, there is no apparent difference between the semantic function of the infinitive phrases within nominal constituents and their semantic function within VPs, except that the infinitive phrases in the former is optional. In particular, they argue that the controller choice for the unexpressed subjects of infinitival phrases within the NP is constrained by the same semantic principles in (113) as the controller choice for those within the VP. For example, in (114a), the controller of the unexpressed subject is *Sandy*, the agent of the *promise or attempt* that involves SOAs whose relation is of the commitment type; in (114b), the null subject is construed as *Chris*, the experiencer of the *desire or wish* that involves SOAs whose relation is of the orientation type; and in (114c), the antecedent of the understood subject is *Jean*, the influenced participant in the *signal/appeal* situation whose relation is of the influence type. The controllers of the unexpressed subjects in (114a)-(114c) are exactly those that are predicted under the semantic principles given in (113).

Secondly, in support of their semantic approach, Sag and Pollard discuss the data like (115), where the controller of the unexpressed subject of infinitive clauses within nominals appears in various syntactic positions (as underlined below).

(115)  

a. *Sandy’s* promise to Tracy to leave the party early caused quite an uploar.  
b. The promise by *Sandy* to leave the party early caused quite an uploar.  
c. The promise that *Sandy* made, to leave the party early, caused quite an uploar.
d. The promise to leave the party early, which Kim knew would be immediately forth
coming from Sandy, was going to cause quite an uproar.


What is promised in (115a)-(115d) is that Sandy, the committor of the promise, leaves the party
early. Notice, however, that unlike the syntactic or configurational approaches predict, the syn-
tactic positions the controller occupies are not uniform: for example, the controller of the unex-
pressed subject appears in a possessor position in (115a) and in the object position of a by-phrase
in (115b); furthermore, the controller is not a syntactic argument directly selected by the noun
promise, as in (115c) and (115d). By contrast, Sag and Pollard’s role-based approach that hinges
upon the semantic principles in (113) easily captures the diverse syntactic distribution of the con-
trollers in (115): that is, whether promise falling under the commitment type predicates is a noun
or verb, the controller of the unexpressed subject in the infinitival phrase within the NP or VP is
invariably Sandy, the ‘committor’ of the promise, as predicted by (113b).

In connection with the data in (115), Sag and Pollard also present the examples in (116)
and (117). In particular, they argue that these data are more puzzling from the perspective of the
configurational approach, since the controller of the unexpressed subject of infinitive phrases is
either present across the sentence boundary (e.g., (116)), or even absent in discourse (e.g., (117)).

(116) The whole room was focused on Sandy. A promise now to endow the center would
ensure the success of the funding drive.

(117) a. A promise to endow the center would indicate a desire to help the campaign.
b. A promise to endow the center would mean a commitment to success.

Sag and Pollard (1991: 68)

Under Sag and Pollard’s approach, on the other hand, the control patterns in both sentences are
readily predictable, as the principle in (113b) requires the controller of the unexpressed subject in
(116) and (117) to be the committor of the promised action. So when searching for the controller in each sentence, we can simply link the unexpressed subject to the committor of the promise, which is recoverable from the preceding sentence or discourse.

Although Sag and Pollard’s approach obviously has advantages, there appear to be some problems for their approach as well. First of all, it would be difficult to derive split antecedent control in the Korean jussive control (cf. Madigan (2008b) for the same observation). To capture the split control interpretation under Sag and Pollard’s approach, they need to assume an additional type of predicates, other than INFLUENCE, COMMITMENT and ORIENTATION types, which include a handful of split control predicates such as *propose* and *ask*, and multiple instances of thematic roles (e.g., COMMITTOR and INFLUENCED) should be encoded in their lexical entries.

What seems to me to be a more serious problem for Sag and Pollard is that it would fail to predict correct patterns in jussive control constructions in Korean. As we have already seen, the clause type of complements is very crucial in determining the control interpretation in the Korean jussive control constructions: for example, regardless of whether the subordinating predicate is a typical control predicate or a verb of communication, the embedded promissive clause induces subject control, the embedded imperative triggers object control, and the embedded exhortative causes split control, as in (118a)-(118c), respectively.

(118) a. John[un] Mary[eykey] [e_{ij} hakkyo-ey ka-*ma-*ko]
John-TOP Mary-DAT school-to go-PRM-COMP
yaksokhayssta/malhayssta.
Lit. ‘John {promised/told} Mary to go to school.’ (SUBJECT CONTROL)
b. John[un] Mary[eykey] [e_{ij} hakkyo-ey ka-*la-*ko]
John-TOP Mary-DAT school-to go-IMP-COMP
myenglyenghayssta/malhayssta.
ordered/said
Lit. ‘John {ordered/told} Mary to go to school.’ (OBJECT CONTROL)
c. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [\textit{e\textsubscript{i+j}} hakkyo-ey hamkkey ka-\textbf{ca-ko}]

Lit. ‘John {proposed to/told} Mary to go to school together.’ (\textit{Split Control})

Under Sag and Pollard’s role-based approach, however, although the interaction between the lexical meaning of the matrix verb and the infinitive clause is not entirely ignored, control interpretations are exclusively determined by the semantic principles; specifically, the control patterns are influenced by whether the matrix predicate belongs to the \textit{INFLUENCE}, \textit{COMMITMENT}, or \textit{ORIENTATION} type. Therefore, in (118a)-(118c), when the subordinating predicate is \textit{malha-} ‘say,’ the verb of communication, the same control interpretation should arise, contrary to fact.\textsuperscript{30}

Let me quickly summarize Sag and Pollard’s (1991) approach in the light of the three issues in (18). As for the first issue of licensing conditions for null subjects in (18a), they do not explicitly mention about how the unexpressed subject of infinitival phrases is licensed. Likewise, regarding the issue of the categorial status of the unexpressed subject in (18b), they do not make an explicit assumption about whether it is PRO, \textbf{pro} or an A-trace. They instead assume that the unexpressed subject of infinitival phrases which are considered as VPs is anaphoric, and the lexical information of the unexpressed subject is represented in the \textit{SUBCAT} (i.e., subcategory) list of the VPs. Finally, as for the issue of controller choice in (18c), they claim that controllers are determined by the principles for controller assignment in (113), which are correlated with the semantic properties of predicates encoded in their lexical entries.

\textsuperscript{30} Notice, however, that Ginzburg and Sag (2000) recently present a finer-grained theory, according to which each syntactic clause type has a specific type of semantic meaning which in turn determines the kind of semantic clause types and/or speech acts the clause can be associated with. However, since what they explore is not control but \textit{wh}-interrogative sentences, I will not attempt to review Ginzburg and Sag’s theory in this section. I would like to thank Peter Sells for informing me of their work.
5.6 Conclusion

This chapter has introduced the jussive control construction, another major control construction in Korean investigated in this dissertation. As described in 5.1, what is unique to this control construction is that the clause type of a complement contributes to the determination of the type of control: that is, the subject control arises when a promissive clause is embedded, as in (119a); the object control is obtained when an imperative clause is subordinated, as in (119b); and the split control is available when an exhortative clause is embedded, as in (119c).

(119) JUSSIVE CONTROL CONSTRUCTION

   John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL  
   ‘John promised Mary to go to school.’  (SUBJECT CONTROL)

b. John-i-un Mary_j-eykey [e_i*j hakkyo-ey\ ka-\textbf{la}-ko] myenglyenghay-ss-ta
   John-TOP Mary-DAT school-to go-IMP-COMP order-PAST-DECL  
   ‘John ordered Mary to go to school.’  (OBJECT CONTROL)

c. John-i-un Mary_j-eykey [e_i*j hakkyo-ey\ hamkkey ka-\textbf{ca}-ko]
   John-TOP Mary-DAT school-to together go-EXH-COMP ceyanhay-ss-ta.
   ‘John proposed to Mary to go to school together.’  (SPLIT CONTROL)

Section 5.3 reviewed several common grammatical properties of the three clause types subordinated in (119a-c), most of which are drawn from Pak (2006), Pak et al. (2007), Zanuttini et al. (2011)). Following those studies, I also grouped the three clause types by the name of ‘jussive clauses.’ After that, I showed with several diagnostics that the three subordinate clauses above are embedded promissives, imperatives and exhortatives. In Section 5.4, the six standard OC diagnostics led us to confirm the initial observation made in Section 5.1—namely that the
embedded jussive clauses are OC complements and their null subjects are equivalent to what was formerly known as OC PRO (cf. Madigan (2008a,b); Fujii (2006) for the Japanese equivalents).

Finally, in Section 5.5, I provided a critical survey of both syntactic and semantic approaches to obligatory complement control. In so doing, it was revealed that all the previous approaches pose some theoretical or empirical problems, which call for an alternative analysis of the Korean data at issue. Specifically, most approaches reviewed in 5.3 do not either explicitly address or answer properly (some of) the three questions in (18), repeated here as (120).

(120)  a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
       b. What are controlled subjects? (Categorial status of controlled elements)
       c. How are controllers determined? (Controller choice)

First, holding the semantic/pragmatic view that control dependencies in Korean cannot be obtained by syntactic binding but by pragmatics, H. Choe (2006) argues that the null subject in sentences like (119b,c) is pro and its referential dependency with the matrix argument(s) is an instance of pragmatic coreference. But unlike her claim that the meaning of the matrix predicate has no role in picking out the antecedent of pro, there are some restrictions on the type of complement clause that can be selected by a certain class of predicates in the jussive control contexts: for instance, the order-type predicate cannot subcategorize a promissive clause, etc. Second, Fujii (2006) adopts Hornstein’s (1999, 2001) Movement Theory of Control to explain the Japanese equivalents to (119b) and (119c), but it turned out that he has to make a number of assumptions to justify the movement of two controllers in the split control case.

Turning to the semantic approaches, Chierchia’s (1984, 1989) thematic hierarchy-based approach does not seem to correctly predict the availability of split control in (119c). In addition, since he takes the control complement to be a VP, it is difficult to capture the availability of the
lexical subject in the jussive complement. Second, as for Farkas’s (1988) lexical semantic approach in terms of the Principle of Controller Choice, it is incorrectly predicted that no matter how far the controller is, it can be the antecedent of a controlled subject as long as it is in the responsibility relation with the situation. In addition, the range of available overt subjects in place of a controlled null subject in jussive complements is hard to capture on her approach. Finally, Sag and Pollard’s (1991) analysis turned out to have a problem of failing to derive the split control interpretation.

This being said, I will develop an alternative analysis of the control data in (119a-c) in Chapter 6, trying to offer appropriate answers to the three questions in (120) against those data. In order to achieve this goal, I will carefully examine the syntactic and semantic nature of jussive clauses and their subjects.
Chapter 6
A Formal Analysis of Jussive Control

6.1 Introduction

6.1.1 Major Issues and Claims

As discussed in Chapter 5, in Korean, 6.obligatory control (OC) dependencies arise when three types of jussive clause are embedded, as in (1a-c).

(1) a. **SUBJECT CONTROL**

\[
\begin{align*}
\text{John-i-un} & \quad \text{Mary-j-eykey} & [\text{e}_{ij} \cdot \text{hakkyo-ey} & \text{ka-} \text{ma-ko}] & \text{yaksokhay-ss-ta.} \\
\text{John-TOP} & \quad \text{Mary-DAT} & \text{school-to} & \text{go-PRM-COMP promise-PAST-DECL} \\
\end{align*}
\]

‘John promised Mary to go to school.’

b. **OBJECT CONTROL**

\[
\begin{align*}
\text{John-i-un} & \quad \text{Mary-j-eykey} & [\text{e}_{ij} \cdot \text{hakkyo-ey} & \text{ka-la-ko}] & \text{myenglyenghay-ss-ta} \\
\text{John-TOP} & \quad \text{Mary-DAT} & \text{school-to} & \text{go-IMP-COMP order-PAST-DECL} \\
\end{align*}
\]

‘John ordered Mary to go to school.’

c. **SPLIT (ANTECEDENT) CONTROL**

\[
\begin{align*}
\text{John-i-un} & \quad \text{Mary-j-eykey} & [\text{e}_{ij} \cdot \text{hakkyo-ey} & \text{hamkkey} & \text{ka-ca-ko}] & \text{ceyanhay-ss-ta.} \\
\text{John-TOP} & \quad \text{Mary-DAT} & \text{school-to} & \text{together} & \text{go-EXH-COMP} \\
\end{align*}
\]

‘John proposed to Mary to go to school together.’

The point of interest lies in the fact that the type of control in these data varies according to the type of complement clause: the subject control is possible if the embedded clause is a promissive marked by \(-ma\), as in (1a); the object control arises if the complement clause is an imperative marked by \(-la\), as in (1b); and the split control is possible if an exhortative clause marked by \(-ca\) is embedded. More crucially, the control type of each sentence is in fact correlated with the person restriction imposed on the subject of the embedded clause. In root contexts, the subject of a promissive clause is necessarily first person, the speaker, that of an imperative clause is second person, the addressee, and that of an exhortative is first person plural inclusive, both the speaker...
On the other hand, in embedded contexts like (1a-c), the null subject of the pro-missive complement is construed as the matrix subject, the speaker of the reported speech act; that of the imperative clause as the matrix object, the addressee of the reported speech act, and that of the exhortative as the matrix subject and object, the speaker and addressee of the reported speech act.

The primary goal of this chapter is to offer a proper analysis of the jussive control data in (1a-c) and capture the correlation between the clause type of jussive complement and the control type. Specifically, the analysis to be developed in this chapter aims to provide appropriate answers to the questions in (2a-c).

(2) a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
   b. What are controlled subjects? (Categorial status of controlled elements)
   c. How are controllers determined? (Controller choice)

In 6.1.1.1 through 6.1.1.3, I will lay out important assumptions and claims which this chapter will make concerning the three issues in (2a-c).

6.1.1.1 First Issue: Syntactic Environments/Licensing Condition

Starting by considering the first issue in (2a), as discussed at the beginning of Chapter 5, many languages such as Modern Greek (Terzi (1997), Spyropoulos (2007)) and Modern Hebrew (Borer (1989), Landau (2004, 2006)) take finite clauses as control complements. Furthermore, an increasing body of research has observed that there are languages like Icelandic and Russian, where control subjects can be assigned structural Case, not null Case (e.g., Andrews (1981), Sigurðsson (1991), Ussery (2007) for Icelandic; Franks and Hornstein (1992) for Russian). What these data suggest in common is that the $I^0$ or $T^0$ head in the control complements may be able to
govern into its specifier position. If this is true, the control data from those languages cannot be explained by any version of the control theory that strictly appeals to the PRO Theorem (Chomsky (1981, 1986), D. Yang (1984, 1985)) or null Case assignment (Chomsky and Lasnik (1993), Martin (1996)) as a licensing condition for controlled null subjects.

I claim in this chapter that jussive control in Korean, exemplified in (1a–c), should be added to the list of the data that resist an analysis within the framework of PRO theory of control. One immediate reason for making this claim is that complement clauses in the jussive control constructions cannot be characterized as infinitival clauses. In Chapter 3, I suggested a couple of tests to distinguish finite from infinitival clauses in agreement-less languages like Korean: (i) finite clauses allow tense or aspectual markers, while infinitival clauses cannot; (ii) the former can be uttered as root clauses, while the latter cannot; and (iii) the presence of clause-typing markers is permitted only in finite clauses (cf. J. Huang (1989), J. Lin (2011) for the similar diagnostics for Chinese). According to these diagnostics, the jussive complements in (1a–c) cannot fall at least under infinitival clauses. By contrast, it was shown in Chapter 3 that complement clauses in the Korean infinitival control constructions, headed by complementizers like -kilo, –lyeko, –koca or –tolok, do not allow the presence of tense markers or clause-typing markers, and they cannot be produced in root contexts, either.

Thus, in developing an alternative analysis of how controlled subjects are licensed in jussive complements, I will argue that the $[\pm \text{AGR}]$ or $[\pm \text{TENSE}]$ feature on $T^0$ is what is responsible for their licensing; rather, the jussive subjects must take two steps to be properly licensed. As for the first step, building on Pak et al. (2007, 2008), Zanuttini (2008) and Zanuttini et al. (2011), I will suggest that there is a functional projection called ‘Jussive Phrase’ right above TP, which only projects in jussive clauses. In particular, null subjects in jussive complements, which are
assumed to enter the derivation without specific values for person features, must establish an Agree relation with the Jussive head to make their features valued. Without going through this step, the null subjects can gain no person features. As for the second step, incorporating Baker’s (2008) idea about locality effects found in 1st/2nd person agreement, I will propose that after undergoing Agree with the Jussive head, the jussive subjects must be locally bound by a relevant operator, the Speaker or Addressee operator, in Speaker/Addressee Phrase above Jussive Phrase. In addition to these two steps, although whether T₀ is specified [±AGR] or [±TENSE] does not matter, jussive complements must have an unrealized tense with respect to the matrix event time due to the [FUTURATE] feature on T₀ (cf. C. Han (1998/2000), Jensen (2003a,b), Hasegawa (2009, 2010) for imperatives; see also Stowell (1982), Martin (1996), O’Neil (1996), Bošković (1997) for the notion of irrealis tense in control complements).

6.1.1.2 Second Issue: Categorial Status of Controlled Subjects

Regarding the second question in (2b), I will claim that controlled subjects in jussive complements are pro, not PRO nor A-traces. The working hypothesis tested in this dissertation is that controlled subjects may not be homogeneous across languages and even within a language, and their categorial status may vary depending on the nature of syntactic structures where the controlled subjects appear. For example, it has been argued in Chapter 3 that the best way to analyze null subjects in tolok-complements is to treat them as an A-trace within the framework of Movement Theory of Control (Hornstein (1999, 2001, 2003)). Repeating the core idea underlying this claim, the three diagnostics for the finite-infinitival distinction, which were just mentioned in the previous subsection, led us to view the tolok-clauses as infinitives, since they do not allow for tense markers or clause-typing markers and cannot appear without being embedded. Given this, slightly modifying Monahan’s (2003) analysis, I proposed that forward or backward
control in the *tolok*-control constructions can be derived by virtue of A-movement of a controller, which is followed by linearization of the chain. Specifically, the forward control can be obtained if the copy in the embedded Spec, TP is deleted, as in (3b), while the backward control can be derived if the copy in the matrix clause is deleted, as in (3c). This analysis was built on Hornstein’s (2001) insight that a null subject inside an infinitival clause can be regarded as a residue of A-movement of a controller, since the clause is transparent for extraction as it does not form a syntactic island.

(3)  

   John-TOP Mary-NOM/ACC leave-COMP persuade-PAST-DECL  
   ‘John persuaded Mary to leave.’

   John-TOP Mary-ACC leave-COMP persuade-PAST-DECL  

A-movement with a lower copy deleted

c. John-un Mary [Mary-ka ttena-*tolok*] seltukha-ess-ta. (BACKWARD)  
   John-TOP Mary-NOM leave-COMP persuade-PAST-DECL  

By contrast, there are at least two reasons to think that null subjects in jussive complements cannot be treated as A-traces. First, as mentioned in the previous subsection, I will claim in this chapter that unlike the *tolok*-clauses, complement clauses in jussive control cannot be treated as infinitives in terms of the suggested criteria for the finite-infinitival distinction in Korean without inflectional agreement. This is because although tense or aspectual markers are not allowed, jussive clauses can be used in both root and embedded contexts and their clause types are overtly marked by the distinctive clause-typing particles, such as –*ma*, –*la* and –*ca*. Second, in order to explain why the jussive subjects receive restrictive interpretations in person and how this subject restriction correlates with the presence of a distinctive jussive particle, I will argue,
building on Pak et al. (2007, 2008), Baker (2008) and Zanuttini et al. (2011), that null subjects in the jussive complements enter agreement with Jussive\(^0\) in person and then need to be bound by an operator in the Speaker/Addressee Phrase. Under this proposal, after a null subject undergoes agreement in person with the Jussive head, it cannot further move out of the Jussive Phrase and Speaker/Addressee Phrase. This is analogous to instances where a \textit{wh}-phrase fails to undergo successive-cyclic movement after checking its \textit{wh}-feature against the interrogative \(C^0\) (e.g., \textit{Who}_i do you think [t; John loves t;] vs. *\textit{Who}_i do you wonder [t; John loves t;]?). If it is correct, it would be untenable to take controlled subjects in jussive complements to be an \textbf{A-trace}.

More importantly, as will be demonstrated in Section 6.4, lexical NPs can appear in place of a null subject in jussive complements, and the alternability of the null subject with the lexical NP precludes another option of viewing the controlled subjects as \textbf{PRO}.\(^1\) Therefore, we are led to conclude that controlled subjects in jussive complements are \textbf{pro} rather than an A-trace or PRO. In the same section, it will also be shown that lexical subjects in jussive complements are ‘real’ subjects, distinguishable from vocatives or topics, which gains support from the crosslinguistic fact that imperatives allow for lexical subjects. Notice that Korean is generally classified

\(^1\) Landau (2004, 2006) claims that the availability of an overt element in control contexts in various languages, such as Modern Greek, Romanian, Russian and Korean, etc., does not necessarily imply that a null subject cannot be \textbf{PRO} in the same contexts. Instead, maintaining that the controlled subject is \textbf{PRO}, Landau develops a mechanism for the interpretation of \textbf{PRO}, which is tightly correlated with the tense and agreement information of a control complement. However, unlike other Indo-European languages he discusses, the tense and agreement of the control complement is not an important factor distinguishing OC from NOC \textbf{PRO}, nor for determining the type of control in Korean (cf. Gamerschlag (2007), Madi- gan (2008b)). In particular, his calculus for interpreting overt or covert controllees makes an incorrect prediction for the availability of lexical subjects in jussive complements. See Section 6.4.2 for detailed discussion.

Besides, Landau cites D. Yang’s (1985) work on Korean control, which is not unproblematic. As pointed out in Chapter 2, adopting the \textbf{PRO} Theorem as a restriction for the distribution of controlled subjects in Korean, D. Yang (1985) claims that the controllees, overt or covert, must be ungoverned. Howev- er, he stipulates that the Inf head in the control complement ‘structurally’ ungoverns but ‘inherently’ governs its specifier, with a radical conclusion that Korean is not a pro-drop language, which goes against the widely accepted view (e.g., J. Huang (1984, 1989), Hasegawa (1984/1985), S. Kim (1994)). Please refer to Section 2.3.2.4 in Chapter 2 for more information.
as a discourse-prominent (or discourse-configurational) language which allows subjects to drop in root or subordinate clauses and the missing subjects are defined as pro on the the standard analysis of null subjects in East Asian languages (J. Huang (1984, 1989), S. Kim (1994); cf. Hasegawa (1984/85) for a PRO approach). Therefore, it would make sense to draw the conclusion that controlled subjects are pro in Korean jussive control.

But the question that immediately arises is how null subjects in control contexts are distinguishable from those in non-control contexts. In other words, why is it the case that the null subjects in the former must be construed as (a) matrix argument(s) but those in the latter do not have to? As reviewed in Chapter 2, J. Huang (1989) claims that pro and PRO pattern alike in Chinese, and just as PRO has two kinds such as OC PRO and NOC PRO, pro can be divided into two types, namely, controlled pro and uncontrolled pro. In order to capture this parallelism between PRO and pro, he suggests that PRO and pro are governed by the same principle, the Generalized Control Rule, for their licensing and interpretation.2 There are in fact cases in Korean where pro in non-control sentences coincidentally has the same domain for its reference search as pro in control sentences. Thus, one might think that both kinds of pro can be uniformly treated in Korean, just as those in Chinese. However, we have already seen that the controlled subject in Korean may not always be pro and whether it is pro or something else is contingent upon the nature of syntactic environments. Furthermore, as noted in the previous subsection, the controlled pro can appear only in jussive complements, which project the Jussive Phrase and have an unrealized future tense with respect to the tense of a matrix clause. Therefore, despite their superficial similarity with respect to the distribution and interpretation, the controlled pro

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2 The rule is given in (i). Refer to Chapter 2 for detailed discussion of J. Huang’s (1989) analysis.

(i) GENERALIZED CONTROL RULE: An empty pronominal is controlled in its domain (if it has one).

J. Huang (1989: 193)
should be kept apart from the uncontrolled pro. This chapter will be devoted to investigating the properties of jussive clauses in both root and non-root contexts, so that we can reveal how the controlled pro differs from the uncontrolled pro as well as the other kinds of controlled subject.

6.1.1.3 Third Issue: Controller Choice

Turning to the last issue in (2c), recall from the review given in Chapter 2 that the transformational approaches to control (Rosenbaum (1967, 1970), Chomsky (1973), and Chomsky and Lasnik (1977)) and the standard PRO theory of control (Chomsky (1981)) fail to provide an appropriate mechanism for controller choice. Specifically, they simply assume that the reference of PRO is determined in a control module by lexical semantic and/or pragmatic factors, although they appeal to a Rosenbaum-style locality condition, the Minimal Distance Principle in (4), as a means to distinguish object control (e.g., John ordered/persuaded Mary to leave) from some limited cases of subject control (e.g., John tried/hoped to go to college).

(4) MINIMAL DISTANCE PRINCIPLE
An infinitive complement of a predicate P selects as its controller the minimal c-commanding noun phrase in the functional complex of P.

as represented by Larson (1991: 115)

Since then, generative linguists have made various attempts under the GB and Minimalist framework in order to develop an independent mechanism for capturing control patterns. Repeating some of the syntactic proposals here, three major ways deserve to be mentioned: the first approach is to extend Binding Theory (Manzini (1983), Bouchard (1984), Koster (1984), Borer (1989)) or Control Theory (J. Huang (1989)), the second approach utilizes syntactic agreement between a controlled subject and its controller through the mediation by functional categories (Landau (1999, 2004, 2006)), and the third approach appeals to syntactic movement of control-
To the extent that my claim that the controlled subject in the jussive complement is pro is correct, the third approach based on movement of a controller may not be an appropriate analysis at least for controller choice in jussive control, unless we posit a complex DP-internal structure for the controller which includes both pro and an additional element to undergo movement out of the larger DP (cf. Martin (1996) for OC in Spanish; Rodrigues (2007) for partial control in Brazilian Portuguese). In addition, as shown in Chapter 2, a number of studies adopting the first approach encounter theoretical or empirical problems, which preclude us from opting for this approach. Then, we are left with the second approach, which views the obligatory control relation as a by-product of syntactic agreement between PRO and its controller mediated by functional categories (e.g., T, v, C). However, since this agreement-based approach crucially relies on some unjustified assumptions and fails to capture split control, I will not choose this approach as a possible mechanism for deriving the control patterns in jussive control, either.

For this reason, instead of adopting any of the existing major strategies, this chapter will propose a novel analysis of jussive control by combining Pak et al.’s (2007, 2008) and Zanuttini et al.’s (2011) analysis of jussive subjects with Baker’s (2008) proposal about 1st/2nd person agreement. The original goal of Pak et al. and Zanuttini et al. is to derive the person restrictions imposed on null subjects in imperative, promissive and exhortative clauses in root contexts in Korean (except for Pak et al. (2007) which also discuss jussive clauses in non-root contexts; cf. Zanuttini (2008) for English imperatives). Remember that what is dubbed “jussive control” in this dissertation has a peculiar property, namely that the referent of a controlled subject is predictable by the clause type of a subordinated jussive clause. Therefore, any successful control
analysis should be able to capture this property, and I believe that Pak et al.’s and Zanuttini et al.’s analysis of three subtypes of jussive clauses in Korean gives us a solid ground for achieving this goal. To have a taste of their suggestions beforehand, Pak (2006), Pak et al. (2007, 2008) and Zanuttini et al. (2011) make a very important observation that the three subtypes of jussive clauses are minimally different with respect to the person feature of a subject, and the person feature value of the subject co-varies with the type of a clause where the subject appears: that is, the subject of a promissive clause (marked by –ma) is first person, singular or plural (exclusive of the addressee), that of an imperative (marked by –la) is second person, and that of an exhortative (marked by –ca) is first person plural inclusive of the addressee. In order to derive these interpretive restrictions on the subjects, Pak et al. and Zanuttini et al. suggest that the person feature of a null subject in each subtype of jussive clause is transmitted from the clause-typing particle (called the ‘jussive particle’) through an agreement relation. At the heart of their analysis is (i) that each jussive particle is a morphological reflex of different person features carried by a functional head, Jussive0; and (ii) that the person features of null subjects in the three subtypes of jussive clauses are valued by Agree with those of the Jussive0, not the other way around.3

More importantly, in order to explain how null subjects find their reference in embedded jussive contexts, Pak et al. (2007) propose that the person features carried by Jussive0 and null pronouns are shiftable, while those by overt pronouns are unshiftable, and that the role of the shiftable feature is to make first or second person subjects in jussive complements referentially linked to the matrix subject and object, which are the speaker and addressee of the reported speech act, respectively. However, slightly departing from Pak et al. (2007), I assume that only the person features of the subjects (but not the person feature of the Jussive head) need to be dis-

3 Departing from Chomsky (2000, 2001), Pak et al. (2008) and Zanuttini et al. (2011) assume with Pesetsky and Torrego (2007) that Agree can be defined as an operation triggering feature sharing between a probe and a goal. See Section 6.2.3 for relevant discussion in detail.
tinguished in terms of shiftability: specifically, the person features borne by the first and second person pronouns are assumed to be unshiftable. In addition, building on Baker (2008), I will suggest that CPs selected by a limited class of predicates, such as attitude verbs, verbs of communication and control-creating verbs, have a Speaker or Addressee operator (or both) in the left periphery by which first or second person subjects must be locally bound for licensing. I also assume with Baker that every root clause can optionally have the same operator(s), but there is a difference between the operators in the root contexts and those in the embedded contexts: that is, the former find their reference from the actual speech context, while the latter receive their reference from the closest argument(s) in the next higher clause. This means that what is known as ‘control effects’ in the jussive control constructions can arise when the Speaker and Addressee operator in the embedded CP is bound by the closest antecedent in the immediately higher clause. Note that a couple of recent studies on control such as Gamerschlag (2007) and Madigan (2008a,b) advance an analysis of jussive control by capitalizing on Pak (2004) and Pak et al. (2006) (an earlier version of Zanuttini et al. (2011)). They attempt to develop a unified analysis of the roles of –keyss and –lye(ko), along with those of the three clause-typing particles (but only two jussive particles excluding –ma in Gamerschlag), but such kind of unified approach will turn out to pose problems (see Section 6.5).

6.1.2 Organization of Chapter 6

In Section 6.2, I will lay out the core assumptions this chapter makes in order to capture the distribution and interpretation of subjects in jussive clauses. In particular, based on Pak et al. (2007, 2008) and Zanuttini et al. (2011) (cf. Zanuttini (2008) for English imperatives), it will be shown why we need an independent functional projection, labeled ‘Jussive Phrase,’ and how the Jussive
head imposes restrictions on the subjects of jussive clauses. In addition, some more assumptions will be made about the position and role of a Speaker and Addressee operator by drawing on Baker’s (2008) analysis of first and second person agreement. Section 6.3 discusses the semantics of jussive clauses, as well as person restrictions imposed on subjects in jussive clauses, focusing on how each type of jussive clause can be interpreted. Section 6.4 addresses the three issues in (2a-c) and proposes a formal account for how null subjects in jussive complements are controlled and what consequences of the current analysis have. In Section 6.5, I will discuss two previous studies, Gamerschlag (2007) and Madigan (2008a,b), whose data and/or analysis are similar to those of the current study in a number of aspects, and point out some possible problems for each of them. Section 6.6 summarizes and concludes this chapter.

6.2 Underlying Assumptions about Subjects in Jussive Clauses

6.2.1 Syntactic Properties of Subjects in Jussive Clauses

We have seen in Section 5.2 in Chapter 5 that imperative, promissive and exhortative clauses in Korean share some morpho-syntactic and semantic properties: for example, unlike declarative and interrogative clauses, they do not allow for tense markers (e.g., -ass/-ess) and epistemic markers (e.g., -te, -kwun), their subjects are restrictively interpreted in person, and they do not allow for a possession reading with the copula-like predicate –issta ‘exist.’ Because of these shared properties, I proposed to treat them differently from declaratives and interrogatives, and following Pak (2006) and Pak et al. (2007, 2008a,b), I labeled them ‘jussive clauses.’ In this section, I will focus on the interpretive restrictions on the subjects of jussive clauses, trying to figure out (i) what the nature of the restrictions is (i.e., Are they syntactic, semantic or pragmatic?) and (ii) where those restrictions come from (i.e., Are they inherent to the subjects?).
Recall that three subtypes of jussive clauses in Korean are minimally different with respect to their subject in person, which is marked by the distinct clause-final particles, –ma, –la and –ca, as shown in (5a-c). Notably, the subject of a promissive is confined to first person, that of an imperative to second person, and that of an exhortative to first person plural inclusive of the addressee.

(5) a. \([\text{NP e}]\) sihem-ey hapkyekha-\textbf{ma}. (PROMISSIVE)
\begin{tabular}{l}
exam-in & pass-PRM \end{tabular}
\begin{tabular}{l}
‘I/we/*you_{SG,PL}/*he/*she/*they promise to pass the exam.’
\end{tabular}

b. \([\text{NP e}]\) sihem-ey hapkyekh\textbf{a-}l\textbf{a}. (IMPERATIVE)
\begin{tabular}{l}
exam-in & pass-IMP \end{tabular}
\begin{tabular}{l}
‘(You_{SG,PL}/*I/*he/*she/*we/*they) pass the exam!’
\end{tabular}

c. \([\text{NP e}]\) sihem-ey hapkyekha-\textbf{ca}. (EXHORTATIVE)
\begin{tabular}{l}
exam-in & pass-EXH \end{tabular}
\begin{tabular}{l}
‘Let us/*me/*you/*him/*her/*them pass the exam.’
\end{tabular}

One question that can arise at this point is whether these restrictions on jussive subjects in person are syntactic, semantic or pragmatic. In order to answer this question, it seems useful to consider the restrictions on imperative subjects, since imperatives are a subtype of jussive clause found in both English and Korean. Zanuttini et al. (2011: Sec 1.2) point out that there is a prevailing view among linguists that the restrictions on imperative subjects are a corollary of the semantics and pragmatics of imperatives; simply put, the interpretation of imperatives is responsible for such restrictions. According to this semantic/pragmatic perspective, the subject restrictions can be explained at least in two ways. First, it can be argued that the function of imperatives is to give an instruction to the addressee and this function can be performed only when the subject of an imperative sentence is second person. In other words, why the subject of an imperative sentence is confined to a limited range of elements can be explained simply by looking at the final meaning of the sentence. However, this kind of account is counterintuitive from the ge-
nerative perspective advocated in this dissertation, since an ideal analysis within the generative framework would be to derive the subject restrictions in a compositional way—that is, we should be able to answer how a subject and the other subparts of an imperative sentence are combined in creating the meaning of the entire sentence, not the other way around.

Second, one can also argue under the semantic/pragmatic perspective that imperative subjects could in principle have any reference including speaker, addressee, or others, but only some of them can be used to perform a speech act like ‘The addressee is to make $p$ true.’ However, as pointed out in Zanuttini et al. (2011), this way of account also runs into a problem in deriving the subject restrictions. In particular, it fails to capture why the addressee must be represented as the subject in imperative sentences. For instance, an incorrect prediction is made that (6b), whose propositional content is similar to (6a), should be grammatical. This is because, although the addressee is not in subject position in (6b), the speech act ‘(You addressee) see to it that John kisses you’ could be performed, as the pronoun you refers to the addressee.

(6) a. (You) be kissed by John!
   b. *John kiss you!      Pak et al. (2008a: 4)

For these reasons, we can conclude that the purely semantic or pragmatic account may not be an ideal way to derive the restrictions imposed on imperative subjects.4

If the subject restrictions in imperatives are not purely semantic or pragmatic, we could see their nature as syntactic. But how do we know that the restrictions are syntactic? Consider the imperative sentences in (7), where second person anaphors appear in object position. Given that imperative subjects are restrictively construed as second person, it is legitimate to say that

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4 Please refer to Portner (2004) and Zanuttini et al. (2011) for more arguments against the semantic/pragmatic view.
those anaphors are bound by the null subjects. This suggests that null subjects in imperatives have second person features that yield binding effects.

(7)  

a. Know yourself/*herself/*himself!  
b. Wash yourselves!

Note also that as widely observed in the literature (e.g., Potsdam (1998), Zanuttini (2008), Zanuttini et al. (2011) and references therein), not only null subjects but also overt subjects can serve as subjects of imperative clauses in English. For example, a second person pronoun, a quantificational expression, proper names and bare nouns can appear in the subject position of imperative clauses, as shown in (8) drawn from Zanuttini (2008) ((a) from p.189, (b) from p.190, and (c)-(d) from p.192)).

(8)  

a. You/*I/*he do it!  
b. Everyone say hello to the principal!  
c. Daniel sit by the tree, Gabriel stand by the door!  
d. Boys be the cops and girls be the robbers!

First, just as with null subjects, pronominal subjects refer to the addressee. Second, quantificational subjects in imperatives range over the set of addressees, which does not always hold for quantificational subjects in declarative and interrogatives; in the latter two clause types, they can also range over a domain provided by the context (Zanuttini (2008: 191)). Third, proper names are normally used as imperative subjects to refer to individuals from the set of addressees in the context.\(^5\) Finally, the interpretive function of bare nouns is to refer to a subset of the set of addressees. As Zanuttini (2008: 193) notes, unlike bare nouns in declaratives and interrogatives,  

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\(^5\) Citing previous works (Downing (1969), Davies (1986) and Potsdam (1998)), Zanuttini (2008: 192) points out that proper names are preferably used as imperative subjects in coordinated structures.
they hardly receive the generic interpretation in imperative clauses.

More revealing from the syntactic point of view are binding effects involving *overt* subjects in imperatives. As shown in (9)-(11), whatever serves as a subject in imperatives can always bind second person pronouns inside VP. That is, although the subjects are third person quantified nouns in (9), proper names in (10) and bare nouns in (11), all of them can bind second person pronouns. So we can generalize that both *overt* and *null* subjects in imperatives exhibit syntactic effects apart from the interpretive effects.\(^6\)

(9)  
   a. Nobody touch your pencils!  
   b. Everyone\(_i\) raise *(his/her/their/your)* your\(_i\) hand!  
   c. Someone\(_i\) raise *(his/her/their/your)* your\(_i\) hand!  
      Zanuttini (2008: 190)

(10)  
   a. Gabriel\(_i\) comb your\(_i\) hair, Danij put on yourj shoes!  
   b. John\(_i\) raise your\(_i\) hand, Maryj wiggle yourj fingers!  
      Zanuttini (2008: 192)

(11)  
   a. Boys\(_i\) raise your\(_i\) hands; girlsj wiggle yourj fingers!  
   b. Boys\(_i\) be your\(_i\) own judges; girlsj be yourj own bosses!  
      Zanuttini (2008: 193)

If we compare these data with declarative and interrogative counterparts, it becomes clear that the binding effects exhibited by third person subjects are only available in imperatives. As illustrated in (12)-(14), unlike imperative sentences, third person subjects in declaratives and interrogatives are generally unable to bind second person pronouns inside VP.

(12)  
   a. Everyone, should raise *(his/her/their/your)* your\(_i\) hand.  
   b. Should everyone, raise *(his/her/their/your)* your\(_i\) hand?  
      Zanuttini (2008: 191)

(13)  
   a. *Gabriel, combed your hair, while Danij put on yourj shoes.*  
   b. *Did Gabriel, comb youri hair, while Danij put on yourj shoes?*

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\(^6\) As observed by Pak et al. (2007) and Zanuttini (2008), some but not all speakers also allow quantified nouns in subject position to bind third person pronouns in imperatives. I will not attempt to offer an account for this fact here. Please refer to Zanuttini (2008) for in-depth discussion.
(14) a. Boys, are often *youri/theiri own worst enemy.
b. Are boysi, often *youri/theiri own worst enemy?

In short, the data in (9)-(14) obviously lend support to the view that the restrictions imposed on imperative subjects need to be considered as syntactic. Crucially, we are led to make two related conclusions: first, imperative subjects, *overt or null*, have second person features that can trigger binding effects; and second, it may not be an imperative subject but something else in the structure that brings second person features into the derivation, as third person lexical subjects exhibit the same binding effects. The second conclusion is tightly related to one of the questions raised at the beginning of this subsection, namely, where the person restrictions come from. Detailed discussion about which constituent enters the derivation with valued second person features in imperatives will be postponed until the next subsection.

Turning to Korean jussive clauses, we can easily see that the conclusions based on English imperative data hold true of them. Starting with imperative clauses, lexical subjects are allowed in Korean in a similar way to English: in particular, not only second person pronouns but also third person lexical NPs, such as quantificational nouns and proper names, can serve as subjects in imperatives, as exemplified in (15).

(15) a. *nay-/ku-/*kunye-/kutul-/*ney-ka
   I/he/she/they/you-NOM swukcey-lul do-IMP
   ‘*I/*he/*she/*they/you do homework!’

   b. amwu-to cip-ey ka-ci ma-la
   anyone-even home-to go-NML NEG-IMP
   ‘Nobody go home!’

   John-NOM game-ACC do-IMP
   ‘John play the game!’
d. yehaksayng-tul-i kyosil-ey nam(a)-la.
female.student-PL-NOM classroom-in stay-IMP
‘Female students stay in the classroom!’ (BARE NOUN)

As for the interpretive properties of these overt subjects, just as with those in English imperatives, the second person pronoun refers to the addressee, the quantificational subject quantifies over the set of addressees, the proper name picks out an individual from the set of addressees, and the bare noun refers to the subset of the set of addressees.

Given the morpho-syntactic and semantic similarities exhibited by three subtypes of jussive clauses in Korean, we can predict that promissives and exhortatives pattern with imperatives regarding the availability of overt subjects. This prediction is confirmed, as shown in (16).

(16) a. *ney-/*ku-/*kunye-/nay-ka sihap-eyse sungliha-ma. (PROMISSIVE)
you.SG/he/she/I-NOM game-in win-PRM
‘*You. SG/*he/*she/I promise to win the game.’
b. *nehuy-/*kutul-/wuli-ka sihap-eyse sungliha-ca. (EXHORTATIVE)
you.PL/they/we-NOM game-in win-EXH
‘Let *you.PL/*them/us win the game.’

However, notice that due to the interpretive properties of promissives and exhortatives, only a first person singular pronoun is permitted as a subject of promissives, as in (16a), while a first person plural pronoun (inclusive of the addressee) can serve as a subject of exhortatives, as in (16b). Note also that for some reason I do not fully understand, other lexical NPs than personal pronouns are restrictively used as subjects in promissives. Among non-pronominal third person NPs, only a limited number of bare nouns (e.g., emma ‘mother’ and sensayngnim ‘teacher’), which can refer to the speaker in Korean, are allowed in subject position in promissives, as in (17a). However, most other kinds of bare nouns and proper names that are seldom used to refer
to the speaker cannot be licensed as subjects of promissives, as in (17b). On the other hand, relatively unrestricted kinds of bare nouns can appear in the subject position of exhortatives as long as the speaker of the context is included in the set of individuals denoted by a bare noun, as in (17c). Furthermore, when referring to the addressee, even proper names can be used as a subject of exhortatives by co-occurring with any NP referring to the speaker, as given in (17d).

(17) a. emma-ka/senayngnim-i chayk- ul ilk(e).cwu- ma.
    mother-NOM/teacher-NOM book-ACC read.give-PRM
    ‘Mother/teacher promises to read a book (to you).’ (mother/teacher = speaker)

b. *yehaksayng-i chayk-ul ilk(e).cwu- ma.
    female.student-NOM book-ACC read.give-PRM
    Intended: ‘Female student promises to read a book (to you).’

c. yehaksayng-tul-i chak-ul ilk-ca.
    female.student-PL-NOM book-ACC read-EXH
    ‘Let female students read books.’ (female students = speaker + addressees)

d. emma-wa John-i chayk-ul ilk-ca.
    mother-and John-NOM book-ACC read-EXH
    ‘Let mother and John read a book.’ (mother = speaker; John = addressee)

What is more crucial is that just as in the case of imperatives in English, any lexical NPs that are allowed to occur in subject position can bind first or second person elements inside VP in three subtypes of jussive clauses in Korean, as shown in (18).

(18) a. emma-ka, nayi/*kunye-uyi chinkwu-lul teliko.o- ma.
    mother-NOM my/her friend-ACC bring.come-PRM
    ‘Mother will bring my friend’ (mother = speaker)

b. Byungkyu-ka nayi chinkwu-lul teliko.o- ma-ender
    Byungkyu-NOM my friend-ACC bring.come-ENDER
    ‘Byungkyu will bring my friend.’

---

7 However, kids often use their names to refer to themselves. This seems to be one of few exceptional cases where proper names can be used to refer to the speaker in Korean. Nonetheless, it seems rare to hear kids produce promissives ending in –ma. They rather use the ender –ulkey, which is frequently used in colloquial speech to express the speaker’s intention or promise, as in (i). The rare use of the promissive marker –ma by the younger generation seems to suggest that the marker is used as a special register.

(i) Byungkyu-ka nayi chinkwu-lul teliko.o- ulkey.
    Byungkyu-NOM my friend-ACC bring.come-ENDER
    ‘Byungkyu will bring my friend.’
b. Inho-ka\_i ney/*ku-uy\_i chinkwu-lul teliko.o-a\_a.
Inho-NOM your/his.MALE friend-ACC bring.come-IMP
‘Inho bring your friend!’ (Inho = addressee)

c. emma-wa Inho-ka\_i wuli/*ku-uy\_i chinkwu-lul teliko.o-ca.
mother-and Inho-NOM our/his friend-ACC bring.come-EXH
‘Mother and Inho will bring our friend’ (mother = speaker; Inho = addressee)

Pak et al. (2008a: 11)

It is noteworthy that \textit{emma} ‘mother’ and \textit{Inho} are third person nouns which cannot usually be associated with first or second person features. Nevertheless, these nouns can bind a first or second person element (singular or plural) depending on the type of clause: the bare noun \textit{emma}, the speaker of the context, binds the first person possessive pronoun in the promissive in (18a); the proper name \textit{Inho}, the addressee of the context, binds the second person in the imperative in (18b); and the coordinated noun consisting of \textit{emma} and \textit{Inho}, the speaker and the addressee of the context, respectively, binds the first person plural in the exhortative in (18c). Therefore, it would not make sense to conclude that first and second person features that license pronouns in VP originate from the subjects in the jussive clauses. Notice that the binding patterns with lexical subjects are also possible with null subjects in jussive clauses. This is clearly shown by the sentences in (19) which are almost identical with (20) except that the subjects are null.

\begin{align*}
\text{a. [NP e]}_i & \quad \text{nay/*kunye-uy}_i \quad \text{chinkwu-lul} \quad \text{teliko.o-\textbf{ma}.} \\
\text{my/her} & \quad \text{friend-ACC} \quad \text{bring.come-PRM} \\
\text{Intended: ‘Mother promises to bring my friend’} & \quad (mother = \text{speaker})
\end{align*}

\begin{align*}
\text{b. [NP e]}_i & \quad \text{ney/*ku-uy}_i \quad \text{chinkwu-lul} \quad \text{teliko.o-\textbf{a}.} \\
\text{your/his.MALE} & \quad \text{friend-ACC} \quad \text{bring.come-IMP} \\
\text{Intended: ‘Inho bring your friend!’} & \quad (Inho = \text{addressee})
\end{align*}

\begin{align*}
\text{c. [NP e]}_i & \quad \text{wuli/*ku-uy}_i \quad \text{chinkwu-lul} \quad \text{teliko.o-\textbf{ca}.} \\
\text{our/his} & \quad \text{friend-ACC} \quad \text{bring.come-EXH} \\
\text{Intended: ‘Mother and Inho will bring our friend’} & \quad (mother = \text{speaker}; \text{Inho} = \text{addressee})
\end{align*}

However, we still need to make it clear whether the binding effects by lexical subjects are
unique to imperatives or available in the other major clause types in Korean. As shown in Zanuttini et al. (2011: 9), the same kind of binding effects cannot arise with third person lexical subjects in declaratives and interrogatives even when they refer to the speaker or addressee. Suppose that Inho and his mother are looking at their pictures, and his mother is talking to and asking Inho about the pictures. In this situation, in both declarative and interrogative sentences, the third person bare noun *emma* and the proper name *Inho* fail to bind a first or second person pronoun in VP, as in (20), although the subject is the speaker or addressee of the given context.

(20) a. emma-ka (*nay) chaky-ul lik-nun-ta.
   mother-NOM my book-ACC read-PRES-DECL
   ‘Mother is reading a book/*my book.’  (*mother = speaker*)

   Inho-NOM your book-acc read-PRES-DECL
   ‘Inho is reading a book/*your book.’  (*Inho = addressee*)

c. emma-ka (*nay) chayk-ul ilk-nya?
   mother-NOM my book-ACC read-INT
   ‘Is mother reading a book/*my book?’  (*mother = speaker*)

d. Inho-ka (*ney) chayk-ul ilk-nya?
   Inho-NOM your book-acc read-INT
   ‘Is Inho reading a book/*your book?’  (*Inho = addressee*)

From the contrast between (18)-(19) and (20) regarding the binding effects, we can draw the following two conclusions about Korean jussive subjects similar to those based on English imperative subjects: first, subjects have first or second person features—more precisely, subjects in promissives have a first person feature, those in imperatives a second person feature, and those in exhortative a first and second person feature; second, those features are not intrinsically encoded in subjects, which is evidenced by the fact that lexical subjects can license first or second person pronouns regardless of their superficial person features.

Before proceeding to the next subsection, since bare nouns and proper names are often
used as vocatives to call the addressee, we need to clarify how lexical subjects can be distinguished from vocatives in jussive sentences. First of all, the most compelling difference lies in the fact that unlike English, Korean has morphological markers for vocatives whose forms are different from Case and topic markers: \(-a\) for NPs ending in a consonant and \(-ya\) for those ending in a vowel. Indeed, the lexical subjects in imperatives and exhortatives provided in this section are seen to take a nominative Case marker (e.g., \(-i\), \(-ka\)). However, as shown in (21), if we alternate the nominative-marked subjects in (18) with vocative counterparts, the sentences become ungrammatical, except for the imperative sentence in (18b).\(^8\)

(21) a. *emma-ya, nay\(_i\) chinkwu-lul teliko.o-ma.
   mother-VOC my friend-ACC bring.come-PRM
   Intended: ‘Mother will bring my friend’ \((mother = \text{speaker})\)

b. Inho-ya, ney\(_i\) chinkwu-lul teliko.o-ala.
   Inho-VOC your friend-ACC bring.come-IMP
   Intended: ‘Inho bring your friend!’ \((Inho = \text{addressee})\)

c. *emma-wa Inho-ya, wuli\(_i\) chinkwu-lul teliko.o-ca.
   mother-and Inho-VOC our friend-ACC bring.come-EXH
   Intended: ‘Mother and Inho will bring our friend’ \((mother = \text{speaker}; Inho = \text{addressee})\)

Second, it has been observed in the literature (e.g., Downing (1969), Hamblin (1987), Potsdam (1998), Zanuttini (2008), \textit{inter alia}) that vocatives exclusively pick out the addressee. Recall, however, that lexical subjects in jussive clauses can be licensed as long as they range over the addressees. For example, as reported by Potsdam (1998: 180), in English, some types of NPs

\(^8\) I attribute the grammaticality of (21b) to the interpretive property unique to vocatives to be discussed right below—namely, vocatives are used to pick out the addressee. In (21b), what is referred to by the vocative \textit{Inho-ya} is the addressee of the context, and it is not incompatible with the subject required by the imperative clause. In particular, the imperative sentence accompanying a vocative like (21b) can be represented as in (i), where there is an independent null subject referentially linked to the unique referent introduced by the vocative \textit{Inho-ya} (see the next section for why null imperative subjects are \textit{pro}).

(i) Inho\(_i\)-ya, \textit{pro}\(_i\) ney\(_i\) chinkwu-lul teliko.o-ala.
   Inho-VOC your friend-ACC bring.come-IMP
   ‘Inho, \textit{pro}, bring your friend!’
italicized in (22) are not allowed as vocatives since they cannot exclusively refer to the addressee(s). However, the same types of NPs can function as subjects in imperative sentences, as in (23), suggesting that they should be distinguished from vocatives.

(22)  
 a. *Hey, you and Fred, did no one say to stay out of the construction zone?  
 b. *Your children, can the play area be kept clean?  
 c. *Nobody, that man just rode off with my bicycle!

(23)  
 a. You and Fred stay out of the construction zone!  
 b. Your men guard the front while we creep round to the back!  
 c. Nobody ride off with my bicycle!

We can find the same contrast in Korean jussives as well. Consider the sentences in (24). The coordinated NP cannot be used as a vocative marked by –ya, as in (24a), but it can serve as a subject marked by a nominative Case –ka in an imperative and exhortative sentence, as in (24b) and (24c), respectively.

(24)  
 a. *John-kwa Mary-ya, amwu-to ancenhan. kot-ey iss(u)-la-ko malha-ci ahn-ass-nya?  

John-and Mary-voc anyone-even safe place-in exit-IMP-COMP say-NML not-MOD-PAST-INT  
Intended: John and Mary, did nobody say to stay in a safe place?  

b. John-kwa Mary-ka acenhan kot-ey iss(e)-ca.  

John-and Mary-nom safe place-in exist-IMP  
‘John and Mary stay in a safe place!’ (John & Mary = addressees)  


John-and mother-nom safe place-in exist-exh  
‘Let John and mother stay in a safe place.’ (John = addressee; mother = speaker)

Third, the use of vocatives causes an intonational effect, while that of lexical subjects can hardly trigger the same effect. That is, vocatives and the rest of clauses are normally separated by an intonational break, while bare nouns or proper names serving as jussive subjects do not accom-
pany the same type of intonational break.\textsuperscript{9}

To summarize, we began by looking at the data showing that there are restrictions imposed on jussive subjects which are minimally different depending on the clause type. Then it was shown that these restrictions cannot be analyzed purely from the semantic or pragmatic perspective, since they have difficulty in explaining, for example, why the addressee cannot be represented in other positions than subject position in imperatives. In addition, it turned out that the subject restrictions in jussives are not only limited to the interpretive effects, but also yield syntactic effects. In other words, null jussive subjects can bind first or second person anaphors or pronouns, and this suggests that the subjects bear person features. Furthermore, the fact that even third person lexical subjects in jussive clauses exhibit the same binding effects as null jussive subjects do has driven us to conclude that those features are not directly associated with the lexical properties of jussive subjects. So an appropriate syntactic account is called for in order to explain where such features come from.

\textbf{6.2.2 Jussive Phrase and pro as Subject in Jussive Clauses}

We have just seen that subjects in jussive clauses in Korean have person features: that is, subjects in promissives have a first person feature, those in imperatives a second person feature and those in exhortatives have both a first and second person feature. But the puzzle is that these features

\textsuperscript{9} Zanuttini (2008: 194-95) discusses two other criteria for distinguishing vocatives from lexical subjects in English imperatives. To my best understanding, both criteria are somehow related to Downing’s (1969) observation that while imperatives with a vocative can be produced in isolation, those with a lexical subject cannot, as shown in the contrast between (i) and (ii). However, jussive clauses in Korean do not pattern exactly the same way as imperatives in English in this respect, but I will not attempt to explain why this is so. See Zanuttini (2008: Sec 2.2) for comprehensive discussion about the different properties between vocatives and imperative subjects, as well as a full list of literature addressing this issue.

\begin{itemize}
  \item[(i)] John, close the door, will you? (with VOCATIVE – isolation allowed)
  \item[(ii)] a. *John close the door, will you? (with SUBJECT – isolation not allowed)
  b. John scatter the files, Bill ransack the desk, and I’ll watch the door.
\end{itemize}
do not seem to originate from subjects themselves. Again, what is striking is that jussive subjects which are neither first nor second person can bind first or second person anaphors and pronouns in VP. These binding patterns would remain unexplained if one insists that the person features of third person subjects in jussives are already fixed in the lexicon. Rather, it would be more intuitive if we assume that their person features are fed by something else in the structure.

For this reason, I adopt two hypotheses made by Pak et al. (2007, 2008) and Zanuttini et al. (2011) (cf. Zanuttini (2008) for English imperatives). First, it is hypothesized that there is a functional projection in the syntactic representation of jussive clauses, which encodes person features. This functional category is called a ‘Jussive Phrase,’ and is assumed to project only in three subtypes of jussive clauses with directive force. The second hypothesis is that the Jussive head establishes a syntactic relation with a subject, thereby the person features of the former are shared with the latter. Abstracting away from details, the three subtypes of jussive clauses can be represented as in (25) (where ‘1⊕2’ in (c) indicates first person plural inclusive of the addressee).

\[
\begin{align*}
\text{a. Promissives} & & \text{b. Imperatives} & & \text{c. Exhortatives} \\
\begin{array}{c}
\text{CP} \\
\text{JussiveP} \\
\text{Jussive}^0 \\
\text{TP} \\
-\text{ma}
\end{array} & & \begin{array}{c}
\text{CP} \\
\text{JussiveP} \\
\text{Jussive}^0 \\
\text{TP} \\
-\text{la}
\end{array} & & \begin{array}{c}
\text{CP} \\
\text{JussiveP} \\
\text{Jussive}^0 \\
\text{TP} \\
-\text{ca}
\end{array}
\end{align*}
\]

As illustrated above, the person features possessed by the Jussive head vary depending on the type of a jussive clause, and different clause-typing markers are spelled-out under the Jussive head according to the person features that the head carries.
The immediate questions raised at this point include the following: (i) what null subjects in jussive clauses are (i.e., Are they PRO or pro?); (ii) what makes it possible for the Jussive head to share its person features with subjects; and (iii) how null (or overt) subjects come to acquire nominative Case. I will address the first issue here, holding the discussion about the other two issues until the next subsection. In particular, I endorse the view suggested by Pak et al. (2007, 2008) and Zanuttini et al. (2011) that null subjects in jussive clauses are pro (cf. Potsdam 1998, Zanuttini 2008 for English imperatives). Again, arguments for the suggested view will be based on null subjects in imperatives as they are a common clause type available in many languages. One plausible alternative to the current view would be that the null subject in imperatives is equivalent to PRO found in infinitival clauses in the so-called arbitrary control sentences like (26).

(26) a. [PRO to lose] is always disheartening.  
   b. [PRO to walk alone at night] is dangerous.

   Potsdam (1998: 224)  
   C. Han (2000: 144)

This is because there are some similarities between imperatives and (arbitrary) control infinitives: first, verbs predicated of null subjects in both imperatives and control infinitives take bare forms without being fully inflected; second, null subjects in both do not have an explicit antecedent; and third, imperatives have an unrealized future-oriented tense, just as do control infinitives (C. Han 2000)). However, these similarities are just apparent; a close examination reveals that null subjects in imperatives and control infinitives have different semantic and syntactic properties. From the perspective of interpretation, the null subjects in (26) should be generically construed, as the label ‘arbitrary control’ suggests. But recall from our discussion in 6.2.1 that imperative subjects, whether they are null, quantificational or bare nouns, do not receive the generic interpretation but range over the addressee(s); this difference obviously resists the unification of
the imperative subjects and controlled subjects by means of PRO. As C. Han (2000) points out, there are of course some cases where PRO is not generically interpreted in the similar environments to (26a,b): for example, it can be controlled by the overt NP in the same clause, as in (27a), or it is not an arbitrary PRO itself, as in (27b).

(27)  a. [PRO, to walk alone at night] is dangerous for Elena. (PRO = Elena)  
     b. Yesterday, [PRO writing this poem] was fun. (PRO = speaker)  
C. Han (2000: 144)

However, it seems to me that the syntactic properties of imperative null subjects constitute more convincing evidence against the alternative view taking them as PRO. Above all, if null subjects in imperatives are PRO, they should not be able to alternate with overt subjects. But as already seen in the previous section, the subject position in imperatives can freely (and sometimes preferrably) be occupied by at least three kinds of NPs, i.e., pronouns, quantified NPs and bare nouns. Recall also that the presence of lexical NPs as subjects is not only possible in imperatives across languages but also in promissives and exhortatives in Korean. Secondly, the syntactic distribution of jussive clauses, which is not identical with that of control infinitives, lends additional support to the current view. That is, environments allowing for obligatorily controlled or arbitrarily interpreted PRO are limited to infinitival clauses in English, which should always be subordinated (e.g., *PRO to walk alone at night (cf. (26b))). On the contrary, it is evident that not only imperative clauses in both English and Korean but also the other two subtypes of jussive clauses in Korean can be uttered as root clauses.

In short, from the interpretive and syntactic differences between null subjects in imperatives and those in arbitrary control, we can safely conclude that the null imperative subjects are not PRO but pro even in English, traditionally known as a non-null subject language. Further-
more, given that imperatives pattern with promissives and exhortatives regarding several grammatical properties in Korean, this conclusion can be extended to null subjects in the other two subtypes of jussives. However, if the imperative subject in English is *pro*, one might ask how it can be licensed and interpreted (cf. Rizzi’s (1986) conditions on licensing and interpretation of *pro*). Similarly, one can also ask how *pro* in jussive clauses in Korean is different from *pro* in non-jussive clauses, as well as how the former can be licensed and interpreted. Following Pak et al. (2007, 2008), Zanuttini (2008) and Zanuttini et al. (2011), I will claim in the forthcoming subsection that licensing and interpretation of *pro* in imperatives in non-null subject languages like English, as well as jussive clauses in null subject languages like Korean, can be achieved by means of agreement with the Jussive head.

6.2.3 Agree as a Feature Sharing Operation and Case

Let us now examine the second issue raised in the previous subsection, namely, how a null subject ends up sharing a person feature with the Jussive head in jussive clauses. It seems clear that this question can be restated in terms of the following question: how can *pro* in English imperatives and in Korean jussives be licensed and interpreted? Recall that the first hypothesis adopted from Pak et al. (2007, 2008) and Zanuttini et al. (2011) is that in jussive clauses, the Jussive head enters a ‘syntactic’ relation with a subject, which makes its person features shared with the subject. This hypothesis in fact begs two related questions: first, what kind of syntactic relation is involved in between the Jussive head and the jussive subject; and second, how such relation can be established between them. As regards these two questions, I assume with Pak et al. (2007, 2008) and Zanuttini et al. (2011) that the Jussive head establishes an ‘agreement’ relation with the subject in person, and that it is the operation ‘Agree’ (especially, Pesetsky and Torrego
(2007)’s version that implements Chomsky’s (2000, 2001) original version) that takes place for the Jussive head to undergo person agreement with the subject.

Chomsky (2000, 2001a,b) suggests Agree with the goal of capturing various agreement phenomena found in human language, for example, how a subject undergoes agreement with a predicate in \( \varphi \) (phi)-features such as person and number features (e.g., John walks vs. *John walk). According to him, when an element \( \alpha \) has an uninterpretable feature \( u_F \), called a probe, it searches down for another element \( \beta \) with an interpretable counterpart \( i_F \), called a goal. If \( i_F \) is not distinct from \( u_F \), Agree takes place in between these two features, as shown in (28). As a result, the probe \( u_F \) that Chomsky assumes to be unvalued before Agree ends up having the same value (represented by the subscript \( n \)) as the goal \( i_F \). However, the probe is deleted later for convergence at the interfaces (the strikethrough in (28) indicates that features are deleted).

\[
\begin{align*}
\alpha \quad [u_F] & \quad \text{Agree} \quad \beta \quad [i_{F,n}] \\
\end{align*}
\]

Crucially, just as the agreement phenomena are strictly constrained (in terms of identity in features and locality in distance between an agreeing and agreed element), it is not the case that Agree applies in an unrestricted manner. Rather, as summarized by Baker (2008: Ch 1), Chomsky (2000, 2001) argues that the basic four conditions in (29) must be respected in order for Agree to be operative.

(29) A functional head \( H \) agrees with \( XP \) only if
a. \( H \) c-commands \( XP \).  

(C-COMMAND CONDITION)
b. There is no YP such that H c-commands YP, YP c-commands XP, and YP has phi-features.  
   (INTERVENTION CONDITION)

c. H and XP are contained in all the same phases (e.g., full CPs).  
   (PHASE CONDITION)

d. XP is made active for agreement by having an unchecked Case feature.  
   (ACTIVATION CONDITION)

Suppose that we have a sentence like \textit{John walks}. In this sentence, while a probe is uninterpretable phi-features on the finite T whose values are not determined, a goal is interpretable phi-features on the subject NP \textit{John} (consisting of 3rd person and singular features), which also carries an uninterpretable Case feature. The way in which Agree applies for this sentence can be roughly represented as in (30). As clearly shown in (30), the probe on the finite T c-commands the goal on the subject NP, without any other NP intervening in between them in the same phase (i.e., CP); accordingly, the conditions in (29a)-(29c) are satisfied. Also, the goal on the subject NP is visible for Agree with the probe, since it also has an uninterpretable Case feature, respecting the activation condition in (29d).

\begin{equation}
\begin{array}{c}
\text{AGREE} \\
\text{NP} \\
\text{TP}
\end{array}
\begin{array}{c}
\text{TP} \\
\text{vP} \\
\text{v'} \\
\text{VP} \\
\ldots
\end{array}
\rightarrow
\begin{array}{c}
\text{MOVE} \\
\text{NP} \\
\text{TP}
\end{array}
\begin{array}{c}
\text{TP} \\
\text{vP} \\
\text{v'} \\
\text{VP} \\
\ldots
\end{array}
\end{equation}

Consequently, the uninterpretable phi-features on the finite T come to have the same value (marked by the subscript $n$) as the interpretable phi-features on the subject DP. In the end, once the uninterpretable features of the finite T are valued, they are deleted for convergence, as re-
quired by another condition in (31). Similarly, the uninterpretable Case feature on the subject NP gets valued as nominative by virtue of the same operation and is deleted after experiencing Move to Spec-TP (which is driven by an EPP-feature on T\(^0\), not represented on (30), though).

\[ (31) \quad \text{CONDITION ON DELETION OF UNINTERPRETABLE FEATURES} \]
\[
\text{Once an uninterpretable feature is valued, it can and must delete.} \\
\text{(as presented in Pesetsky and Torrego (2007: 266))}
\]

Returning to the issue of how a subject in jussive clauses inherits its person feature from the Jussive head, as already mentioned, the idea we are pursuing is that an uninterpretable person feature on the Jussive head establishes an ‘Agree’ relation with a null subject in a jussive clause, and as a result, the subject gets valued for person. In order for this idea to work, we need to assume that the probe, an uninterpretable person feature on the Jussive head, enters the derivation with its own value, while the goal, an interpretable person feature on the subject, does not get valued until Agree takes place. Notice, however, that if we take Chomsky’s (2000, 2001) notion of Agree at face value, we would encounter a non-trivial problem in deriving the subject restrictions in this way. According to the condition in (31), the function of Agree is to locate interpretable features in order to make uninterpretable features valued and eliminated in narrow syntax. This implies that interpretability and valuation are not independent of each other in Chomsky’s Agree system. As pointed out by Pesetsky and Torrego (2007), a biconditional relation between valuation and interpretability in (32) is incorporated in the definition of Chomsky’s ‘assignment’ version of Agree. He further argues that this biconditional relation reflects the fact that the syntax has no access to the interpretability of a feature, instead its role being limited to identifying whether the feature is valued or not.
According to this biconditional relation between interpretability of features and their valuation, since person features of the Jussive head are uninterpretable, they cannot have their own value before undergoing Agree. Furthermore, features on a null subject to serve as a goal should be underspecified at least for person, which is not permitted under Chomsky’s definition of Agree. These two related issues, which are rooted in the assumption about the biconditional relation in (32), make it hard to appeal to Chomsky’s notion of Agree in pursuing the suggested idea. As discussed in Pak et al. (2008) and Zanuttini et al. (2011), there could be two possible ways to get around this problem: the first way is to stick to this biconditional relation anyhow but instead postulate some different features for a probe and goal from those originally assumed in Chomsky (2000, 2001); alternatively, we can get rid of the assumption about the biconditional relation while maintaining the other conditions for Agree. As shown in Pak et al. and Zanuttini et al., since approaches taking the first track (e.g., Holmberg (2005), Roberts (2007)) have some problems, the current analysis opts for the second alternative by incorporating Pesetsky and Torrego’s (2007) ‘feature sharing’ version of Agree.\(^\text{10}\)

---

10 Holmberg (2005) and Roberts (2007) pursue a similar line of analysis, in that they both assume a D-feature on T\(^0\) as well as on subject NPs. First, Holmberg points out that the standard analysis of null subject licensing (e.g., Rizzi (1982, 1986)), which appeals to the correlation between rich inflection and pro drop, faces a problem under the minimalist framework since \(\phi\)-features on T\(^0\) are uninterpretable. For this reason, he suggests that a valued interpretable D-feature on T\(^0\) plays a crucial role in licensing a null subject by valuing an uninterpretable D-feature on the subject. However, as Pak et al. (2008a,b) point out, there are some problems for Holmberg’s analysis: first, he does not explicitly discuss how his system captures the correlation between rich agreement and pro drop; second, he argues that only considerations into phonology and processing are operative, but the nature of the correlation between rich agreement and pro drop is obviously syntactic.

Secondly, capitalizing on Holmberg’s idea, Roberts (2007) suggests that D-feature exists on T\(^0\) only in rich agreement languages, which is transmitted to a subject by Agree, and that features of a pronominal subject can be spelled out as null only if they are a proper subset of those on T\(^0\). But, as Pak et al. (2008)
Building on Brody (1997) and Frampton and Gutmann (2000), etc., Pesetsky and Torrego (2007) argue that Agree should be understood in terms of feature sharing rather than assignment, redefining the operation as follows:

\begin{align*}
\text{(33) } \text{AGREE (Feature Sharing Version)} \\
\text{a. An unvalued feature } F \text{ (a } \text{probe}) \text{ on a head } H \text{ at syntactic location } \alpha \text{ (} F_\alpha \text{) scans its } \\
c\text{-command domain for another instance of } F \text{ (a } \text{goal}) \text{ at location } \beta \text{ (} F_\beta \text{) with which to agree.} \\
\text{b. Replace } F_\alpha \text{ with } F_\beta, \text{ so that the same feature is present in both locations.} \\
\text{Pesetsky and Torrego (2007: 268)}
\end{align*}

As defined above, if Agree takes place in between a goal valued for } F \text{ and a probe unvalued for the same feature, the probe is replaced with the goal, producing an instance of valued } F \text{ appearing in the location previously occupied by the unvalued probe.}^{11} \text{ The most important aspect that distinguishes the feature sharing version of Agree from the feature assignment version is that Agree between an unvalued goal } F \text{ and a valued probe } F \text{ is either vacuous or impossible in the latter version, while it is not the case in the former. In particular, Pesetsky and Torrego (2007) argue that by eliminating the assumption about the biconditional relation in (32), we can have two more types of features available for the computation, which are given in (34a) and (34d) (where ‘} F \text{ } \text{val} \text{’ and ‘} F \text{ } \text{[]} \text{’ indicate a valued and unvalued feature, respectively).}

\footnote{Pesetsky and Torrego (2007: 268) in fact distinguish the term \textit{instance} from the term \textit{occurrence}. That is, the term \textit{instance} is used to refer to a feature-location pair. For example, a feature that has undergone Agree will wind up with more than one instance. On the other hand, they use the term \textit{occurrence} to refer to distinct features that could undergo, but have not yet undergone, Agree. Given these two terms, Agree is defined as taking two \textit{occurrences} of a feature } F \text{, turning them into two \textit{instances} of } F.}
(34) **FOUR POSSIBLE TYPES OF FEATURES**

- **a.** \( uF \text{ val} \): *uninterpretable, valued*  
- **b.** \( uF [ ] \): *uninterpretable, unvalued*  
- **c.** \( iF \text{ val} \): *interpretable, valued*  
- **d.** \( iF[ ] \): *interpretable, unvalued*

Pesetsky and Torrego (2007: 269)

According to Pesetsky and Torrego (2007: 270), an instance where an *interpretable unvalued* feature and an *uninterpretable valued* feature participate in an Agree relation can be found in the relationship between Tns (= T⁰) and the finite verb. They point out that although the Tns node is a functional head necessary for the semantic interpretation of tense just as standardly assumed in the literature (e.g., Chomsky (1957), Pollock (1989)), it is in fact the finite verb that carries a distinctive morphology in many languages. This asymmetry suggests that the Tns has an *interpretable* but *unvalued* tense feature (i.e., \( iT[ ] \)), while the V⁰ has an *uninterpretable* but *valued* tense feature (i.e., \( uT + \text{val} \)). For example, in deriving the sentence in (35a), Agree takes place in between the probe on the Tns and the goal on the V⁰, making the valued feature appearing not only with the Tns but also the V⁰, as represented in (35b). Note that the number in the brackets is arbitrarily chosen to indicate that a particular feature is shared by more than one node as a result of Agree.

(35) a. John walked to school yesterday.

\[
\begin{array}{c}
\text{\( iT[ ] \)}
\end{array}
\begin{array}{c}
\text{Agree}
\end{array}
\begin{array}{c}
\Rightarrow
\end{array}
\begin{array}{c}
\text{\( iT[2] \)}
\end{array}
\]

Now we can see how this feature sharing version of Agree captures the person restrictions on subjects in jussives. Remember that the immediate benefit of this analysis is that it opens up the possibility that an uninterpretable feature can be valued, while an interpretable feature may not. Therefore, we can safely argue that the Jussive head already has different person features in
the lexicon (more precisely, in the numeration), which vary according to the type of a clause where it appears: the Jussive$^0$ is specified first person in a promissive clause, second person in an imperative clause, and first and second person in an exhortative clause. I assume with Pak et al. (2008) (cf. Zanuttini (2008); contra Zanuttini et al. (2011)) that the person features specified on the Jussive head are uninterpretable. On the other hand, at the moment when entering the derivation, jussive subjects either have interpretable person features without specific values, or they are entirely devoid of person features if they are third person. This view that the person features on the jussive subject are also interpretable is in line with Pak et al. (2008) (cf. Zanuttini (2008)); contra Zanuttini et al. (2011)). In short, in jussive clauses, the Jussive head enters the derivation with uninterpretable valued person features, while the jussive subject comes from the lexicon with interpretable unvalued person features or with no person features. Later in the derivation, the subject gets valued for person or obtains a person feature by means of Agree with the Jussive head, since the operation makes the value of the Jussive head’s person feature also occur on the subject. These derivational steps are sketched in (36) (where CP is omitted for the sake of convenience and iF means that the feature is interpretable).

(36) a. Before Agree  
\[
\begin{array}{c}
JussiveP \\
\text{Jussive'} \\
TP \\
\text{pro} \\
[i\text{person: }\_] \\
\text{AGREE}
\end{array}
\]

b. After Agree  
\[
\begin{array}{c}
JussiveP \\
\text{Jussive'} \\
TP \\
\text{pro} \\
[i\text{person: }x] \\
\text{AGREE}
\end{array}
\]

Just as in Pak et al. (2008a,b), we argue that the identical structures in (36), except for the direc-
tionality of heads and the range of $x$, also work in English imperatives with the difference being that while $x$ can be 1, 2 or $1 \oplus 2$ in the jussive clause in Korean, it can only be 2 in the imperative clause in English.

The remainder of this subsection will discuss the third issue raised in the previous subsection: that is, how do null (or overt) subjects come to acquire nominative Case in jussive clauses. Recall first that as stated in the Activation Condition in (29d), an NP can be active for Agree only if it has an unchecked Case feature. Then, we should ask how pro or a lexical subject be made active for Agree with the Jussive head in a jussive clause. Drawing on Zanuttini (2008), I suggest that the jussive subject has an uninterpretable unvalued nominative Case feature, which enables it to enter an Agree relation with the Jussive head. I further assume that once Agree takes place, the Case feature of the jussive subject is valued by the Jussive head as nominative and deleted afterwards. One might think that this idea departs from the assumption made in the previous chapters regarding Case valuation in Korean. That is, in Chapters 3 and 4, I implicitly assumed that the Case feature of a DP in Korean can be valued by a (non-agreeing) functional head, such as $T^0$ or $v^0$, even though the DP does not establish an Agree relation with the head, and that the most common way for the DP to get its Case feature valued is to be in a Spec-head relation with the relevant head by Move. According to this assumption, Korean can be typologically grouped with languages negatively specified for the second conjunct of the Case Parameter in (37), which is suggested by Baker (2008).\footnote{According to Baker, Bantu languages, as opposed to Indo-European languages, have a negative value for this parameter. In addition, there is another major parameter suggested by Baker (2008), which is the Directionality Parameter defined in (i). He argues that the C-command Condition for Agree is too restrictive. So assuming that Agree can apply even when a DP (i.e., goal) c-commands F (i.e., probe), Baker puts forth the parameter in (i) According to him, Bantu languages are positively specified for this parameter, while Indo-European languages are not.}

(i) DIRECTIONALITY PARAMETER: F agrees with DP only if DP asymmetrically c-commands F.
for the Case Parameter presumably because it lacks ϕ-feature agreement at the IP level.

(37)  **CASE PARAMETER** (from Baker (2008) with a slight change)
F agrees with DP only if F values the Case feature of DP, or F values the Case feature of DP if F agrees with DP.

However, I argue that the idea that the Case feature of a jussive subject is valued by the agreeing Jussive$^0$ is not contradictory with the analysis proposed in Chapters 3 and 4. Rather, I claim that in comparison with non-jussive subjects in Korean and non-imperative subjects in English, both Korean jussive subjects and English imperative subjects are exceptional with respect to the way their Case features are valued. That is, in non-jussive clauses, a DP in the subject (and object) position makes its Case feature valued by moving to a local relation with a functional head even though the DP does not undergo Agree with the functional head. On the other hand, in jussive clauses, the Case feature of a DP in the subject position gets valued only if it enters an Agree relation with the Jussive head; this is possible since the jussive subject agrees with the Jussive head at least in person. In the case of English, which is positively specified for the Case Parameter in most environments, the Case feature of a DP in the subject (and object) position in non-imperative contexts is valued by a functional head only if the DP can Agree with the head. By contrast, since the subject in the imperative clause exhibits agreement only in person, it would make little sense to maintain the standard view that nominative Case is valued by Agree with the finite T$^0$. So it would make more sense to assume, following Zanuttini (2008), that it is not the T$^0$ but the Jussive$^0$ that values the Case feature of the imperative subject in English.

### 6.2.4 Speaker/Addressee Operators and Person Licensing Condition

Underlying the analysis outlined so far is the view that null subjects and a limited class of pro-
nominal and lexical NPs in the subject position may be underspecified for person features in
some limited contexts, inheriting particular values from something else in the structure. A de-
tailed discussion will be provided later in Section 6.4, but to look ahead, I assume that subjects
only in jussive clauses can enter the derivation without valued person features, although even the
same class of nominals behaves differently depending on whether they appear in root or embed-
ded clauses: for example, (i) a null pronoun, which I take to be pro, in the subject position is un-
derspecified for person in both root and embedded jussives; (ii) a certain class of lexical NPs in-
cluding proper names, bare plurals and quantificational nouns can be underspecified for the per-
son feature(s) only in root contexts; and (iii) the long-distance anaphor caki ‘self’ and third per-
som pronouns can be underspecified for their person features only in embedded contexts. Table 1
below summarizes the patterns.

<table>
<thead>
<tr>
<th>SUBJECTS</th>
<th>Examples</th>
<th>Contexts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Catetories</td>
<td>Examples</td>
<td>Root Jussives</td>
</tr>
<tr>
<td>Null pronoun</td>
<td>pro</td>
<td>Underspecified</td>
</tr>
<tr>
<td>1st, 2nd person pronouns (SG, PL)</td>
<td>na ‘I’, ne/nehu ‘you’, wuli ‘we’</td>
<td>Specified</td>
</tr>
<tr>
<td>3rd person pronouns (SG, PL)</td>
<td>ku ‘he’, kunye ‘she’, kultul ‘they’</td>
<td>Specified</td>
</tr>
<tr>
<td>Long-distance reflexives (SG, PL)</td>
<td>caki ‘self’, caki-tul ‘selves’</td>
<td>Specified</td>
</tr>
<tr>
<td>Proper names</td>
<td>John, Mary, Inho, Yenghi, Chelswu, etc.</td>
<td>Underspecified</td>
</tr>
<tr>
<td>Bare nouns (SG, PL)</td>
<td>emma ‘mother’, appa ‘father’ haksayng ‘student’, yeca ‘female’, etc.</td>
<td>Underspecified</td>
</tr>
</tbody>
</table>
| Quantified nouns          | motwu ‘all’, amwuto ‘no-

Table 1. Patterns of subjects with respect to their person feature specification in jussive clauses

The view that the person features of nominal elements may be underspecified is not completely new and can be found in some previous works on pronouns and person agreement (e.g., Baker (2008), Kratzer (2006), *inter alia*). In particular, drawing on insights entertained by Schlenker (2003), Sigurðsson (2004) and Anand and Nevins (2004), Baker (2008) suggests that there are two empty operators in the CP area of all matrix clauses and certain embedded clauses (without specifying exactly which functional category accommodates the operators), and they are the Speaker (Op$_S$) and Addressee (Op$_A$) operator, the former designating the speaker while the latter the addressee of the sentence. Assuming that the referential dependency achieved by binding between an operator and a variable leads to feature sharing, he argues that a pronominal element can be first or second person only if it is locally bound by the Op$_S$ or Op$_A$, respectively. In short, under the Baker’s framework, operator-variable binding plays an important role in valuing first or second person features of pronouns. The crux of his claim is formalized in terms of a licensing condition for first and second person pronouns given below, which he labels the Person Licensing Condition (PLC) (where $S$ and $A$ corresponds to Op$_S$ and Op$_A$, respectively).

(38) **PERSON LICENSING CONDITION (PLC)**

a. A DP/NP is first person only if it is locally bound by the closest c-commanding $S$ or by another element that is first person.

b. A DP/NP is second person only if it is locally bound by the closest c-commanding $A$ or by another element that is itself second person.

c. Otherwise, a DP/NP is third person. 

Baker (2008: 126)

According to Baker (2008: 127), the PLC imposes a double locality condition on 1$^{\text{st}}$ and 2$^{\text{nd}}$ person pronouns: first, they must be bound by the closest Op$_S$ or Op$_A$; and second, they cannot have a closer binder that is not an Op$_S$ or Op$_A$ (unless the binder itself is first or second person). For example, suppose that in (39a) (originally from Kayne (2000)), the lexical NP in the
matrix subject position independently refers to the speaker. In this situation, coindexing of the
first person pronoun in the object position with the subject NP is ruled out; instead, the third per-
son pronoun should be used.

(39)  a. [CP [NP The man who is talking to you] wants you to give him/me some money].
b. Representation of (39a) with the subject NP referring to the speaker
   [CP Opₜ [NP The man who is talking to you] wants you to give him/*me some money].

Pointing out that the first person pronoun can be bound by the Opₜ, but not in a local manner,
Baker attributes the failure of its licensing to a violation of the PLC. In other words, as
represented in (39b), the subject NP is closer to the first person pronoun than the Opₜ, but the NP
is not first person though it refers to the speaker. By contrast, if the subject NP does not refer to
the speaker in the same sentence in (39a), the first person pronoun can be licensed in accordance
with the PLC, since it is locally bound by the Opₜ with there being no closer NP that is not first
person.

At this point, I would like to point out two things before discussing how Baker’s system
can be carried over to the issue of licensing of jussive subjects. First, the aim of Baker’s PLC is
not to capture subject restrictions in jussive clauses but to derive strict locality effects found in
1ˢᵗ/2ⁿᵈ person agreement across languages. Second, non-pronominal lexical NPs in jussive and
non-jussive clauses do not pattern alike. We have seen in Section 6.2.1 that non-pronominal lex-
cical NPs, such as quantifiers and bare nouns, may have first or second person features in jussive
clauses. On the other hand, the same kinds of lexical NPs (as well as definite descriptions) do
not seem to be able to bear first or second person features in non-jussive clauses. Consider the
sentences in (40). Although the underlined NPs can refer to the speaker or addressee, the verbal
morphology clearly shows that they cannot have first or second person features that are syntacti-
Baker assumes that since the non-pronominal lexical NPs can refer to the speaker or addressee without being bound by the OpS or OpA, they are not subject to the PLC. What we can learn from the difference between non-pronominal NPs in jussives and those in non-jussives is that the relationship between first/second person features and their discourse roles is not biconditional: that is, an NP that has first person or second person features can refer to the speaker or addressee, while an NP that refers to the speaker or addressee does not always have first or second person features.

This being said, we need to figure out how to accommodate Baker’s insight concerning the PLC to the current analysis of jussive subjects. To recap the core idea of the current analysis, the Jussive head enters an agreement relation with a subject by Agree, as a result of which the subject gets valued for person by sharing the person features with the Jussive head. If we are to reinterpret this idea under Baker’s framework, either the specifier or head of the Jussive Phrase should function as an operator that binds the subject, a variable; in other words, something in the Jussive Phrase should be equivalent to the OpS in the promissive and the OpA in the imperative, etc. However, instead of identifying the OpS or OpA with something in the Jussive Phrase, I suggest that on top of the Jussive Phrase, there is an independent functional category called ‘Speaker/Addressee Phrase’ (Sp/AdP) in which the operators reside (cf. Speech Act Phrase by Speas and Tenny (2003) and Tenny (2006)). That is, the head of the Jussive Phase dominates the jussive particles and encodes person features of subjects, while the Sp/AdP houses the OpS or OpA which binds the subjects depending on their person feature. Following the standard analysis (cf.
Ahn and Yoon (1989), Cinque (1999)), I also assume here that the MoodP, as opposed to the JussiveP, does not bear person features in non-jussive clauses. Given this, the structure of the jussive clause and that of the non-jussive clause in root contexts would look like the diagrams in (41). Notice that these structures for the jussive and non-jussive clauses are distinguished from those assumed in Pak et al. (2007, 2008a,b), in that the Sp/AdP is not independently postulated in the latter.

As shown in (41a), in jussive clauses, the Jussive head establishes an Agree relation with pro, valuing the person features of the latter. Then, when the Sp/AdP is introduced into the structure, the subject is bound by an appropriate operator, the OpS or OpA (or both), as indicated by the dotted line: i.e., the subject valued as 1st person in a promissive clause must be bound by the OpS; the subject valued as 2nd person in an imperative must be bound by the OpA; and the subject valued as 1st person plural inclusive in an exhortative must be bound by the sum of OpS.
and Op$_\wedge$, represented as ‘Op$_s$ ⊕ Op$_\wedge$’. However, if $\text{pro}$ is not locally bound by any of these operators, or the person feature of $\text{pro}$ does not match the type of the operator, the PLC in (38) would not be satisfied, making the derivation crash. Notice that the operator ‘Op$_s$ ⊕ Op$_\wedge$’ is assumed to behave as a single operator here, although each subpart needs to be construed independently as the actual speaker or addressee in root contexts.

In addition, one might think that it is redundant to have both the Jussive Phrase and Speaker/Addressee Phrase in the same clause, since it looks as if the Op$_s$ or Op$_\wedge$ vacuously binds $\text{pro}$ that has already been specified for person through Agree with the Jussive head. However, it will be shown later in Section 6.4 that the idea that the Sp/AdP is projected along with the Jussive Phrase in jussive clauses is very crucial for the null subject interpretation in embedded contexts where the jussive complements come with the Op$_s$ or Op$_\wedge$, which designate the speaker or addressee of the reported speech act. Furthermore, I will suggest that the range of available operators in the jussive complements is determined by the class of matrix predicates.

On the other hand, in non-jussive clauses with the Mood Phrase as the locus of the clause-typing particles, I argue that there is no agreement in φ-features between the Mood head and the subject NP. This claim conforms to the dominant view in the literature that Korean does not exhibit φ-feature agreement at the IP level (e.g., C. Suh (1996), H. Sohn (1999)). Just as in the jussive clauses, the Sp/AdP is always projected in the non-jussive clauses in the root context, and if the subject is a first or second pronominal element, it must be locally bound by the Op$_s$ or Op$_\wedge$ in the Sp/AdP, as illustrated in (41b). Otherwise, the PLC in (38) is not satisfied, hinder-

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13 I adopt this symbol ‘⊕’ from Zanuttini et al. (2011), which originally comes from Kratzer (2009).

14 Notice that subject NPs in non-jussive clauses should in principle be able to be freely construed as first, second or their person depending on the context, since, due to the absence of subject agreement with the Mood head, the person features they can carry are not limited to first or second. However, unlike this
ing the subject NP from being properly interpreted as first or second person. On the other hand, in embedded contexts, the Sp/AdP is not always projected in declarative or interrogative clauses; it can be only when they are selected by a limited class of predicates, such as malha- ‘say’, mwut- ‘ask’ or sayngkakha- ‘think,’ etc.

Although I provided the tentative structure of jussive clauses and non-jussive ones in Chapter 5, by incorporating Baker’s (2008) PLC, I have just revised them as in (41a) and (41b), respectively. Notice, though, that my analysis is different from Baker’s at least in two: first, while Baker does not make an explicit assumption about the position of the discourse participant operators (i.e., Opₜ and Opₐ), I have suggested that in both jussive and non-jussive clauses, the Speaker/Addressee Phrase is projected above the Jussive Phrase or Mood Phrase; second, although only pronominal elements are assumed to be subject to the PLC in Baker’s analysis, not only pronouns but also some lexical NPs should respect the same condition in my analysis.

In addition, I wish to emphasize again how jussive and non-jussive clauses diverge with prediction, there are some cases in Korean where the subjects are construed only as first person in declaratives and as second person in interrogatives (Gamerschlag (2007), J. Park (2011)). That is, when the modal marker –keyss is used to convey the speaker’s volition, the subject should be first person in the declarative but second person in the interrogative, as in (i). Likewise, as shown in (ii), the same contrast is exhibited by predicates such as sulphu- ‘sad’, which expresses the subject’s personal emotion (Gamerschlag (2007), J. Park (2011)). For the moment, I will not discuss the person restriction found in these two examples in detail.

(i) Person Restriction by the Modal Marker
      I- NOM/you-NOM/John-NOM tomorrow school-to go-will-DECL
      ‘I/*you/*John will go to school tomorrow.’
   b. *nay-ka/ney-ka/*John-i nayil hakkyo-ey ka-keyss-nya?
      I- NOM/you-NOM/John-NOM tomorrow school-to go-will-INT
      ‘Will *I/you/*John go to school tomorrow?’

(ii) Person Restriction by the Subject Experience Predicate
      I- NOM/you-NOM/John-NOM exam-because.of be.sad-DECL
      ‘I/*you/*John is sad because of the exam.’
   b. *nay-ka/ney-ka/*John-i sihem-ttaymwuney sulphu-nya?
      I- NOM/you-NOM/John-NOM exam-because.of be.sad-INT
      ‘*Am I/*you/*John sad because of the exam?’
respect to the way their subjects obtain person features. In jussive clauses (including English imperatives), null subjects and a limited class of pronominal and lexical subjects enter a derivation without a specific value for person, and the value is determined by establishing an Agree relation with the Jussive head. On the other hand, in non-jussive clauses, the person features of both null pronouns and 1\textsuperscript{st}/2\textsuperscript{nd} person pronouns are already valued when they are introduced in the derivation from the numeration, and those pronominal elements need to be bound by the Speaker or Addressee operator. This difference leads us to conclude that although the 1\textsuperscript{st} and 2\textsuperscript{nd} person features of subjects in both jussive and non-jussive sentences must be locally bound for licensing by a relevant operator in the Sp/AdP, as required by the PLC, there is an additional requirement for the jussive subjects: namely, they must undergo Agree with the Jussive head. These two constraints constitute an important component for licensing and interpretation of the jussive subjects. Agree is in principle required for the interpretation of jussive subjects, but since jussive subjects cannot have their person values without undergoing Agree, thus failing to meet the PLC, the operation is also necessary as part of the licensing procedure.

The question that can naturally arise is what would happen if $\text{pro}$ in the embedded jussive clause enters the derivation with its person feature valued. Since the current system adopts Pesetsky and Torrego’s feature sharing version of Agree, it would not in principle be a problem to have a $\text{pro}$ with a specified person feature, as long as the feature is the same as the Jussive head. However, it seems to me that there is no principled way to ensure that the valued person feature of $\text{pro}$ always matches that of the Jussive head depending on the clause type. Conversely, we need to ask what would happen if $\text{pro}$ in the non-jussive clause enters the derivation with its person feature unvalued. Given the present assumption that the subject in the non-jussive clause does not establish an Agree relation with the Mood head, there would be no way for $\text{pro}$ to ac-
quire a relevant person feature in the course of a derivation. Consequently, either Opₜ or Opₜₐ fails to bind the pro, which would lead to a violation of the PLC.

Finally, a brief comment on the tense restriction imposed on T⁰ in jussive clauses is in order. Notice, in particular, that the tense of the jussive clause is restricted to an unrealized future-oriented tense relative to the utterance time (cf. C. Han (2000) for imperatives). I suggest that this is so because T⁰ has [FUTURATE], just as does the T node in infinitival control complements discussed in Chapter 3.¹⁵

6.2.5 How pro in Jussive Clauses differs from pro in Other Contexts?

This subsection comments on how the current analysis is different from some previous approaches to null subjects, normally treated as pro, in East Asian languages. In particular, focusing on the way jussive subjects are licensed and interpreted, I will show why the analysis proposed here is superior to a couple of previous works on null subjects. According to Taraldsen’s (1978) Principle of Recoverability, later dubbed ‘Identification Hypothesis’ by Jaeggli (1982), referential pro is connected to the availability of sufficiently rich inflection. Adopting the Identification Hypothesis, Rizzi (1982) suggests that the possibility of pro drop in a language is contingent upon whether the language has rich agreement inflection. So languages with rich agreement morphology like Italian allow for null subjects, while those with poor agreement morphol-

¹⁵ As discussed in Zanuttini et al. (2011), Jensen (2003) pursues a similar line of analysis adopted here, in that she assumes an independent functional category for second person features in imperatives. In her analysis, it is TP that carries the second person features for subjects. In particular, she argues that the same functional head has a specific future-oriented tense. Zanuttini et al. (2008a: 22) point out that although her idea about the tense of T⁰ appears to be buyable, her analysis cannot be easily extended to jussive clauses in Korean. Note that if T⁰ carries person features for jussive subjects, the jussive particles should be spelled-out under the same head. Given the standard assumption that the structural positions where clause-typing particles appear should be identical, the declarative and interrogative particles should appear under T⁰ in Jensen’s analysis. Then, it would be left unexplained why the declarative and interrogative particles can occur with tense markers, but the jussive particles cannot.
ogy like English do not. Rizzi (1986) elaborates this idea, arguing that in order for pro to be dropped, two components, namely, licensing and recovery, are independently required. According to formal licensing, which is a syntactic requirement, pro must be in an appropriate structural configuration with a licensing head. On the other hand, the recovery condition requires that sufficient information suitable for making the identity of pro recoverable or determinable be present. Licensing is made possible by the governing head that assigns Case to pro, while recovery is achieved by feature sharing with the same licensing head.\textsuperscript{16}

Although Rizzi (1986) is quite right in distinguishing the structural licensing condition from the interpretation condition for pro drop, his analysis (and other studies pursuing the same line of analysis) faces empirical problems. As pointed out by J. Huang (1984, 1989), it is incorrectly predicted that languages like Chinese, Japanese and Korean cannot permit pro drop since they have no agreement inflection. Contrary to this prediction, however, the Chinese-type languages with no agreement morphology have not only null subjects but also null objects. In addition, the notion of ‘sufficiently rich agreement’ is also problematic since it is not clearly defined how much and what range of morphology is required for pro to be licensed and/or recovered. Indeed, languages like German and Icelandic do not permit null subjects, although they have rich subject-verb agreement systems. Y. Huang (2000) thus argues that rich inflectional morphology is neither a necessary nor sufficient condition for licensing of pro.

Since it is beyond the scope of this dissertation, I will not attempt to explain why such languages as German and Icelandic do not admit pro drop. But one thing I would like to point

\textsuperscript{16} The definition of Rizzi’s (1986) licensing and recovery conditions for pro is as follows:

(i) \textbf{LICENSING AND RECOVERY CONDITIONS ON pro} (Rizzi (1986))
   a. pro is Case-marked by X\textsubscript{0}, a governing head of type y.
   b. Let X be the licensing head of an occurrence of pro; then pro has the grammatical specification of the features on X coindexed with it.
out is that it seems unclear how the analyses of null subjects that adopt the Identification Hypothesis can be extended to null subjects in imperative sentences in rich (e.g., Italian), poor (e.g., English), and no agreement (e.g., Korean) languages. In particular, they would experience difficulty capturing the person restrictions imposed on the null subjects in the imperatives.

While maintaining the Identification Hypothesis for rich agreement languages, J. Huang (1984) argues that languages such as Chinese, which he calls ‘discourse-prominent languages,’ permit null arguments in different ways from those with rich agreement morphology: null subjects identified as pro are licensed and interpreted by being bound by a null topic or matrix argument, while null objects are not pro but variables that should be A’-bound by a moved null topic for licensing and interpretation. Although J. Huang’s (1984) analysis is still problematic in that it fails to account for the absence of pro drop in rich agreement languages like German and Icelandic, it exploded various subsequent works on null arguments in Chinese-type languages. On the other hand, as discussed in Chapter 2, J. Huang (1989) attempts to provide a unified account for pro and PRO. In particular, instead of taking the Identification Hypothesis at face value, he proposes a principle called the Generalized Control Rule repeated below.

(42) **GENERALIZED CONTROL RULE (GCR)**
An empty pronominal is controlled in its control domain (if it has one).

Given this rule, J. Huang suggests that the different behaviors of three types of languages with respect to the availability of null subjects can be explained in terms of whether AGR is present and is qualified for being a controller. For example, in Italian-type languages with rich agreement where AGR is assumed to function as a controller, a subject can be readily dropped in accordance with the GCR, since it is controlled by AGR within its control domain. Second, in English-type languages with poor agreement where AGR does not serve as a controller by as-
assumption, a null subject is not allowed, since there is no appropriate controller that could control the subject in its control domain. Third, in Chinese-type languages with no agreement, there is no control domain for pro in a non-subordinated clause due to the lack of AGR on Infl. However, unlike English, pro can still be licensed in Chinese-type languages since it does not need to be controlled. He further suggests that the referent of pro is not determined from the discourse without being controlled by a syntactic controller.

However, if we apply J. Huang’s (1984, 1989) approach to imperative subjects in English and jussive subjects in Korean, there arise problems for explaining their licensing and interpretation. First, J. Huang (1984) would fail to explain why null subjects are possible in imperatives in English that is neither rich in agreement nor discourse-prominent. This is because, under J. Huang’s (1984, 1989) analysis, only rich agreement or discourse-prominent languages can license null subjects. Second, null subjects in Korean jussive clauses are viewed as pro that must be bound by a null topic in CP under J. Huang’s (1984) analysis. The shortcoming of this view is that it would be hard to explain why a null subject should be distinctively interpreted in person depending on the type of jussive clause where the subject appears. In other words, as pointed out by Zanuttini et al. (2011: 19), no pragmatic principles can ensure that a null topic is first person in promissives, second person in imperatives, and first person plural inclusive in exhortatives. Third, J. Huang’s (1984) analysis where a topic is postulated in the CP area seems to overgenerate. That is, if a null topic were assumed in the left periphery, there would be no way to prevent the topic from binding a null argument in ‘object’ position in jussive clauses. But only null arguments in ‘subject’ position receive restrictive person interpretations in the jussive clauses.

Turning to J. Huang’s (1989) analysis, his assumptions about the parametric differences regarding the GCR experiences problems similar to J. Huang’s (1984) analysis. First, since J.
Huang (1989) assumes that AGR lacks the ability to function as a controller (even in finite clauses) in English, null subjects should not be allowed in imperatives. In addition, since AGR is more meager in imperatives than in finite declaratives, it would not be tenable to argue that unlike the finite declaratives, AGR in the imperatives can serve as a controller in English. Second, since AGR is entirely absent in Korean under J. Huang’s (1989) analysis, the referent of pro in finite clauses should be pragmatically determined. But we have seen that the subject restrictions found in jussive clauses are not pragmatic but syntactic. Even if we ignore the syntactic nature of the subject restrictions, it should anyhow be answered how pragmatics connects a subject of each subtype of jussive clause to a specific person, which does not seem to be an easy task.

By contrast, under the view adopted here, the aforementioned problems for previous approaches like J. Huang (1984, 1989) can be avoided. It was suggested in the previous subsection that licensing (as well as interpretation) of (null) subjects in jussive clauses is possible through Agree with the head of a particular functional projection, the Jussive Phrase, which encodes person features. This idea provides a uniform account for the availability of null subjects in English and Korean jussive clauses. Second, it has been argued that the person restrictions on jussive subjects can be explained in terms of Agree established between the Jussive head and the subject. Thus, one of the most problematic issues for J. Huang (1984, 1989), namely, why the interpretive restrictions are imposed only on the subject in jussive clauses, can be easily resolved if we consider the locality condition that needs to be respected in order for Agree to apply. Recall that as stated in the Intervention Condition in (29b), a probe P can undergo Agree with a goal G only if there is no other goal G’ that is closer to P. Because of this condition, the Jussive head cannot establish an Agree relation with the object across the subject, since the subject is closer to the Jussive head than the object. Accordingly, why the person restrictions are effective only for the
jussive subject naturally follows. Third, the current analysis, which appeals to syntactic agreement coupled with the presence of Jussive Phrase, can readily capture why the subject in jussive clauses is construed as having a particular person feature depending on the clause type where it appears. Under the current analysis, the Jussive head enters the derivation with a distinct person feature depending on the type of clause: that is, the first person feature in a promissive, the second person in an imperative, and the first and second person features in an exhortative. Then, each feature is inherited to the subject when Agree applies to them, and as a result, the subject is interpreted as the speaker, addressee or both. Notice, however, that I have not discussed how the person features that the subject comes to have by Agree with the Jussive can be interpreted as the speaker, addressee, or both, in each subtype of jussive clause. I will address this issue in Section 6.3. To sum up the discussion so far, we can conclude that there are at least three kinds of pro in human language: pro in rich agreement languages, pro in discourse-prominent languages, and pro in imperative clauses across languages.17

6.2.6 Summary

In Section 6.2.1 through 6.2.5, I have outlined the basic assumptions made in this dissertation for jussive clauses in root contexts. Those assumptions can be summarized as follows:

- Person restrictions imposed on subjects in jussive clauses have also the syntactic nature, which cannot be easily explained by a purely semantic or pragmatic account; the compel-

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17 Paul Portner (class lecture in fall 2009) makes the same point. Besides, as mentioned in Chapter 4, Hornstein (2001) argues under the Movement Theory of Control that null subjects in non-obligatory (NOC) contexts can be characterized as pro even in English. His idea is that obligatory control (OC) dependencies are derived by A-movement of a controller out of an infinitival complement, but since the infinitival clause in the NOC contexts constitutes a syntactic island, the subject cannot undergo A-movement out of the clause. Therefore, pro is inserted to the subject position as a last resort, the process similar to do support in English.
ling evidence comes from the fact that the subjects in the jussive clauses can bind pro-nouns inside VP (Park et al. (2007), Zanuttini (2008), Zanuttini et al. (2011)).

- Null subjects in jussive clauses cannot be arbitrary PRO but pro in that they can alternate with pronouns or lexical NPs and do not allow generic readings (contra C. Han (2000)).

- pro and a limited class of pronominal and lexical NPs enter the derivation without their person features valued in jussive clauses; rather, they share the person features with the Jussive head through Agree (Park et al. (2007), Zanuttini et al. (2011); cf. Pesetsky and Torrego (2007)).

- There are discourse participant operators, namely, a Speaker or Addressee operator, in the left periphery of jussive clauses, and subjects must be bound by the relevant operator for licensing, as required by the Person Licensing Condition (Baker (2008)).

- pro in jussive clauses is distinguished from pro in non-jussive clauses, in that the former must be licensed by entering an Agree relation with the Jussive head and then bound by a Speaker or Addressee operator in Speaker/Addressee in accordance with the Person Licensing Condition.

6.3 The Semantics of Jussive Clauses and Subject Restrictions

This subsection sketches Zanuttini et al.’s (2011) compositional analysis of the meanings of jussive clauses, which is also adopted in this dissertation. From the perspective of semantics, Zanuttini et al. (2011) also addresses two major questions: first, how the sentential force of jussive clauses can be derived; and second, how the interpretive restrictions on jussive subjects are explained. In answering these two questions, Zanuttini et al. (2011) suggest within Portner’s (2004, 2007) clause typing theory of imperatives that each subtype of jussive clause is connected to its sentential force through the truth-conditional, compositional semantic meaning of the clause, and what each jussive clause denotes is not a proposition but a property. Beginning with the first issue, according to Zanuttini et al. (2011), there are at least three views in the literature on how to derive the directive meanings of imperatives: they are the speech act view, the modal view and
the semantic type view. Since it is beyond the scope of this dissertation to provide a comprehensive review of the three views, I will briefly outline what the core idea of each view is. First, analyses which take the speech act view basically adopt versions of Lewis’s (1972) performative hypothesis. Roughly speaking, the core idea of those analyses is that the sentential force of a given sentence is structurally represented by the presence of particular elements, say, an illocutionary force operator, under a functional head in the CP area (e.g., Rivero and Terzi (1995), Rizzi (1997)). However, there are several problems for the analyses postulating the illocutionary force operator: above all, they fail to account for the fact that imperatives are used not only to give orders but also to perform other various speech acts such as permission or suggestion, as given in (43).

(43) a. Have a glass of wine, if you like. (Permission)
    b. Take the #3 bus. (Suggestion)

Zanuttini et al. (2011: 24)

Secondly, according to analyses that adopt the modal view, imperatives are considered as identical to modal sentences except that the former contain a covert modal rather than an overt one (e.g., Schwager (2005)). The analyses holding the modal view makes sense if we consider the fact that modal sentences in (44) below can be performatively used in a way similar to imperatives.

(44) a. You must leave now!

18 As discussed by Zanuttini et al. (2011: 23), according to Lewis’s (1972) performative hypothesis, the semantic meaning of an imperative sentence in (ia) is not different from that of a declarative sentence in (ib). In other words, both sentences can be construed as a set of possible worlds where the speaker orders the addressee to leave at the time and place they are uttered.

(i) a. Leave!
    b. I order you to leave.
However, unlike the modal *must* in (44a), most modals including *should* in (44b) are ambiguously used either in a performative or non-performative way. For this reason, if the modal view were adopted, covert modals for imperatives would have to be assumed as covert, obligatorily performative modals. Furthermore, as pointed out by Portner (2007), assuming that imperatives have a covert performative modal would not be sufficient for capturing their directive force, since the semantics of modals can explain at most their descriptive meaning. For instance, although the directive meaning of *should* in (44b) can be derived by implicature, that of *must* in (44a) would be hard to capture unless one develops a decent model to explain how the grammar encodes the directive meaning. There are a couple of attempts to achieve these goals (e.g., Schwager (2005), Ninan (2005)), but they also encounter some problems (see Portner (2007), Zanuttini et al. (2011) for detailed discussion about their problems). Third, what characterizes approaches taking the semantic type view is that the basic meaning of imperatives is considered as different from that of declaratives. Note, however, that the speech act view and modal view both assume that imperatives and declaratives share the basic meaning, but an illocutionary force operator or a covert modal is added in the former type of clauses to derive their directive meaning which is missing in the latter type.

Against this background, Portner (2004, 2007) pursues an analysis that exploits the semantic type view, arguing that imperatives should be distinguished not only from declaratives but also from interrogatives with respect to their denotations: that is, imperatives denote properties, declaratives propositions, and interrogatives sets of propositions. Furthermore, developing Stalnaker’s (1978) suggestion that assertion is an addition of a proposition to the Common Ground, Portner proposes that the canonical conversational function of imperatives is to add a
property denoted by an imperative to the addressee’s To-do List. Portner (2004) also suggests a specific principle for the assignment of illocutionary function (more precisely, sentential force) to each clause type, which will be discussed at the end of this subsection. Given this, Portner’s (2004, 2007) approach can be evaluated as unique in that it teases the function of clause typing apart from the assignment of illocutionary function: that is, a clause is typed as an imperative if it denotes a property, while the sentential force of an imperative is assigned by a principle which states that the conversational function of an imperative is to update the To-do List of the addressee in a context. What we gain from this kind of separation is that we can avoid a problem that the illocutionary operator approach would experience due to the absence of syntactic evidence in favor of the existence of such an operator across a variety of imperative sentences. Given that the three subtypes of jussive clauses in Korean are basically similar to one another but minimally different only with respect to the person features of their subjects, Portner (2004, 2007) argues that his idea about how the sentential force of imperatives is derived can be readily extended to promissives and exhortatives. Specifically, he suggests that the sentential force (or conversational function) of promissives is to update the To-Do List of the speaker, while that of exhortatives is to update the To-Do List of both the speaker and addressee. Portner’s (2004, 2007) analysis outlined so far is adopted by Zanuttini et al. (2011) which the current analysis is also grounded on.

As for the second issue of how the interpretive restrictions on jussive subjects are imposed, Pak et al. (2008a) point out that to handle this issue properly, we should answer how the Jussive head and the person features it shares with the subject through Agree contribute to the meaning of a jussive clause. In line with the semantic type view, they suggest that all three subtypes of jussive clauses denote ‘properties’ which are formed by abstracting over the subject. In
particular, in order to cash out their idea that the Jussive head that supplies the subject person features plays a crucial role in this abstraction process, they propose that the head serves as an operator in the semantics, which binds the subject as a variable. For example, Zanuttini et al. (2011) represent the semantic meaning of an imperative clause in (45a) as something like (45b) (where $X'$ is a semantic representation of $X$, the rest part of the structure below Jussive Phrase excluding pro).

(45) a. $[\text{Jussive}^0[\text{person: 2}][\text{pro}[\text{person: 2}]] X]$ (IMPERATIVE) 
   b. $[\lambda w \lambda x: x = \text{addressee}(c). X'(x)(w)]$

As represented in (45b), what the imperative sentence denotes is of type $<s,<e,t>>$, the typical semantic type of properties. Furthermore, the imperative subject abstracted over is presupposed to be the addressee of the context, since it comes to obtain the second person feature via Agree with the Jussive head in the syntax. Note that Pak et al. adopt the idea widely accepted in the literature (e.g., Cooper (1979), Heim and Kratzer (1998), Schlenker (2003)) that the semantics of person features is presuppositional. One advantage of this analysis is that it helps us have a better understanding of why the person restrictions are imposed only on the subject, given that what is abstracted over by the lambda operator is the subject, not the other argument.

As argued by Zanuttini et al. (2011), the same line of analysis works for the other two subtypes of jussives. According to them, promissive and exhortatives also denote properties formed by abstracting over the subject. But since the person features the subject obtains via Agree with the Jussive head in the syntax are different in the two types of jussives, what their subject is presupposed to denote in the semantics also varies: the subject in the promissive which has the first person feature is presupposed to be the speaker of the context, as in (46a,b), while the subject in the exhortative which have the first and second person features are presupposed to
be the speaker and addressee of the context, as in (47a,b).

(46)  

a. \[ \text{Jussive}^0[\text{person: 1}]\left[\text{pro}[\text{person: 1}] X\right] \]  
     \hspace{1cm} (PROMISSIVE)  

b. \[ \lambda w \lambda x: x = \text{speaker}(c) \cdot X'(x(w)) \]

(47)  

a. \[ \text{Jussive}^0[\text{person: }1 \oplus 2]\left[\text{pro}[\text{person: }1 \oplus 2] X\right] \]  
     \hspace{1cm} (EXHORTATIVE)  

b. \[ \lambda w \lambda x: x = \text{speaker}(c) \& \text{addressee}(c) \cdot X'(x(w)) \]

To provide a unified, compositional analysis of the meaning of three subtypes of jussive clauses—that is, to derive the meaning in (45b), (46b) and (47b) in a uniform way, Zanuttini et al. (2011) advance the principle in (48) (where XP is a phrase dominated by the Jussive Phrase).

(48) For any phrase XP, \([\text{Jussive}^0[\text{person: v}]_n XP]^{\text{e,c}} = [\lambda w \lambda x: x = [[\text{person: v}]_n]]^{\text{e,c}} \cdot [XP]_g^{[n \rightarrow x],c}.\]
     \hspace{1cm} (cf. Zanuttini et al. (2011: 27))

They assume that as a result of Agree between the Jussive head and the subject in the syntax, the two elements are coindexed with each other, which is marked by the subscript \(n\) above. Notice that although I adopt Zanuttini et al.’s view that the jussive subject is a variable which is semantically bound by an operator, the Jussive head, I assume that it should also be bound by an operator, i.e., \(\text{Op}_s\) or \(\text{OP}_u\), in Speaker/Addressee Phrase in the syntax. In addition to the above principle, Zanuttini et al. (2011: 28) also propose the principles for the referents of person features to formalize the traditional intuition that the semantics of person features is presuppositional (Cooper (1979), Heim and Kratzer (1998), Schlenker (2003)). Given in (49) are their principles with a slight modification to the third one.

(49)  

a. \([[[\text{person: 1}]_n]]^{\text{e,c}}\) is only defined if \(g(n) = \text{speaker}(c)\); if it is defined, \([[\text{person: 1}]_n]]^{\text{e,c}} = g(n).\)

b. \([[[\text{person: 2}]_n]]^{\text{e,c}}\) is only defined if \(g(n) = \text{addressee}(c)\); if it is defined, \([[\text{person: 2}]_n]]^{\text{e,c}} = g(n).\)
c. $[[\text{[person: } 1\oplus 2]_n ]]^{g,c}$ is only defined if $g(n) = \text{speaker}(c) \& \text{addressee}(c)$; if it is defined, $[[\text{[person: } 1\oplus 2]_n ]]^{g,c} = g(n)$.

Given these tools, we can now see how the meaning of each jussive clause is compositionally derived. Consider the imperative sentence in (50a) whose step-by-step derivations are provided in (50b).

\begin{align*}
(50) \quad & \text{a. hakkyo-ey ka-la.} \\
& \text{Go to school!}
\end{align*}

\begin{align*}
& b. \quad [[(50a)]]^{g,c} = [[\text{[JussiveP} \text{TP } \text{pro}_n[\text{person: }\_\_\_\_n, \text{hakkyo-ey ka}-\text{la}]]^{g,c} \\
& \quad = [[\text{Jussive}^0[\text{person: } 2]_n \text{TP } \text{pro}_n[\text{person: } 2]_n \text{hakkyo-ey ka}]]^{g,c} \\
& \quad = [\lambda w\lambda x: x = \text{addressee}(c) \cdot [[\text{TP}]]^{g[n\rightarrow x],c}] \\
& \quad = [\lambda w\lambda x: x = \text{addressee}(c) \cdot [[[\lambda y. y \text{ goes to school in } w]]^{g[n\rightarrow x],c}] \\
& \quad = [\lambda w\lambda x: x = \text{addressee}(c) \cdot [[[g(n) \text{ goes to school in } w]]^{g[n\rightarrow x],c}] \\
& \quad = [\lambda w\lambda x: x = \text{addressee}(c) \cdot x \text{ goes to school in } w]
\end{align*}

In the second line in (50b), the null imperative subject, \text{pro}, acquires the second person feature from the Jussive head by means of Agree with it. Then, once the principle in (48) applies to the second line, the third line is derived. As shown in the third line, the second person feature is construed as the addressee in the context according to the interpretive principle in (49b). After that, by means of lambda abstraction, lambda conversion and value assignment function, we arrive at the last line in (50b) as the meaning of the imperative sentence in (50a).

To sum up, jussive clauses are defined as denoting properties that are formed by abstracting over the subject, and the sentential force of the jussive clauses is to update the To-do List of the speaker, the addressee or both, depending on the type of jussive clause, by adding a property denoted by the jussive clause (Pak et al. (2007, 2008), Zanuttini et al. (2011)).
6.4 Answering Three Core Questions

In this section, turning to the jussive control constructions in Korean, I will provide the answer to the important question, namely, how null (or lexical) subjects in complements in jussive control can be licensed and interpreted. More specifically, I am going to address the three issues in (2), repeated below.

(2)  
   a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
   b. What are controlled subjects? (Categorial status of controlled elements)
   c. How are controllers determined? (Controller choice)

6.4.1 pro and Overt Subjects in Jussive Complements

For the sake of convenience, let us begin by discussing the second issue in (2b), namely, what are controlled subjects? In this subsection, I claim, just as in J. Park (2009d, 2010b), that what appears in the subject position of embedded jussive clauses are pro, not PRO or an A-trace. Recall our conclusion drawn in Section 5.3.1 in Chapter 5 that complement clauses in the jussive control constructions are not direct quotes but instances of embedded clauses. If this conclusion is correct, our claim about the categorial status of subjects in root jussive clauses can be readily extended to those in embedded jussive clauses. In Section 6.2.2, I have argued that subjects in the root jussive clauses are pro, not PRO. What I presented as the most compelling evidence was that the jussive subjects can not only be empty elements but also lexicalized NPs such as personal pronouns, proper names and quantified expressions. Given the parallelism between root and embedded jussive clauses, it is predicted that a certain class of overt subjects would be available in the embedded jussive clauses, and I will show that this prediction is confirmed by jussive control data in Korean. Before we discuss Korean data, consider the English sentences in (51).
Control complements in English, which are defined as infinitival clauses, disallow overt material in the subject position, as shown in (51).

(51)  a. John promised Mary [e/*him to do homework].  
     b. John persuaded Mary [e/*her to do homework].  
     c. John proposed to Mary [e/*them to do homework together].

For this reason, as discussed in Chapter 2, it was claimed in the Government and Binding and Minimalist framework that the subject of the infinitival complement in the control constructions in English is PRO, a special empty category available only in a position that cannot be assigned structural Case. In particular, it was suggested that the empty category must be ungoverned in accordance with the PRO Theorem (Chomsky (1981, 1986)), or should be assigned null Case (Chomsky and Lasnik (1993), Martin (1996)). However, this claim has been empirically challenged. For example, it has been reported that many languages such as Icelandic and Russian allow PRO to be assigned structural Case (Andrews (1981), Sigurðsson (1991) for Icelandic; Franks and Hornstein (1992) for Russian). Furthermore, other languages like Serbo-Croatian (Zec (1987)) and Zapotec (Boeckx, Hornstein and Nunes (2005)) are known to allow for overt controlees. What is more crucial for the current discussion is that Korean can also be found in the list of languages that license overt controlees that are assigned nominative Case (D. Yang (1984, 1985), Borer (1989), Madigan (2008b), J. Park (2009d, 2010b)). I have briefly mentioned the range of overt subjects allowed in embedded (as well as root) jussive clauses in Table 1 in Section 6.2.4. In this section, let us take a close look at the data revealing the range of possible
overt controlees in jussive complements. First of all, the long-distance (LD) reflexive caki ‘self’ can appear in place of the null subject, as in (52a-c).\footnote{The LD anaphor caki behaves differently from the English anaphor, in that it does not need to be bound by a local antecedent in the same clause; and it can be interpreted as a bound variable when its antecedent is a quantified NP (D. Cho (1996), Storoshenko (2008)). However, there are some restrictions imposed on the distribution of the LD anaphor caki. For instance, this anaphor is prohibited in the embedded subject position if its controller is not third person, as shown in (i) (cf. K. Hong (1991)).}

\begin{enumerate}
\item \textbf{a.} John\textsubscript{i}-un Mary\textsubscript{j}-eykey [e\textsubscript{i}/caki\textsubscript{i}-ka tangcang nonmwun-ul ssu-\textbf{ma}-ko]  
John-TOP Mary-DAT self-NOM right.away paper-ACC write-PRM-COMP  
yaksokhay-ss-ta  
promise-PAST-DECL  
‘John promised Mary that self (John) would write a paper right away.’
\item \textbf{b.} John\textsubscript{i}-un Mary\textsubscript{j}-eykey [e\textsubscript{j}/caki\textsubscript{j}-ka honca nonmwun-ul ssu-\textbf{la}-ko]  
John-TOP Mary-DAT self-NOM alone paper-ACC write-IMP-COMP  
seltukhay-ss-ta.  
persuade-PAST-DECL  
‘John persuade Mary that self (Mary) would write a paper alone.’
\item \textbf{c.} John\textsubscript{i}-un Mary\textsubscript{j}-eykey [e\textsubscript{i+j}/caki-tuli\textsubscript{i+j}-i hamkkey nonmwun-ul ssu-\textbf{ca}-ko]  
John-TOP Mary- DAT self-PL-NOM together paper-ACC  
write-EXH-COMP propose-PAST-DECL  
‘John proposed to Mary that selves (John and Mary) would write a paper together.’
\end{enumerate}

\begin{enumerate}
\item \textbf{a.} *Nai-nun Mary\textsubscript{j}-eykey [\textbf{caki}-ka tangcang nonmwun-ul ssu-\textbf{ma}-ko] malhay-ss-ta  
I-TOP Mary-DAT self-NOM immediately paper-ACC  
write-PROM-COMP say-PAST-DECL  
Intended: ‘I told Mary that self (I) would write a paper immediately.’
\item \textbf{b.} *John\textsubscript{i}-un ne\textsubscript{j}-eykey [\textbf{caki}-ka honca nonmwun-ul ssu-\textbf{la}-ko] malhay-ss-ta.  
John-TOP you-DAT self-NOM alone paper-ACC  
write-IMP-COMP say-PAST-DECL  
Intended: ‘John told you that self (you) would write a paper alone.’
\end{enumerate}

Notice that there is also a view taking caki as a logophoric anaphor in the literature. In particular, Sells (1987) argues that the interpretation of caki can be felicitous only if its antecedent is one of the three logophoric centers, such as SOURCE, SELF and PIVOT. Whether the same generalization can hold in the jussive control contexts will be left open for future research.
Since the LD anaphor is not subject to Condition A, it can in principle be construed as coreferential with an NP across more than a clause boundary, as in (53). However, as seen in (52) above, the LD anaphor must be controlled by the subject or direct object in the immediately higher clause in the jussive control contexts.

(53)  
\[
\begin{array}{llll}
\text{John}_i & \text{un} & \text{[Bill}_j & \text{-i} & \text{[caki}_i & \text{-j-ka} & \text{Mary-lul} & \text{coaha-n-ta-ko]} & \\
\text{John-TOP} & \text{Bill-NOM} & \text{self-NOM} & \text{Mary-ACC} & \text{like-PRES-DECL-COMP} & \\
\text{malhay-ss-ta-ko]} & \text{sayngkakha-n-ta}. & \\
\text{say-PAST-DECL-COMP} & \text{think-PRES-DECL} & \\
\end{array}
\]

‘John\(_i\) thinks that Bill\(_j\) said that self\(_i,j\) likes Mary.’

Note that as reported in J. Park (2010b), the native speakers of Korean whom I consulted judged the sentences in (52a,b) more natural when specific contexts were provided and/or the LD anaphor was stressed (cf. Pak et al. (2007), Madigan (2008b)). (54a) and (54b) are what I provided as the relevant scenario for (52a) and (52b), respectively.

(54)  
\begin{enumerate}
\item \textbf{Scenario A}: Mary is the editor for a handbook of comparative syntax. In search of writers of chapters, she solicited a paper from John, her former professor. Since John thought that it’d be a good chance to publish his recent work, he accepted her offer.
\item \textbf{Scenario B}: John is Mary and Bill’s professor. Mary wanted to collaborate with Bill, but John didn’t want her to do so. So John told Mary to write a paper alone.
\end{enumerate}

Secondly, first and second person pronouns can also appear in place of the null subject in jussive complements. This is illustrated in (55a-c).

(55)  
\begin{enumerate}
\item \textbf{a. Scenario A}: Mary is the editor for a handbook of comparative syntax. In search of writers of chapters, she solicited a paper from John, her former professor. Since John thought that it’d be a good chance to publish his recent work, he accepted her offer.
\item \textbf{Scenario B}: John is Mary and Bill’s professor. Mary wanted to collaborate with Bill, but John didn’t want her to do so. So John told Mary to write a paper alone.
\end{enumerate}

Secondly, first and second person pronouns can also appear in place of the null subject in jussive complements. This is illustrated in (55a-c).

\begin{enumerate}
\item  
\[
\begin{array}{llllll}
\text{Nay}_i & \text{-ka} & \text{Mary}_j & \text{-eykey} & \text{[nay}_i & \text{-ka} & \text{nonmwun-ul} & \text{ssu-\textbf{ma-ko]} & \text{yaksokhayssta}. & \\
\text{I-NOM} & \text{Mary-DAT} & \text{I-NOM} & \text{paper-ACC} & \text{write-PRM-COMP} & \text{promised} & \\
\end{array}
\]
Lit. ‘I promised Mary that I would write a paper.’
\item  
\[
\begin{array}{llllll}
\text{John}_i & \text{-i} & \text{ne}_j & \text{-eykey} & \text{\textbf{?}(ecey)} & \text{[ney}_j & \text{-ka} & \text{nonmwun-ul} & \text{ssu-\textbf{la-ko]} & \text{cisiha-ci-anh-ass-nya}? & \\
\text{John-NOM} & \text{you-DAT} & \text{yesterday} & \text{you-NOM} & \text{paper-ACC} & \text{write-IMP-COMP} & \text{order-NML-NEG-PAST-INT} & \\
\end{array}
\]
Lit. ‘Didn’t John order you (yesterday) that you would write a paper?’
C. Nayi-ka neį-eykey [wuli+j-ka hamkkey nonmwun-ul ssu-ca-ko]
I-NOM you-DAT we-NOM together paper-ACC write-EXH-COMP
propose-NML-NEG-PAST-INT
Lit. ‘Didn’t I propose to you that we would write a paper together?’

Just as in the case of the LD anaphor caki, the first and second person pronouns in the subject position of the jussive complements tend to be judged more natural if the relevant contextual information is accessible and/or they are given a stress or contrastive focus. Furthermore, the occurrence of the first and second pronouns is contingent upon the type of person features their controllers bear. As shown by the ungrammaticality of (56a-c), what can serve as the controller of the first and second person pronominal subject is confined to the same type of pronouns: that is, the 1st person pronominal subject can only be controlled by the 1st person pronoun, while the 2nd person pronominal subject can only be referentially connected to the 2nd person pronoun.

John-TOP Mary-DAT I/you-NOM leave-IMP-COMP persuaded
Intended: ‘John persuaded Mary that I/you (Mary) would leave.’
John-TOP Mary-DAT I/you-NOM leave-IMP-COMP promised
Intended: ‘John promised Mary that I/you (John) would leave.’
John-TOP Mary-DAT I/you-NOM leave-IMP-COMP proposed
Intended: ‘John proposed to Mary that we (John and Mary) would leave.’

Finally, although it is controversial, unlike the root jussive clauses, third person pronouns can be used as the subject of embedded jussives, as in (57a-c), although they are unexceptionally prohibited in the root jussive clauses.

---

20 According to Madigan (2008b: Ch 5, Sec 5.3.1.3), unlike the judgements on pronominal subjects in just-
   John-TOP Mary-DAT he-NOM school-to go-PRM-COMP promised
   ‘John promised Mary that he (John) would go to school.’

   John-TOP Mary-DAT she-NOM school-to go-IMP-COMP ordered
   ‘John ordered Mary that she (Mary) would go to school.’

c. Johni-un Mary-j-eykey [kutuli+j-i hakkyo-ey hamkkey ka-ca-ko]
   John-TOP Mary-DAT they-NOM school-to together go-EXH-COMP ceyanhayssta.
   proposed
   ‘John proposed to Mary that they (John and Mary) would go to school together.’

One might wonder if the other types of lexical NPs that are available in the root jussive clauses can be used as the subject of the jussive complements. The answer is negative, and unlike in the root contexts, lexical NPs such as proper names and quantified NPs are disallowed, as in (58).

   he-TOP Mary-DAT he-NOM school-to go-PRM-COMP promised
   Intended: ‘He promised Maryj that Johni would go to school.’

b. *Johni-un kutuli+j-eykey [motun haksayng+j-i hakkyo-ey ka-la-ko]
   John-TOP they-DAT every student-NOM school-to go-IMP-COMP myenglyenghayssta
   ordered
   Intended: ‘Johni ordered themj that every studentj would go to school.’

c. *ku-i-nun kunyej-eykey [John-kwa Mary-j-ka hakkyo-ey hamkkey ka-ca-ko]
   he-TOP she-DAT John-and Mary-NOM school-to together ceyanhayssta.
   go-EXH-COMP proposed

sive complements reported here, his informants took the similar (but not same) data to be unacceptable or at most marginally acceptable. He argues that the unavailability of third person subjects in the jussive complements is predicted by one of the diagnostics for OC, namely that only a de se reading is possible in the OC constructions but third person pronouns cannot receive a de se reading. I do not have my own account for why the Korean speakers consulted by him and those by me have diverging judgments on the control data with the third person pronouns under discussion. In addition, even though we assume that the judgments reported here are correct, it is still necessary to carefully examine why third person pronouns, known to resist the de se interpretation, are allowed in the subject position of the jussive control constructions. I will leave these issues open for future research.
Intended: ‘He proposed to her that John and Mary would go to school together.’

It seems straightforward why the above sentences are ungrammatical. If the proper name in the embedded subject position is construed as coreferential with the pronoun in the matrix subject position, as in (58a), Condition C is violated. The ungrammaticality of (58c) can also be attributed to a violation of the same grammatical principle. The quantified subject in the embedded clause in (58b) cannot be coindexed with the matrix object, since it involves the so-called strong crossover which prohibits a variable from being coindexed with a pronoun on the left.

So far we have seen that overt material such as the long-distance (LD) anaphor *caki* ‘self’ and personal pronouns can appear in the embedded subject position, as long as some restrictions imposed on them are met—for example, the controller of the first person pronoun should be the same type of the pronoun, etc. Furthermore, it has also been shown that all the subjects permitted in that position take nominative Case. The availability of various kinds of overt subjects and nominative Case on them in the jussive complements leads us to claim that null subjects in the jussive complements is pro, not PRO, just as are empty subjects in the root jussive clauses. As we discussed in Chapter 2 and Chapter 5, some previous works like Borer (1989) and H. Choe (2006) hold the same view that the null subject of the complement clause is pro. However, it was shown that both analyses pose some problems: for example, Borer’s analysis in terms of raising of the anaphoric Agr\(^0\) to C\(^0\) for null subject identification does not successfully work for the jussive control constructions, since the C head is occupied by the overt complementizer \(-ko\) (cf. S. Kim (1994)) and with some unjustified assumption and misleading data, H. Choe draws the radical conclusion that Korean does not exhibit obligatory control phenomena.
6.4.2 What licenses the Controlled pro?: Agree, PLC and Futurate Feature on $T^0$

This subsection addresses the issue in (2a), which asks about the licensing conditions for the controlled subject in the jussive control constructions. I argue that just as in null subjects in root jussives, those in embedded jussives can be licensed only when their person features inherited with the Jussive head via Agree can be bound by the relevant discourse participant operator, namely the Speaker or Addressee operator. Furthermore, unlike in non-jussive complements, the T head in jussive complements must have the [FUTURATE] feature, which makes the tense of the complement clause interpreted unrealized with respect to that of the matrix clause. Before presenting these ideas, I will briefly discuss one previous work to show which issues need to be carefully considered in order to answer the question in (2a) appropriately.

As mentioned in the previous subsection, the availability of a lexical subject in jussive complements makes it difficult to maintain the standard PRO approach where the controlled null subject in the complement clause is treated as PRO. There is in fact one work that deserves careful examination, which we have not yet reviewed: that is, Landau (2004, 2006) investigates language-internal and crosslinguistic variation with respect to the distribution of controlled subjects which he treats as PRO. Observing that many languages, such as Icelandic, Hungarian, Korean, Modern Greek, Russian and Romanian, allow the controlled subject to have structural Case, he claims that no previous approaches under the GB and Minimalist framework, which connect the unavailability of structural Case to the distribution of PRO, can be correct. Instead, Landau advances an analysis which combines the features of [±TENSE] and [±AGR] on $I^0$ and $C^0$ with [±R] on NPs, arguing that we can explain when the embedded subject must, can or cannot be PRO. If we zoom in on the roles of these features, first, the tense value indicates whether a clause has an independent semantic tense, which is determined by the selecting verb: for instance, complement...
clauses with \(+\text{TENSE}\) are normally selected by verbs like *prefer* (labeled ‘propositional’ verbs) and the tense of these complements can be interpreted independent of the matrix tense, as in *Yesterday, John preferred to visit Bob tomorrow*; on the other hand, complement clauses selected by verbs like *manage* (dubbed ‘implicative’ verbs) have \(-\text{TENSE}\) on \(I^0\), so the embedded tense must be anaphorically interpreted with respect to the matrix tense, as in *Yesterday, John managed to visit Bob tomorrow*. Second, following the traditional analysis, Landau assumes that the AGR feature encodes morphological agreement inflection: for example, infinitival \(I^0\) is specified \(-\text{AGR}\), while finite \(I^0\) is specified \(+\text{AGR}\). Third, the \([\pm R]\) feature, which is interpretable on NPs but uninterpretable on \(I^0\) or \(C^0\), encodes the information about whether an NP requires an antecedent: e.g., NPs with \([+R]\), which include lexical NPs and *pro*, are referential and thus do not need an antecedent; on the other hand, those with \([-R]\), which only include PRO, are not referential by assumption and thus require an antecedent for identification.

As a means of connecting the clausal features (i.e., \([\pm\text{TENSE}]\) and \([\pm\text{AGR}]\)) to the referential feature (i.e., \([\pm R]\)), Landau proposes the following rule by which the uninterpretable R-feature of the functional head, \(I^0\) or \(C^0\), is valued.

\begin{align} 
(59) \quad \text{R-ASSIGNMENT RULE} \\
&\text{For } X^0_{[\alpha T, \beta \text{Agr}] \in \{I^0, C^0, \ldots\}:} \\
&\text{a. } \emptyset \rightarrow [+R]/X^0_{\frac{\alpha T}{\beta \text{Agr}}}, \text{ if } \alpha = \beta = + \\
&\text{b. } \emptyset \rightarrow [-R]/\text{elsewhere} \quad \text{Landau (2006: 163)} 
\end{align}

According to this assignment rule, the functional head, say, \(I^0\), is assigned \([+R]\) only when it has \([+\text{TENSE}]\) and \([+\text{AGR}]\)—that is, only in the case of finite clauses. In this case, an overt NP or *pro* which carries the interpretable \([+R]\) feature is necessary to check the uninterpretable \([+R]\) feature on \(I^0\) (and \(C^0\) later). On the other hand, the functional head is assigned \([-R]\) when it has one of
the following three feature combinations—(i) \([+\text{TENSE}]\) and \([-\text{AGR}]\); (ii) \([-\text{TENSE}]\) and \([+\text{AGR}]\); and (iii) \([-\text{TENSE}]\) and \([-\text{AGR}]\). In this case, PRO, which has the interpretable \([-\text{R}]\) feature, is necessary in order to check the uninterpretable \([-\text{R}]\) feature on \(I^0\) (and \(C^0\)). Thus, the generalization concerning the distribution of PRO and lexical NPs/\text{pro} is that PRO can appear in the rest of cases where lexical NPs or \text{pro} are licensed by \(I^0\) with \([+\text{TENSE}, +\text{AGR}]\).

There are a couple of more assumptions that are crucial in Landau’s (2004, 2006) system. As for the way in which the \([\text{TENSE}]\) and \([\text{AGR}]\) features of \(C^0\) are determined, he assumes that \([\pm\text{TENSE}]\) can be specified on \(C^0\) only when the embedded tense is restricted by the matrix predicate, for example, when the embedded clause is either infinitival or subjunctive; otherwise, \(C^0\) lacks the tense feature. In the case of \([\pm\text{AGR}]\), its specification is parasitic on the specification of the tense feature: when \(C^0\) is specified \([+\text{TENSE}]\), it can be either \([+\text{AGR}]\) or \([-\text{AGR}]\); on the other hand, when \(C^0\) is specified \([-\text{TENSE}]\), it has unspecified \([\text{AGR}]\). Besides, Landau assumes that although it has an interpretable \([-\text{R}]\) feature, the phi-features of PRO are not valued before it enters Agree with its controller through the mediation of functional categories. For illustration, let us consider the derivation of a sentence with a controlled subjunctive complement in (60) and another derivation of a sentence with a free subjunctive complement in (61) in Romanian.21

(60) **ROMANIAN (C-SUBJUNCTIVE)**

\[
\begin{align*}
\text{a. } & \text{Maria} & \text{a } \text{încercat} & \text{PRO/*John } \text{să } \text{plece}. \\
& \text{Mary} & \text{has } \text{tried} & \text{PRO/*John } \text{PRT } \text{leave} \\
& \text{‘Mary tried to leave.’} 
\end{align*}
\]

21 Landau (2004, 2006) distinguishes C(ontrolled)-subjunctives and F(ree)-subjunctives in terms of whether the subject of the subjunctive clauses can be null and needs to be obligatorily controlled. According to this criterion, lexical subjects cannot appear in place of the null subject in the C-subjunctives, and the null subject is always referentially dependent on the matrix argument. On the other hand, in the F-subjunctives, either obligatorily controlled null subjects or non-controlled overt subjects are available.
Romanian (F-subjunctive)

(61)  

\[
\text{b. } \begin{array}{c}
\text{[CP DP... F... [CP C}^0\text{ [-T] [IP PRO}_i\text{ [-R] [I}^0\text{ [-T,+Agr,-R] [VP tPRO ...]]]]]}
\end{array}
\]

Agree\text{[+Agr,+R]} \text{ Agree\text{[+Agr]} Agree\text{[-T]} Agree\text{[+Agr,-R]}} \quad \text{Landau (2006: 166)}

In the case of the C-subjunctive, since I\text{\textsuperscript{0}} has [-TENSE, +AGR], it is assigned [-R] by the R-assignment rule in (59). Therefore, PRO, which has an interpretable [-R] feature, is necessary to check the uninterpretable counterpart via Agree. Then, PRO undergoes another instance of Agree with the functional head F, which in turn establishes an Agree relation with the matrix DP, the controller. In the meantime, the C\text{\textsuperscript{0}} head undergoes Agree with I\text{\textsuperscript{0}} in the tense feature. On the other hand, in the case of F-subjunctive, I\text{\textsuperscript{0}} is specified [+TENSE, +AGR], so it is assigned [+R] by the R-assignment rule. Therefore, a lexical NP or pro which has the [+R] feature is required. But unlike PRO, this type of NP does not need a controller, so once it undergoes Agree with the lower I\text{\textsuperscript{0}}, it does not participate in any further instance of Agree, as in (61b).

However, notice that although Landau’s (2004, 2006) approach is superior to the Case-theoretic approaches (e.g., Chomsky (1986), Chomsky and Lasnik (1993), Martin (1996)) as it demonstrates that licensing of PRO may not be exclusively determined by the (un)availability of Case of I\text{\textsuperscript{0}}, there seems to be an issue that makes it difficult to extend his approach to the Korean jussive control constructions. Specifically, Landau’s assumption that the feature specifications of I\text{\textsuperscript{0}} are determined by inflectional agreement leads us to make an incorrect prediction for the availability of a lexical subject in the jussive complement. Note that as mentioned in several
places in this dissertation, Korean does not exhibit agreement at the IP level. Thus, although one could argue that I\(^0\) (or T\(^0\) in our terms) of a jussive complement is specified \([+\text{TENSE}]\) as it has an unrealized tense with respect to the matrix tense, it would be hard to maintain that the same head is positively specified for \([\text{AGR}]\) (even in non-control finite clauses). In addition, we have justified the hypothesis that the use of different forms of jussive particles which co-vary with the clause type reflects subject’s agreement in person with the Jussive\(^0\), not with I\(^0\). If this is correct, \(I^0\) in the jussive complement should be specified \([+\text{TENSE}, -\text{AGR}]\), so the R-assignment rule will not assign \([+R]\) but \([-R]\) to \(I^0\). Then, there would be no way to account for the fact that the lexical subject bearing \([+R]\) is available in the jussive complement, since the uninterpretable \([-R]\) feature on \(I^0\) would be left unchecked (see Madigan (2008b: Ch 5) for a similar point).

Even if this problem is ignored, there are some other problems with Landau’s (2004, 2006) analysis. Note that he basically adopts his own Agree-based theory of control, originally suggested in Landau (1999). However, as discussed in Chapter 2, Landau’s (1999) Agree-based analysis itself poses technical problems. For example, on his approach, OC PRO must establish Agree with the functional head F in the matrix clause across the CP boundary, as shown in the Romanian C-subjunctive example in (60b). However, this process of Agree would violate the locality condition, particularly, the Phase Impenetrability Condition (PIC, Chomsky (2000, 2001)). To avoid this problem, Landau stipulates that unlike Move, Agree is not subject to the PIC, but as Horsntein (2001) points out, there are cases in Icelandic where Agree is also sensitive to the PIC (see Chapter 2 for detailed discussion).

I am now in a position to propose my own account for how the controlled subject pro is licensed in the jussive control constructions in Korean. Recall that I have suggested in 6.2.4 that there are two steps required for pro to be licensed in jussive clauses in root contexts: first, pro
should undergo Agree with the Jussive head to acquire a person feature; and second, to meet the Person Licensing Condition, it must be bound by a relevant operator, the Speaker or Addressee operator, in the Speaker/Addressee Phrase (cf. Speas and Tenny (2003), Tenny (2006)). In addition, I have also maintained the view that the TP in the jussive clause is particularly specified for the [FUTURATE] feature. The presence of this semantic tense feature enables us to explain why the event time is always unrealized with respect to the utterance time in jussive clauses (cf. C. Han (1998/2000) for root imperatives; Hasegawa (2009, 2010) for Japanese promissives and imperatives). The presence of the [FUTURATE] feature on $T^0$ in jussive complements in turn makes the controlled pro distinguished from pro occupying the subject position of non-jussive complements. In this respect, whether the T node has the [futurate] feature can be taken to be one of the important licensing conditions for the controlled pro in the jussive complements.

This being said, the question that immediately arises is whether the same licensing procedures and the presence of the [FUTURATE] feature are required for controlled subjects in the jussive control constructions as well. Given our conclusion drawn in Chapter 5 that what are subordinated in the jussive control constructions are embedded jussive clauses, I claim that the answer is yes, though some assumptions need to be added. To begin with, I argue that the controlled subject in the jussive complement must enter an Agree relation with the Jussive head, and then must be bound by a relevant operator in Speaker/Addressee Phrase (Sp/AdP) in accordance with the Person Licensing Condition (PLC) (cf. Baker (2008)). In fact, the first step where the null subject Agrees with the Jussive head is mandatory for the subject to be bound in the second step; in other words, unless the null subject undergoes Agree with the Jussive head, the subject can never acquire a relevant person feature and cannot be bound by any operator, either, failing to meet the PLC.
In addition, I suggest that the range of discourse participant operator(s) that is available in the left periphery of an embedded CP is determined by the class of matrix verbs. First, verbs of commitment, such as *yaksokha-* ‘promise’ and *tacimha-* ‘make sure, pledge’, select for a Sp/AdP that has the speaker operator (OpS) in its specifier position. Second, directive verbs such as *sel-tukha-* ‘persuade’ and *myenglyengha-* ‘order’ subcategorize a Sp/AdP that has the addressee operator (OpA) in its specifier position. Third, verbs of suggestion, such as *ceyanha-* ‘propose’ and *yochengha-* ‘request, ask’, subcategorize a Sp/AdP that has both the speaker and addressee operator. Fourth, verbs of communication (or verbs of saying), such as *malha-* ‘say’, can select a Sp/AdP which is unspecified with respect to the type of operators, and their values are fixed depending on the context. Given below is the list of possible operators in the Sp/AdP according to the class of verbs.

\[(62)\] **CLASS OF VERBS**

<table>
<thead>
<tr>
<th>Class of Verbs</th>
<th>Selected Operators</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Verbs of commitment (e.g., <em>yaksokha-</em> ‘promise’)</td>
<td>{OpS}</td>
</tr>
<tr>
<td>b. Directive verbs (e.g., <em>myenglyengha-</em> ‘order’)</td>
<td>{OpA}</td>
</tr>
<tr>
<td>c. Verbs of suggestion (e.g., <em>ceyanha-</em> ‘propose’)</td>
<td>{OpS⊕OpA}</td>
</tr>
<tr>
<td>d. Verbs of communication (e.g., <em>malha-</em> ‘say’)</td>
<td>{OpS, OpA, OpS⊕OpA}</td>
</tr>
</tbody>
</table>

There are two things to be noted. First, I assume that the subcategorization properties of the matrix verb directly affect the type of available operators in the Spec, Sp/AdP position despite the presence of CP on top of Sp/AdP. I contemplate that this is so because the role of C⁰ of CP in the embedded jussive clause is not to encode clause types but simply host the subordinator –*ko*. This property is not found in other languages like English in which the C head is a locus indicating whether a clause is declarative or interrogative, etc. Rather, as discussed in 6.2.4, it is Mood Phrase or Jussive Phrase in Korean that houses clause-typing particles indirectly signaling the sentential force of each clause type. For illustration, the abstract representation for a jussive con-
Second, unlike in the root contexts, the speaker or addressee operator in the Sp/AdP of the embedded clause must be bound by a relevant antecedent in the matrix clause. This property exhibited by the discourse participant operators in the embedded contexts is very crucial, since it enables us to provide a syntactic account for the so-called “shifting indexicality” in jussive control constructions. I will show in the next subsection how this works for each subtype of jussive control constructions.

I also argue that $T^0$ of the jussive complement is specified for $[\textsc{futurate}]$, so that we can account for why the tense of the complement clause is unrealized with respect to the tense of the matrix event in the jussive control constructions (cf. Stowell (1982), Martin (1996), O’Neil (1996), Bošković (1997) for temporal interpretation of control infinitives in English). As discussed in Chapter 2, Stowell (1982) observes that in English, infinitival clauses in control constructions in (64) do not pattern with those in ECM/raising constructions in (65) concerning their temporal interpretations. On the one hand, in the control constructions, the time of the embedded event must be unrealized with respect to the time of the matrix event; to put it differently, the time of the embedded event is shifted to the future relative to the matrix event time. For example, in (64a), the wine-bringing event cannot coincide with Ginny’s recollection; instead, the former must take place after the latter. On the other hand, in the ECM/raising constructions, the time of the embedded event or situation must overlap with the time of the matrix clause. For instance, in
(65a), the interval of people’s belief should be identical with the period of Rebecca’s being the best player at UConn.

(64)  
  a. Ginny remembered [PRO to bring the wine].
  b. Kim decided [PRO to go to the party].
  c. Romário promised Bebeto [PRO to pass the ball].  
         Martin (1996: 51)

(65)  
  a. Everyone believed [Rebecca to be the best basketball player at UConn].
  b. The doctor showed [Bill to be sick].
  c. The defendant; seemed to the DA [\( t_i \) to be a conspirator].  
         Martin (1996: 53)

Given this contrast, it can be easily seen that the jussive control constructions in Korean are clos-
er to the control than the ECM/raising constructions in English as regards the temporal specifica-
tions of complement clauses.  For example, in (66a), the time of Mary’s leaving cannot coincide with the time at which John persuaded Mary; rather, the embedded event must happen after the matrix event time.

(66)  
  a. il.cwuil cen-ey John\(_i\)-un Mary\(_j\)-eykey \([\text{pro}_j]\) ku taum.nal-ey  
            one.week before-at John-TOP Mary-DAT  the next.day-on  
                  ttena-la-ko]  seltukhayssta  
          leave-IMP-COMP persuaded  
          ‘A week ago, John persuaded Mary to leave the next day.’

  b. *onul John\(_i\)-un Mary\(_j\)-eykey \([\text{pro}_j]\) ecey  
              today John-TOP Mary-DAT  yesterday  
                  ttena-la-ko]  seltukhayssta  
          leave-IMP-COMP persuaded  
          Intended: ‘Today, John persuaded Mary to leave yesterday.’

  c. ecey John\(_i\)-un Mary\(_j\)-eykey \([\text{pro}_j]\) nayil  
              yesterday John-TOP Mary-DAT  tomorrow  
                  ttena-la-ko]  seltukhayssta  
          leave-IMP-COMP persuaded  
          ‘Yesterday, John persuaded Mary to leave tomorrow.’
Second, the ungrammaticality of (66b) confirms that the time of the matrix event must be prior to the time of the embedded event. Finally, the time of the event denoted by the embedded clause can not only be after the matrix event time but also after the utterance time. For instance, the sentence in (66c) can be true only if the event of Mary’s leaving has not yet taken place at the time of utterance.

To capture this interpretive difference between control and ECMraising infinitives, Sto-well (1982) suggests that they should be characterized in terms of the [±TENSE] feature: that is, the control infinitives are specified [+TENSE], while the ECMraising infinitives are specified [−TENSE]. Building on this idea, Martin (1996) argues that only the infinitival T0 with [+TENSE] is able to assign null Case by which PRO can be licensed. However, we have already seen that the previous approaches, which treat the controlled subject as PRO and/or adopt null Case as a licensing condition for PRO, are not tenable to capture the availability of lexical NPs as the controlled subject. In addition, I make the hypothesis in this dissertation that in Korean, the availability of nominative Case is not correlated with [±TENSE] of T0; in other words, nominative Case can be assigned as long as there is a TP in a clause, regardless of whether it is finite or infinitival (see Chapters 3 and 4 for the relevant discussion) Therefore, I am led to suggest that T0 in the jussive control complement has the [FUTURATE] feature, and this feature forces the tense of the embedded clause to be unrealized with respect to the matrix event time.22

The two-step licensing procedures and the presence of [FUTURATE] on T0 make the controlled pro in the jussive complement distinguished from the uncontrolled pro found in the other contexts in two ways. First, as we have seen in several places in this chapter, the null subject in

22 As Paul Portner (p.c.) points out, it also seems possible to assume that it is Jussive0 that carries the [FUTURATE] feature. But I rather maintain the view in this dissertation that the semantic tense feature, which makes complement clauses have future-oriented tense, resides in the T node in both infinitival and jussive control complements in Korean.
the jussive complement must be referentially connected to the matrix argument(s), while the null subject in the non-jussive complement does not need to be construed as the matrix argument(s) (see also (67a-c) below). Secondly, the tense restriction imposed on the jussive complement does not work for the non-jussive complement. That is, unlike the jussive complement, the event time of the non-jussive complement can either coincide with or be after the matrix event time, as shown in (67a) and (67b). In some cases, the event time of the non-jussive complement can even be prior to the matrix event time, as in (67c). Note that $e_1$ and $e_2$ indicate the matrix and embedded event, respectively, and $e_1 < e_2$ means that $e_1$ precedes $e_2$ in time.

   ‘John$_i$ told Mary$_j$ that she$_j$/someone else loved her$_j$.’  \( (e_1 = e_2) \)

b. John-un Mary-eykeyse[pro$_{jk}$ makcwu-lul kacye.o-n-ta-ko]
   John-TOP Mary-from beer-ACC have.come-PRES-DECL-COMP tulessta.
   ‘John$_i$ heard from Mary$_j$ that she$_j$/someone else would bring a beer.’ \( (e_1 < e_2) \)

c. John-un Mary-eykey [pro$_{ik}$ kangto-lul manna-ass-ta-ko]
   said ‘John$_i$ told Mary$_j$ that she$_j$/someone else had encountered a robber.’ \( (e_1 > e_2) \)

6.4.3 Controller Choice in Jussive Control Constructions

6.4.3.1 Assumptions about Shifting Indexicality

In this subsection, based on our discussion so far, I will offer an account for the last issue in (2c)—that is, how is controller choice made in jussive control constructions? Recall that what is unique to the Korean jussive control constructions is that the controller choice is correlated with the clause type of a complement clause. In other words, as shown in the core paradigms below,
the clause type of a complement clause leads to a particular type of control interpretation: a subject control interpretation arises if a promissive is subordinated as in (68a), an object control interpretation is possible if an imperative clause is embedded, as in (68b), and a split control interpretation is induced if an exhortative clause is subordinated.

(68)  

a. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [pro\textsubscript{i,j} hakkyo-ey ka-\textbf{ma}-ko] yaksokhay-ss-ta.  
   ‘John promised Mary to go to school.’

b. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [pro\textsubscript{i,j} hakkyo-ey ka-\textbf{la}-ko] seltukhay-ss-ta  
   ‘John persuaded Mary to go to school.’

c. John\textsubscript{i}-un Mary\textsubscript{j}-eykey [pro\textsubscript{i,j} hakkyo-ey hamkkey ka-\textbf{ca}-ko] ceyanhay-ss-ta.  
   ‘John proposed to Mary to go to school together.’

Most of the previous studies on (some of) these paradigms in the literature (e.g., C. Lee (1973), D. Yang (1984, 1985), S. Lee (1994), H. Choe (2006)) were not successful in deriving this correlation between the controller choice and the type of an embedded clause. As discussed earlier in this chapter, the fact that this correlation is not accidental can be confirmed by crosslinguistic or language-internal data. First, it is unlikely that the clause type of an embedded clause plays a crucial role in picking out the controller in complement control constructions in English. This is because, as shown in (69), the complement clause is uniformly infinitival, so the controller seems to be chosen based on the lexical meaning of the matrix predicate.

(69)  

a. John\textsubscript{i} promised Mary\textsubscript{j} [e\textsubscript{i} to buy her a new computer].

b. John\textsubscript{i} persuaded Mary\textsubscript{j} [e\textsubscript{i} to go to college next year].

c. John\textsubscript{i} proposed to Mary\textsubscript{j} [e\textsubscript{i,j} to play tennis together].
Second, in Korean, when a declarative or interrogative clause is embedded, the referent of a null subject is normally determined by the contextual information, as shown in (70).

(70)  

![Example sentences in Korean showing null subjects and their referents.](example_sentences.png)

Third, the fact that the control interpretation patterns of (68a)-(68c) would remain unchanged even if the matrix predicates were replaced with the utterance verb *malha*- ‘say’ also suggests that the clause type of the jussive complement is important in determining the controller.

The question that immediately arises is how the meaning of the embedded jussive clause contributes to the controller choice. In order to answer this question, it seems necessary to consider the meaning and conversational force of the jussive complement in (68a-c). Recall from our previous discussion that complement clauses in the jussive control context are not direct quotations but embedded jussives (Chapter 5), and that the jussive clause denotes a property which is formed by abstracting over the subject (Sec 6.3). So the meaning of the embedded clause in (68a)-(68c) can be represented as in (71a)-(71c), respectively.

(71)  

![Formulas representing the meanings of embedded clauses.](example_formulas.png)

In addition, following Portner (2004, 2007), I assume that the sentential force of each subtype of jussive clause is to update a To-do List of the relevant discourse participant(s) by adding a property denoted by the jussive clause: the sentential force of the promissive is to update the To-do
List of the speaker, that of the imperative is to update the To-do List of the addressee, and that of
the exhortative is to update the To-do List of both the speaker and addressee. Notice, however,
that we cannot take these meanings at face value for (68a-c) since the subjects of the embedded
jussive clauses cannot be the speaker and addressee of the actual conversation. It would rather
make more sense if we reinterpret them as individuals that correspond to the speaker and addres-
see of the reported speech act. For example, in (68b), the null subject is the addressee of the re-
ported speech act, whose To-do List is to be updated by adding a property denoted by the em-
bedded clause, namely, the action of going to school. But Mary is the only person among the
two individuals in the matix clause, who is being ordered and whose To-do List is to be updated
if the action of going to school is added. Accordingly, Mary should be picked out as the control-
er of the null subject of the embedded imperative clause, explaining why the object control in-
terpretation is forced in (68b). We can easily apply the same line of analysis to the other sen-
tences in (68a) and (68c).

Then, how can we syntactically derive the control patterns in (68a)-(68c) by utilizing the
syntactic tools developed so far? To recap the key proposals for jussive clauses in root clauses,
I adopt the hypothesis originally made by Pak et al. (2007, 2008) and Zanuttini et al. (2011) that
jussive clauses have a Jussive Phrase where first and second person features are encoded, and the
null subject inherits the person features from the Jussive head via Agree. In addition, building on
Baker (2008), I have proposed that the null subject which has acquired the first or second person
feature must be bound for licensing by a relevant discourse participant operator, such as the
Speaker (OpS) and/or Addressee operator (OpS), in the Speaker/Addresssee Phrase (Sp/AdP). No-
tice that this binding procedure for licensing cannot be completely separated from the interpreta-
tion of the subject. Although it may not be easily seen how binding by the discourse operator
contributes to the interpretation of the subject in root contexts, we can clearly see how the binding procedure contributes to the controller choice of the subject in non-root contexts. I will discuss those cases in detail in the forthcoming subsections. As suggested in the previous subsection, in the non-root contexts, the range of available discourse operators in the Sp/AdP of the complement clause is determined by the class of matrix verbs. For example, in the case of (68b), since the matrix predicate is \textit{seltukha-} ‘persuade’, which belongs to the class of directive verbs, the Sp/AdP whose specifier is filled with the Op\textsubscript{A} is selected for. Given this, part of the derivation for the sentence in (68b) at the time when the lower CP is merged with the matrix predicate can be schematically represented as follows (where the head-final word order is not reflected):

(72) Part of the derivation for (68b)

a. Before Agree between Jussive\textsubscript{0} and pro:

\[
\begin{array}{c}
[\text{JussP Juss}^{0} \text{[person: 2]} ] \text{TP pro[person:__]} \text{[\text{vP tpro} went to school …}
\end{array}
\]

b. After Agree between Jussive\textsubscript{0} and pro:

\[
\begin{array}{c}
[\text{JussP Juss}^{0} \text{[person: 2]} ] \text{TP pro[person: 2]} \text{[\text{vP tpro} went to school …}
\end{array}
\]

\text{AGREE}

c. Merge of Sp/AdP and binding of pro by Op\textsubscript{A}:

\[
\begin{array}{c}
[\text{Sp/AdP Op}_{A} \text{Sp/Ad}^{0} \text{[JussP Juss}^{0} \text{[person: 2]} ] \text{TP pro[person: 2]} \text{…}
\end{array}
\]

d. Merge of CP, the matrix verb and Mary:

\[
\begin{array}{c}
[\text{VP Mary persuaded } \text{[CP C}^{0} \text{Sp/AdP Op}_{A} \text{Sp/Ad}^{0} \text{[JussP Juss}^{0} \text{[person: 2]} ] \text{TP pro[person: 2]} \text{…}
\end{array}
\]

e. Merge of John:

\[
\begin{array}{c}
[\text{vP John persuaded } \text{[VP Mary } tV \text{[CP C}^{0} \text{Sp/AdP Op}_{A} \text{Sp/Ad}^{0} \text{[JussP Juss}^{0} \text{[person: 2]} \text{…}
\end{array}
\]

As shown in (72a), just as in the root context, the null subject enters the derivation without its person feature, while the Jussive head has the valued second person feature. So the person feature of the subject is valued via Agree with the Jussive head, as in (72b). Then, the Sp/AdP whose specifier position is filled with the Op\textsubscript{A} is merged, and the operator binds the null subject bearing the second person feature, as in (72c), so that the Person Licensing Condition (PLC) is
respected. After that, the CP, the matrix verb and the direct object Mary are merged, as in (72d). Then, the matrix subject John is introduced in the derivation, as in (72e).

Notice, however, that there appears to be a problem for the above derivation: that is, the person feature the null subject has obtained via Agree with the Jussive head is second person, but what the null subject actually refers to is the matrix object, Mary, in (68b). In other words, as mentioned above, since the null subject appears in the reported speech context, its controller cannot be the addressee of the actual conversation. However, this may not be a real problem given that there are languages where a first or second person pronoun in an embedded clause under the utterance verb refers to the speaker or addressee of the reported speech act. For instance, Schlenker (2003) reports that in Amharic, the first person null subject of an embedded clause refers to the matrix subject that corresponds to the speaker of the reported speech act, as in (73).

(73) AMHARIC  
jon [jäguna na-ññ] yil-all  
John hero be.PF-1sO 3M.say-AUX.3M  
‘John says that he is a hero.’ (Lit. ‘John says that I be a hero.’)  
(as represented by Baker (2008: 125))

To explain this kind of shifting in indexicality, some studies (e.g., Schlenker (2003), Anand and Nevins (2004)) have suggested that there are certain elements that have shiftable person features. According to them, in some languages, person features refer to the speaker or addressee of the actual conversation in root contexts, but they may also refer to the speaker or addressee of the reported speech act under the scope of a certain class of verbs like attitude verbs. In particular, Schlenker (2003: 32) proposes that attitude verbs can be defined as operators that quantify over contexts of thought or speech. Furthermore, assuming that a context determines a single world of thought as well as a speaker (or an addressee) and a time of utterance, he defines the attitude
operators as a tuple of the form $\langle$agent, time, world$\rangle$. Given this, he represents the logical form of the Amharic sentence in (73) in the following way (where $c_i$ indicates a contextual variable bound by the attitude operator).

$$\text{SAY} <\text{John, now, actually}> c_i \text{ be-hero (agent}(c_i), \text{ time}(c_i), \text{ world}(c_i))$$

Schlenker (2003: 32)

According to Schlenker, in languages like English, the contextual variable $c$ is not bound by the attitude operator, which allows an indexical to depend on the actual speech act; however, in other languages like Amharic, the same variable can be bound by the operator, which makes an indexical dependent on the reported speech act, as shown in (74) above.

Extending this idea to the Korean embedded jussive clauses, Pak et al. (2007: Sec 4) make three hypotheses: (i) the Jussive head and null pronouns have shiftable person features; (ii) overt pronouns have unshiftable features; and (iii) a verb like ‘say’ in Korean is a context-shifter. According to these hypotheses, whether the embedded subject is overt or null plays a crucial role in determining the shiftable of the person feature borne by the subject via Agree, and the contrast between (75a) and (75b) illustrates the point.

(75) a. John-un Mary-eykey [pro*ij hakkyo-ey ka-la-ko] malhayssta. (cf. (68b))

 '\text{John told Mary to go to school.}'

b. *John-un Mary-eykey [neyj-ka hakkyo-ey ka-la-ko]

 '\text{Intended: ‘John told Mary that you (Mary) would go to school.’}'

On the one hand, when the lower subject is null, as in (75a) (which is identical with (68b) except that the matrix verb is replaced with the utterance verb), Agree makes both the Jussive head and
the subject have ‘shiftable’ second person features, as represented in (76). In this case, the derivation is convergent since, due to its shiftable second person feature, the null subject is required to correctly refer to the matrix object, the addressee of the reported speech act.

(76) Abstract derivations for (75a) (by Pak et al. (2007))
   a. Before Agree: $.. \text{say} [CP [\text{JussP Jussive}^0_{\text{shiftable: 2}}] [\text{TP pro}_{\text{shiftable: 2}}] \ldots]]$
   b. After Agree: $.. \text{say} [CP [\text{JussP Jussive}^0_{\text{shiftable: 2}}] [\text{TP pro}_{\text{shiftable: 2}}] \ldots]]$

On the other hand, when the lower subject is the overt second person pronoun, as in (75b) (which is identical with (56a) except for the matrix predicate being replaced with the utterance verb), the Jussive head and the pronoun end up with not only the ‘shiftable’ person feature but also the ‘unshiftable’ person feature as a result of Agree, as shown in (77). In this case, the derivation crashes due to the conflict between the shiftable and unshiftable person feature that the null subject obtains via Agree. That is, the feature [shiftable: 2] requires the pronoun to refer to the matrix object, while the feature [unshiftable: 2] forces the pronoun to refer to the actual addressee of the utterance. The sentence can only be true if the matrix object happens to be the second person pronoun, ne ‘you’, which refers to the addressee of the actual speech context.

(77) Abstract derivation for (75b) (by Pak et al. (2007))
   a. Before Agree: $.. \text{say} [CP [\text{JussP Jussive}^0_{\text{shiftable: 2}}] [\text{TP you}_{\text{unshiftable: 2}}] \ldots$\$\$
   b. After Agree: $.. \text{say} [CP [\text{JussP Jussive}^0_{\text{shiftable: 2}}] [\text{TP you}_{\text{unshiftable: 2}}] [\text{TP you}_{\text{shiftable: 2}}] \ldots$

The current study extends the third hypothesis of the three made by Pak et al. (2007), suggesting that not only the verbs of communication but also three classes of control predicates, such as verbs of commitment, directive verbs and verbs of suggestion, are context-shifters, making it possible for person features under their scope to be interpreted with respect to the reported speech act (cf. Madigan (2008b) for the same idea). Recall that under the suggested analysis
here, the range of available discourse operators is contingent upon the class of matrix verbs. It is also proposed that those operators must be bound by the closest antecedent in the matrix clause in the syntax due to their inherent nature to refer to the speaker or addressee of the reported speech act (cf. Table 3 below). This proposal leads me to make a hypothesis that jussive control involves syntactic binding. The empirical data in favor of this hypothesis includes cases where the overt pronominal element occupies the subject of the jussive complement; I will discuss the relevant data shortly in the forthcoming subsections. Given this, in the current system, Op\(_S\) and Op\(_A\) in Sp/AdP of a jussive complement play crucial roles in making person features shifted to the reported speech act in narrow syntax.

Notice also that, departing from Pak et al. (2007) where all overt pronouns are treated as ‘unshiftable’ person features, I suggest that person features carried by first and second overt personal pronouns are ‘unshiftable,’ just as in Pak et al., while those borne by not only pro but also third person pronouns and the long-distance (LD) anaphor caki are ‘shiftable’. This is summarized in Table 2.

<table>
<thead>
<tr>
<th>TYPES OF PRONOUNS</th>
<th>EXAMPLES</th>
<th>SHIFTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Null pronoun</td>
<td>pro</td>
<td>Shiftable</td>
</tr>
<tr>
<td>1(^{st}) and 2(^{nd}) person pronouns (SG, PL)</td>
<td>na ‘I’, ne/nehuy ‘you’ wuli ‘we’</td>
<td>Unshiftable</td>
</tr>
<tr>
<td>3(^{rd}) person pronouns (SG, PL)</td>
<td>ku ‘he’, kunye ‘she’, kutul ‘they’</td>
<td>Shiftable</td>
</tr>
<tr>
<td>Long distance reflexives (SG, PL)</td>
<td>caki ‘self’, caki-tul ‘selves’</td>
<td>Shiftable</td>
</tr>
</tbody>
</table>

In addition, in my analysis, the shiftability distinction is not made for the Jussive head, which means that the shiftability of person features is not what can be transmitted by Agree; rather, I suggest that this information is accessed by the computation to determine whether the embedded subject already licensed by the embedded Op\(_S\) or Op\(_A\) should also be bound by the matrix Op\(_S\) or
OpA (cf. Baker’s (2008) analysis of shifting indexicality in Western African languages). In other words, when pro, the third person pronoun and the LD anaphor appear in the subject position of a jussive complement, it would suffice if the OpS or OpA of the complement clause that has already bound the subject is bound by the closest antecedent in the matrix clause, which serves as the speaker or addressee of the reported speech act. This is because those three types of overt subjects in the jussive complement can only be interpreted with respect to the reported speech act. On the other hand, when the first or second person overt pronoun occupies the subject position of a jussive complement, the OpS or OpA of the complement clause should also be bound by the matrix OpS or OpA. For this reason, the closest argument in the matrix clause that binds the embedded OpS or OpA needs to be bound by the matrix OpS or OpA, so that the embedded operator can be bound by the matrix operator by transitivity. I make this proposal in order to capture the fact that the first and second person ‘overt’ pronouns should always be interpreted with respect to the actual speech act in both root and embedded contexts.\(^{23}\) In a nutshell, my proposal regarding the way shiftable or unshiftable pronouns are controlled presupposes that the OpS and OpA in root contexts refers to the actual speaker and addressee of the utterance, respectively, while those in

\(^{23}\) There seems to be another way to capture this fact that the 1st or 2nd person pronoun always refers to the speaker or addressee of the actual speech act in both root and non-root contexts. That is, one can say that these pronouns, as opposed to the other types of pronouns, are always bound directly by the Speaker or Addressee operator in the matrix Speaker/Addressee Phrase. Although this alternative idea sounds simpler than what I propose here, it does not seem to be able to correctly rule out some ungrammatical sentences like (ib). That is, the first person pronoun can be used as the subject of the jussive complement only when the controller is the same type of pronoun, namely, the first person pronoun, as in (ia). According to the alternative idea, this sentence should be grammatical, since there is no way to prevent the Speaker operator from binding the first person in the embedded subject position. See Section 6.4.3.3 for the way in which my analysis rules out sentences like (ib).

\begin{itemize}
\item \textbf{(a)} John-un Mary-eykey [pro/\text{Mary}-eykey swukcey-lul ha-ma-ko] yaksokhayssta.
\item \textbf{(b)} Nai-nun Mary-eykey [pro/\text{Mary}-eykey swukcey-lul ha-ma-ko] yaksokhayssta.
\end{itemize}
embedded contexts are equivalent to the speaker and addressee of the reported speech act. This difference is summarized in Table 3.

<table>
<thead>
<tr>
<th>OPERATORS</th>
<th>ROOT Clause</th>
<th>EMBEDDED Clause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speaker Operator (OpS)</td>
<td>Speaker of the actual speech act</td>
<td>Speaker of the reported speech act</td>
</tr>
<tr>
<td>Addressee Operator (OpA)</td>
<td>Addressee of the actual speech act</td>
<td>Addressee of the reported speech act</td>
</tr>
</tbody>
</table>

Table 3. Referents of Speaker and Addressee Operators

To sum up, the assumptions and hypotheses made in this subsection are listed below:

- Not only verbs of communication but also three classes of control predicates are context-shifters (cf. Madigan (2008b)).
- The subject of a jussive complement can be interpreted as the speaker or addressee of the reported speech act due to the the Speaker Operator (OpS) and Addressee Operator (OpA) in the Speaker/Addressee Phrase (Sp/AdP) selected by context-shifting predicates (cf. Baker (2008)).
- The OpS and OpA in root contexts get their reference from the actual speech context, while the same operators in embedded contexts from the matrix argument; therefore, syntactic binding is required when the OpS and OpA in the jussive complement get their reference from the closest argument.
- Person features of first and second person overt pronouns are unshiftable, while those of pro, third person pronouns and the LD anaphor are shiftable (cf. Pak et al. (2007)).
- Elements with unshiftable person features must be bound by the OpS and OpA in the matrix Sp/AdP, while those with shiftable ones do not need to.

6.4.3.2 Deriving Object Control Interpretation

With these tools at hand, let us return to the derivational steps in (72a-e), repeated below, which derive the object control interpretation in (68b) where the imperative clause is embedded. If we
continue the derivation, the matrix object *Mary* ends up binding the Op$_\lambda$ in the lower clause, as represented in (72f), since it is the closest antecedent that can function as the addressee of the reported speech act.

(72) Part of the derivation for (68b)
a. Before Agree between Jussive$^0$ and *pro*:
   \[\text{[JussP Juss}^0_{\text{[person: 2]}} \text{[TP pro}_{\text{[person: 2]}} \text{[vP } t_{\text{pro}} \text{ went to school \ldots}}\]
b. After Agree between Jussive$^0$ and *pro*:
   \[\text{[JussP Juss}^0_{\text{[person: 2]}} \text{[TP pro}_{\text{[person: 2]}} \text{[vP } t_{\text{pro}} \text{ went to school \ldots}}\]
   \[\text{AGREE}\]
c. Merge of Sp/AdP and binding of *pro* by Op$_\lambda$:
   \[\text{[Sp/AdP Op}_{\lambda} \text{ Sp/Ad}^0_{\text{[person: 2]}} \text{[JussP Juss}^0_{\text{[person: 2]}} \text{[TP pro}}_{\text{[person: 2]}} \text{\ldots}}\]
d. Merge of CP, the matrix verb and *Mary*:
   \[\text{[vP Mary persuaded \[CP C}^0_{\text{[Sp/AdP Op}_{\lambda} \text{ Sp/Ad}^0_{\text{[JussP Juss}^0_{\text{[person: 2]}} \text{[TP pro}}_{\text{[person: 2]}} \text{\ldots}}\]
   \[\text{BINDING}\]
e. Merge of *John*:
   \[\text{[vP John persuaded \[CP C}^0_{\text{[Sp/AdP Op}_{\lambda} \text{ Sp/Ad}^0_{\text{[JussP Juss}^0_{\text{[person: 2]}} \text{[TP pro}}_{\text{[person: 2]}} \text{\ldots}}\]
   \[\text{BINDING}\]

It should be emphasized again that since I assume that the second person feature carried by the null subject *pro* is shiftable, it does not need to be bound by the matrix Op$_\lambda$, as long as it is bound by the closest argument in the matrix clause that corresponds to the addressee of the reported speech act. In (68b), the closest argument that fulfills this job is the matrix object, so the ‘object control interpretation’ available for the sentence naturally follows. Note that for the sake of discussion, I take the embedded Op$_\lambda$ to be bound by the matrix object *Mary* after *John* is also introduced in the derivation, as in (72f). However, the operator is in fact supposed to be bound as soon as *Mary* is merged with the VP. In the derivations to be illustrated from now on, I will show how this works.
Let us compare (68b) with (75b) which is minimally different from the former sentence in that the embedded subject is the second person ‘overt’ pronoun (and the matrix verb is the utterance verb). In particular, I will show how the proposed analysis rules out the sentence in (75b). As mentioned in 6.2.4, I assume that unlike the null pronoun and the other pronouns, the second person pronoun (and first person pronoun) enters the derivation with its person feature valued. But although the second person pronoun already has the valued person feature, it has to undergo Agree with the Jussive head bearing the second person feature for Case reasons. The step-by-step derivation for this sentence is provided in (78).

(78) Derivation for (75b)

a. Before Agree between Jussive 0 and you:

\[
\text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{[vP you went to school ...}}
\]

b. After Agree between Jussive 0 and you for NOM Case

\[
\text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{[vP you went to school ...}} \uparrow \text{AGREE}
\]

c. Merge of Sp/AdP and binding of you by the embedded OpA:

\[
\text{[Sp/AdP OpA Sp/Ad}_0^{\text{person: 2}} \text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{...}} \quad \uparrow \text{BINDING}
\]

d. Merge of CP, the matrix verb and Mary:

\[
\text{[VP Mary persuaded [CP C}_0^{\text{person: 2}} \text{[Sp/AdP OpA Sp/Ad}_0^{\text{person: 2}} \text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{...}} \quad \uparrow \text{BINDING}
\]

e. Binding of the embedded OpA by Mary:

\[
\text{[VP Mary persuaded [CP C}_0^{\text{person: 2}} \text{[Sp/AdP OpA Sp/Ad}_0^{\text{person: 2}} \text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{...}} \quad \uparrow \text{BINDING}
\]

f. Merge of John:

\[
\text{[vP John persuaded [VP Mary t}_V^{\text{person: 2}} \text{[CP C}_0^{\text{person: 2}} \text{[Sp/AdP OpA Sp/Ad}_0^{\text{person: 2}} \text{[JussP Juss}_0^{\text{person: 2}} \text{[TP you}_{\text{person: 2}}^{\text{NOM}} \text{...}} \quad \uparrow \text{BINDING}
\]

g. Merge of TP, Sp/AdP and binding of Mary by the matrix OpA (MoodP omitted):

\[
\text{[Sp/AdP OpA Sp/Ad}_0^{\text{person: 2}} \text{[TP John [vP }_{\text{person: 2}}^{\text{NOM}} \text{John persuaded [VP Mary }_{\text{person: 2}}^{\text{NOM}} \text{...}} \quad \uparrow \text{BINDING}
\]

As shown in (78a), both the Jussive head and the second person pronoun are already specified for person. Nonetheless, in the next step, the second person pronoun must undergo Agree with the Jussive head, not for acquiring a person feature but for valuing (and deleting) an uninterpret-
able Case feature. Recall from our discussion in 6.2.3 that I argued that in Korean, an agreementless language, only subjects in jussive clauses should enter an Agree relation with a relevant functional head, namely, the Jussive head, to make their Case feature valued. Then, the second person pronoun needs to be bound by the Opλ in order to satisfy the Person Licensing Condition, as shown in (78c). Notice, however, that since the person feature borne by the second person overt pronoun is unshiftable and is required to be interpreted with respect to the actual speech context, the pronoun must be bound by the Opλ in the matrix clause. But the embedded Opλ cannot be directly bound by the matrix Opλ since its referent is confined to the addressee of the reported speech act. Instead, it must be bound by Mary, as in (78e), which is the closest argument in the matrix clause that can serve as the addressee of the reported speech act.24 Notice that since John, the external argument, has not yet been introduced in the structure at this point, there is no other argument than Mary in the matrix clause that can c-command and bind the embedded Opλ; therefore, the locality condition for controller choice, for example, the Minimal Distance Principle (Rosenbaum’s (1967, 1970)), is satisfied. Finally, after the Sp/AdP is introduced in the derivation, the matrix object Mary should be bound by the matrix Opλ. However, as shown in (78g), Mary cannot be bound by the matrix Opλ since it does not have a second person feature required for being construed as the actual addressee of the utterance. As a result, the sentence in

24 The immediate question that can be raised is whether it is natural for an operator to be bound by something higher in the structure. To the best of my knowledge, there are at least two cases where the operator itself is assumed to be bound. One of them has to do with relative clause formation. That is, under the standard analysis of relative clauses in the generative literature, the relative pronoun (overt or null) must be coreferential with its antecedent NP appearing in the next higher clause. (contra Kayne’s (1994) raising analysis). According to this view, the sentence with a relative clause in (i) can be roughly represented as in (ib). Secondly, the so-called tough-construction exemplified in (ii) also involves binding of an operator by a coreferential element in the matrix clause, as in (iib) (Chomsky (1981)).

(i) a. John read the book {which/that} Mary recommended.  
    b. John read the book [_{CP} {which/Op, that} {_{TP} Mary recommended}].

(ii) a. John is easy to please.
    b. John is easy [_{CP} Op{_{TP} PRO to please}].

(RELATIVE CLAUSE)

(TOUGH-CONSTRUCTION)
(75b) cannot be grammatical. Remember that as mentioned in 6.2.3, a limited class of lexical NPs including proper names can be underspecified for person features only in root jussive clauses, but the matrix clause in (75b) cannot obviously be characterized as a jussive clause.

It should be pointed out that the ungrammaticality of (75b), as opposed to (68b), lends support to one of the major hypotheses made by the current analysis, namely that jussive control involves syntactic binding. That is, I have just shown that the fact that the second person pronominal subject in the embedded imperative clause cannot be controlled by the third person element in (75b) can be easily explained if we adopt the hypothesis that the subject in a jussive complement selected by a context-shifting predicate needs to be syntactically bound by the embedded operator, which should in turn be bound by the closest argument in the matrix clause in the syntax.

One might wonder how the proposed analysis can deal with the other kinds of overt subjects in the embedded imperative clause. As presented in 6.4.1, the third person pronoun and LD anaphor can also be used as the subject of an embedded imperative. Consider (79a) with the third person pronoun and (79b) with the LD anaphor as the lower subject. Note again that there is variation among the speakers regarding their judgments on the jussive control sentences with the overt subject in the complement clause. But most speakers judge the sentences more natural when we add an adverb like honca ‘alone,’ along with a heavy stress on the pronominal subject, as in (79), to yield a reading such that Mary is the only person on the list of individuals in the context who should go to school (cf. Pak et al. (2007), Madigan (2008b)).

   John-TOP Mary-DAT she-NOM alone school-to go-IMP-COMP
   seltukhay-ss-ta. (cf. (57b))
   persuade-PAST-DECL
   ‘John persuaded Mary that she (Mary) would go to school alone.’
b. John-i-un Mary-eykey [caki-ka honca hakkyo-ey ka-la-ko]
John-TOP Mary-DAT self-NOM alone school-to go-IMP-COMP
seltukhay-ss-ta. (cf. (52b))
persuade-PAST-DECL
‘John persuaded Mary that self (Mary) would go to school alone.’

Again, as mentioned in 6.2.4, both the third person pronoun and the LD anaphor can be underspecified for person only in embedded jussive contexts. Furthermore, on the current analysis, the person features possessed by the third person overt pronoun and the LD anaphor are shiftable, just like those by pro. So they do not need to be bound by the matrix OpA. Then, the derivation for these two sentences would be identical with the derivation for (68b), which was provided in (72a-f). Illustrated below are the derivational steps for sentence (79a) and (79b) (where the nominative Case feature on she and caki is not represented for the sake of convenience):

(80) Derivation for (79a)/(79b)
a. Before Agree between Jussive⁰ and she/caki:
   \[
   \begin{array}{c}
   [\text{JussP} \ Juss_0^{\text{person: 2}} ] [\text{TP} \ she/caki_{\text{person: }\_} ] [vP \ t_{she/caki} \ \text{went to school alone} \ldots \\
   \end{array}
   \]
b. After Agree between Jussive⁰ and she/caki:
   \[
   \begin{array}{c}
   [\text{JussP} \ Juss_0^{\text{person: 2}} ] [\text{TP} \ she/caki_{\text{person: 2}} ] [vP \ t_{she/caki} \ \text{went to school alone} \ldots \\
   \end{array}
   \]
\hspace{2cm} \text{AGREE}

c. Merge of Sp/AdP and binding of she/caki by OpA:
   \[
   \begin{array}{c}
   [\text{Sp/AdP} \ OpA \ Sp/Ad_0^{\text{person: 2}} ] [\text{JussP} \ Juss_0^{\text{person: 2}} ] \ldots \\
   \end{array}
   \]
d. Merge of CP, the matrix verb and Mary:
   \[
   \begin{array}{c}
   [vP \ Mary \ t_{\text{vP}} ] [\text{CP} \ C_0 ] [\text{Sp/AdP} \ OpA \ Sp/Ad_0^{\text{person: 2}} ] [\text{JussP} \ Juss_0^{\text{person: 2}} ] \ldots \\
   \end{array}
   \]
e. Binding of OpA by the matrix object:
   \[
   \begin{array}{c}
   [vP \ Mary \ t_{\text{vP}} ] [\text{CP} \ C_0 ] [\text{Sp/AdP} \ OpA \ Sp/Ad_0^{\text{person: 2}} ] [\text{JussP} \ Juss_0^{\text{person: 2}} ] \ldots \\
   \end{array}
   \] \hspace{2cm} \text{BINDING}

f. Merge of John:
   \[
   \begin{array}{c}
   [vP \ John \ persuaded ] [vP \ Mary \ t_{\text{vP}} ] [\text{CP} \ C_0 ] [\text{Sp/AdP} \ OpA \ Sp/Ad_0^{\text{person: 2}} ] [\text{JussP} \ Juss_0^{\text{person: 2}} ] \ldots \\
   \end{array}
   \]

Although their forms are different, the overt subjects in (79a) and (79b) obtain a second person feature via Agree with the Jussive head, as shown in (80a,b). But since the embedded OpA needs
to get its reference from the closest argument, it should be bound by the closest argument, namely, the direct object *Mary* which can function as the addressee of the reported speech act, as in (80e). As a result, the pronoun and LD anaphor can be referentially connected to the matrix object, since they are already bound by the embedded Op\(_A\). In this way, the control dependency between *she/caki* and the matrix object in (79a,b) can be derived. In a nutshell, under my analysis, the object control dependency in the jussive control construction is equivalent to an instance of a shift in indexicality of the pronoun.

Notice that the data in (79a,b) seem to show that the current analysis works better for the jussive control sentences with the overt embedded subject than Pak et al. (2007). That is, if we assume, just as do Pak et al. (2007), that the person features of all the overt subjects are unshiftable, the pronoun and LD anaphor in (79a,b) that has acquired the second person feature from Jussive\(^0\) should both refer to the actual addressee of the utterance, which is not the case.

### 6.4.3.3 Deriving Subject Control Interpretation

Now let us turn to the jussive control sentence in (68a), repeated below, which subordinates a promissive clause.

\[
\begin{align*}
(68) \quad \text{a. John-} & \text{-un Mary-} \text{-eykey } [\text{pro-} & \text{-}\text{j} \text{ hakkyo-ey} \text{ ka-} \text{ma-}\text{-ko}] \text{ yaksokhay-ss-ta.} \\
& \text{John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL} \\
& \text{‘John promised Mary to go to school.’}
\end{align*}
\]

In (68a), since the complement is the promissive clause, the Jussive head enters the derivation with the first person feature, while the null subject is introduced without a specific value of its person feature. Thus, Agree applies to the null subject and the Jussive head, making the former inherit the person feature from the latter, as shown in (81a,b). When the matrix predicate *yak-
sokha- ‘promise’ is merged with the complement clause, what occupies the specifier position of the Sp/AdP selected by the verb is the OpS rather than the OpA, as in (81c), since it belongs to the verbs of commitment. The null subject that has acquired the first person feature must be bound by the OpS in the embedded Sp/AdP for licensing, as represented in (81c). Note that since the OpS in the embedded Sp/AdP selected by the context-shifting predicate gets its reference from the matrix clause, it should be bound by the closest argument, which can serve as the speaker of the reported speech act. In this case, it is the matrix subject that can do the job, as illustrated in (81f).

(81) Derivation for (68a)

a. Before Agree between Jussive\textsuperscript{0} and pro:

\[
\begin{aligned}
[JussP Juss^0 & \text{[()} person: 1\text{]} [TP pro person:__] [vP tpro went to school \ldots
\end{aligned}
\]

b. After Agree between Jussive\textsuperscript{0} and pro:

\[
\begin{aligned}
[JussP Juss^0 & \text{[()} person: 1\text{]} [TP pro person: 1] [vP tpro went to school \ldots
\end{aligned}
\]

\[\text{AGREE}\]

c. Merge of Sp/AdP and binding of pro by the embedded OpS:

\[
\begin{aligned}
[Sp/AdP OpS Sp/Ad^0 & [JussP Juss^0 \text{[()} person: 1\text{]} [TP pro person: 1] \ldots
\end{aligned}
\]

d. Merge of CP, the matrix verb and Mary:

\[
\begin{aligned}
[VP Mary promised & [CP C^0 [Sp/AdP OpS Sp/Ad^0 [JussP Juss^0 \text{[()} person: 1\text{]} [TP pro person: 1] \ldots
\end{aligned}
\]

e. Merge of John:

\[
\begin{aligned}
[vP John promised & [VP Mary tV [CP C^0 [Sp/AdP OpS Sp/Ad^0 [JussP Juss^0 \text{[()} person: 1\text{]} \ldots
\end{aligned}
\]

f. Binding of the embedded OpS by the matrix subject:

\[
\begin{aligned}
[vP John promised & [VP Mary tV [CP C^0 [Sp/AdP OpS Sp/Ad^0 [JussP Juss^0 \text{[()} person: 1\text{]} \ldots
\end{aligned}
\]

Recall that in my analysis, pro, the third person pronoun and the LD anaphor are assumed to have shiftable person features, so the derivation converges if the discourse participant operators licensing them are bound by the closest matrix argument. Since the embedded subject is pro in this case, the embedded OpS does not need to be further bound by the matrix OpS once it is bound by the matrix subject, as in (81f). As a result, the pro can be construed as the matrix subject, yielding the subject control interpretation.
Notice, however, that as represented in (81f), the matrix object appears to be closer to the embedded Ops than the matrix subject. Then, the natural question that can be raised is whether it would violate any version of the minimality principle, such as Minimal Distance Principle (MDP) (Rosenbaum (1970, 1967)) or Minimal Link Condition (MLC) (Chomsky (1995)). In Chapter 3, I discussed the case of subject control into infinitival complements such as kilo-clauses, as in (82a). Since it turned out that these complements can be best characterized as infinitival clauses, I adopted Hornstein’s (1999, 2001, 2003) Movement Theory of Control to derive the subject control interpretation. Specifically, I suggested that the control dependency between the matrix subject and the lower subject in (82a) can be achieved by A-movement of the controller out of the complement clause, as schematized in (82b).

(82) a. Bill$_1$-un coach$_2$-eykey [e$_{i/*j}$ mayil yensup-ha-kilo] yaksokhayssta.
   Bill-TOP coach-DAT every.day practice-do-COMP promised
   ‘Bill promised the coach to practice every day.’

   b. Bill$_1$-un coach$_2$-eykey [t$_i$ mayil yensup-ha-kilo] yaksokhayssta.

But the controller should cross the matrix object in order to reach the Spec-vP position for checking the θ-feature, which would make the MDP or MLC in jeopardy. To explain this apparent violation of the minimality principle in (82), drawing on Hornstein’s (1999, 2003) idea, I suggested that the indirect object selected by the promise-type verbs is distinguished from the indirect object selected by the persuade-type verbs, in that the former is actually a PP, which does not prevent the lower subject from crossing it. It was shown that one compelling piece of evidence comes from the fact that the dative-marked object does not allow for Case alternations (see 3.4.4.2 in Chapter 3 for detailed arguments).
The state of affairs involved in (81f) seems to be very similar to the one in (82), since there is an argument that apparently intervenes in between the binder and the bindee or between the landing site and the launching site. Thus, I argue that the same account for the absence of the minimality effect in (82) can be extended to that in (81f). To put it differently, although the dative-marked DP *Mary*-eykey is apparently closer to the embedded OpS than the matrix matrix subject *John*, it cannot prevent the subject from binding into the embedded clause since it is categorized as a PP. This pattern is analogous to English sentences like *John*$_{i}$ seems to *Bill*$_{j}$ to hate *himself*$_{i}$/*j*, where *Bill* inside the PP cannot c-command and bind into the infinitival complement. Furthermore, in order for a matrix argument to serve as the antecedent of the embedded OpS: namely, it should be able to refer to the speaker of the reported speech. Given this, the indirect object of *yaksokha*- ‘promise’, which is not qualified for being the speaker of the reported speech act, is ruled out as a possible candidate to bind the OpS.

Jussive subject control sentences with the overt material in the lower subject position can be readily explained under the proposed analysis as well. Consider the sentences in (83a,b). These sentences are slightly different from (68a)/(81) in that the subject position of an embedded promissive clause is occupied by the third person overt pronoun in (83a) and the LD anaphor *ca-ki* in (83b). But the licensing and interpretation of the overt pronominal subject and LD anaphor in (83a,b) can be explained almost in the same way as those of the null subject in (68a)/(81). That is, just like *pro*, the person features of these two kinds of overt subjects are shiftable in my analysis, so the two sentences converge if the embedded OpS that licenses the subjects can be bound by the closest matrix argument that can serve as the speaker of the reported speech act. Just as in (68a)/(81), the matrix subject, *John*, binds the embedded OpS, after which it is referentially connected to the overt material, capturing the subject control interpretation.
Notice that the contrast between (83b) and (83c) is suggestive, in that it can be taken to be evidence in favor of the hypothesis that syntactic binding is required for deriving the control dependency in the jussive control constructions. Note that if the matrix subject John is replaced with the first person pronoun na ‘I’, sentence (83b) becomes ungrammatical, as in (83c). The derivational steps for (83c) are almost identical with those for (83b), except that the matrix subject na ‘I’ must be bound by the matrix OpS, as its person feature is not shiftable. Then, what makes the two sentences diverge in their grammaticality? To figure this out, let us consider the last five derivational steps for (83c).

(84) Part of the derivation for (83c)

a. Merge of Sp/AdP and binding of caki by the embedded OpS:
\[
\text{[VP promised [CP C \text{person: 1}] [Sp/AdP OpS Sp/Ad0 [JussP Juss0 \text{person: 1}] [TP caki \text{person: 1}] \ldots ]}
\]
d. Binding of the embedded Opₜ by the matrix subject:
\[
[\text{\textsc{vP}} \text{I promised} [\text{\textsc{vp}} \text{Mary} t_V [\text{\textsc{cp}} C^0 [\text{\textsc{sp/adp}} \text{Opₜ} \text{Sp/Adₜ} [\text{\textsc{jussP}} \text{Jussₜ} [\text{person: 1}] [\text{\textsc{tp}} \text{caki} \ldots]]]]]
\]

e. Merge of Sp/AdP and binding of I by the matrix Opₜ (MoodP omitted):
\[
[\text{\textsc{sp/adp}} \text{Opₜ} \text{Sp/Adₜ} [\text{\textsc{tp}} I T^0 [\text{\textsc{vP}} t_I \text{promised} [\text{\textsc{vp}} \text{Mary} t_V [\text{\textsc{cp}} C^0 [\text{\textsc{sp/adp}} \text{Opₜ} \ldots]]]]]
\]

As in (84d), the matrix subject -na ‘I’ which has bound the embedded Opₜ in the previous step should be bound by the matrix Opₜ in order to be licensed; otherwise, the PLC that requires the 1ˢᵗ or 2ⁿᵈ person element to be bound by the closest Speaker or Addressee operator would not be satisfied. Then, the derivational step in (84d) itself does not seem to be problematic. Note, however, that the LD anaphor in the lower subject position has become referentially dependent on the matrix subject by means of a series of binding steps taking place in (84a) and (84d). Therefore, by transitivity, the LD anaphor winds up being bound by the first person pronoun. But it has been observed in the literature on Korean syntax that the LD anaphor  caki cannot be bound by the 1ˢᵗ person and 2ⁿᵈ person elements (K. Hong (1991), S. Kim (1994)). Although I will not attempt to provide an account for why binding of the LD anaphor by the 1ˢᵗ and 2ⁿᵈ person element is banned in Korean, I attribute the ungrammaticality of (83c) to a violation of this constraint. Crucially, I take this to be a compelling piece of evidence in favor of the hypothesis that the control dependency in the jussive control constructions obviously involves syntactic binding, which could be missed if one insists on the semantic or pragmatic approach. I drew the same conclusion for the cases of object control in the previous subsection.

6.4.3.4 Deriving Split Control Interpretation

This subsection discusses how the proposed analysis derives the split control interpretation from the sentence in (68c), repeated below.
‘John proposed to Mary to go to school together.’

The Jussive head in the exhortative complement carries both the first and second person features (viz., the first person plural inclusive), but the null subject is underspecified for person features until Agree takes place, as in (85a). At the next step, the person features of the Jussive head are shared with the null subject via Agree, as in (85b). After that, as shown in (85c), a pair of the operators $\text{Op}_s \oplus \text{Op}_a$, which is assumed to behave as a single unit here, appears in the embedded Sp/AdP selected by the matrix verb, $\text{ceyanha}$- ‘propose’, which belongs to the verbs of suggestion. The null subject with the first and second person features are bound by the $\text{Op}_s \oplus \text{Op}_a$, as in (85c), which makes the Person Licensing Condition respected. After the matrix object $\text{Mary}$ is introduced in the step in (85d), it binds the $\text{Op}_a$ in the embedded Spec, Sp/AdP, as in (85e). Since it is the closest argument in the matrix clause, it can bind the embedded operator without violating the minimality condition. At the subsequent step in (85f), $\text{John}$ is merged, and then, it binds the $\text{Op}_s$ in the embedded Spec, Sp/AdP, as in (85g).\footnote{Roughly Speaking, the binding procedure that has taken place in (85e) and (85g) is analogous to the case where the first person inclusive pronoun is bound by two separate antecedents, as in (i) below.}

\begin{enumerate}
\item Before Agree between Jussive$^0$ and $\text{pro}$:
\[
\begin{array}{c}
\text{JussP Juss}^0 \text{[person: 1}\oplus 2\text{]} \\
\text{TP [pro [person: ___]} \\
\text{vP [tpro went to school together …}
\end{array}
\]

\item After Agree between Jussive$^0$ and $\text{pro}$:
\[
\begin{array}{c}
\text{JussP Juss}^0 \text{[person: 1}\oplus 2\text{]} \\
\text{TP [pro [person: 1}\oplus \text{2]} \\
\text{vP [tpro went to school together …}
\end{array}
\]
\end{enumerate}

A GREE

\footnote{Roughly Speaking, the binding procedure that has taken place in (85e) and (85g) is analogous to the case where the first person inclusive pronoun is bound by two separate antecedents, as in (i) below.}

\begin{enumerate}
\item Youi told mej that we$c_{ij}$ had to go to school together.
\end{enumerate}
c. Merge of Sp/AdP and binding of pro by the embedded Op₅⊕Op₆:
\[
\text{[Sp/AdP } \text{Op₅} \oplus \text{Op₆} \text{ Sp/Ad}^0 \text{ [JussP Juss}^0 \text{[person: 1@2]} \text{TP pro[person: 1@2]} \ldots
\]

BINDING

d. Merge of CP, the matrix verb and Mary:
\[
\text{[VP Mary proposed [CP C}^0 \text{ [Sp/AdP Op₅} \oplus \text{Op₆} \text{ Sp/Ad}^0 \text{ [JussP Juss}^0 \text{[person: 1@2]} \ldots
\]

BINDING

e. Binding of the embedded Op₆ by Mary:
\[
\text{[vP John proposed [VP Mary tᵥ [CP C}^0 \text{ [Sp/AdP Op₅} \oplus \text{Op₆} \text{ Sp/Ad}^0 \text{ [JussP Juss}^0 \text{[person: 1@2]} \ldots
\]

f. Merge of John:
\[
\text{[vP John proposed [VP Mary tᵥ [CP C}^0 \text{ [Sp/AdP Op₅} \oplus \text{Op₆} \text{ Sp/Ad}^0 \text{ [JussP Juss}^0 \text{[person: 1@2]} \ldots
\]

BINDING

g. Binding of the embedded Op₅ by John:
\[
\text{[vP John proposed [VP Mary tᵥ [CP C}^0 \text{ [Sp/AdP Op₅} \oplus \text{Op₆} \text{ Sp/Ad}^0 \text{ [JussP Juss}^0 \text{[person: 1@2]} \ldots
\]

BINDING

There is one thing to be noted regarding the derivational steps above. As shown above in (85a-g), although the pair of operators Op₅⊕Op₆ behaves as a single unit, each of them should be bound by the closest argument. However, in addition to the locality constraint, there is a caveat: that is, the operator and its binder must match in their discourse role; otherwise, even if the operator is bound by the closest argument in the syntax, the derivation would crash at LF. That is, as represented in (85e), the embedded Op₆ must be bound by the indirect object Mary, since it is the closest argument and can serve as the addressee of the reported speech act. Likewise, the embedded Op₅ must be bound by the subject John, as in (85g), because it is the closest argument and can function as the speaker of the reported speech act.

Just as in the case of jussive subject and object control, overt material is permissible in the subject positions of complement clauses in the split control sentences, as in (86a,b). Note that the sentences are judged more natural by the native speakers if an adverbial phrase like susulo ‘for oneself’ is added.

\[
(86) \quad \text{a. John\text{-TOP Mary\text{-DAT they-NOM for.oneself problem-ACC}}}
\]
Let me briefly explain how my analysis captures the split control interpretation from these sentences in (86a,b) where the lower subject position is occupied by the third person plural pronoun \textit{kutul} ‘they’ and the plural LD anaphor \textit{caki-tul} ‘selves.’ Although I will not discuss them in detail, the derivational steps for (86a,b) are almost the same as those for (68c) with \textit{pro} as the lower subject, which are represented in (85). Since the person features of the third person pronoun and the LD anaphor are shiftable regardless of their number under the current analysis, the two sentences converge if the \textbf{Op$_s$\textsuperscript{\textcircled{⊕}}Op$_A$} in the lower Sp/AdP, which licenses the overt subjects, can be bound by the matrix subject and indirect object.

On the other hand, sentence (86c) is ungrammatical, though being almost identical with sentence (86b) except that the matrix subject is the first person pronoun. The ungrammaticality of (86c) can be explained in the same way as the ungrammaticality of (83c) in the previous subsection. There is no problem with the derivation for (86c) by the time the embedded Op$_s$ and Op$_A$ are bound by their respective antecedent, i.e., the matrix subject and indirect object. How-
ever, since the matrix subject is the first person pronoun, it must also be bound by the matrix Op$_s$ for licensing, as required by the Person Licensing Condition. Then, the ban on binding of the LD anaphor by the first person element in Korean makes the sentence ungrammatical, as the anaphor is already referentially linked to both the embedded Op$_s$ and the matrix subject *na ‘I’. Again, given that the contrast between (86b) and (86c) regarding the use of the LD *caki as the controllee is correctly predicted by my analysis, it can be concluded that the hypothesis that jussive control involves syntactic binding is on the right tract.

Finally, the same conclusion can be extended to the split control data in (87) where the embedded subject is the first person plural overt pronoun *wuli ‘we’. Note that as long as one of the controllers in the matrix clause is the first person pronoun, the sentence can be judged grammatical with the split control interpretation, as in (87a). However, if neither of the controllers is a first person element, the sentence turns out to be ungrammatical, as in (87b). This contrast between (87a) and (87b) conforms to the generalization drawn in 6.4.1 regarding the distribution of first person elements as the controllees.

\[(87)\]
\[
\begin{align*}
\text{a. Na}_i\text{-nun John}_j\text{-eykey [wuli}_i^+\text{-ka susulo mwuncey-lul} & \text{haykyelha-}\text{ca-ko] ceyanhay-ss-ta.} \\
\text{I-TOP John-DAT we-NOM for.oneself problem-ACC solve-EXH-COMP} & \text{propose-PAST-DECL} \\
\text{‘I proposed to John that we (I and John) would solve the problem for ourselves.’} \\
\text{b. *John}_i\text{-nun Mary}_j\text{-eykey [wuli}_i^+\text{-ka susulo mwuncey-lul} & \text{haykyelha-}\text{ca-ko] ceyanhay-ss-ta.} \\
\text{John-TOP Mary-DAT we-NOM for.oneself problem-ACC solve-EXH-COMP} & \text{propose-PAST-DECL} \\
\text{Intended: John proposed to Mary that we (John and Mary) would solve the problem} \\
\text{for ourselves.}
\end{align*}
\]

The observed contrast immediately follows from my analysis: that is, I suggest that the first person pronoun has the unshiftable 1st person feature as it refers to the speaker of the actual speech.
act, and thus, the embedded Op, binding the first person pronoun must also be bound by the matrix OpS. On the one hand, in (87a), the embedded OpS can be bound by the matrix OpS, since the matrix subject also has a first person feature to be bound by the operator to meet the PLC. The last derivational step for this sentence can be schematized as in (88a). On the other hand, in (87b), since both arguments in the matrix clause do not have a first person feature, neither of them can be bound by the OpS in the matrix clause, as illustrated in (88b). Therefore, there is no point where the embedded OpS can be referentially connected to the matrix OpS. Recall that on my analysis, proper names can be underspecified for person only in root jussive clauses; they are always specified for the person feature elsewhere.

\[
\begin{align*}
\text{a. } & [\text{Sp/AdP} \text{ OpS Sp/Ad0 } [\text{TP} T^0 [\text{vP} t_I \text{ proposed } [\text{VP} \text{ Mary } t_F] \text{ [CP C0 } [\text{Sp/AdP} \text{ OpS } \oplus \text{OpA } \ldots ] ] ] ] ] \uparrow \text{BINDING} \\
\text{b. } & [\text{Sp/AdP} \text{ OpS Sp/Ad0 } [\text{TP} John T^0 [\text{vP} t_{John} \text{ proposed } [\text{VP} \text{ Mary } t_F] \text{ [CP C0 } [\text{Sp/AdP} \text{ OpS } \oplus \text{OpA } \ldots ] ] ] ] \uparrow \text{*BINDING} \\
\end{align*}
\]

Once again, we can conclude that the hypothesis that syntactic binding is involved in jussive control is crucial in capturing the distribution of the first person pronoun as the overt controllee.

### 6.4.4 Some Consequences of the Proposed Analysis

This subsection discusses some consequences of the current analysis. First, recall that one of the conspicuous properties that distinguish the controlled \textbf{pro} in a jussive complement from the uncontrolled \textbf{pro} in a non-jussive complement is that the former type of \textbf{pro} must be controlled by a controller in a next higher clause, as shown by the contrast between (89a) and (89b) regarding the interpretive patterns of \textbf{pro}.
(89)  a. [CP₁ Bill-i-un [CP₂ John-i Mary-i-eykey [CP₃ proᵢᵣᵢᵤₖ hakkyo-ey  
ka-ma-ko] malhayssta-ko] sayngkakhayssta].
gogo-PRM-COMP thought
‘Bill thought that John told Mary that pro (John) would go to school.’

b. [CP₁ Bill-i-un [CP₂ John-i Mary-i-eykey [CP₃ proᵢᵣᵢᵤₖ enehak-ul  
sileha-n-ta-ko] malhayssta-ko] sayngkakhayssta].

dislike-PRES-DECL-COMP thought
‘Bill thought that John told Mary that pro (Bill/John) dislikes linguistics.’

Let me show how the contrast between these two sentences can be handled in my analysis. In (89a) where a promissive clause is embedded, the null subject acquires a first person feature by Agree with the Jussive head. Therefore, in order to meet the Person Licensing Condition (PLC), it must be bound by the Speaker operator (Op₃) in the lowest CP₃, which is selected by the verb of utterance in CP₂. This Op₃ should be bound by the closest argument in CP₂ immediately dominating CP₃, which can be the speaker of the reported speech act. Although the subject Bill in the highest CP₁ could do the same job, if the Op₃ in CP₃ were bound by it, the minimality principle (e.g., Rizzi’s (1990) Relativized Minimality) would be violated due to the presence of an intervening binder, John, in CP₂. Therefore, it is predicted that John, the subject of CP₂, is the one and only possible controller that can bind the Op₃ in the lowest CP₃. This prediction is confirmed by the interpretive pattern of pro in (89a). On the other hand, in (89b) where a declarative clause is subordinated, the Sp/AdP can in principle be projected in CP₃, as the clause is selected by the utterance verb which falls under the classes of context-shifting predicates. However, since there are no elements in CP₃ that bear first or second person features, the Sp/AdP is not required. Consequently, no minimality principle is operative in narrow syntax when the computational system determines the referent of the null subject in CP₃; instead, its referent will be chosen by the contextual information, so pro is interpreted in an ambiguous way in (89b).
Second, the current analysis makes a correct prediction that the derived subject by passivization can be the controller of the subject of an embedded imperative, as in (90).

(90)  

a. John_{i-un} Mary_{j-eykey} [pro_{j} hakkyo-ey ka-la-ko] myenglyenghay-ss-ta.  
John-TOP Mary-DAT school-to go-IMP-COMP order-PAST-DECL  
‘John ordered Mary that pro (Mary) would go to school.’

b. Mary_{i-nun} John_{j-eykeyse} [pro_{i} hakkyo-ey ka-la-ko]  
Mary-TOP John-from school-to go-IMP-COMP myenglyeng-pat-ass-ta.  
order-PASS-PAST-DECL  
‘Mary was ordered by John that pro (Mary) would go to school.’

As shown above, the null subject of the imperative complement is invariably construed as Mary in both sentences whether or not the matrix verb is passivized. This interpretive pattern can naturally follow from the current analysis: that is, in both (90a) and (90b), Mary is the only argument in the matrix clause that can bind the embedded OpA, since it is the closest argument and can function as the addressee of the reported speech. In (90b), the demoted agent appears to be closer to the embedded OpA, but it cannot syntactically bind the operator since it cannot c-command out of the PP.

Finally, it has been pointed out that although the clause type of a complement clause contributes to the controller choice, the matrix predicate also imposes the restrictions on the type of jussive complement embeddable under the predicate. For example, as shown in (91), repeated from Section 5.3.2 of Chapter 5, the promise-type verb cannot co-occur with the imperative complement, and the order-type verb cannot subordinate both the promissive and exhortative clause.

(91)  

a. *John_{i-un} Mary_{j-eykey} [e_{ij} hakkyo-ey ka-la-ko]  
John-TOP Mary-DAT school-to go-IMP-COMP
Given these data, we raised the following two questions in the same section:

1. Why is it the case that only a limited class of predicates can subcategorize a particular type of jussive clause?

2. How can we capture the restrictions imposed on the embedded jussive clause by the matrix predicate?

The first question can be answered if we carefully examine the meanings of both the matrix and embedded clause. Taking (91a) for example, if the verb *promise* is used, there must be a speaker who makes a promise of doing something. On the other hand, as discussed in Section 6.3, the imperative clause requires that there be an addressee whose To-do List can be updated by doing something denoted by the clause. Given this, if we are to combine the verb *promise* with the imperative clause, the person who makes a promise of doing something and the one who is being ordered to do something cannot be identical. Therefore, it can be said that whether a particular type of jussive clause can be subordinated under a certain class of control verbs depends on whether the discourse participant(s) required by the jussive complement is identical with the participant(s) performing the action denoted by the matrix verb. As for the second question, I suggest that the restrictions imposed by the matrix predicate on the complement clause can be ex-
plained in terms of what kind of operators can be selected by the matrix predicate. Recall from our discussion in 6.4.2 that in the embedded context, the possible range of available discourse participant operators is determined by the class that the matrix verb belongs to. The list of the possible operators selected by four classes of verbs is provided in (62) repeated below.

(62)   CLASS OF VERBS    SELECTED OPERATORS
a. Verbs of commitment (e.g., yaksokha- ‘promise’)   \{Op₈\}
b. Directive verbs (e.g., meynglyengha- ‘order’)   \{Op₆\}
c. Verbs of suggestion (e.g., ceyanha- ‘propose’)   \{Op₆\textcircled{\oplus}Op₆\}
d. Verbs of communication (e.g., malha- ‘say’)   \{Op₆, Op₆, Op₆\textcircled{\oplus}Op₆\}

Given this list, the reason for which (91a) is ungrammatical is that there is no operator in the Sp/AdP in the complement clause, which is able to bind the null subject with a second person feature. That is, the null subject in the imperative complement acquires the second person feature via Agree with the Jussive head. In order for the null subject to be licensed, it must be bound by the Addressee operator (Op₈) in Sp/AdP in the jussive complement. However, as listed above, the verb promise, which belongs to the verbs of commitment, can only select the Sp/AdP whose specifier is filled with the Speaker operator (Op₂). Consequently, the second person null subject fails to meet the Person Licensing Condition, explaining the ungrammaticality of (91a).

6.5 Similar Approaches

6.5.1 Gamerschlag (2007)
As mentioned in Chapter 3, Gamerschlag (2007) presents a comprehensive survey of control constructions in Korean. He particularly argues that Korean can be characterized as a language where the majority of cases of controller choice is semantically determined rather than structurally conditioned. To support this claim, his survey profiles a variety of control constructions in...
Korean. In particular, he correctly acknowledges the important role of (some of the) clause-typing markers in the controller choice. Nonetheless, there are some problems and issues in his data and analysis. I will go over the core data reported in his survey, focusing on those that are related to the jussive control constructions.

His survey is centered on obligatory control (OC) into complements in Korean, presenting three major environments where the OC dependency is available. First of all, according to Gamerschlag, the sentences in (92) are the only environment where controller choice is influenced by the structure of a complement clause. He argues that in these data, the matrix verb subcategorizes for a specific base form of the depedent verb, giving rise to subject control only.

\[(92)\]
\[
a. \text{John-} \text{un} \ [e_{i}\ast j \ i \ \text{nonmwun-ul} \ \text{ilk-e}] \ \text{po-ass-ta.} \\
\text{‘John tried to read the paper.’} \\
b. \text{Nai-nun} \ [e_{i}\ast j \ ttena-ko] \ \text{siph-ta.} \\
\text{I-} \text{TOP} \ \text{leave-GER} \ \text{wish-DECL} \\
\text{‘I wish to go.’} \quad \text{Gamerschlag (2007: 93)}
\]

However, as discussed in Chapter 3, it seems controversial if these two sentences can be treated as control sentences. Especially, it is unclear whether what he takes to be the matrix verbs are independent control predicates. For example, unlike jussive control sentences, the matrix and embedded clause cannot be independently modified by adverbs, as in (93a) and (93b). Furthermore, what appears to be a complement clause cannot be scrambled across the subject, as in (94a,b).

\[(93)\]
\[
a. \ast \text{John-} \text{un} \ [e_{i}\ast j \ i \ \text{nonmwun-ul} \ \text{ilk-e}] \ \text{philsacekulo} \ \text{po-ass-ta.} \\
\text{Intended: ‘John desperately tried to read the paper.’} \\
\text{try-PAST-DECL}
\text{try-PAST-DECL}
\]

\[(94)\]
\[
a. \ast \text{John-} \text{un} \ [e_{i}\ast j \ i \ \text{nonmwun-ul} \ \text{ilk-e}] \ \text{philsacekulo} \ \text{po-ass-ta.} \\
\text{Intended: ‘John desperately tried to read the paper.’} \\
\text{try-PAST-DECL}
\text{try-PAST-DECL}
\]
Given these facts, I am led to conclude that the constructions in (92a,b) are not genuine OC constructions but can rather be characterized as serial verb constructions, particularly, where the second V in the sequence of V₁-V₂ is an aspectual verb (cf. T. Chung (1993), S. Choi (2003), Sohn and Ko (2010)). Gamerschlag also argues that lyeko-clauses behave similarly to the complement clauses in (92a,b), in that they are infinitival clauses which are subcategorized for by a limited set of verbs to trigger OC interpretation. As discussed in Chapter 3, I agree with him on the view taking the lyeko-complements to be infinitival clauses (contra Madigan (2008b)), but they should be kept apart from the complement clauses in (92a,b), as the former yield positive results against the diagnostics applied above.

As for the second major environment for OC, Gamerschlag reports that either subject control or object control can arise if nominalized clauses or tolok-clauses are subordinated under inherent subject or object control verbs, as shown in (95) and (96), respectively. That is, he claims that since neither the nominalized complements nor the tolok-complements contribute to
the controller choice, the controller of the null subject is exclusively determined by the lexical
meaning of the matrix verb in both cases.

    Chelswu-TOP that thing-ACC do-REL NML-ACC regret-PAST-DECL
    ‘Chelswu regretted doing that’ Gamerschlag (2007: 88)
    Chelswu-TOP meat(-ACC) eat-NML-ACC refusing-PAST-DECL
    ‘Chelswu refuses to eat meat.’ Gamerschlag (2007: 97)

(96) theyleistu-i-nun incil-tul-eykey [e_i/*j/*k nwup-tolok]
    terrorist-TOP hostage-PL-DAT lie.down-COMP
    force-PAST-DECL
    ‘The terrorists forced the hostages to lie down’ Gamerschlag (2007: 92)

In order to explain the OC interpretations from (95)-(96) (as well as from (92)), Gamerschlag
(2007) adopts Farkas’s (1988) Principle of Controller Choice in (97). However, his analysis in
terms of this principle does not seem to work well for the data in (95a,b).

(97) PRINCIPLE OF CONTROLLER CHOICE (PCC)
    For RESP-inducing V’s, the controller of the infinitival complement is the argument
    linked to $i(V’)$m. Farkas (1988: 44)

According to this principle, the controller of the lower subject must be an initator of the situation
(or event) denoted by the embedded clause; especially, given the assumption that the embedded
situation is caused by the controller, the controller must have a responsibility relation with the
resulting situation (cf. Sec 5.5.2.2 of Ch 5 for detailed information about the notion of responsi-
bility). Although I have no comment on his analysis of (95a,b), the way he analyzes (96) seems
to have a problem. That is, for the sentence in (96), Gamerschlag (2007) basically takes the
similar position to Cormack and Smith (2004), in that the control dependency is encoded in the
meaning of the matrix verb. However, as pointed out in Chapter 3, Cormack and Smith’s semantic approach suffers from a technical problem in explaining backward control found in sentences with the *tolok*-complement like (99).

(99) John-un Mary-ka ttena-tolok sultukhayssta.
John-TOP Mary-NOM leave-COMP persuaded
‘John persuaded Mary to leave.’

a. John-un \textit{pro}$_{i}$ [Mary$_{j}$-ka ttena-tolok]$_{k}$ seltukhayssta.
John-TOP Mary-NOM leave-COMP persuaded
b. John-un [Mary$_{j}$-ka ttena-tolok]$_{k}$ \textit{pro}$_{i}$ $t_{k}$ seltukhayssta.
John-TOP Mary-NOM leave-COMP persuaded

Recall that under Cormack and Smith’s analysis, the null argument is treated as \textit{pro}, as in (99a), so scrambling must always apply to the *tolok*-complement in order to avoid a violation of Condition C, as in (99b). Gamerschlag comments that he does not fully commit himself to Cormack and Smith’s analysis in every aspect. Then, he could avoid the problem caused by the unjustified scrambling operation, but he still has to come up with an appropriate account for how the syntax distinguishes forward control from backward control with respect to the structural position of the controller and its Case form, etc.

The third major environment of OC discussed by Gamerschlag is illustrated in (100). He correctly observes that three distinct patterns of control interpretation, such as subject, object or split control interpretation, arise if the predicates are affixed by \textit{–keyss}, \textit{-la} and \textit{–ca} and they appear in clauses embedded under the utterance verbs or directive verbs, as in (100a)-(100c).

(100) a. Chelswu$_{i}$-nun Yenghi$_{j}$-eykey \textit{[e$_{i}$/j/*k naynyen-ey safari-yehayng-ul ha-keyss-ta-ko]} malhay-ss-ta.
C.-TOP Y.-DAT next.year-in safari-trip-ACC do-VOL-DECL-COMP say-PAST-DECL
‘Chelswu told Yenghi that he wants to go on a safari trip next year’
(100b) and (100c) are the same paradigms as the jussive control sentences discussed in this dissertation, especially, the object control and split control cases; notice, though, that he defines –la and –ca as the modal markers rather than the clause-typing markers and dubs the particle –ca the ‘propositive’ marker, not the ‘exhortative’ marker. Given the data in (100b,c), he draws the generalization in (101) about their interpretive patterns. However, as he also acknowledges, this cannot be a real analysis but nothing more than a generalization of the patterns.

(101) **SUBJECT OF IMPERATIVES AND PROPOSITIVES**

The imperative/propositive subject is determined out of the next-higher context. The next higher context is the situation of the utterance if the imperative/propositive appears in the main clause, and the matrix clause if the imperative/propositive appears in a clause embedded below a verb involving an utterance.  

Turning to the first data in (100a), he reports that the modal marker –keyss that expresses the speaker’s volition contributes to picking out the matrix subject as the controller (cf. D. Yang (1984, 1985), S. Kim (1994), Madigan (2008b)). His observation about the interpretive pattern of this sentence seems to be on the right track. Nonetheless, the way in which he analyzes it has some gaps to be filled in. That is, he first observes that in the root (and declarative) context, the subject of the volitional modal suffix –keyss is confined to the first person, as shown in (102a,b).
(102) a. Ce-nun an ka-keyss-eyo.
   I-TOP NEG go-VOL-ADD.HON
   ‘I don’t intend to go.’

b. *Chelswu-nun an ka-keyss-eyo.
   C.-TOP NEG go-VOL-ADD.HON
   Intended: ‘Chelswu does not intend to go.’

Gamerschlag (2007: 112)

According to him, this person restriction imposed on the subject that co-occurs with the volitional marker –keyss can be ascribed to the following constraint in (103).

(103) INNER STATE
    Unobservable inner states (psychological or sensory) can only be asserted about the own person.

Gamerschlag (2007: 113)

Notice, however that in (100a), the clause whose predicate is affixed by the volitional modal marker is embedded under the utterance verb. Therefore, the constraint in (103) does not work directly for the sentence in (100a). Gamerschlag argues that the null subject in the embedded clause can be coreferential with the third person subject in the matrix clause, because the person who utters the complement clause is the subject of the matrix clause, not the person who produces the entire clause. There seems to be nothing wrong with the claim itself. But he does not provide a formal analysis of how the null subject in the embedded clause in (100a) can acquire a person feature, and how its person feature can be interpreted with respect to the reported speech act, not the actual speech act. Note that the same criticism can also be extended to the sentences in (100b,c).

Besides, there is an additional issue related to the data in (100a-c). That is, because of the differences in their semantic function and syntactic distribution, it would make little sense to treat the sentence-final particles –la and –ca as modal markers, just like the volitional marker –keyss. From the semantic perspective, there would not be a problem to take the marker –keyss as
a modal marker, since its primary usage is to convey either the speaker’s volition (or willingness) if the subject is first person, as in (100) and (102), or the speaker’s (un)certainty about a proposition if the subject is other than first person, as in (104).

(104) a. John-i kongpwu-lul yelsimhi hay-ss-(u)nikka, pro/kulu-nun
    John-NOM study-ACC laboriously do-PAST-because he-TOP
    comprehensive exam-at pass-MOD-DECL
    ‘Since John has studied laboriously, (I think) pro/hei would pass the comprehensive exam.’

b. mekkwulum-i mahn-un-kes-ul po-nikka, pi-ka
    dark.cloud-NOM be.abundant-REL-NOML-ACC see-because rain-NOM
    kot o-keyss-ta.
    soon come-MOD-DECL
    ‘Seeing that there are a lot of dark clouds, (I think) it might rain soon.’

By contrast, it is not likely that –la and –ca function as the modal markers that can be used to express the speaker’s volition or epstemic attitude towards a proposition. Rather, they can be better defined as clause-typing markes since, for example, they provide the crucial information about the person of the subject of a property they combine with—that is, the addressee by –la and both the speaker and addressee by –ca in the root context.

The status of –la and –ca as the clause-typing markers can also be confirmed by their syntactic distribution: that is, they cannot co-occur with the other major clause-typing markers in Korean, such as the declarative –ta and interrogative –nya. By contrast, the volitional maker –keyss is able to co-occur with the declarative and interrogative markers. Given these differences with respect to the semantic functions and syntactic distributions, Gamerschlag’s analysis that attempts to unify the volitional marker –keyss with the clause-typing markers –la and –ca turns out not to be on the right track.
To sum up, Gamerschlag’s (2007) survey is very informative in that it profiles a variety of environments where OC relations are available in Korean. In particular, he correctly observes that the imperative marker –la and the propositive (i.e., exhortative) marker –ca play an important role in picking out the controller when they are attached to the verbal stems in the clause embedded under the utterance verb. However, he does not provide a formal account for the control patterns observed in the environment where the role of the certain verbal affixes is prominent, let alone in the other environments where the lexical meaning of the matrix arguably determines the control patterns in an exclusive way. Besides, the modal marker –keyss and the other two clause-typing markers are incorrectly treated in the uniform way.

6.5.2 Madigan (2008a,b)

Since Madigan (2008a,b) seems to be very close to the current analysis in many respects, it is worthwhile to overview his approach to jussive control in order to see how the two analyses differ. To begin with, the major claim made by Madigan (2008a) is that split control is an instance of obligatory control (OC). Madigan (2008a) is one of the few works (e.g., Landau (1999), Fujii (2006)) that makes such a claim, which is not congruent with the standard view on OC (e.g., Williams (1980), Martin (1996), Hornstein (1999), among many others). In support of this claim, he presents control constructions in Korean where the exhortative clause is embedded. Madigan (2008a) mentions that one of the most promising ways to capture the split control interpretation can be found in Pak’s (2004) analysis of jussive clauses in the root context, where the three jussive markers, –ma, –la and –ca, are taken to be a morphological realization of an Agree relation between the null subject, PRO, and a functional head, Addressee/Speaker0. But rather than pro-
In Madigan (2008b), he expands the scope of his study, investigating all three subtypes of jussive control in Korean (although he does not use the term ‘jussive control’), as well as a couple of other constructions. In particular, he provides a fine-grained syntactic and semantic analysis of how the controller choice is made in the Korean jussive control constructions. Outlining his analysis of the control interpretations in the three subtypes of jussive control, Madigan makes several assumptions based on Pak (2004) and Pak et al. (2006), an earlier version of Zabuttini et al. (2011). First, he assumes that as illustrated in (105), there is a functional projection, Addressee/SpeakerP (which is equivalent to Jussive Phrase in my analysis), on top of TP, and that the functional head, Addressee/Speaker\(^0\), establishes a syntactic agreement with the null subject PRO, making the former share their person features. The distinct sentence-final endings in the three subtypes of jussive clause are results of morphological Spell-Out of these features under the Addressee/Speaker head.

(105)  

Second, it is also assumed that since the person features are presuppositional, the first and second person features induce presuppositions of speaker or addressee, respectively; in particular, he defines the 1\(^{st}\) and 2\(^{nd}\) person feature as [+SPEAKER] and [+ADDRESSEE], respectively. Third, the
sentential force of each subtype of jussive clause is to update a To-do List of the relevant discourse participant.

Given these assumptions, Madigan (2008b) makes new proposals in order to derive OC readings not only in the three subtypes of jussive control constructions discussed here, but also in some other related control constructions in Korean, as in (106a,b) (drawn from Madgian (2008b) with some correction and modifications). A review of his core proposals is presented below, along with my comments on each proposal.

(106) a. Jwuhi-ka Hwun-eykey [PRO$_{i}$ chayk-ul ilk-keyss-ko]
   Jwuhi-NOM Hwun-DAT book-ACC read-VOL-DECL-COMP
   yaksokhay-ss-ta.
   promise-PAST-DECL
   ‘Jwuhi promised Hwun to read the book.’ Madigan (2008b: 218)

b. Hwun-i [PRO$_{i}$ chaky-ul ilk-ulye-ko]
   Hwun-NOM book-ACC read-INT-COMP try-PAST-DECL
   nolyekhay-ss-ta.
   ‘Hwun tried to read the book.’ Madigan (2008b: 222)

First of all, extending Pak et al.’s (2006) idea that the utterance verb is a context-shifter, he suggests that control predicates can function as the context-shifters. Thus, the 1$^{st}$ and 2$^{nd}$ person features on PRO and the Addresssee/Speaker head in the embedded context need to be interpreted as the speaker and addressee of the reported speech act. My analysis is in line with Madigan’s suggestion but in a bit more restrictive way. That is, as discussed in 6.2.4 and 6.4.3, control predicates taken to be the controller shifters are limited to three major classes, such as verbs of commitment (e.g., promise), directive verbs (e.g., persuade, order) and verbs of suggestion (e.g., propose). However, unlike Madigan, verbs like plan and try are excluded from the list of the context-shifters, since, for example, it does not seem appropriate to treat the subject selected by the verb nolyekha- ‘try’ as the speaker of the reported speech in (106b).
Secondly, according to Madigan (2008b), there are at least five distinct mood markers in Korean that create control environments, which he labels ‘Control Creating Markers (CCMs)’. The table in (107) lays out the inventory of the markers, the discourse roles of the subjects of verbs they combine with, and the available types of control interpretation. Note that he proposes to redefine ‘subject control’ and ‘object control’ as ‘speaker control’ and ‘addressee control,’ respectively. One motivation for this proposal has to do with the fact that the controllers of the null subjects of verbs that are combined with the five CCMs in (107) are construed as the discourse participants, such as speaker and/or addressee, of the reported speech act.

(107) Korean Control Creating Mood Markers (Madigan (2008b: 175))

<table>
<thead>
<tr>
<th>Mood Marker</th>
<th>Meaning (\rightarrow) Subject’s (\theta)-role/Discourse Features</th>
<th>Control Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>-keyss</td>
<td>‘Volitional’ (\rightarrow) Speaker</td>
<td>Speaker</td>
</tr>
<tr>
<td>-ma</td>
<td>‘Promissive’ (\rightarrow) Speaker</td>
<td>Speaker</td>
</tr>
<tr>
<td>-lye</td>
<td>‘Intentive’ (\rightarrow) Speaker</td>
<td>Speaker</td>
</tr>
<tr>
<td>-la</td>
<td>‘Imperative’ (\rightarrow) Addressee</td>
<td>Addressee</td>
</tr>
<tr>
<td>-ca</td>
<td>‘Propositive/exhortative’ (\rightarrow) Speaker &amp; Addressee</td>
<td>Split</td>
</tr>
</tbody>
</table>

Notice also that although both \(-keyss\) and \(-ma\) trigger ‘speaker control,’ he defines the meaning of the former as ‘volitional’ and that of the latter as ‘promissive.’ Given the assumption that the CCMs are the morphological realizations of the [+SPEAKER] and/or [+ADDRESSEE] features under Addressee/Speaker\(^0\), he specifically suggests that the marker \(-keyss\) is specified [+SPEAKER, +VOLITIONAL], while the marker \(-ma\) carries the [+SPEAKER] feature only. According to him, this is the way the grammar distinguishes between \(-keyss\) and \(-ma\), spelling out the necessary marker depending on the features encoded in Addressee/Speaker\(^0\). Likewise, since the null subject of the verb combined with the marker \(-lye\) also causes the same type of control as \(-keyss\) and
–ma, he characterizes the marker in terms of [+SPEAKER, +INTENTIVE] in an attempt to distinguish it from the other two subject control markers.

One of the issues that immediately arise regarding this idea is what the [+VOLITIONAL] and [+INTENTIONAL] features are; in other words, are they syntactic or semantic features? If the features are among what need to be transmitted to PRO by Agree in narrow syntax, they should be at least kind of formal features like person features. Even if this issue is put aside, his analysis that postulates [+VOLITIONAL] and [+INTENTIONAL] seems to confront some other issues. He is aware that Addressee/Speaker⁰ cannot include those features, since if it happens, the features should be transferred to PRO via Agree, but it is hard to find pronominal elements across languages that realize such features. To avoid this problem, Madigan suggests that the [+VOLITIONAL] and [+INTENTIONAL] features are base-generated under the head of Mood Phrase (abbreviated as MP), which is projected independently of Addressee/Speaker Phrase. The abstract derivations for –keyss and –lye are illustrated in (108a) and (108b), respectively.

(108)  a. Derivation for –keyss (in (106a))

Addressee/SpeakerP

MP

IP

PRO [+SPEAKER]

M [+VOLITIONAL]

Agree

Spell-Out –kyess

Madigan (2008b: 220)
The idea is that although Agree applies to PRO and Addressee/Speaker\(^0\) to which Mood\(^0\) has raised, only the [+SPEAKER] feature can be shared with PRO, while the combination of [+VOLITIONAL] or [+INTENTIVE] with [+SPEAKER] can be accessed to spell-out rules and realized as –\textit{keyss} or –\textit{lye} at PF. But it seems unclear to me how the computational system ensures that Agree selectively targets only part of the features carried by Addressee/Speaker\(^0\). Notice that by the time Agree takes place, the Mood head has already been adjoined to the Addressee/Speaker head, so not only [+VOLITIONAL] and [+INTENTIVE] but also [+SPEAKER] should in principle be accessible to the operation Agree.

Furthermore, it does not seem to be a right direction to postulate both Mood Phrase and Addressee/SpeakerP (again, which is equivalent to our Jussive Phrase) for sentences involving –\textit{keyss} and –\textit{lye}. In particular, he considers the MP as the locus where such features as [+VOLITIONAL] and [+INTENTIVE] are housed, but this line of analysis can be shown to be problematic for a couple of reasons. According to the standard analysis, MP is a functional category that contains the information about sentential mood such as declaratives or interrogatives, rather than the information about the person features of subjects (Ahn and Yoon (1989), Whitman (1989), Cinque (1999)). Indeed, whether a given sentence is a declarative or interrogative clause
does not entail that the subject of that sentence is volitional or intentive. Recall from our discussion in Chapter 5 that the marker –keyss has a dual function—namely, to express the speaker’s (un)certainty or the speaker’s volition (H. Sohn (1999) and references therein). Given that such functions are normally executed by modal auxiliaries in many languages, the marker –keyss can be better analyzed as a modal marker rather than something under Mood$^0$, the head typically associated with the sentential mood. In addition, the occurrence of –keyss is banned in jussive clauses, and this restriction imposed on the distribution of –keyss keeps us from postulating the Addressee/SpeakerP (i.e., Jussive Phrase in our terms) for the complement clause in (106a). For these reasons, I tentatively suggest that in the embedded clause of sentences like (106a), there is a Modal Phrase (ModP) under which –keyss is base-generated, and the phrase is present above the TP but below the MoodP the latter of which marks the sentence as a declarative clause with the particle –ta. In addition, the Speaker/AddresseeP (not the same as Madigan’s Addressee/SpeakerP) is present on top of MP, and the phrase has the speaker operator (OpS) in its specifier, which binds the first person subject. I will leave it open how the subject acquires the first person feature, but the alternative structure of the embedded clause of (106a) would look like the following:

(109) Speaker/AddresseeP  (cf. (108a))

```
OpS  Sp/Ad’
   |
MoodP Sp/Ad$^0$
   |
  ModalP Mood$^0$
     |
    TP  Mod$^0$
       |  -ta
      |
     pro[person: 1]
```
Turning to the marker \(-lye\), if we consider its distribution and function, it seems evident that the marker cannot be treated in the same way as the modal marker \(-keyss\). Notice that both markers are prohibited in jussive clauses, which means that there cannot be a JussiveP in (106a) and (106b). Furthermore, their distributions in non-jussive clauses diverge in a number of ways. First, the modal marker \(-keyss\) can co-occur with the declarative marker \(-ta\) or the interrogative marker \(-nya\), while the marker \(-lye\) cannot. Second, clauses containing the \(-keyss\) can be uttered without being embedded, but those with \(-lye\) must be subordinated. Third, the marker \(-keyss\) can be preceded by the past tense markers like \(-ess/-ass\), if it functions as the epistemic modal marker; on the other hand, the marker \(-lye\) can co-occur with the tense markers in no case. Because of these facts, I suggested in Chapter 3 that the clauses headed by the marker \(-lye(ko)\) should be defined as infinitival clauses, which cannot be independently typed due to the lack of the Mood Phrase or Jussive Phrase. To the best of my knowledge, no one has analyzed the marker \(-lye(ko)\) as a particle that provides direct or indirect information concerning the sentential mood of a clause. If the marker were generated under Mood\(^0\), as Madigan suggests, it should then be able to convey such information, which is not the case. Instead, I considered \(-lye(ko)\) as a complementizer that subordinates an infinitival clause, and argued that a plausible way to capture the subject control from sentences like (106b) is to view the control dependency as a residue of A-movement of the controller within Hornstein’s (1999, 2001, 2003) Movement Theory of Control. Note also that although Madigan splits \(-lyeko\) into the mood marker \(-lye\) and the (indirect) quotative marker \(-ko\), I followed the standard view of taking \(-lyeko\) as a single morpheme, which alternates with \(-lye\) (H. Sohn (1999)).

The third major proposal made by Madigan (2008b) which deserves some comments is concerned with the split control PRO. To capture the split control interpretation, he adopts the
feature [SUM] for PRO from Kratzer (2006), which is defined in (110a). Kratzer postulates this feature with other several features for the purpose of analyzing bound variable pronouns and minimal pronouns in a principled way. Following Kratzer, he assumes that PRO is a bound variable pronoun which enters a derivation with minimal feature specifications, and that it obtains its features via local chains of agreement with its antecedent. It is also assumed that PRO acquires its necessary features in a compositional way. With these assumptions, he presents the derivational steps in (110b) to derive the split control interpretation. Note that <e>, <e,e> and <e,<e,e>> indicate the semantic type of each lexical item.

(110) a. \([\text{SUM}] = \lambda x. \lambda y. x+y\) \hspace{1cm} <e,<e,e>>
b. \[
\begin{array}{c}
\text{DP} \\
\text{N = PRO}
\end{array}
\]
\[
\{[\text{SUM}], [1], [2]\}
\]
\[
\begin{align*}
[1] & = g(1) \\
[2] & = g(2) \\
[\text{SUM}] & = \lambda x. \lambda y. x+y \\
[N] & = [\text{PRO}] = [\lambda x. \lambda y. x+y] (g(1))(g(2)) \\
& = [\lambda y. g(1)+y] (g(2)) \\
& = g(1) \oplus g(2)
\end{align*}
\]

Madigan (2008b: 162)

Through these derivational steps, PRO ends up having a sum of the 1st person and 2nd person feature. Given the assumption that the control predicate is a context-shifter, the referents of PRO in the exhortative complement would be a sum of the speaker and addressee of the reported speech act. He argues that his analysis in terms of the [SUM] feature correctly predicts that the referents of the split control PRO are not a collective group (like the committee) but a set of two separate members, which is evidenced by the presence of the reciprocal selo ‘each other’ in (111). That is,
PRO in this sentence refers to a set of two separate antecedents, namely, \{Inho, Minswu\}, which he argues would not be easy to capture without recourse to the \([\text{SUM}]\) feature.

\begin{verbatim}
(111)  Inho-ka Misun-eykey [PRO_{i,j} selo top-ca-ko] ceyanhay-ss-ta.
      Inho-NOM Misun-DAT each.other help-EXH-COMP

‘Inho proposed to Misun to help each other.’

Madigan (2008b: 163)
\end{verbatim}

Notice that the same prediction can be easily made by my analysis couched within Pak et al. (2008) and Zanuttini et al. (2011), as the Jussive head in the exhortative complement is taken to enter the derivation with the sum of the first and second person feature, represented as ‘[person: 1 ⊕ 2].’ Furthermore, in 6.4, I made the hypothesis that jussive control involves syntactic binding, and suggested that in sentences like (111), the matrix subject and indirect object must bind the embedded Speaker operator (Op_s) and Addressee operator (Op_a), respectively. Especially, I argued that the contrast between (86b) and (86c), repeated below, lends support to the proposed analysis. But it will be shown shortly that the same contrast fails to be captured by Madigan.

\begin{verbatim}
(86)  b.  Johni-un Maryj-eykey [caki-tuli_{i,j}-i susulo mwuncey-lul
     John-TOP Mary-DAT self-PL-NOM for.oneself problem-ACC
     haykyelha-ca-ko] ceyanhay-ss-ta.
      solve-EXH-COMP propose-PAST-DECL
     ‘John proposed to Mary that selves (John and Mary) would solve the problem for themselves.’

 c. *Na_i-nun Maryj-eykey [caki-tuli_{i,j}-i susulo mwuncey-lul
    I-TOP Mary-DAT self-PL-NOM for.oneself problem-ACC
    haykyelha-ca-ko] ceyanhay-ss-ta.
    solve-EXH-COMP propose-PAST-DECL
    Intended: ‘I proposed to Mary that selves (I and Mary) would solve the problem for ourselves.’
\end{verbatim}
Although the plural LD anaphor *caki-tul* ‘selves’ is allowed as the subject of the exhortative complement, as in (86b), the substitution of the first person pronoun for one of the controllers renders the sentence ungrammatical, as in (86c). According to my analysis, the ungrammaticality of (86b) was explained by attributing it to a violation of the ban on binding of the LD anaphor by non-third person elements in Korean. That is, given that each of the matrix arguments is required to bind a relevant operator among $\text{Op}_S$ and $\text{Op}_A$ in the exhortative complement, the first person pronoun *na* ‘I’ must bind the embedded $\text{Op}_S$. As a result, the LD anaphor ends up being referentially connected to the first person pronoun in the matrix clause, which is prohibited in Korean.

By contrast, it seems that Madigan (2008b) has difficulty explaining the contrast between (86b) and (86c). Note that he takes the controlled subject in the jussive control constructions including split control to be PRO, which is known to be in a complementary distribution with the lexical subject. In fact, he correctly observes that a certain range of overt subjects are allowed in Korean control complements, and treats them as focus-marked elements that require independent constraints for their licensing—e.g., obligatory raising of the overt controllers to Spec, FocP above Addressee/SpeakerP, etc. Nonetheless, his analysis of the split control that utilizes the [SUM] feature has no way to discern the types of controllers—in other words, it fails to tell whether they are lexical NPs, pronouns or proper names, etc. Thus, on his analysis, if two individuals that saturate the [SUM] feature occupy the subject and indirect object position in the next higher clause, the split control interpretation should be available for the overt subject of an embedded exhortative, as long as the subject satisfies the constraints he suggests. Then, the sentence in (86c) is predicted to be OK with the split control interpretation, which is not the case. The same criticism can be carried over to his analysis of the other two subtypes of jussive control,
which I will not discuss any further here.

Finally, in order to capture the fact that jussive clauses are not arbitrarily combined with control predicates (e.g., an imperative clause cannot be subordinated under the promise-type verb), Madigan (2008b) first suggests that control predicates have different subcategorization properties listed below.

\[
\begin{align*}
(112) & \quad a. \text{promise-type:} & +\text{VOL}, \ast \text{IMP}, \ast \text{EXH} \\
& \quad b. \text{order-type:} & \ast \text{VOL}, +\text{IMP}, \ast \text{EXH} \\
& \quad c. \text{propose-type:} & +\text{VOL}, \ast \text{IMP}, +\text{EXH} \\
\end{align*}
\]

Madigan (2008b: 229)

The idea is that the subcategorization properties of each type of control verbs require that only clauses fitting in with those properties be subordinated. For instance, the reason that an imperative clause cannot be subordinated under the promise-type verb is that the clause does not match the selectional properties of the verb in (112a). But Madigan himself acknowledges that this account does not have a real explanatory value, so he suggests that the [+SPEAKER] and [+ADDRESEE] features on Addressee/Speaker\(^0\) should be further elaborated by combining them with three additional features like [±REQUIRED], [±VOLITIONAL] and [±INTENTIVE]. He defines each feature as follows:

\[
\begin{align*}
(113) & \quad a. \text{A +REQUIRED individual would be ordered or directed to do something (to update their To-do List). A –REQUIRED individual would not.} \\
& \quad b. \text{A +VOLITIONAL individual would have some volition over the action represented by the property on the updated To-do List. A –VOLITONAL individual would not.} \\
& \quad c. \text{A +INTENTIVE individual would intentionally perform the action represented by the property on the To-do List. A –INTENTIVE individual would not.} \\
& \quad \text{Madigan (2008b: 230)}
\end{align*}
\]

Given this, he attributes the impossibility of the combination of an imperative clause with the promise-type verb to the fact that the imperative marker –la could never serve to update the ad-
addressee’s To-do List in a *promise*-type context. In other words, the addressee in the *promise*-type contexts should be a –REQUIRED addressee, while the imperative –*la* requires a +REQUIRED addressee. Although this revised account sounds more appealing than the earlier account, it still raises some questions. The first question is whether these features are well motivated, just like the other discourse-related features like [SPEAKER] and [ADDRESSEE]. Although it makes sense to postulate such features from the viewpoint of pragmatics, it seems unclear if they can also be treated as syntactic features participating in syntactic operations. The related issue to this question is that if those features are on Addressee/Spaeker⁰, they should be shared with PRO as a result of Agree. Then, another question that comes into my mind is whether pronominal elements are attested in any languages, which spell-out those features along with the speaker or addressee feature. As discussed above, due to the same issue, Madigan himself points out that it would be problematic to postulate the [+VOLITIONAL] and [+INTENTIVE] features on Addressee/Spaeker⁰ for –*keyss* and –*lye*. By contrast, as shown in 6.4.3, my analysis accounts for the same kind of selectional requirements in a more principled way without stipulating such features as [REQUIRED], [VOLITIONAL] and [INTENTIVE]; the key components to the current analysis, such as Jussive Phrase, Speaker/Addresse Phrase, Speaker/Addressee operator, and Person Licensing Condition, etc., have already been shown to have their own independent grounds in the literature.

To summarize, although Madigan’s (2008a,b) analysis sounds similar to the current analysis at first blush, it has turned out that there are non-trivial differences in the proposals regarding several core issues. In addition, it has been shown that Madigan’s analysis confronts some empirical and conceptual problems, which could be avoided under the current analysis. For example, he uniformly treats not only the three jussive markers but also the modal marker –*keyss* and the subordinaror –*lye*, without considering their differences in the syntactic distributions and
semantic functions. The same problem does not arise for the current analysis, as they are separately treated according to the nature of their syntactic environments and are analyzed under different theoretical frameworks. In addition, although he correctly observes the availability of limited types of overt subjects, his analysis fails to rule out instances where the overt subject is controlled by an illegitimate antecedent, which would lead to a violation of independent constraints—e.g., the ban on binding of the LD anaphor by a non-third person element. But it can be correctly ruled out under my analysis that appeals to the hypothesis that jussive control involves syntactic binding. Finally, in an attempt to regulate the combinations of control verbs with jussive clauses, Madigan suggests that three more features such as [±REQUIRED], [±VOLITIONAL] and [±INTENTIVE] should be added on Addressee/Speaker. However, it turned out that it is problematic to assume that these features are accessible to syntactic operations like Agree, given that no languages are known to have overt pronouns which are specified, for example, [+SPEAKER, -REQUIRED] or [+ADDRESSEE, +REQUIRED].

6.6 Conclusion

This chapter has examined jussive control constructions in Korean, which are exemplified in (114a-c). The hallmark of these control constructions is that the type of control is tightly correlated with the type of embedded clause, which is very rare across languages: that is, subject control arises if a promissive clause is subordinated, as in (114a); object control is caused if an imperative clause is embedded, as in (114b); and split control is made possible if an exhortative clause is complemented, as in (114c).

(114)  a. SUBJECT CONTROL
John,un Mary,j-eykey [e[+$j hakkyo-ey ka-ma-ko] yaksokhay-ss-ta.
John-TOP Mary-DAT school-to go-PRM-COMP promise-PAST-DECL
Another peculiar property of the jussive control constructions is that a certain range of overt elements are allowed as the subjects of complement clauses. As discussed in Chapter 5, these two properties preclude us from adopting any of the previous approaches to control, which include the standard PRO Theory of Control (Chomsky (1981), D. Yang (1984, 1985)), the null Case approach (Chomsky and Lasnik (1993), Martin (1996), O’Neil (1996)), the Agree-based approach (Landau (1999, 2004, 2006), and the Movement Theory of Control (Hornstein 1999, 2001, 2003)), etc. Furthermore, the semantic approaches surveyed in that chapter (Chierchia (1984/1988), Farkas (1988), Sag and Pollard (1991)) fail to explain the split control interpretation in (114c).

In order to capture these unique properties of the jussive control constructions in Korean, this chapter has made a thorough investigation into the syntax and semantics of jussive clauses in both matrix and embedded contexts. In particular, I have aimed to address the following three major issues, which any successful analysis of the jussive control constructions should be able to answer.

(2) a. What licenses controlled subjects? (Syntactic environments (or Licensing condition))
b. What are controlled subjects? (Categorial status of controlled elements)
c. How are controllers determined? (Controller choice)

In order to develop an analysis by which these questions can be properly answered, I made several assumptions based on Pak (2006), Pak et al. (2007, 2008) and Zanuttini et al. (2011). First, there is a functional category, Jussive Phrase, which is projected only in jussive clauses in both root and embedded contexts. Second, it is not the subject of a jussive clause but the Jussive head which enters a derivation with valued person features. In particular, the Jussive head undergoes Agree (in Pesetsky and Torrego’s (2007) sense) with the subject in person, and as a result, the person features of the former are inherited to the latter. The evidence for the presence of the Jussive Phrase, as well as the Agree relation between its head and the jussive subject, comes from the cross-linguistic fact that subjects, lexical or null, in imperative clauses can bind second person pronouns inside VP. We saw that the same conclusion holds true of the other two subtypes of jussive clauses, promissives and exhortatives, as these two types of clauses are minimally different from the imperatives only in the person features of subjects. Third, I also assumed that person features are presuppositional (cf. Cooper (1979), Heim and Kratzer (1998), Schlenker (2003)); in particular, the 1st person feature presupposes the speaker of the context, the 2nd person feature the addressee, and the sum of the 1st and 2nd person feature the sum of the speaker and addressee. In addition to these assumptions, capitalizing on Baker’s (2008) theory of 1st and 2nd person agreement, I suggested that another functional projection, Speaker/AddresseeP (Sp/AdP), is present right above the JussiveP, and that a Speaker operator (OpS) and/or Addresssee operator (OpA) are housed in the specifier position of the Sp/AdP. The subjects of jussive clauses that have acquired a 1st and/or 2nd person feature must be bound by a relevant discourse participant operator for licensing: that is, the promissive subject must be bound by the OpS, the imperative subject by the OpA, and the exhortative subject by both the OpS and OpA.
Given these assumptions, I argued regarding the question in (2a) that controlled subjects in jussive control constructions can be properly licensed only if they meet Baker’s (2008) Person Licensing Condition (PLC), which requires that a DP be bound by the closest speaker or addressee operator (or the closest first or second person element) to serve as the first or second person pronoun. In order to meet this condition, they should participate in two syntactic relations: first, they must enter an Agree relation with the Jussive head which makes them acquire 1st or 2nd person) features from the latter; second, they must be bound by an appropriate operator, OpS or OpA. In addition, the jussive complements should have the [FUTURATE] feature on T0 (cf. Stowell (1982), Martin (1996), O’Neil (1996), Bošković (1997) for English control complements). It forces the complement clause to have unrealized tense with respect to the matrix event. Concerning the issue of the categorial status of controlled subjects in (2b), they are taken to be pro, which enables us to correctly predict the availability of lexical subjects in jussive complements.

As for the last issue concerning controller choice in (2c), I offered a syntactic account for how the subject with a first or second person feature in a jussive complement can be construed as the matrix subject and/or indirect object. However, since the subject appears in a jussive complement, the first and second person feature borne by the subject cannot be construed as the speaker and addressee of the actual utterance, respectively. Thus, extending the idea advanced by Pak et al. (2007, 2008) and Zanuttini et al. (2011), I suggested that just like attitude verbs, three typical classes of control predicates (promise-type, persuade-type and propose-type) are context-shifters, making the first and second person feature interpreted as the speaker and addressee of the reported speech act. Furthermore, drawing on Baker’s (2008) syntax-based approach to shifting indexicality, I proposed that a Speaker or Addressee operator is projected not only in root clauses but also in jussive complements. What distinguishes the operators in the
root context and those in the embedded context lies in how they get their reference: that is, the former get the reference from the actual speech context, while the latter need to get the reference from the next higher clause. In order to capture this difference, I argued that the $\text{Op}_s$ or $\text{Op}_a$ in the jussive complement, which binds the subject with a first or second person feature, must be bound by the closest matrix argument. Crucially, I made the hypothesis that the nature of binding that links the embedded subject to the embedded operator, as well as that of binding that connects the embedded operator to the matrix argument, is syntactic. Besides, I proposed that the range of available discourse participant operators in the embedded Speaker/AddresseeP (Sp/AdP) is determined by the class of matrix verbs: that is, the Sp/AdP with the $\text{Op}_s$ is selected by verbs of commitment (e.g., *yaksokha*- ‘promise’), the Sp/AdP with the $\text{Op}_a$ by directive verbs (e.g., *seltukha*- ‘persuade’), the Sp/AdP with the $\text{Op}_s \oplus \text{Op}_a$ by verbs of suggestion, and the Sp/AdP allowing for all three kinds of operators by verbs of utterance (e.g., *malha*- ‘say’). If my analysis proposed in this chapter is correct, we can draw the conclusion that the OC dependencies in the Korean jussive control constructions, which include subject control, object control and split control, can be reinterpreted as an instance analogous to a shift in indexicals found in many languages.

Finally, I showed that my analysis of the jussive control constructions brings about a number of consequences. To repeat some of them here, first, it immediately follows why *pro* in jussive control contexts must have its controller in the next higher clause, but not *pro* in non-jussive contexts. That is, under my analysis, *pro* in a jussive complement is destined to have a 1\textsuperscript{st} or 2\textsuperscript{nd} person feature as a result of Agree with the Jussive head; thus, it is required that a Sp/AdP be present in the jussive complement, which hosts the $\text{Op}_s$ or $\text{Op}_a$. But since these operators must be bound by the closest argument that can serve as the speaker or addressee of the re-
ported speech act, arguments that are not in the next higher clause cannot bind the operators. On the other hand, pro in non-jussive clauses enters a derivation with its person features valued, and does not always bear 1st or 2nd person features. This means that the presence of Speaker/AddresseeP and Op₆ or Op₇ is not obligatory, either. Consequently, the non-jussive pro is free to obtain its referent from the given context. Second, it can be clearly shown by my analysis why the type of control keeps unchanged even if the matrix clause is passivized in jussive object control contexts. For example, even when the matrix predicate seltukha- ‘persuade’ is passivized in (114b), the controller of the null subject is invariably Mary. According to my analysis, the operator which licenses the embedded subject with the 2nd person feature is Op₇, and it must also be bound by the closest matrix argument that can function as the addressee of the reported speech act. Since it is only the derived subject, Mary, that can do this job, it follows that the derived subject should be picked out as the controller. Third, why only a limited range of overt elements are allowed in the subject position of embedded jussives can be explained effectively. For instance, the LD anaphor caki is basically allowed in the subject position of an imperative complement, but it cannot have the first person pronoun as its controller. This is because if the addressee operator (Op₇) that binds the LD anaphor is bound by the first person pronoun, the ban on binding of the LD anaphor by the non-third person pronoun would be violated. Lastly, why there are restrictions on the combinations of the class of control verbs with the type of jussive clauses can receive a straightforward account, without stipulating unjustified features of the kind suggested in Madigan (2008b) (e.g., [+REQUIRED], [+INTENTIVE], etc.). For instance, the persuade-type predicate fails to subordina te a promissive clause. According to the current analysis, the subject of the promissive clause must be bound by the Op₄ for licensing. On the contrary, the persuade-type can only select for the Op₅ to be hosted in the embedded Spec, Speak-
er/AddresseeP. Therefore, the subject in the promissive complement can never have a chance to be bound by the relevant operator, which runs foul of the PLC.
Chapter 7 Conclusion

7.1 Conclusion

This dissertation has investigated two complement control constructions in Korean, namely infinitival control and jussive control constructions. These two constructions either have been incorrectly analyzed or have received little attention in the literature, and a careful examination of the two constructions turned out to be very suggestive to the theory of control. Specifically, the results of the investigation demonstrated that controlled subjects may not form a homogeneous group even within a language, and their categorial status varies depending on the syntactic structure of the complement where they appear. Therefore, it was shown that no approach attempting at treating the two constructions in a unified way is tenable (e.g., S. Kim (1994), Madigan (2008b)). For this reason, this dissertation advanced different lines of analyses in order to capture the control patterns arising in the two control constructions.

As for the first major control constructions where clauses headed by the complementizers –kilo, -lyeko, -koca and –tolok are embedded, I showed in Chapter 3 with the newly suggested diagnostics that these clauses can be best characterized as infinitival complements; and that functional projections like Mood Phrase, traditionally assumed to encode clause types, is absent. In addition, it was demonstrated that the four infinitival complements should have unrealized tense with respect to the matrix clause, which is not found in other similar constructions like the Raising-to-Object construction. Then, within the framework of Movement Theory of Control (Hornstein (1999, 2001, 2003)), I argued that the control dependencies in the infinitival control constructions can be derived by A-movement of a controller for θ-feature checking. Accordingly, it was concluded that what was previously known as PRO is the copy left behind
by the movement of the controller. One immediate virtue of this analysis is to capture backward control available in the *tolok*-control construction where the controlling element is in a structurally lower position than the controlled element. I showed that this type of control, which is typologically rare, resists any analysis that assumes the presence of PRO, but the movement approach, combined with some mechanisms for chain linearization, readily accounts for this type of control. Monahan’s (2003) analysis of the backward control case in Korean is similar to mine, as both adopt some core assumptions from the Movement Theory of Control. However, since Monahan’s analysis encountered a few problems, I suggested that Chain Reduction, a PF deletion operation for chain linearization, can apply in a cyclic manner in the backward control case, so that we can avoid the same problems.

In Chapter 4, I also examined the Raising-to-Object (RTO) construction that appears to pattern with the *tolok*-control construction in that both constructions allow the lower subject or controller DP to exhibit Case alternations. A number of researchers have already maintained that the Case alternations in both constructions are the reflex of the structural positions of the Case-alternating DPs. However, it has received little attention that remnant scrambling leads to bifurcating results for the two constructions. At first blush, this asymmetry appears to be a challenge for the movement view on control, but I showed that it can be accounted for under a derivational model by elaborating the definition of Chomsky’s (2000, 2001a,b) notion of phase. One important theoretical consequence of my analysis is to eliminate Fiengo’s (1977) Proper Binding Condition.

Turning to the jussive control constructions, Chapter 5 was devoted to showing that the subordinate clauses in these constructions are embedded jussive clauses whose subtypes are promissives, imperatives and exhortatives, and that they are OC complements. In Chapter 6, it
was demonstrated that there are reasons to believe that the controlled subjects are pro; one strong piece of evidence comes from the fact that subjects in imperative clauses can also be occupied by a limited class of overt elements across languages and they do not allow for generic interpretations. In addition, the suggested diagnostics for distinguishing finite from infinitival clauses showed that the embedded jussive clauses cannot be identified with the infinitival complements. Thus, we reached the conclusion that it is hard to extend the movement approach to the jussive control constructions. Instead, drawing on Pak et al. (2007) and Baker (2008), I argued that the control dependencies in the jussive control constructions are instances of a shift in indexicality, a phenomenon found in many languages. In order to technically implement this idea, I assumed with Pak et al. (2007, 2008) and Zanuttini et al. (2011) that the subject without a valued person feature undergoes Agree in person with a functional head, Jussive. In addition, extending Baker (2008), I suggested that in both root and embedded jussive clauses, there is a discourse participant operator in the Speaker/Addressee Phrase, and the subject that has acquired a 1st or 2nd person feature must be bound by the relevant operator for licensing. However, it was further suggested that in the embedded jussive clauses, these operators need to be bound by the matrix argument(s), which explains how the null subjects can get their reference. Underlying this suggestion is the hypothesis that the control dependencies in the jussive control constructions involve syntactic binding; this hypothesis enables us to explain why only a limited class of antecedents can control overt subjects in the jussive complements. I also suggested that the range of available operators is determined by the class of matrix verbs. One important consequence of this suggestion is that we can explain why only a certain class of predicates can be combined with a particular type of jussive clause.
All in all, the findings of this dissertation lead us to draw the conclusion that PRO is not necessary in our grammar, and that control at least in Korean may not be viewed as a uniform phenomenon, which requires us to develop different lines of analyses for different constructions.

7.2 Residual Issues

Notice, however, that there are three prominent issues that need to be examined in the future. First of all, I claimed in Chapters 5-6 that jussive complements cannot be defined as infinitival clauses. But I have not yet clearly explained exactly how the jussive complements can be defined—in other words, are they finite clauses, or something else?

Second, as mentioned in Chapter 2, although English allows for split antecedent control, it is reported that there is variation in judgment among the native speakers of English (Hornstein (2009)). By contrast, as discussed in Chapter 5, just as in the case of Korean, the same type of control is consistently accepted by the native speakers of Japanese. Then, one can ask the question of what brings about the typological difference between English (and other Indo-European languages) and Korean/Japanese with respect to the availability of split control. For now, given that the latter type of languages has overt clause-typing (or mood) markers, I am speculating that whether or not a language has morphologically realized mood markers influences whether the language allows for it.

Finally, notice that complement clauses in the two constructions investigated here can in fact be alternated with nominalized clauses headed by the nominalizer – kes, as in (1) (cf. N. Kim (1985)).

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1 Peter Sells (p.c.) also pointed out to me that the similar data can be found in Martin (1992). Thanks to him for the helpful resource.
(1) a. John-un Mary-eykey i [e]i ttena-l-kes]-ul yaksokhayssta.
   John-TOP Mary-ACC leave-FUT-NOML-ACC promised
   ‘John promised Mary to leave.’

   John-TOP Mary-ACC leave-FUT-NOML-ACC persuaded
   ‘John persuaded Mary to leave.’

   John-TOP Mary-ACC together leave-FUT-NOML-ACC proposed
   ‘John proposed to Mary to leave together.’

Then, the question that immediately arises is what the categorial status of the null subject. It
seems hard to consider the null subject as an A-trace, since nominalized clauses are normally
taken to be a syntactic island. According to the system proposed in this dissertation, if the
controlled subject is not an A-trace, it should be pro. If it were pro, how could it find its
reference? Notice that since the nominalized clauses cannot be identified with jussive clauses, it
would seem difficult to extend the analysis proposed here. But since I have no clear answers to
these questions, I will leave this issue open for future research (cf. Hornstein’s (2001) for
discussion of the possibility to extend the movement approach to the nominalized control
constructions).
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554


