Overt Subjects in Obligatory Control Constructions in Korean

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1. Introduction

It has been reported in the literature that Korean is one of the languages where overt elements can appear in the subject position of control constructions (Yang, 1985; Madigan, 2008; Lee, 2009: a.o.). This paper investigates the properties of overt subjects in Korean obligatory control constructions (e.g., pronouns and long-distance anaphors) in comparison with the null subject. Focusing on the obligatory de se interpretations of the (null and overt) subjects in obligatory control constructions, I also present novel observations about the interaction between the controlled subjects and another de se element, the long-distance reflexive caki, in Korean. Based on the differences between the null and overt controlled subjects, I show that lexical subjects in control complements are not merely an overt form of PRO. Rather, I propose that an overt element can appear in the controlled subject position in Korean if and only if (i) it can be used as a bound variable and (ii) its own binding conditions (if there are any) are satisfied. Moreover, I argue that the obligatory de se interpretation of the controlled subjects and the long-distance reflexive in Korean are derived from the same mechanism, following the property analysis of de se ascriptions (Lewis, 1979; Chierchia, 1989; Percus & Sauerland, 2003; Pearson, 2013: a.o.).

The structure of this paper is as follows. In section 2, I present data concerning similarities and differences between null and overt controlled subjects. Section 3 provides novel data on how controlled subjects interact with another de se element in the same clause. In section 4, I discuss a unified analysis of controlled subjects based on structural conditions of obligatory control complements and the property analysis of de se. Section 5 concludes.

2. Overt subjects in obligatory control constructions

2.1. Obligatory control properties of overt subjects

Obligatory control (henceforth, OC) environments in Korean can be formed by a combination of certain embedding predicates and mood markers in the embedded clause or some special complementizers (Yang, 1985; Borer, 1989; Madigan, 2008; Lee, 2009: among others). For instance, an obligatory subject control construction is created by an embedding predicate like yaksohkata ‘promise’ and a volitional modal -keyss, while an obligatory object control construction is formed with an imperative mood marker -la along with an embedding verb like myenglyenghata ‘order’, as illustrated in (1). The embedded null subject must co-refer with the matrix subject Tom in (1-a) and with the matrix object Bill in (1-b).

(1) a. Subject Control: Volitional -keyss + yaksohkata ‘promise’
   Tom-NOM Bill-DAT PRO Mary-ACC meet-VOL-DECL-COMP promise-PST-DECL
   ‘Tomi promised Billj, PROi/sj to meet Mary.’

b. Object Control: Imperative -la + myenglyenghata ‘order’
   Tom,-i Bill,-eykey [PROsi/j Mary-lul manna-la-ko] myenglyenghay-ss-ta.
   Tom-NOM Bill-DAT PRO Mary-ACC meet-IMP-COMP order-PST-DECL
   ‘Tomi ordered Billj PROsi/j to meet Mary.’

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1 Abbreviations in the glosses include the following: ACC = accusative; COMP = complementizer; DAT = dative; DECL = declarative; GEN = genitive; IMP = imperative; NOM = nominative; PST = past; TOP = topic; VOL = volitional.

There is a widespread consensus in the literature that OC exhibit certain properties, such as no arbitrary control, no long-distance control, only sloppy readings under ellipsis, and obligatory de se readings (Hornstein, 1999; Landau, 1999). The constructions like (1) in Korean indeed exhibit these OC properties (Madigan, 2008; Lee, 2009).

In addition to the null subject, overt lexical subjects such as pronouns and anaphors can also appear in OC constructions in Korean (Yang, 1985; Madigan, 2008; Lee, 2009; Park, 2011: a.o.). For example, in the subject control sentence in (1-a), the third person pronoun or the long-distance (henceforth, LD) reflexive caki can replace PRO, as shown in (2). By contrast, lexical referential DPs cannot be used in the subject position of control constructions (Lee, 2009).

(2) Pronouns and the LD reflexive caki as an OC subject

John,un[kTom,j-i Bill,k-eykey[PROs1/j/sk/kus1/j/sk/kcaki,s1/j/sk/*Sue)-ka Mary-lul
John-TOP Tom-NOM Bill-DAT PRO/he/self/Sue-NOM Mary-ACC
meet-VOL-DECL-COMP promise-PST-DECL-COMP believe
Lit. ‘Johni believes that Tomj promised Billk [PROs1/j/sk/he/s1/j/sk/ he/*Sue to meet Mary].’

The overt controlled subjects behave like the null subject PRO in the OC complement in that (i) they must be controlled by an argument in the immediately embedding clause (e.g., Tom (but not John) in (2)), and (ii) they must be interpreted de se. Thus, the sentence in (2) with either the null or overt subject is only felicitous in a context in which Tom makes a promise to Bill using the first person pronoun, e.g., “I will meet Mary.” These OC properties of the controlled pronouns or controlled LD caki are distinct from the typical properties of these elements in non-control constructions in a number of ways. First, the third person pronoun can normally be used as a free variable and receive either a (non-de se) de re or de se reading. Second, the LD reflexive caki can have any long-distance antecedent that c-commands it when it is not controlled. The contrasts between the controlled and non-controlled pronouns or caki show that the interpretations of the pronoun and LD caki are restricted in a similar way only when they appear in the OC construction, indicating that the OC properties of the overt subjects may be attributed to certain structural properties of OC constructions instead of the inherent properties of the OC subjects.

2.2. Overt OC subjects ≠ overt forms of PRO

Given that the LD reflexive caki behaves like PRO in the OC subject position, one may argue that the controlled LD reflexive is merely an overt form of PRO in OC constructions (e.g. Madigan, 2008). However, as Lee (2009) points out, caki and OC PRO are not always interchangeable. One of the basic properties of the LD reflexive caki is that it cannot have a first or second person pronoun as its antecedent. This person restriction must hold even when caki is used as an OC subject. Thus, caki cannot be used as an overt OC subject when a controller is either the first or second person pronoun (Lee, 2009). Moreover, it has been reported in the literature that caki cannot replace PRO in the object control construction (Yang, 1985; Lee, 2009), due to its own binding conditions. That is, in contrast to the English-type anaphors, the reflexive caki cannot co-refer with a c-commanding non-subject element (i.e., subject-orientation), and this restriction appears to be maintained in the OC subject position as well.

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2 In addition, there are other elements that can appear in the controlled subject position in Korean, such as a LD reflexive casin and a local anaphor cakicasin.

3 Throughout this paper, I use the term ‘LD caki’ to mean the long-distance reflexive caki.

4 Madigan (2008) reports that his consultants allow object control with caki in the subject position of the control complement. However, I agree with the judgment reported in Lee (2009) (see fn.80, p.177) that caki in the object control construction can only be understood as a discourse pronoun ‘you’ rather than an anaphor.
(3) No first or second person controller for *caki*

Na, nun Bill, eykey [PROᵢᵢ/j/cakiᵢᵢ/j/naᵢᵢ/j-ka Mary-lul manna-keyss-ta-ko]
I-TOP Bill-DAT PRO/self/I-NOM Mary-ACC meet-VOL-DECL-COMP
yaksokha-ess-ta.

Lit. ‘I promised Bill ḳPROᵢᵢ/j/selfᵢᵢ/j/Iᵢᵢ/j to meet Mary.’

(4) No object control with *caki*

Tomᵢ-i Billᵢᵢ/j-eykey [PROᵢᵢ/j/kuᵢᵢ/j/cakiᵢᵢ/j-ka Mary-lul manna-la-ko]
Tom-NOM Bill-DAT PRO/he/self-NOM Mary-ACC meet-IMP-COMP
myenglyenghay-ss-ta.

Lit. ‘Tom ordered Bill ḳPROᵢᵢ/j/heᵢᵢ/j/selfᵢᵢ/j to meet Mary.’

In summary, we have examined the properties of overt OC subjects, such as the pronouns and the reflexive *caki*, in Korean both in comparison to the null subject PRO and to the non-controlled pronouns and *caki*. In the OC subject position, even the pronouns get an obligatory de se interpretation and the LD reflexive *caki* can only be controlled by a local controller. It is hard to assume, then, that these OC properties of the controlled pronouns or *caki* are the inherent lexical properties of these elements. Rather, it would be more plausible to assume that these OC properties are imposed by certain structural properties of OC constructions. We have also seen that the controlled *caki* preserves its basic properties, such as its third person feature and subject orientation. Therefore, the LD reflexive *caki* cannot be used as an OC subject when a controller is the first or second person pronoun or when a controller is in a non-subject position (e.g. object control constructions).

3. OC PRO/controlled pronouns vs. controlled LD *caki*

In the previous section, we saw that although the LD reflexive *caki* can replace PRO in OC constructions, they are not always interchangeable due to the inherent properties of *caki*. In this section, I will present more novel data on the difference between the OC subjects—PRO and controlled pronouns on the one hand and controlled LD *caki* on the other—with respect to their interactions with another de se element in the same clause.

The LD reflexive *caki* in Korean must receive an obligatory de se interpretation in attitude environments, regardless of its position (e.g., subject or object) or the type of complements (e.g., control or non-control). Although the obligatory de se interpretations of PRO and long-distance reflexives in many languages have received considerable attention, the interaction of these two different de se elements (when they co-occur in the same clause) has not been fully discussed. Interestingly, OC subjects do not interact with a clausemate LD *caki* in the same way.

First, if the OC subject is PRO or an overt pronoun, a clausemate *caki* does not have to be coreferential with the OC subject under multiple embeddings.

(5) Between PRO/controlled pronouns and LD *caki*

John-TOP Bill-NOM PRO/he-NOM self-GEN house-to go-VOL-DECL-COMP
yaksokhayssta-ko] sayngkakhayssta.

promised-COMP thought

‘Lit. John thought that Bill promised [PRO/heᵢᵢ/j to go to selfᵢᵢ/j’s house].’

The OC subject and *caki* must be interpreted de se with respect to their referents, respectively, in (5) even when they are not coreferential. In other words, the disjoint reading of PRO (or the controlled pronoun) and *caki* in (5) can only be obtained in the following situation: Bill said, ‘I will go to John’s house’, while John thought, ‘Bill promised that he will go to my house.’ Contrary to the disjoint reading
of PRO/controlled pronouns and LD caki, multiple clausemate LD cakis need to be coreferential, as illustrated in (6). Thus, the disjoint reading of PRO and caki in (5) may be unexpected if one assumed that the two elements are the same type of de se element. Given this, our first key question regarding PRO and LD caki is whether the obligatory de se construals of these two types of elements arise via the same or different mechanisms.

(6) Multiple clausemate LD cakis

John-i [Bill-i [caki-uy emmeni-ka caki-lul silhehanta-ko] sayngkakhanta-ko]
malhaysta.
said
a. ‘John, said that Bill thought that his mother hates him,’
b. ‘John, said that Bill thought that his mother hates him,’
c. *‘John, said that Bill thought that his mother hates him,’
d. *‘John, said that Bill thought that his mother hates him,’

Second, if the LD reflexive caki is used as an OC subject, it must co-refer with a non-controlled LD caki appearing in the same clause, which is in contrast to the PRO/controlled pronouns but identical to the multiple non-controlled LD cakis. Since the controlled caki can only refer to the local controller Bill in (7), the clausemate LD caki must also find the same referent as its antecedent.

(7) Between controlled and non-controlled cakis

John,un [Bill,-i [caki,si/j-ka caki,si/j-uy cip-uloso ka-keyss-ta-ko] yansokkakhssta-ko]
sayngkakhayssta.
thought
‘Lit. John, thought that Bill promised [self to go to self’s house.’

We already saw that PRO and LD caki need not be coreferent, whereas multiple LD cakis in the same clause must be. The controlled caki, then, behaves like the non-controlled caki with respect to the interaction with another clausemate LD caki. On the other hand, the controlled caki also exhibits the PRO-like property in terms of the obligatory local control. This dual property of the controlled caki is puzzling and requires explanation.

To summarize, the data presented in this section suggest that (i) not every de se element (OC subjects vs. LD caki) behaves identically in Korean, and (ii) not every OC subject exhibits the same property, especially with respect to their interactions with another LD caki in the same clause, although they share some properties in common (e.g., local control and obligatory de se interpretations). The complete properties of PRO, (non-)controlled pronouns, and (non-)controlled LD caki presented so far are summarized in Table 1 below.

<table>
<thead>
<tr>
<th></th>
<th>PRO</th>
<th>Controlled pronoun</th>
<th>Non-controlled pronoun</th>
<th>Controlled caki</th>
<th>Non-controlled LD caki</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obligatory de se</td>
<td>√</td>
<td>√</td>
<td>×</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Obligatory local control</td>
<td>√</td>
<td>√</td>
<td>×</td>
<td>√</td>
<td>×</td>
</tr>
<tr>
<td>Object control</td>
<td>√</td>
<td>√</td>
<td>—</td>
<td>×</td>
<td>—</td>
</tr>
<tr>
<td>3rd person restriction</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>√</td>
<td>—</td>
</tr>
<tr>
<td>Obligatory coreference w/ a clausemate LD caki</td>
<td>×</td>
<td>×</td>
<td>×</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Table 1: Summary: PRO, (non-)controlled pronoun, and (non-)controlled LD caki

5 In addition, caki in the object position can take the subject DP, ‘self’s mother’, as its local antecedent.
4. Proposal: The property analysis

Having presented the properties of PRO, overt controlled subjects (pronouns and caki) and their interactions with a clausemate LD caki, let us now discuss how to account for these properties of OC subjects and their relationships with another de se element in Korean. A number of questions we need to explain are listed in (8).

(8) a. How do the OC subjects, either null or overt, consistently exhibit OC properties?
   b. How does the LD reflexive caki in the OC subject position display both the OC PRO-like and non-controlled LD caki-like properties?
   c. How can we account for the difference between the two de se elements: OC PRO on the one hand and LD caki on the other?
   d. Why do controlled and non-controlled LD cakis have to be coreferential, while PRO (or controlled pronouns) and non-controlled LD caki need not?

Given that PRO is obligatorily interpreted de se, some prior studies on PRO attributed its unambiguous de se interpretation to the lexical meaning of PRO (e.g., Schlenker, 2003; Anand & Nevins, 2004; Stephenson, 2007). For instance, PRO is treated as the first or second person indexical, which denotes the author or addressee of the context (or index). However, our data about the overt controlled subjects in Korean provide evidence against this indexical approach. If the obligatory de se interpretation of PRO is derived from its inherent indexical-like meaning, we may also need to assume that the third person pronoun or LD caki has the same lexical meaning only when it is controlled, given that they must also receive a de se interpretation in the controlled subject position. It does not seem to be reasonable, however, to directly posit the first or second person-like meaning to the third person pronoun or LD caki. Rather, since any element that can appear in the OC subject position must be construed de se in Korean, it would be more plausible to argue that the obligatory de se interpretation of the elements in the controlled subject position is derived due to certain structural properties of the obligatory control construction, instead of some special lexical meaning of these elements.

In this section, following and extending the Lewis-Chierchia’s property approach to de se (Lewis, 1979; Chierchia, 1989), I will provide a unified account of obligatory de se interpretations of any kinds of controlled subjects (e.g., PRO, controlled pronouns, and controlled anaphors) and the LD reflexive caki. While there is one and the same semantic mechanism for the two types of de se elements in Korean, I will show that additional structural conditions of OC constructions and the lexical properties of caki can derive the complete set of properties of the OC subjects, LD caki, and their interactions.

4.1. Structural conditions of OC constructions

Based on the Chierchia’s (1989) semantic approach to OC, I assume that OC complements are derived predicates, whose subject must be a bound variable that needs to be bound by a local individual abstractor. Madigan (2008) provides the definition of Control as in (9), motivated by Chierchia (1984, 1989).

(9) Definition of Control proposed by Madigan (2008):

Let X be an NP in a sentence S, Y a subject NP in a sentence S’ that is embedded under S, and R the predicate that selects Y. X and Y are in the control relation (or X controls Y) iff the property that corresponds to R is unambiguously attributed to the referent of X and the referent is aware of the attribution. (Madigan, 2008: p.49)

Given the definition of control shown in (9), control constructions are properties that are attributed to an argument in the immediately embedding clause. The definition in (9) attempts to capture the obligatory de se interpretation of OC subjects by adding a condition that the referent of controller must be aware of the attribution. However, this condition has no clear link to the semantic mechanism of the obligatory de se interpretation of the controlled subjects.

From a semantic point of view, the obligatory de se construal of PRO can be derived from the Lewis-Chierchia’s property approach with the assumption that PRO is a variable that is bound by an individual
abstractor, which appears in the left periphery of complements of attitude predicates. In contrast with other de se elements like LD caki, controlled subjects are special in that they only allow local control. Based on the property analysis of de se (Lewis, 1979; Chierchia, 1989; Percus & Sauerland, 2003; Pearson, 2013: a.o.), the definition of control in (9) can be revised as in (10).\(^6\)

(10) **The Definition of Control (revised version)**

Let X be an NP in a sentence S, Y a subject NP in a sentence S’ that is directly embedded under S. Y is abstracted over, yielding a structure that denotes a property P. X and Y are in the control relation (or X controls Y) iff the property P is self-ascribed by the referent of X.

Our revised version of the definition of control states that (i) control complements denote properties, (ii) the subject of control complements is a variable that is abstracted over, and (iii) the properties denoted by control complements must be attributed to an argument of the immediately embedding clause (by being bound by the local abstractor). A sample LF and the semantics of a control construction is provided in (12), based on the semantics of attitude verbs, as illustrated in (11).

(11) \[[\text{expect}]\] \(\lambda x. \forall <y,w'> \in \text{Expect}_{x,w} : P(y)(w') \equiv \text{T}\), where \(\text{Expect}_{x,w} = \{<y, w'> : w' is a world compatible with what x expects in w, and y is the one who x identifies in w as herself in w'.\}

(12) a. John expects PRO to win the election.

b. LF: \(\lambda w_0 \text{John expects } w_0 [\lambda x_1 \lambda w_2 \text{PRO}_1 \text{ to win the election w}_2]\).

c. \([(12-a)]^9 = \lambda w. \forall <y,w'> \in \text{Expect}_{\text{John},w} : y \text{ wins the election in } w'\)

Given our definition of control seen in (10), the sentence in (12-a) is a legitimate control construction where the matrix subject John controls the null subject PRO, since the control complement denotes a property of type \(\langle e, st \rangle\) whose subject (PRO) is abstracted over, and the controller John self-ascribes the property of winning the election. The latter condition can be satisfied by our semantics of attitude verbs and the fact that PRO is bound by the local individual abstractor. Given the definition of ‘expect-alternatives’ as centered worlds, PRO is interpreted as John’s expect-alternative y in w’, who John identifies in w as himself in w’, and thus receives an obligatory de se interpretation.

Our discussion of control constructions predicts that if a language allows an overt subject in the OC complement for an independent reason, the overt element must be able to be used as a bound variable, such as anaphors or pronouns. Thus, the unavailability of referential OC subjects that we saw in (2) is also predicted. Moreover, any bound variable that can appear in the OC subject position must also be locally controlled and receive an unambiguous de se interpretation under our system.

### 4.2. Binding conditions of LD caki

Following Park (2015), I assume that there are two inherent binding conditions for the LD reflexive caki in Korean: the feature match and locality conditions. The feature match condition is based on the assumption that LD caki is a variable that bears a special feature [+log] (e.g., Anand, 2006; Pearson, 2013). In addition, the locality condition requires LD caki to be bound by the closest individual binder that bears the same feature, [+log], under the assumption that individual binders introduced in the complements of attitude verbs can optionally take the [+log] feature. These binding conditions for LD caki can correctly capture the obligatory coreference reading between multiple clausemate LD cakis seen in (6).

(13) **Deriving the coreference reading of multiple cakis**\(^7\)

a. John said [\(\lambda_j +\text{log}\) Bill said [\(\lambda_k +\text{log}\) caki\(_k +\text{log}\)’s mother hates caki\(_j +\text{log}\)] ]

b. *John said [\(\lambda_j +\text{log}\) Bill said [\(\lambda_k +\text{log}\) caki\(_k +\text{log}\)’s mother hates caki\(_j +\text{log}\)] ]

c. *John said [\(\lambda_j +\text{log}\) Bill said [\(\lambda_k +\text{log}\) caki\(_j +\text{log}\)’s mother hates caki\(_k +\text{log}\)] ]

d. John said [\(\lambda_j +\text{log}\) Bill said [\(\lambda_k \text{ caki}_j +\text{log}\)’s mother hates caki\(_j +\text{log}\)] ]

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\(^6\) More precisely, this is a definition of Logophoric Control (Landau, 2015), where control complements appear in attitude environments.

\(^7\) For the sake of simplicity, world variables and their binders are omitted in these configurations.
In (13-a), both cakis satisfy their binding conditions by being bound by the closest binder with the [+log] feature. On the other hand, one of the cakis, caki\textsuperscript{2} with [+log], is not bound by the closest binder with [+log] in (13-b) and (13-c), violating the locality condition of LD caki binding. Therefore, neither (13-b) nor (13-c) is derivable. Moreover, the multiple cakis in the most embedded clause can take the matrix subject as its antecedent only when the closer binder does not bear the [+log] feature, as shown in (13-d).

Note that only LD caki bears the [+log] feature and is subject to these particular binding conditions. While LD caki must be bound by the closest binder with the feature [+log], PRO and controlled pronouns must be bound by the local individual abstractor, regardless of the presence/absence of the feature [+log], in order to satisfy the structural conditions of OC. Given that, we can now derive the interactions between PRO/controlled pronouns and a clausemate LD caki, especially with respect to their disjoint reading. Let us recall the example (5) in which the PRO/controlled pronouns and LD caki co-occur under the multiple embeddings. When the closest abstractor does not bear the [+log] feature as in (14-a), PRO or the controlled pronoun and the clausemate LD caki are bound by the different abstractors, and thus they can have a disjoint reading. On the other hand, the configuration in (14-b) is not legitimate because the locality condition of LD caki is violated: caki is not bound by the closest binder with the feature [+log].

(14) Deriving the disjoint reading of PRO and LD caki
a. John thought [x\textsubscript{1}[+log] Bill promised Mary [λx\textsubscript{2} PRO/he\textsubscript{2} to go to caki\textsubscript{1} [+log]\textquoteright s house]]

b. *John thought [x\textsubscript{1}[+log] Bill promised Mary [λx\textsubscript{2}[+log] PRO/he\textsubscript{2} to go to caki\textsubscript{1} [+log]\textquoteright s house]]

Although PRO/controlled pronouns and LD caki are distinguished by the specific structural or binding conditions, one and the same semantic mechanism is responsible for their de se interpretations under the property approach. We can derive the de se interpretation of both PRO and LD caki with respect to their referents based on the LF in (15-a) and our semantics of attitude verbs.

(15) a. LF of (5): λw w John thinks [λx\textsubscript{1}[+log] λw\textsubscript{2} w\textsubscript{2} Bill promised [λx\textsubscript{3} λw\textsubscript{4} w\textsubscript{4} PRO\textsubscript{3} to go to caki\textsubscript{1} [+log]\textquoteright s house]]

b. [(5)]\textsuperscript{g} = λw. ∀<y,w'> ∈ Dox\textsubscript{John, w} ∀<z,w''> ∈ Say\textsubscript{Bill, w'}: z goes to y’s house in w''

4.3. The dual property of controlled LD caki

Lastly, we can also derive the dual property of LD caki in the OC subject position. We have seen that controlled LD caki displays both the OC PRO-like and non-controlled LD caki-like properties. Due to the structural conditions of OC, LD caki only allows local control in the OC subject position. Since LD caki must also satisfy its own binding conditions when it appears in the OC subject position, the local binder in control complements must bear the [+log] feature to properly bind LD caki. Given this, we can now explain the obligatory coreference between controlled and non-controlled LD cakis as well. Consider the following configurations.

(16) Deriving the obligatory coreferential reading of the controlled and non-controlled LD cakis
a. John thought [x\textsubscript{1}[+log] Bill promised [λx\textsubscript{2}[+log] caki\textsubscript{2} [+log] to go to caki\textsubscript{1} [+log]\textquoteright s house]]

b. *John thought [x\textsubscript{1}[+log] Bill promised [λx\textsubscript{2}[+log] caki\textsubscript{2} [+log] to go to caki\textsubscript{1} [+log]\textquoteright s house]]

c. *John thought [x\textsubscript{1}[+log] Bill promised [λx\textsubscript{2} caki\textsubscript{1} [+log] to go to caki\textsubscript{1} [+log]\textquoteright s house]]

Since the local binder must bear the feature [+log] to properly bind LD caki and satisfy the structural conditions of OC complements, any other clausemate LD caki must also be bound by the same local binder to meet its ‘locality’ binding condition. Therefore, the disjoint reading of the controlled and non-controlled LD cakis are ruled out.

8 There are two possible LFs for the coreference reading of PRO/controlled pronoun and caki, given that the reflexive caki in Korean can take a local or long-distance antecedent.

(i) Deriving the coreference reading of PRO and caki
a. John thought [x\textsubscript{1} Bill promised Mary [λx\textsubscript{2}[+log] PRO/he\textsubscript{2} to go to caki\textsubscript{2} [+log]\textquoteright s house]]

b. John thought [x\textsubscript{1} Bill promised Mary [λx\textsubscript{2}[+log] PRO/he\textsubscript{2} λ\textsubscript{3} to t\textsubscript{3} go to caki\textsubscript{3}\textquoteright s house]]
In summary, I have shown that the complete set of the properties of OC subjects, both null and overt, and LD caki in Korean can be uniformly explained under the property approach (Lewis, 1979; Chierchia, 1989; Percus & Sauerland, 2003: among many others) with the additional binding conditions for LD caki and structural conditions of OC. Our system correctly predicts that any bound variable type elements may appear in the controlled subject position in Korean, unless it is blocked by an independent reason. As predicted, local anaphors such as caki-casîn or pronoun-casîn in Korean can also be controlled and display OC properties.

5. Conclusion

I proposed that overt lexical subjects can appear in OC complements in Korean if they can be used as a bound variable. While overt OC subjects exhibit the same OC properties, such as obligatory local control and de se interpretations, owing to the structural conditions of OC, they also display the different properties in the OC subject position based on their inherent lexical or binding conditions. I have also shown that the obligatory de se interpretations of the controlled subjects and the LD reflexive caki in Korean can uniformly be derived under the property analysis of de se. That is, these elements are variables that must be bound by an individual abstractor, which appears in the complement of attitude verbs, so that they are interpreted as a de se counterpart of an attitude holder. However, the structural conditions of OC and the binding conditions of LD caki (i.e., the locality and feature match conditions) specifically determine by which binder these variables need to or can be bound.

In this paper, we did not discuss the fact that overt subjects can also appear in OC complements without attitude environments in Korean (Landau, 2015). In these cases, de se interpretations of controlled subjects are not relevant because there is no attitude environment. One might wonder how our proposal can be extended to overt subjects in OC complements under non-attitude environments. I leave this issue for future research.

References
