OC, where are you?
How OC can be bled in Korean

Answer:
In Korean, clausal A-scrambling and different types of infinitival subjects may bleed OC in object control, subject to restrictions of control complementizers.

1 In a nutshell

• Obligatory Control (OC)\(^1\) is characterized by the following properties:

  1. C-command requirement
  2. No Long-distance Control
  3. No Arbitrary Control
  4. No strict reading under VP ellipsis
  5. Obligatory \textit{de se/te} reading

• We use ‘Non Obligatory Control’ (NOC) negatively with respect to this cluster of properties, without making any claims about the distinction between No Control and Non Obligatory Control as used elsewhere

(2) Obligatory Control in Korean

a. John\(-i\) Mary\(-eykey\) [e\(_{i/s}\) party\(-lul\) ttena\(-kilo\)] yaksokhayssta.
   John-NOM Mary-DAT party-ACC leave-C promised
   ‘John promised Mary to leave the party.’ subject control

b. John\(-i\) Mary\(-lul\) [e\(_{s/i}\) party\(-lul\) ttena\(-tolok\)] seltukhayssta.
   John-NOM Mary-ACC party-ACC leave-C persuaded
   ‘John persuaded Mary to leave the party.’ object control

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(1) The OC signature (Landau 2013:29)
In a control construction \([\ldots \text{X}_i \ldots]_{i_{g}} \text{PRO}_i \ldots \] \ldots\], where \(X\) controls the PRO subject of the clause \(S\):

a. The controller(s) \(X\) must be (a) co-dependent(s) of \(S\).

b. PRO (or part of it) must be interpreted as a bound variable.
Generalizations about Korean OC:

(3) Scrambling bleeds OC in Object Control

a. Subj, Obj [ ___ j/i*k V_2] V_1 \text{ base line}

b. Subj, [ ___jik V_2]_h Obj t_h V_1 \text{ scrambling}

(4) Overt infinitival subjects bleed OC in Object Control

a. Subj, [Subji*i*j V_2] V_1 \text{ subject control}

b. Subj, Obj [Subji*k V_2] V_1 \text{ object control}

• Roadmap:
  – We will show data where we fail to get the OC reading
  – Have a look at semantic orientation depending on the control complementizer
  – Present a tentative analysis

2 Data I: Scrambling

2.1 Controller<Complement vs. Complement<Controller

• In object control, when the controller follows the control clause (scrambled order) instead of preceding it (base order), OC is lost

• In the base order (5a), the embedded subject must refer to the matrix object, and has the standard OC properties

• In the scrambled order (5b), the embedded subject refers freely, and lacks OC properties (Polinsky et al. 2007)

(5) Object Control

a. John-i, Mary-lul [e/j*i*k party-lul ttena-tolok] seltukhayssta
   John-NOM Mary-ACC party-ACC leave-C persuade
   ‘John persuaded Mary to leave the party.’ \text{ base order}

b. John-i, [e/j*k party-lul ttena-tolok] Mary-lul seltukhayssta
   John-NOM party-ACC leave-C Mary-ACC persuade
   ‘John persuaded Mary to leave the party’ \text{ scrambled order}
2.2 The clause in the scrambled order has moved

The complement undergoes clausal A-movement from its base position

• Different control verbs select different complementizers -kilo, -lyeko, -koca, -tolok

• The complementizer in the scrambled order (6b) must be the one required by the relevant verb in the base order (6a)

- The infinitive must have started out in a local selectional configuration with the control verb (contra Polinsky et al. 2007, who treat it as an adjunct)

- If it were an adjunct base-merged in a higher position, no such restriction should hold

(6) a. Jane-i [e\textsubscript{j}i/\textsubscript{k} ttena-tolok/*kilo] seltukhayssta.
   Jane-NOM Mary-ACC leave-C persuade
   ‘Jane persuaded Mary to leave.’
   \textit{base order}

   b. Jane-i [e\textsubscript{j}i/\textsubscript{k} ttena-tolok/*kilo] Mary-lul j seltukhayssta.
   Jane-NOM leave-C Mary-ACC persuade
   ‘Jane persuaded Mary to leave.’
   \textit{scrambled order}

• A subject reflexive in the scrambled infinitive must be bound by the matrix subject (7b)

- The moved reflexive does not reconstruct, but is bound in a new configuration

- This is indicative of A, not A-bar movement

(7) No reconstruction - Principle A

a. Jane-i [caki-ka\textsubscript{i}i/\textsubscript{j}i/\textsubscript{k} hakkyo-lul ttena-tolok] seltukhayssta.
   Jane-NOM Mary-ACC self-NOM school-ACC leave-C persuade
   ‘Jane\textsubscript{i} persuaded Mary\textsubscript{j} that she\textsubscript{j} should leave school.’
   \textit{base order}

b. Jane-i [caki-ka\textsubscript{i}i/\textsubscript{j}i/\textsubscript{k} hakkyo-lul ttena-tolok]\textsubscript{h} Mary-lul j t\textsubscript{h} seltukhayssta.
   Jane-NOM self-NOM school-ACC leave-C Mary-ACC persuade
   ‘Jane\textsubscript{i} persuaded Mary\textsubscript{j} that she\textsubscript{i} can leave school.’
   \textit{scrambled order}


\textsuperscript{3}Movement of the control clause does not generally disrupt OC. Our preliminary investigation shows that OC is retained in Indonesian, Turkish, Finnish, Tamil and German; Japanese seems to be a marginal case.
Movement of the complement clause remedies Weak Crossover (10b) This is further support for A-movement (Postal 1993). 4

(10) Weak Crossover remedy in the scrambled order

a. *Jane-i, [kunye-uy emma-lul] [nwukwu-ka, ttena-tolok] seltukhayss-ni?
   Jane-NOM she-GEN mom-ACC who-NOM leave-C persuaded-Q
   ‘Who did Jane persuade her mom that e should leave?’

b. Jane-i, [nwukwu-ka, ttena-tolok], [kunye-uy emma-lul] th seltukhayss-ni?
   Jane-NOM who-NOM leave-C she-GEN mom-ACC persuaded-Q
   ‘Who did Jane persuade her mom that e should leave?’

In Object Control, A-movement of the complement clause bleeds OC

4Korean has A-scrambling, attested by new binding configurations, Weak Crossover remedies, and the lack of reconstruction.

(8) New variable binding - reflexives

   self-NOM Suzi-ACC like
   ‘Suzi likes herself.’

b. Suzi-lul, caki-ka, th cohahanta.
   Suzi-ACC self-NOM like
   ‘Suzi likes herself.’

(9) Weak Crossover Effect Avoidance

a. *Suzi-ka [ku/caki-uy emma]-eykey nwukwu-lul, sokayhayss-ni?
   Suzi-NOM he/self-GEN mom-DAT who-ACC introduced-Q
   ‘Who did Suzi introduce to his/self’s mother?’

b. Suzi-ka nwukwu-lul, [ku/caki-uy emma]-eykey th sokayhayss-ni?
   Suzi-NOM who-ACC he/self-GEN mom-DAT introduced-Q
   ‘Who did Suzi introduce to his/self’s mother?’
3 Data II: The AUTHOR vs anti-AUTHOR restriction

3.1 anti-AUTHOR

• In the scrambled order, the embedded subject behaves like a covert referential pronoun

• However, it remains subject to one restriction (which also holds in the base order)

• It cannot refer to the matrix AUTHOR, the event participant communicating their attitude (Landau 2015: 32)

• In (11), Jane is the the AUTHOR persuading Mary, the ADDRESSEE - the event participant to whom the attitude is communicated

• In the base order (11b), the embedded subject can only be Mary, the ADDRESSEE

• In the scrambled order (11a), the embedded subject can be anyone except Jane, the AUTHOR (and it loses the obligatory de se reading)

(11) a. Jane-\textsc{AUTH}\_i \text{[tena-tolok]}_\text{h} Mary-\textsc{ADDR}\_l \text{leave-C} \text{Mary-ACC persuaded}

Jane-NOM Mary-ADDR leave-C persuaded

‘Jane persuaded Mary to leave.’ scrambled order

b. Jane-\textsc{AUTH}\_i Mary-\textsc{ADDR}\_l \text{[tena-tolok]} seltukhayssta.

Jane-NOM Mary-ACC leave-C persuaded

‘Jane persuaded Mary to leave.’ base order

• We propose that -tolok imposes a semantic anti-AUTHOR restriction on its clausemate subject

• This is supported by matrix passivization in object control, which retains -tolok (12b)

• If -tolok were syntactically oriented towards grammatical function, it should change to one of the subject control complementizers (-kilo, -lyeko, -koca)

(12) Passivization in Object Control

a. Jane-\textsc{AUTH}\_i Mary-\textsc{ADDR}\_l \text{[tena-tolok]} seltukhayssta.

Jane-NOM Mary-ACC leave-C persuaded

‘Jane persuaded Mary to leave.’

b. Mary-\textsc{ADDR}\_i \text{[tena-tolok]} seltuk-toy-ess-ta

Mary-NOM leave-C persuade-PASS-PST-DECL

‘Mary was persuaded to leave.’
3.2 AUTHOR

- We provide further support for the semantic orientation of control complementizers
- The verb 'promise' requires the subject-control complementizer -kilo
- Unlike in object control, A-scrambling of the complement does not bleed OC
- The embedded subject must be matrix John, and retains the obligatory de se reading

(13) Subject Control

a. John-i\textsuperscript{AUTH} Mary-eykey\textsuperscript{ADDR} [e_{i/s_j} party-lul ttena-kilo] yaksokhayssta
   John-NOM Mary-DAT party-ACC leave-C promised
   ‘John promised Mary to leave the party.’ base order

b. John-i\textsuperscript{AUTH} [e_{i/s_j} party-lul ttena-kilo]\textsubscript{h} Mary-eykey\textsuperscript{ADDR} t\textsubscript{h} yaksokhayssta.
   John-NOM party-ACC leave-C Mary-DAT promised
   ‘John promised Mary to leave the party.’ scrambled order

- We propose that the subject-control complementizers impose an AUTHOR restriction on their clausemate subjects

\begin{itemize}
  \item The Object Control complementizer encodes an anti-AUTHOR restriction
  \item The Subject Control complementizers encode an AUTHOR restriction
\end{itemize}

“Subject Control is OC-stable; Object Control is OC-instable under scrambling”

4 Data III: Overt Infinitival Subjects

4.1 Object Control

- In object control, overt infinitival subjects\textsuperscript{5} (OIS) bleed OC
- The OIS loses its obligatory de se reading\textsuperscript{6}
- It refers freely, except to the matrix AUTHOR
- OISs bleed OC both in the base and scrambled order

\textsuperscript{5}Crucially, the fact that overt nominative subjects can surface in non-finite complements is an independent property of Korean: nominative subjects need not be licensed by finite T.

\textsuperscript{6}See Szabolcsi (2009), where all overt infinitival subjects in subject control behave like overt PRO.
(14) Object Control

a. Jane-i$_i^{AUTH}$ Mary-lul$_j^{ADDR}$ [e$_{i/j}$] ttena-tolok$_{i}$ seltukhayssta.

   Jane-NOM Mary-ACC leave-C persuaded

   ‘Jane persuaded Mary to leave.’

b. Jane-i$_i^{AUTH}$ Mary-lul$_j^{ADDR}$ [kunye-ka$_{i/j}$] ttena-tolok$_{i}$ seltukhayssta.

   Jane-NOM Mary-ACC she-NOM leave-C persuaded

   ‘Jane persuaded Mary to leave.’

• If -tolok were oriented towards the ADDRESSEE instead of anti-AUTHOR, we should expect the embedded subject in (14b) to obligatorily refer to Mary

4.2 Subject Control

• In subject control, OISs do not bleed OC

• The OIS must refer to the matrix subject, and must be de se

• OC is retained with OISs both in the base (15b) and scrambled order (15c)

(15) Subject Control

a. John-i$_i^{AUTH}$ Mary-eykey$_j^{ADDR}$ [e$_{i}$] ttena-kilo$_{i}$ yaksokhayssta

   John-NOM Mary-DAT leave-C promised

   ‘John promised Mary to leave.’

b. John-i$_i^{AUTH}$ Mary-eykey$_j^{ADDR}$ [kunye-ka$_{i/j}$] ttena-kilo$_{i}$ yaksokhayssta

   John-NOM Mary-DAT she-NOM leave-C promised

   ‘John promised Mary to leave.’

• OIS + scrambled order

    7
4.2.1 Nominalized clauses do not encode anti-AUTHOR

- Control verbs may also select nominalized -ki complements with nominative subjects
- These nominative subjects are never controlled
- This further illustrates how the (anti-)AUTHOR restriction stems from the control complementizers

(16) OIS + Nominalized complement

a. Jane-\textsuperscript{AUTH} Mary-lul\textsuperscript{ADDR} [kunye-ka\textsubscript{i/j/k} ttena-\textbf{ki}-lul] seltukhayssta.
   Jane-NOM Mary-ACC she-NOM leave-NMLZ-ACC persuaded
   ‘Jane persuaded Mary to leave.’ \hspace{1cm} Object Control

b. John-\textsuperscript{AUTH} Mary-eykey\textsuperscript{ADDR} [kunye-ka\textsubscript{i/j/k} ttena-\textbf{ki}-lul] yaksokhayssta
   John-NOM Mary-DAT she-NOM leave-NMLZ-ACC promised
   ‘John promised Mary to leave.’ \hspace{1cm} Subject Control

- In object control, OISs bleed OC \hspace{0.5cm} \^\textbullet\textsuperscript{they are referential pronouns}
- In subject control, OISs do not bleed OC \hspace{0.5cm} \^\textbullet\textsuperscript{they behave like overt PRO}

5 Interim summary

(17) Subject Control \hspace{1cm} (18) Object Control

<table>
<thead>
<tr>
<th></th>
<th>Base order</th>
<th>Scrambled</th>
</tr>
</thead>
<tbody>
<tr>
<td>no OIS</td>
<td>OC</td>
<td>OC</td>
</tr>
<tr>
<td>OIS</td>
<td>OC</td>
<td>OC</td>
</tr>
</tbody>
</table>

(19) Subject Control \hspace{1cm} (20) Object Control

<table>
<thead>
<tr>
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<td>NOC</td>
</tr>
<tr>
<td>OIS</td>
<td>NOC</td>
<td>NOC</td>
</tr>
</tbody>
</table>

- In subject control, neither scrambling nor an OIS bleeds OC
- The subject must refer to the AUTHOR
- OISs behave like overt PRO

- In object control, scrambling and/or an OIS bleeds OC
- The (c)overt subject never refers to the AUTHOR
- The empty subject in the scrambled order behaves like pro
- OISs are overt referential pronouns

6 Analysis

- Binding is evaluated after A-scrambling, which targets an outer Spec,\textsubscript{vP}
- Embedded subjects can be merged as overt pronouns with inherent $\phi$-features, or pro/PRO
- pro and PRO start out as a minimal pronoun lacking $\phi$-features (Chomsky 1982, Kratzer 2009, Sundaresan & McFadden 2018)
- Control complementizers carry an (anti-)AUTHOR restriction
### 6.1 Object Control: OIS + base order

\[(19)\] Jane-i\textsubscript{AUTH} Mary-lul\textsubscript{ADDR} \{kunye-ka\textsubscript{si/j/k} ttena-tolok\} seltukhayssta.  
Jane-NOM Mary-ACC she-NOM leave-C persuaded  

‘Jane persuaded Mary to leave.’  \textit{OIS, base order}

1. The embedded OIS is merged as an overt pronoun with inherent $\phi$-features  
2. Due to being referential and $\phi$-valued, it cannot be controlled  
3. -tolok prohibits coreference between the OIS and the matrix AUTHOR  
\textit{\textit{\\&}} NOC

\[(20)\] 

```
\text{TP} \\
Jane-i\textsubscript{i} \text{AUTH} \\
\text{T} \\
\text{vP} \\
\text{t} \quad \text{v'} \\
\text{v} \\
\text{VP} \\
\text{V} \\
\text{RP} \\
\text{R'} \\
\text{CP} \\
\text{C'} \\
\text{TP} \\
\text{T} \\
\text{vP} \\
party-lul ttena  \\
\text{'leave the party'}
```
6.2 Object Control: OIS + scrambling

(21) Jane-i\textsuperscript{AUTH} [\textsuperscript{kunye-\textsubscript{-ka}\textsubscript{+i/j/k}} ttena-tolok]\textsubscript{h} Mary-lul\textsubscript{ADDR} \textsubscript{t\textsubscript{h}} seltukhayssta.
\quad Jane-NOM \quad she-NOM \quad leave-C \quad Mary-ACC \quad persuaded
\quad ‘Jane persuaded Mary to leave.’ \quad \textit{OIS + scrambled order}

1. The embedded OIS is merged as an overt pronoun with inherent $\phi$-features
2. The complement CP A-scrambles to an outer [Spec,$vP$]
3. \textsubscript{tolok} prohibits coreference of the OIS and the matrix \textit{AUTH} $\Rightarrow$ \textit{NOC}

(22)

\begin{tikzpicture}[scale=1, transform shape]
  \node (auth) at (0,0) {Jane-i\textsuperscript{AUTH}};
  \node (t) at (1.5,0) {T'};
  \node (vP) at (3,1) {$vP$};
  \node (CP) at (1.5,2) {$[\text{SCR}]$};
  \node (C) at (0,2) {$C'$};
  \node (T) at (0,0) {T};
  \node (v) at (3,0) {$v'$};
  \node (vP1) at (4,1) {$vP$};
  \node (VP) at (5,2) {$VP$};
  \node (TP) at (0.75,2) {TP};
  \node (R) at (5.5,2) {$R'$};
  \node (R') at (5.5,1) {R};
  \node (ttena) at (3.5,-1) {ttena-tolok};
  \node (leave) at (3.5,-1.5) {leave-C};
  \node (Mary-lul) at (4.5,-1) {Mary-lul\textsubscript{ADDR}};
  \node (-party-lul) at (2.5,-1.5) {party-lul};
  \node (seltukhayssta) at (4.5,0) {seltukhayssta};
  \node (persue) at (4.5,-0.25) {persue\textsuperscript{A-movement}};
  \node (t) at (4.5,-1) {t};
  \node (T) at (4.5,-1.5) {T'};
  \node (v) at (6,0) {$v'$};
  \node (vP1) at (6.5,1) {$vP$};
  \node (VP) at (7,2) {$VP$};
  \node (RP) at (7.5,2) {$RP$};

\end{tikzpicture}

6.3 Object Control: no OIS + base order

(23) Jane-i\textsuperscript{AUTH} Mary-lul\textsuperscript{ADDR} [\textsuperscript{e\textsubscript{+i/j+h}} ttena-tolok] seltukhayssta.
\quad Jane-NOM \quad Mary-ACC \quad leave-C \quad persuaded
\quad ‘Jane persuaded Mary to leave.’

1. The embedded subject is merged as a minimal pronoun
2. When there is no scrambling, this minimal pronoun can, and therefore must be bound by the matrix \textit{ADDRESSEE} - i.e. it is PRO, not pro
3. This explains why when there is no OIS and no scrambling, the embedded subject must be controlled
\textit{\Rightarrow} \textit{OC}
6.4 Object Control: no OIS + scrambling

(24) Jane-i{AUTH \(e_{\text{AUTH}}\) party-lul ttena-tolok}h Mary-lul{ADDR t_{h}} seltukhayssta.
    Jane-NOM party-ACC leave-C Mary-ACC persuade
    ‘Jane persuaded Mary to leave the party scrambled order

1. The embedded subject is merged as a minimal pronoun lacking inherent \(\phi\)-features
2. The complement CP A-scrambles to an outer \([\text{Spec}, vP]\)
3. After step 1, there is no argument to bind this minimal pronoun
4. But because it must be bound, it is bound by a discourse participant instead
5. It cannot be PRO, and is effectively made it into pro (2, as a repair strategy)
6. -tolok prohibits coreference with the matrix AUTHOR
   \(\equiv\) NOC

(25)
6.5 Subject control: (no) OIS

(26) a. Jane-i_i^{AUTH} Mary-eykey_j^{ADDR} [ε/ε] ttena-kilo] yaksokhayssta
   Jane-NOM Mary-DAT leave-C promised
   ‘Jane promised Mary to leave.’

   no OIS

b. Jane-i_i^{AUTH} Mary-eykey_j^{ADDR} [kunye-kai/ε] ttena-kilo] yaksokhayssta
   Jane-NOM Mary-DAT she-NOM leave-C promised
   ‘Jane promised Mary to leave.’

OIS

1. The embedded subject is merged as a minimal pronoun lacking inherent φ-features, or
   an OIS with inherent φ-features
2. In any case, -kilo coerces this minimal pronoun / OIS into coreferring the matrix AUTHOR
3. This happens regardless of scrambling

   OC

(27)

\[
\begin{align*}
TP & \quad T' \\
& \quad T \quad vP \\
& \quad t \quad v' \quad VP \\
& \quad V \quad CP \\
& \quad Vaksokhayssta \quad PRO_{i/sj/sk} \quad kunye-ka_{i/sj/sk} \quad C' \\
& \quad \text{‘promise’} \quad \text{‘promise’} \\
& \quad \downarrow \quad \downarrow \quad \downarrow \\
& \quad \downarrow \quad \downarrow \quad \downarrow \\
& S=AUTH \quad TP \quad T' \quad vP
\end{align*}
\]

\text{‘leave the party’}
7 Conclusions

• We have shown that A-scrambling of the complement clause and OISs can bleed OC in object control
• Our approach is partly lexical and partly derivational
  – It is lexical in that two distinct elements may enter the derivation: minimal or free pronouns
  – It is derivational in that a minimal pronoun which fails to be bound ends up as pro
• The OC stability in subject control and the OC instability in object control stem from the distinct control complementizers, which encode an (anti-)AUTHOR restriction

Appendix

Open issue: De se/te

• Object OC is bled by scrambling, an OISs, or both
• When OC is bled, the embedded subject loses the obligatory de se reading
• Subject OC is always retained - the embedded subject must be read de se
• This leaves open the issue of why an OIS must be de se in subject, but not object control
• I.e. why does an OIS behave like PRO in subject control, but refer freely in object control?

A very speculative idea

• This must somehow be due to the positive AUTHOR restriction in subject control, but negative anti-AUTHOR restriction in object control
• Onscould assume that in subject control, the de se property is encoded directly on the complementizer -kilo
• By contrast, object control -tolok encodes it indirectly via the selectional requirement that a context coordinate be merged carrying the de se presupposition, which then binds a minimal pronoun / PRO
• So in subject control, any clausemate subject, whether covert or overt, must be de se
• But in object control, the context coordinate can only bind a minimal pronoun / PRO, but not a free pronoun due to its inherent φ-features

References


