Movement of Possessor and Consequences of Cyclic Linearization

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Linguistic Society of America 79th Annual Meeting, Oakland, January 6-9, 2005

1. Introduction

• Borderline cases: so-called ‘semi-arguments’: arguments that behave in some respects as arguments and in others as adjuncts.
• Puzzles: Inalienable Possession Construction and Floating Quantifier Construction

1.1. Multiple Case Construction I: Inalienable Possession Construction

• Inalienable Possession Construction: Inalienable possession refers to a permanent relationship between two entities. The most conspicuous examples are parts, such as body parts and kinship relationships (Croft 1990, 175; see also Nichols 1988 for discussion on the notion of inalienable possession).

1) Multiple Nominative Construction: S-Possessor and S-Possessee
John-i tali-ka aphu-ta
John-NOM leg-NOM sick-DEC
‘John’s leg is sick’

2) Multiple Accusative Construction: O-Possessor and O-Possessee
Mary-ka John-ul tali-lul cap-ass-ta
Mary-NOM John-ACC leg-ACC grab-PAST-DEC
‘Mary grabbed John’s leg’

1.2. Multiple Case Construction II: Case-Marked Floating Quantifier Construction

3) Multiple Nominative Construction: subject-oriented floating quantifiers (FQsubj)
Haksayng-tul-i twu myeng-i kong-ul cha-ss-ta
Student-Pl-NOM 2 Clpeople-NOM ball-ACC kick-PAST-DEC
‘Two students kicked a ball’


1.4. Goals of this talk

- To argue for
  o the Constituent Approach for Inalienable Possession Constructions [5B]
  o the Nonconstituent Approach for Floating Quantifier Constructions [6A]
- To show
  o Systematic differences between IPC and FQC in syntactic distribution
  o Interactions of subject scrambling and the internal structure of \( v P \)
- To shed light on
  o Properties of linearization involving constructions with scrambling
  o Locality conditions and search domain in movement

2. Puzzles

2.1 Inalienable Possession Construction: Subject vs. Object Asymmetries in Scrambling

(7)  \( O\)-Possessor<Subject<\( O\)-Possessee

a. Mary-ka  John-ul  tali-lul  cap-ss-ta
   ‘Mary grabbed John’s leg’

b. John-ul  Mary-ka  tali-lul  cap-ss-ta
   ‘Mary grabbed John’s leg’

(8)  \( S\)-Possessor<Subject<\( S\)-Possessee

[Context: Whose father grabbed a ball?]

   Evidently J-NOM father-NOM ball-ACC grabbed
   ‘Evidently, John’s father grabbed a ball’

b. ?John-i  pwunmyenghi  Mary-ka  apeci-ka  kong-ul  capassta
   J-NOM evidently father-NOM ball-ACC grabbed
   ‘Evidently, John’s father grabbed a ball’

- The S-Possessor can be separated from the S-Possessee by a high adverb

(9)  \( S\)-Possessor<\( H\)-adverbP<\( S\)-Possessee

[Context: ‘whose father grabbed a ball?’]

   ‘Evidently, John’s father grabbed a ball’

b. John-i  pwunmyenghi  Mary-ka  apeci-ka  kong-ul  capassta
   ‘Evidently, John’s father grabbed a ball’

(10) \( O\)-Possessor<\( H\)-adverbP<\( O\)-Possessee

a. Pwunmyenghi  Mary-ka  John-ul  tali-lul  capassta
   Evidently M-NOM J-ACC leg-ACC grabbed
   ‘Evidently, Mary grabbed John’s leg’

b. John-ul  pwunmyenghi  Mary-ka  tali-lul  capassta
   ‘Evidently, Mary grabbed John’s leg’

- The S-Possessor cannot be separated from the S-Possessee by a low adverb

(11) \( S\)-Possessor<\( L\)-adverbP<\( S\)-Possessee

[Context: ‘whose father gathered balls diligently?’]

a. ?John-i  apeci-ka  yelsimhi  kong-ul  moassta
   ‘John’s father gathered balls diligently’

b. ?John-i  yelsimhi  apeci-ka  kong-ul  moassta
   ‘John’s father gathered balls diligently’

(12) \( O\)-Possessor<\( L\)-adverbP<\( O\)-Possessee

a. Ilpwule  Mary-ka  John-ul  tali-lul  capassta
   ‘Mary grabbed John’s leg deliberately’

b. John-ul  Mary-ka  ilpwule  tali-lul  capassta
   ‘Mary grabbed John’s leg deliberately’

\[ ^{3} \text{Multiple nominative constructions in transitive sentences are slightly degraded and require a preceding context assigning a focus on the possessor DP, as given in (8). See Yoon 2004 for constraints on multiple nominative constructions in Korean.} \]
2.2 Case-Marked Floating Quantifier Constructions

No subject and object asymmetry in scrambling

Subject/Object-oriented FQ

(iii) John-i Haksayng-tul-ul cwuw myeng-ul haksayng-tul-i kong-ul zwu myeng-i
John-NOM student-Pl-ACC student-Pl-NOM evidently 2 student-Pl-ACC
taught kicked
‘Evidently, John taught two students’ [cf. (10)]

High adverbs

(i) Subject=High advP<Subject-oriented FQ

Haksayng-tul-i pwu myenghi cwuw myeng-i kong-ul zwu myeng-i
student-Pl-NOM evidently 2 student-Pl-ACC
taught kicked
‘Evidently, two students kicked a ball’ [cf. (9)]

(ii) Object=High advP<Subject-oriented FQ

Haksayng-tul-i pwu myenghi cwuw myeng-i kong-ul zwu myeng-i
student-Pl-NOM evidently 2 student-Pl-ACC
taught kicked
‘John met two students’ [cf. (7)]

(iii) Subject=High advP<Subject-oriented FQ

Haksayng-tul-i pwu myenghi cwuw myeng-i kong-ul zwu myeng-i
student-Pl-NOM evidently 2 student-Pl-ACC
taught kicked
‘Two students kicked a ball’ [cf. (8)]

Low adverbs

(i) Subject=Low advP<Subject-oriented FQ

Haksayng-tul-i yelsimhi twu myeng-i kong-ul chasstta
student-Pl-NOM diligently 2 chasstta
kicked
‘Two students kicked a ball diligently’ [cf. (11)]

(ii) Object=Low advP<Subject-oriented FQ

Haksayng-tul-ul yelsimhi twu myeng-ul kong-ul chasstta
student-Pl-ACC diligently 2 chasstta
kicked
‘John met two students’ [cf. (7)]

(iv) Subject=Low advP<Subject-oriented FQ

Haksayng-tul-ul yelsimhi twu myeng-ul kong-ul chasstta
student-Pl-ACC diligently 2 chasstta
kicked
‘John met two students’ [cf. (7)]

3. Proposal

Interaction of Three Factors:

- Scrambling is constrained by Cyclic Linearization at the syntax-PF interface.
- The subject is a specifier of a Spell-out domain (or phase) head v.
- Different underlying structures:
  - Possessor and Possessee form a constituent in the underlying structure
    - NP and its Case marked-FQ do not form a constituent.

3.1 Cyclic Linearization (Fox and Pesetsky 2004)

a. Certain syntactic domains created in a derivation are Spell-out Domains (i.e. Linearize applies to them). These may correspond to Chomsky’s phase.
b. The linear ordering of syntactic units is affected by Merge and Move within a Spell-out Domain, but is fixed once and for all at the end of each Spell-out.

3.2 Fox and Pesetsky (2004): Object Shift in Scandinavian is possible only when elements that preceded the object in VP still precede the object after it has shifted (cf. Holmberg 1999, Müller 2001, Sells 2001, Williams 2002, among others.)

3.3 See Ko (2004) for Cyclic Linearization of constructions with Scrambling: The subject cannot scramble over a scrambled object in the vP domain. Evidence is drawn from the distribution of Caseless numeral quantifiers in Korean. See the appendix for examples.

3.4 *CP S [cp O tS NQsubj tO V v T C]

5 Unlike Chomsky (2000, 2001), Fox and Pesetsky (2004) assume that both Spec and Complement of the head of the Spell-out domain are shipped to PF at the Spell-out.
(24) Scrambling as a feature-driven movement (cf. Miyagawa 1997, 2001, Kitahara 2002): Given that a probe can search only into its c-command domain (Chomsky 2000, 2001; cf. Rezac 2003, Richards 2004), Spec; and Spec2 of a single head α is not in the search domain of the head α. Therefore, no movement is triggered from Spec; to Spec2 of a single head.


Improper Scrambling

\[
\begin{array}{c}
\text{αP} \\
\text{Spec2} \\
\text{Spec1} \\
\alpha'
\end{array}
\rightarrow
\begin{array}{c}
\text{αP} \\
\text{Spec2} \\
\text{Spec1} \\
\alpha'
\end{array}
\]

A CONSEQUENCE:
Crucially, this implies that the subject externally-merged at [SpecvP] cannot move from [SpecvP] to [SpecvP].

(25) Underlying Structure:

5B. Constituent approach [Possessor Raising] 6A. Nonconstituent Approach [Floating-Q]

\[
\begin{array}{c}
\text{XP} \\
\text{Possessor}_1 \\
\text{DP} \\
\text{t}_1 \\
\text{Possessee}
\end{array}
\]

\[
\begin{array}{c}
\text{vP} \\
\text{NP}_{\text{obj}} \\
\text{v'} \\
\text{FQ}_{\text{obj}} \\
\text{v}
\end{array}
\]

4. Analysis

4.1 Possessor Raising: The Subject vs. Object Asymmetry

(26) Generalization I: The S-Possessor cannot be separated by vP-internal elements from the S-Possessee (See (8) and (11)).

- The Possessor and the Posessese form a constituent at the underlying structure: vP-internal elements (including low adverbs and arguments (object, indirect object, PP) either follow the S-Possessor and the S-Possessee (27), or precede both of them in the vP domain (28), i.e. vP-internal elements cannot move into a position between the S-Possessor and the S-Possessee.

- Cyclic Linearization of the vP domain: The ordering in the vP-domain needs to be preserved in the higher domain => no vP-internal elements can intervene between the S-Possessor and the S-Possessee in the higher domains, as in the vP-domain.

(27)

\[
\begin{array}{c}
\text{DP} \\
\text{Possessor} \\
\text{v'} \\
\text{Possessee} \\
\text{VP} \\
\text{t}_1 \\
\text{V}
\end{array}
\]

Linearize vP:
S-Possessor < S-Possessee < XP

(28)

\[
\begin{array}{c}
\text{XP}_1 \\
\text{v'} \\
\text{Possessor} \\
\text{v'} \\
\text{Possessee} \\
\text{VP} \\
\text{t}_1 \\
\text{V}
\end{array}
\]

Linearize vP:
XP < S-Possessor < S-Possessee

- Crucially, improper movement from SpecvP to SpecvP is banned:

(29)

\[
\begin{array}{c}
\text{vP} \\
\text{Possessor} \\
\text{v'} \\
\text{Possessee} \\
\text{XP}_1 \\
\text{v'} \\
\text{DP} \\
\text{t}_2 \\
\text{Possessee} \\
\text{VP} \\
\text{t}_1 \\
\text{V}
\end{array}
\]
Generalization II: The S-Possessor can be separated by vP-external elements from the S-Possessee (See (9) for an example).

- Cyclic Linearization of the vP: Crucially, high adverbs are not in the vP domain. (31)
- Cyclic Linearization of the CP: The S-Possessor can move to the left of the high adverb in the CP domain, and add new ordering statement (S-Possessor<Hadv). Since high adverbs (vP-external adverbs) are introduced after the linearization of the vP domain, the S-Possessor can precede high adverbs without contradiction! (32). [see (22)c]

\[
\begin{align*}
&\text{S-Possessor < S-Possessee < O} \\
&\text{Hadv < vP < O < V}
\end{align*}
\]

Generalization III: The O-Possessor can be separated either by vP-internal or by vP-external elements from the O-Possessee.

- Accounts for high adverbs and object scrambling in (31)-(35) extend to the same paradigms in floating quantifier constructions: (15)(16)(17)(19).

4.2 Floating Quantifier Constructions

Generalization IV: The subject-oriented FQ and the object-oriented FQ do not show any different patterns. Both of them can be freely separated from vP-internal and vP-external elements (including arguments and adjuncts).

- Case-Marked FQ and its associate NP do not form a constituent at the underlying structure: vP-internal elements can move into a position between the subject and FQadj within the vP domain: (37).

\[
\begin{align*}
&\text{S < XP < FQ_{adj} < V}
\end{align*}
\]

Subject-oriented FQ: See (14) and (18) for examples.

5. Conclusion

- The Possessor and the Possessee form a constituent in the underlying structure, whereas Case-Marked FQ and its associate NP do not form a constituent.
- The distribution of the subject and the subject-oriented XP provides a useful diagnostic for constituency of other borderline cases in the underlying structure. See the appendix.
- Support for the following claims:
  - Linear ordering in phonology is determined by the syntax via Cyclic Linearization at the PF-syntax interface.
  - Scrambling is restricted by locality condition on movement - in particular, probe-goal relationships.
Appendix: Different Types of Floating Quantifiers in Korean

See Ko (2004) for details, the paper is available at:

- Caseless Numerals form a constituent with its associate NP in the underlying structure:

(38) The subject cannot be separated from its Caseless numeral quantifier by the object:

\*Haksayng-tul-i maykwu-lul tj sey-myeng tj masi-ess-ta
Student-PL-Nom beer-Acc three-CLperson drink-Past-Dec
‘Three students drank beer.’ (cf. Saito 1985 for Japanese)

(39) The subject cannot be separated from its Caseless numeral quantifier by a low adverb:

\*Haksayng-tul-i yakwu.glove-lo sey-myeng maykwu-lul tj masi-ess-ta
Student-PL-Nom baseball.glove-with 3-CLpeople beer-Acc receive-Past-Dec
‘Evidently, three students drank beer.’

(40) The subject can be separated from its Caseless numeral quantifier by a high adverb:

Haksayng-tul-i, pwunmyenghi tj sey-myeng maykwu-lul tj masi-ess-ta
Student-PL-Nom evidently tj 3-CLpeople beer-Acc drink-Past-Dec
‘Evidently, three students drank beer.’

(41) The (underlying) object can be separated from its Caseless numeral by a VP-External element (cf. Ko 2004 for interactions between a VP-internal element and an object-oriented numeral):

**High adverb**

a. Kong-ul haksayng-tul-i amato sey-kay pat-ass-ulkes-ita
Ball-Acc student-PL-Nom probably 3-CLthing receive-Past-likely-Dec
‘Probably, students received three balls’

**Low adverb**

b. Kong-ul haksayng-tul-i yakwu.glove-lo sey-kay patastta
Ball-Acc student-PL-Nom baseball.glove-with 3-CLthing received
‘Students received three balls with a baseball glove’

**Passive Subject**

c. Ecey, catongcha-ga totwuk-eykey twu-tay pwuswu-eci-ess-ta
yesterday, car-Nom thief-by 2-CL break-Pass-Past-Dec
‘Yesterday, two cars were broken by a thief’ (cf. Miyagawa 1989 for Japanese)

**Unaccusative Subject**

d. Koyangi-ka i-pyeng-ulo sey-mari cwuk-ess-ta
Cat-Nom this disease-by three-CL die-Past-Dec
‘Three cats died from this disease’

- Focus-Marked NQ, Universal QP, and NPI do not form a constituent with its associate NP in the underlying structure:

(42) The subject can be separated from its associate quantifier by the object:

Student-PI-Nom apple-Acc 3-CL-only eat-Past-Dec
‘Only three students ate apples’

b. Haksayng-tul-i sakwa-lul motwu-(ka) mek-ess-ta
Student-PI-Nom apple-Acc all eat-Past-Dec
‘All the students ate apples’

c. Haksayng-tul-i sakwa-lul amwuto mek-ci-anh-ess-ta
Student-PI-Nom apple-Acc anyone eat-Cl-not-Past-Dec
‘No students ate apples’

(43) The subject can be separated from its associate quantifier by a low adverb:

Student-PI-Nom hand-with 3-CLonly ball-Acc receive-Past-Dec
‘Only three students received a ball with his hand’

b. Haksayng-tul-i son-ulo motwu-(ka) kong-ul pat-ass-ta
Student-PI-Nom hand-with all ball-Acc receive-Past-Dec
‘All the students received a ball with his hand’

c. Haksayng-tul-i son-ulo amwuto kong-ul pat-ci-anh-ass-ta
Student-PI-Nom hand-with anyone ball-Acc receive-CI-not-Past-Dec
‘No students received a ball with his hand’

(44) The subject can be separated from its associate quantifier by a high adverb:

Student-PI-Nom evidently 3-CL-only ball-Acc receive-Past-Dec
‘Evidently, only three students received a ball’

b. Haksayng-tul-i pwunmyenghi motwu-(ka) kong-ul pat-ass-ta
Student-PI-Nom evidently all ball-Acc receive-Past-Dec
‘Evidently, all the students received a ball’

c. Haksayng-tul-i pwunmyenghi amwuto kong-ul pat-ci-anh-ass-ta
Student-PI-Nom evidently anyone ball-Acc receive-CI-not-Past-Dec
‘Evidently, no students received a ball’

(45) Not surprisingly, the object can be separated from its associate quantifier by a VP-external element (see Ko 2004 for examples)

The reference list for this handout is available at:
http://web.mit.edu/heejung/www/Publication.html