An analysis of Khalkha Mongolian possessive markers
Yaxuan Wang
04/21 KFLC 2023

1 Mongolian possessive markers

- In Khalkha Mongolian, when the possessive reference has to be expressed in a nominal or nominalized word on coreference to the subject of the clause, the possessive suffixes -AA (subject to vowel harmony) are obligatorily adopted when applicable.
- No number or person forms
- Must be locally bound (Janhunen, 2012). The binding domain for the possessive suffix is the smallest TP dominating it.

(1) *Margaash egch-**ee** ir-ne.

  tomorrow sister.NOM-**REFL.POSS** come-PRS

  (Int.: 'My sister is coming tomorrow.')

(2) Margaash bi$_i$ egch-**ee**$_i$ yarwuul-na.

  tomorrow I.NOM sister.(ACC)[1]-**REFL.POSS** send-PRS

  I will send my sister tomorrow.

(3) Bi$_i$ [Bat$_j$ nom-**oo**$_{*i/j}$ unshi-sn-iig] med-n.

  I.NOM [Bat book.(ACC)-**REFL.POSS** read-PST-ACC] know-PRS

  I know Bat$_j$ read his$_j$ book.

---

[1] The accusative case is optional for indefinite objects or under the presence of the possessive suffix.

(4) Margaash bi$_i$ egch.iig-**ee**$_i$ mashin.aap-**aa**$_i$ ger.t-**ee**$_i$

   tomorrow I.NOM sister.ACC-**REFL.POSS** car.INSTR-**REFL.POSS** home.DAT-**REFL.POSS**

   yarwuul-na.

    send-PRS

   I will send my sister to my home by my car tomorrow.

● Mongolian possessive suffixes can also apply to the final verb of the embedded clauses.

(5) Ci$_i$ [*pro*$_i$ hii-ne   ge-sn-**ee**$_i$]   jaj   hii-deg boloh we?

   You.NOM [*pro* do-PRS say-PST-(ACC)-**REFL.POSS**] how do-PRS can   Q

   How can you do what you said?

● Possessive particle

○ Indicating the possessor of an object and located after a DP, PP or clause.

○ They are specified for person and number of its referent (Table 1).

Table 1 Mongolian possessive markers

Person	Number	Possessive Particles	Possessive Suffix
1	SG	min' ('my')	-(g)AA/n ("one's")
	PL	maan' ('our')	
2	SG/PL	cin' ('your') tan' ('your.HOR')	
3	SG/PL	n' ('his', 'her', 'its', 'their')	

○ Must be free in the smallest dominating TP (Janhunen, 2012). Mongolian possessive suffixes and possessive particles are in complementary distribution.

(6) Margaash egch   **min'**   ir-ne.

   tomorrow sister.NOM 1SG.POSS come-PRS

   My sister is coming tomorrow.

(7) *Margaash bi$_i$ egch   **min'**$_i$ yarwuul-na.

   tomorrow I.NOM sister.(ACC) 1SG.POSS send-PRS

   I will send my sister tomorrow.

(8) Dorj$_i$ [Bat$_j$ nom   **n'**$_{i/*j/k}$ unshi-sn-iig]   med-n.

 Dorj [Bat book.(ACC) 3SG.POSS read-PST-ACC] know-N.PST

 Dorj$_i$ knows Bat$_j$ read his$_{i/*j/k}$ book.

- When the subject of the embedded finite clause is the same as the matrix subject, the former is obligatorily null (9).

(9) Bat$_i$ [*pro*$_i$ nom-**oo**$_i$ unshi-n gej]   khel-sen.

 Bat [*pro* book.(ACC)-**REFL.POSS** read-PRS COMP] say-PST

 Bat$_i$ said that he$_i$ will read his$_i$ book.

- For non-finite clauses, the same rule applies, but with an additional requirement that the possessive suffix must apply to the final verb of the embedded non-finite clause.

(10)   Bat$_i$ [*PRO*$_i$ nom-**oo**$_i$ unshi-k-d-**aa**]

 Bat [*PRO* book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS]**

 eej-**ee**$_i$ khar-san.

 mom.(ACC)-**REFL.POSS** see-PST

 Bat$_i$ saw his$_i$ mom when he$_i$ read his$_i$ book.

(11)   * Bat$_i$ [Bat/ter$_i$ nom-**oo**$_i$ unshi-k-d-**aa**]

 Bat [Bat/he book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS]**

 eej-**ee**$_i$ khar-san.

 mom.(ACC)-**REFL.POSS** see-PST

 (Int.: 'Bat$_i$ saw his$_i$ mom when Bat/he$_i$ read his$_i$ book.')

(12)   *Bat$_i$ [*PRO*$_i$ nom-**oo**$_i$ unshi-k-d]   eej-**ee**$_i$ khar-san.

 Bat [*PRO* book.(ACC)-**REFL.POSS** read-FUT-DAT**]** mom.(ACC)-**REFL.POSS** see-PST

 (Int.: 'Bat$_i$ saw his$_i$ mom when he$_i$ read his$_i$ book.')

- Different subjects in the matrix and the embedded clauses do not license possessive suffixes on the embedded final verb. Instead, possessive particles are used.

(13)   Bat$_i$ [ci$_j$ nom-**oo**$_j$ unshi-k-d(*-**aa**)]

 Bat [you.NOM book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS]**

 eej-**ee**$_i$ khar-san.

 mom.(ACC)-**REFL.POSS** see-PST

 Bat$_i$ saw his$_i$ mom when you$_j$ read your$_j$ book.

(14)   Bat$_i$ [ci$_j$ nom-**oo**$_j$ unshi-k-d]   **cin'**

         Bat [you.NOM book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS**] 2SG.POSS

         eej-**ee**$_i$ khar-san.

         mom.(ACC)-**REFL.POSS** see-PST

         Bat$_i$ saw his$_i$ mom when you$_j$ read your$_j$ book.

(15)   *Bat$_i$ [*PRO*$_i$ nom-**oo**$_i$ unshi-k-d]   **n'**

         Bat [*PRO* book.(ACC)-**REFL.POSS** read-FUT-DAT**]** 3SG.POSS

         eej-**ee**$_i$ khar-san.

         mom.(ACC)-**REFL.POSS** see-PST

         (Int.: Bat$_i$ saw his$_i$ mom when he$_i$ read his$_i$ book.)

Table 2 Possible and impossible structures

Same subjects	[$_{TP}$ DP$_i$ … [$_{TP}$ PRO$_i$ … V-AA]] [$_{TP}$ DP$_i$ … [$_{CP}$ pro$_i$ … V-AA]]	*[$_{TP}$ DP$_i$ … [$_{TP}$ DP$_i$ … V-AA]] *[$_{TP}$ DP$_i$ … [$_{TP}$ DP$_i$ … V] POSS.PT] *[$_{TP}$ DP$_i$ … [$_{TP}$ PRO$_i$ … V] POSS.PT] *[$_{TP}$ DP$_i$ … [$_{TP}$ PRO$_i$ … V]] *[$_{TP}$ DP$_i$ … [$_{CP}$ pro$_i$ … V] POSS.PT]
Different subjects	[$_{TP}$ DP$_i$ … [$_{TP}$ DP$_j$ … V] POSS.PT$_j$] [$_{TP}$ DP$_i$ … [$_{TP}$ DP$_j$ … V]]	*[$_{TP}$ DP$_i$ … [$_{TP}$ DP$_j$ … V-AA]] *[$_{TP}$ DP$_i$ … [$_{TP}$ PRO$_j$ … V] POSS.PT$_j$] *[$_{TP}$ DP$_i$ … [$_{TP}$ PRO$_j$ … V-AA]]

2 Research question

(i) What syntactic status do the possessive suffixes and particles have? Which constituent

does the clausal final possessive suffix attach to?

(ii) Is Mongolian possessive suffix capable of probing an antecedent outside of its binding

domain?

(16)   Bat$_i$ [egch-iig-**ee**$_i$ nom   unshi-k-d]   Dorj khar-san.

         Bat [sister-ACC-**REFL.POSS** book.(ACC) read-FUT-DAT] Dorj see-PST

         Bat$_i$ saw Dorj when his$_i$ sister read books.

(17)   *Bat$_i$ [egch-**ee**$_i$ nom   unshi-k-d]   Dorj khar-san.

         Bat [sister-NOM-**REFL.POSS** book.(ACC) read-FUT-DAT] Dorj see-PST

         (Int.: Bat$_i$ saw Dorj when his$_i$ sister read books.)

- Peters (2020): ACC-marking is obligatory when the matrix object scrambles above vP/VoiceP, and the embedded subject similarly scrambles into the matrix clause, into a functional projection above the edge of the vP in order to be accusative-marked.

(18) a. Bat chang-aar   [Dorj   sain gej]   khel-sen.
         Bat loud-INSTR [Dorj.NOM good COMP] say-PST

      b. Bat Dorj-iig   chang-aar   [sain gej]   khel-sen.
         Bat Dorj-ACC loud-INSTR [good COMP] say-PST

         Bat said loudly that Dorj is good.   (Fong, 2019)

(iii) It simply needs a mechanism that can correctly predict the possible and impossible structures listed in Table 2.

3 My analysis

- Mongolian possessive particles are generally seen as the reduced shapes from the genitives of personal pronouns (Janhunen, 2012) and can attach to the right periphery of a phrase.

- Although they are possessives, they cannot be determiners to head a DP.

  (4) Margaash bi$_i$ egch.iig-**ee**$_i$ mashin.aap-**aa**$_i$ ger.t-**ee**$_i$
       tomorrow I.NOM sister.ACC-**REFL.POSS** car.INSTR-**REFL.POSS** home.DAT-**REFL.POSS**

          yarwuul-na.

          send-PRS

       I will send my sister to my home by my car tomorrow.

-

- Hence, the possessive suffix on the final verb of the embedded clause is in the scope of the matrix clause. The structures in Table 2 are thus revised (Table 3).

Table 3 Possible and impossible structures

Same subjects	$[_{TP}DP_i \ldots [_{DP}[_{TP}PRO_i \ldots V] \text{-AA}]]$ $[_{TP}DP_i \ldots [_{DP}[_{CP}pro_i \ldots V] \text{-AA}]]$	$*[_{TP}DP_i \ldots [_{DP}[_{TP}DP_i \ldots V] \text{-AA}]]$ $*[_{TP}DP_i \ldots [_{DP}[_{TP}DP_i \ldots V] \text{POSS.PT}]]$ $*[_{TP}DP_i \ldots [_{DP}[_{TP}PRO_i \ldots V] \text{POSS.PT}]]$ $*[_{TP}DP_i \ldots [_{TP}PRO_i \ldots V]]$ $*[_{TP}DP_i \ldots [_{DP}[_{CP}pro_i \ldots V] \text{POSS.PT}]]$
Different subjects	$[_{TP}DP_i \ldots [_{DP}[_{TP}DP_j \ldots V] \text{POSS.PT}]]$ $[_{TP}DP_i \ldots [_{DP}[_{TP}DP_j \ldots V]]]$	$*[_{TP}DP_i \ldots [_{DP}[_{TP}DP_j \ldots V]\text{-AA}]]$ $*[_{TP}DP_i \ldots [_{DP}[_{TP}PRO_j \ldots V] \text{POSS.PT}]]$

		$*[_{TP}\,DP_i\,\dots\,[_{DP}[_{TP}\,PRO_j\,\dots\,V]\text{-}AA]]$

- In Khalkh Mongolian, there is no formal agreement between the subject and the predicate with regard to number or person (Janhunen, 2012).
- The only exception is the plurative voice.

(19)   Ted yab-tzgaa-sen
　　　 3.PL depart-PL-PST
　　　 "They all left."

(20)   Bat$_i$ [bid-niig   nom   unshi-tzgaa-x-d]   (? maan') Dorj khar-san.
　　　 Bat [1.PL-ACC book.(ACC) read-PL-FUT-DAT] 1PL.POSS Dorj see-PST
　　　 Bat$_i$ saw Dorj when we all read books.

- Thus, at the point when the embedded TP is merged with a possessive marker, the interpretable person and number features on the subject have not been checked yet.

- I argue that after the merge of D with the embedded clause TP/CP, D head bearing the uninterpretable person and number features will probe downward to get valued by the embedded subject in the Spec-TP position.
- Canonically, it is formulated that α can agree with β iff: (Smith et al., 2020; Zeijlstra, 2012)
  a.   α carries at least one unvalued and uninterpretable feature and β carries a matching interpretable and valued feature
  b.   α c-commands β
  c.   β is the closest goal to α
  d.   β bears an unvalued uninterpretable feature
  - At the point of the head-specifier agree, the embedded subject still bears an unvalued uninterpretable case feature. This is endorsed by the fact that the embedded subject always scrambles into a functional projection above the edge of the vP to be accusative-marked.
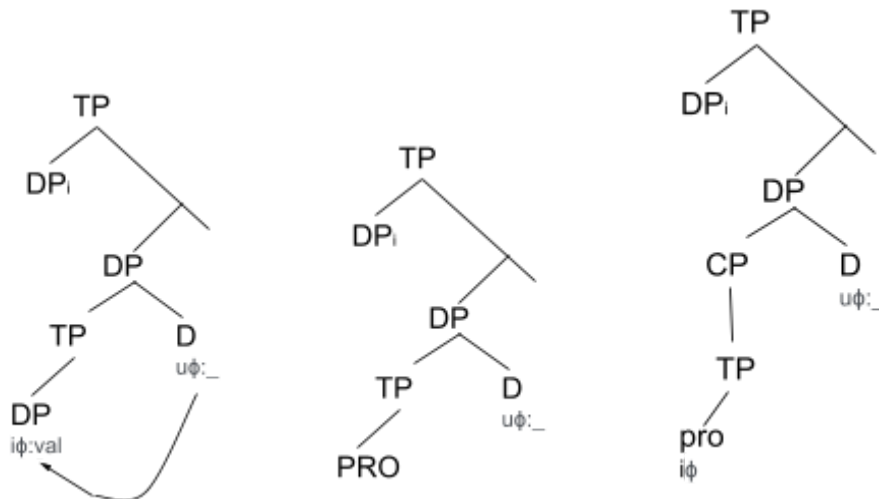
This mechanism predicts the grammaticality of

$[_{TP} DP_i \ldots [_{DP}[_{TP} PRO_i \ldots V] \text{-AA}]]$,

$[_{TP} DP_i \ldots [_{DP}[_{TP} DP_j \ldots V] \text{POSS.PT}]]$,

$[_{TP} DP_i \ldots [_{DP}[_{TP} DP_j \ldots V]]]$,

$[_{TP} DP_i \ldots [_{DP}[_{CP} pro_i \ldots V] \text{-AA}]]$

also predicts the ungrammaticality of

$[_{TP} DP_i \ldots [_{DP}[_{TP} PRO_i \ldots V] \text{POSS.PT}]]$,

$[_{TP} DP_i \ldots [_{DP}[_{TP} PRO_j \ldots V] \text{POSS.PT}]]$,

$[_{TP} DP_i \ldots [_{DP}[_{TP} DP_i \ldots V] \text{-AA}]]$

$[_{TP} DP_i \ldots [_{DP}[_{CP} pro_i \ldots V] \text{POSS.PT}]]$.

- What about $[_{TP} DP_i \ldots [_{DP}[_{TP} PRO_j \ldots V]\text{-AA}]]$?

(21): sloppy reading only, i.e. *Bat_i ate an apple when he_i read a book, and Dorj_j also ate an apple when he_i read a book.*

(22): both sloppy and strict readings, i.e. *Bat is expecting to read this book, and Dorj is expecting himself to read this book; or Bat is expecting to read this book, and Dorj is expecting Bat to read this book.*

- PROs in the TP with possessive suffixes are obligatorily controlled.

- The possessive suffix, which is bound by the matrix subject, serves as the local antecedent for the adjunct PROs. Whenever there is co-existence of a PRO with the possessive suffix, PRO must co-index with the subject that binds the possessive suffix, which predicts the ungrammaticality of $[_{TP} DP_i \ldots [_{DP}[_{TP} PRO_j \ldots V]\text{-AA}]]$ and of an adjunct $[_{TP} DP_i \ldots [_{TP} PRO_i \ldots V]]$.

(21) Bat [*PRO* nom   unshi-k-d]-**aa**   alim   id-sen, Dorj bas ingi-sen.

Bat [*PRO* book read-FUT-DAT]-**REFL.POSS** apple eat-PST Dorj also do.so-PST

Bat$_i$ ate an apple when he$_i$ read a book, so did Dorj.

(22) Bat [*PRO* ene nom unshi-k]-iig   khus-c   bai-na,   Dorj bas ingi-j   bai-na.

Bat [*PRO* this book read-FUT]-ACC expect-DUR DUR-PRES Dorj also do.so-DUR DUR-PRES

Bat is expecting to read this book, and Dorj is also expecting to read this book.
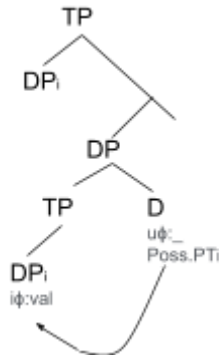
When the embedded subject is co-indexed with the matrix subject, the possessive particle licensed by the embedded DP is also co-indexed with the matrix subject, which violates the binding condition that the possessive particle must be free in the smallest TP that contains it. Thus, [$_{TP}$ DP$_i$ … [$_{DP}$[$_{TP}$ DP$_i$ … V]-POSS.PT]] is correctly predicted to be ungrammatical.

● Optionality of possessive particles:

Whether or not the occurrence of the possessive particle is elided is up to the speaker and to communicative aspects of the situational context in which the sentence is uttered.

(23) Bat$_i$ [ter$_j$ nom-**oo**$_j$ unshi-k-d]   **n'**

Bat [3SG.NOM book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS]** 3SG.POSS

eej-**ee**$_i$ khar-san.

mom.(ACC)-**REFL.POSS** see-PST

Bat$_i$ saw his$_i$ mom when he$_j$ read his$_j$ book.

(24) Bat$_i$ [Dorj$_j$ nom-**oo**$_j$ unshi-k-d]   **n'**

Bat [3SG.NOM book.(ACC)-**REFL.POSS** read-FUT-DAT-**REFL.POSS]** 3SG.POSS

eej-**ee**$_i$ khar-san.

mom.(ACC)-**REFL.POSS** see-PST

Bat$_i$ saw his$_i$ mom when Dorj$_j$ read his$_j$ book.

- Arregi & Hanink (2021): Washo

  Multiple agreement (Upward and Downward) between C in an embedded clause and the referential index values of the subject in that embedded clause as well as the subject in its superordinate clause.

  [IND] is a true syntactic object.

  My analysis: co-indexation is the result of feature checking.

4 Conclusion

- I asked why the Mongolian possessive suffix, which is constrained by Condition A of binding theory, has the ability to probe a potential antecedent outside of its binding domain.

- I argue that binding theory alone is not sufficient to explain the linguistic facts and propose an analysis adopting the Agree operation.

- My analysis correctly predicts all the possible and impossible structures, with an additional hypothesis that Mongolian possessive suffixes serve as an antecedent for PROs in adjunct.

Reference

Arregi, K., & Hanink, E. A. (2022). Switch reference as index agreement. *Natural Language & Linguistic Theory*, *40*(3), 651-702.

Fong, S. (2019). Proper movement through Spec-CP: An argument from hyperraising in Mongolian. *Glossa: a journal of general linguistics*, *4*(1).

Janhunen, J. A. (2012). Mongolian. *Mongolian*, 1-335.

Peters, A. (2020). SCRAMBLING FOR CASE: ACCUSATIVE IN MONGOLIAN.

Smith, P. W., Mursell, J., & Hartmann, K. (2020). Some remarks on agreement within the Minimalist Programme. *Agree to Agree*, 1.

Zeijlstra, H. (2012). There is only one way to agree. *The linguistic review*, *29*(3), 491-539.