The Subject Extraction Asymmetry in Uyghur Relative Clauses

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1. Overview of Uyghur relative clauses

- Uyghur (Turkic; China), a head-final language with pre-nominal relative clauses (RCs), exhibits an apparent asymmetry between subject and non-subject relativization.
- Non-subjects, such as the direct object 'book' in (1) and (2), can be relativized.[1]

(1) An object relative; putative subject is unmarked:
sen [qiz _ ekel-gen kitab-ni] oqu-d-Ing
you girl _ bring-ASP book-ACC read-PST-2sg
'You read the book that the girl brought.'

(2) An object relative; putative subject is genitive-marked; possessor agreement on the head noun:
sen [**qiz-nIng** _ ekel-gen kitab***(-i)**-ni] oqu-d-Ing
you **girl-GEN** _ bring-ASP book**-3sg**-ACC read-PST-2sg
'You read the book that the girl brought.'

- I will refer to relative clauses (RCs) without possessor agreement, like (1), as 'non-Agr RCs'.
- I will refer to RCs with possessor agreement such as (2), as 'Agr RCs'.

1.1. *The puzzle*

- Non-Agr subject RCs are possible:

(3) A subject relative with no possessor agreement on the head noun:
[_ ishkap-tin chüsh-üp qal-ghan kitab] chong i-d-i
_ shelf-ABL fall-IP stay-ASP book long be-PST-3sg
'The book that fell off the shelf was long.'

[1] Unless otherwise indicated, data are drawn from elicitations with a native speaker of Uyghur.

- However, subject relatives formed with the Agr RC strategy – subject Agr RCs – have been claimed to be ungrammatical (Kornfilt 2008, Csató & Uchturpani 2010):

(4) A purportedly ungrammatical subject Agr RC:
*[_ ishkap-tin chüsh-üp qal-ghan kitab**-i**] chong i-d-i
_ shelf-ABL fall-IP stay-ASP book**-3sg** long be-PST-3sg
Intended: 'The book that fell off the shelf was long.'

- Previous accounts claim that the genitive DP in an Agr RC, such as *girl* in (2), is the RC subject (Csató & Uchturpani 2010) and occupies a RC-internal position (Kornfilt 2008, Asarina 2011).
  - Under that assumption, (4) is surprising.
  - Why can't the RC subject of (4), *kitab*, 'book', get genitive case and then be relativized?

1.2. *Defusing the puzzle*:

1. The genitive DP of an Agr RC is not a true subject.
   - Rather, it is a possessor in Spec,DP which can control an embedded PRO subject.
   - While other accounts of Turkic Agr RCs have posited a clause-external position for the genitive DP (Laszakovits 2019b: Kyrgyz; Óttot-Kovács 2020: Kazakh), none have addressed the purported extraction asymmetry.
2. There is possessor agreement iff a possessor is merged.
   - In non-Agr RCs, like (1) and (3), no possessor is merged, and there is no agreement marker suffixed to the RC head.
3. In subject Agr RCs like (4), the possessor is *pro*-dropped.
4. Possessor *pro*-drop is possible in Uyghur, and subject to licensing conditions.
   - Subject Agr RCs are infelicitous (#), not ungrammatical.
   - They are acceptable in contexts that license possessor *pro*-drop and under an interpretation in which the RC head is possessed.
   - As a result, this account obviates the purported extraction asymmetry.

- Subject extraction asymmetries in RCs have been widely observed in Turkic beyond Uyghur (Turkish (Kornfilt 2008), Sakha (Kornfilt 2005, 2008), Kazakh (Óttot-Kovács 2020), and Kyrgyz (Laszakovits 2019a, 2019b)).
- The account proposed here could be relevant for other languages in which such asymmetries have been noted.

2. The analysis

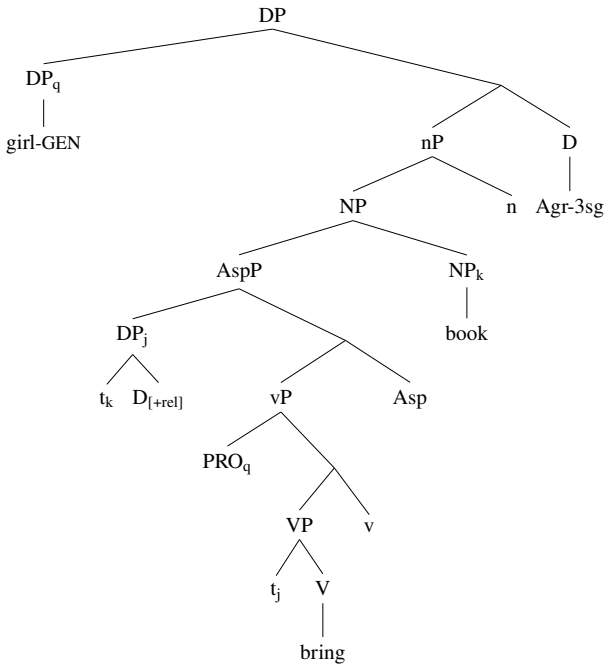
A tripartite analysis:

1. The genitive DP in an Agr RC, as in (5-a), is not the subject of the RC, but rather an optional possessor that occupies a clause-external position (Spec,DP).
2. The possessor may control a PRO subject inside of the RC (5-b)[2].
3. The possessor can be *pro*-dropped (6).

(5) An overt genitive DP in Spec,DP controls an embedded PRO subject:

a. sen [**qiz-nIng** _ ekel-gen kitab ***(-i)**-ni] oqu-d-Ing
you **girl-GEN** _ bring-ASP book **-3sg**-ACC read-PST-2sg
'You read the book that the girl brought.'

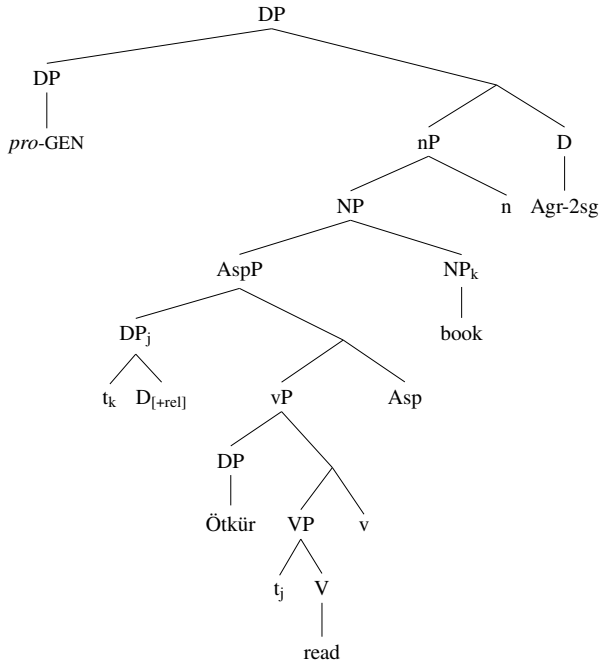
b.



(6) A RC with possessor *pro*-drop:

a. [*pro* Ötkür _ oqu-ghan kitab **-Ing**] chong
pro Ötkür _ read-ASP book **-2sg** long
'Your book that Ötkür read is long.'

b.



[2] I assume a raising derivation of relative clauses in the vein of Bhatt (2002).

3. The genitive DP is a possessor

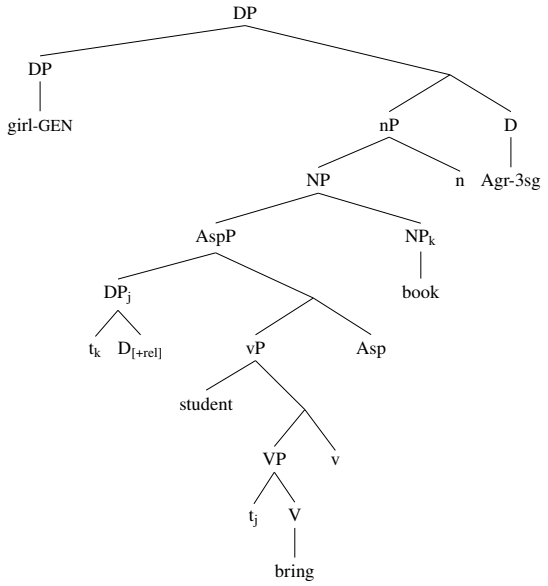
- The genitive DP of an Agr RC exhibits behavior in common with possessors and distinct from unmarked embedded subjects.
  - This supports the claim that the genitive DP occupies a clause-external, Spec,DP position.
- I present data from:
  - The distribution of the genitive DP and unmarked RC subjects
  - The distribution of the genitive DP and possessors
  - The interpretation of inalienable nouns in the RC head position
  - DP fronting (Appendix: A)
  - Scope (Appendix: B)

3.1. *The genitive DP and an unmarked subject may cooccur*

- The genitive DP can cooccur with an unmarked RC subject:

(7) a. sen [**qiz-nIng oqughuchi** _ ekel-gen kitab**-i**-ni] oqu-d-Ing
you **girl-GEN student** _ bring-ASP book**-3sg**-ACC read-PST-2sg
'You read the girl's book that the student brought.'

b.



- This suggests that the genitive DP occupies a distinct structural position from the unmarked RC subject.
- I argue that the RC subject can also be PRO, in which case it is obligatorily controlled by the genitive DP.

3.2. *The genitive DP and a possessor may not cooccur*

- In simple possessive constructions, the possessor is marked with genitive case and possessor agreement matching the phi-features of the possessor is suffixed to the possessee:

(8) a. **më-nIng** kitab**-Im**
I-GEN book**-1sg**
'My book'

b. **Ehmet-nIng** kitab**-i**
Ehmet-GEN book**-3sg**
'Ehmet's book'

- Double possessors are banned:

(9) ***Ötkür-nIng Aygül-nIng** resim**-i**
Ötkür-GEN **Aygül-GEN** picture**-3sg**
Intended: 'Picture that depicts Aygül and belongs to Ötkür'
Asarina (2011:91)

- In relative clauses:
  - Only non-Agr RCs may be possessed (10-a):
  - Agr RCs may not be possessed, paralleling the ban on multiple possessors in simple possessives (10-b):

(10) a. Amine [**më-nIng** Ehmet _ ekel-gen kitab**-Im**-ni] oqu-d-i
Amine **I-GEN** Ehmet _ bring-ASP book**-1sg**-ACC read-PST-3sg
'Amine read my book that Ehmet brought.'

b. *Amine [**më-nIng Ehmet-nIng** _ ekel-gen kitab**-i-sIm**-ni]
Amine **I-GEN** **Ehmet-GEN** _ bring-ASP book**-3sg-1sg**-ACC
oqu-d-i
read-PST-3sg
Intended: 'Amine read my book that Ehmet brought.'

- Example (10-b) suggests that the genitive DP in an Agr RC competes with the additional possessor for a single structural position.

3.3. *The interpretation of inalienable nouns in the RC head*

- In most cases, the Agr RC construction does not impose an interpretation in which the genitive DP possesses the RC head:

(11) **Amine-nIng** oqu-ghan kitab**-i**
Amine-GEN read-ASP book**-3sg**
'The book that Amine read'
Not necessarily 'Amine's book that she read'

- Ótott-Kovács (2020): in Kazakh, relational (inalienable) nouns give rise to an obligatorily possessive interpretation when they appear as the head of a RC whose subject is genitive.

- In contrast, no possessive interpretation arises when the relative clause subject is unmarked.

- Uyghur RCs exhibit the same asymmetry:[3]
  - Non-Agr RCs do not give rise to a possessive interpretation (12-b):
  - Agr RCs give rise to an obligatorily possessive interpretation (12-c):

(12) a. Context: Ehmet and Meryem are not siblings

b. [Ehmet _ uzun waqt parang-lash-qan ata] Meryem-nIng
Ehmet _ long time chat-RECIP-ASP father Meryem-GEN
ati-si
father-3sg
'The father with whom Ehmet chatted for a long time is Meryem's father.'

c. #[**Ehmet-nIng** _ uzun waqt parang-lash-qan ati**-si**]
Ehmet-GEN _ long time chat-RECIP-ASP father**-3sg**
Meryem-nIng ati-si
Meryem-GEN father-3sg
#'Ehmet's father with whom Ehmet chatted for a long time is Meryem's father.'

[3]Examples in (12) are directly inspired by Ótott-Kovács (2020).

- Following Kratzer (1996): possessor DPs in Spec,DP generally receive an underspecified theta role conveying a general relationship of relatedness.[4]
  - Uyghur genitive DPs can bear an ambiguous, and not necessarily possessive, relationship to the nominal complement of the possessive construction:

(13) **Aygül-nIng** resim**-i**
Aygül-GEN picture**-3sg**
Interpretation 1: 'Picture that belongs to Aygül'
Interpretation 2: 'Picture of Aygül' Asarina (2011:91)

- I claim that an inalienable noun imposes a possessor interpretation on the genitive DP when it appears as its complement.

- The RC-internal subject *Ehmet* of (12-b) is not located in Spec,DP and therefore is not interpreted as a possessor.

- In contrast, the genitive DP *Ehmet-nIng* in (12-c) *is* in Spec,DP and may only be interpreted as a possessor because the head noun is inalienable.

4. The genitive DP may control PRO

- I argue that the genitive DP in Spec,DP may obligatorily control a PRO RC subject.

- I reject two alternative analyses of the empty category (EC) in RC subject position:
  1. A trace/unpronounced copy left behind by raising
  2. A *pro* that is coreferential with the genitive DP

4.1. *Against a raising analysis of the EC in subject position*

- Under a raising analysis, the RC subject undergoes raising to Spec,DP and receives genitive case.

- This is unappealing for two reasons:
  1. Adjuncts, such as RCs, are generally islands for movement.
  2. The genitive DP can appear alongside an overt RC subject.

[4]Laszakovits (2019b) and Ótott-Kovács (2020) make similar claims in their respective accounts of Kyrgyz and Kazakh relative clauses.

4.2. *Against a pro-drop analysis of the EC in subject position*

- Under a *pro*-drop analysis, the empty category in RC subject position is a *pro* which may be coreferential with the genitive DP.
  - If the EC in RC subject position is *pro*, we predict that it will exhibit the same properties as *pro* elsewhere in the language.
- An embedded nominalized complement clause (NCC) whose subject has been *pro*-dropped:

(14) *Pro*-drop in an embedded NCC:
Amine$_j$ Hesen$_k$-ge bügün [*pro*$_{j/k}$ Ürümqi-ge bar-idighan-liq-i-ni]
Amine Hesen-DAT today *pro* Ürümqi-DAT go-ASP-NMNL-3sg-ACC
dë-d-i
say-PST-3sg
'Amine$_j$ told Hesen$_k$ today that she$_j$/he$_k$ will go to Ürümqi.'

- (14) exemplifies two relevant properties of *pro*-drop:
  1. There may be ambiguity with respect to which salient DP is the antecedent of *pro*.
  2. The antecedent of *pro* is not restricted to the closest c-commanding DP.
- In contrast, the EC in subject position of a RC exhibits neither of those two properties:

(15) The EC in RC subject position may only corefer with the genitive DP:
men$_j$ [**Amine$_k$-nIng** _$_{*j/k}$ ekel-gen kitab**-i**-ni] oqu-d-Im
I **Amine-GEN** _ bring-ASP book**-3sg**-ACC read-PST-1sg
Interpretation 1: 'I read the book that Amine brought.'
Interpretation 2: #'I read Amine's book that I/someone brought.'

- Unlike instances of *pro*-drop, the EC in RC subject position may only corefer with the genitive DP and no other salient DP.
- Additionally, (15) demonstrates that the EC may only corefer with the closest c-commanding DP (the genitive DP).
  - Even though *men*, 'I', also c-commands the EC, coreference seems to be blocked by the intervening genitive DP, *Amine-nIng*.
- Obligatory coreference between an EC and the closest c-commanding DP is characteristic of obligatory control (OC) (Green 2019).
- A potential objection: it is often claimed that PRO does not alternate with overt DPs (Chomsky & Lasnik 1993, Polinsky & Potsdam 2002).
  - Under my analysis, the RC subject may either be (a) overt, or (b) a PRO which is obligatorily controlled by the genitive DP.
  - Alternation between PRO and overt DPs is therefore built into the analysis.
- However, alternation between PRO and overt subjects has been attested, for example in Hebrew finite control (Landau 2004).
- Therefore, I maintain the analysis of the EC as PRO.

5. Infelicitous subject relatives arise from unlicensed *pro*-drop

- Back to the puzzle: what goes wrong in subject Agr RCs, like in (4) (relabeled (16))?

(16) #[_ ishkap-tin chüsh-üp qal-ghan kitab**-i**] chong i-d-i
_ shelf-ABL fall-IP stay-ASP book**-3sg** long be-PST-3sg
Intended: 'The book that fell off the shelf was long.'

- Example (3), repeated as (17) demonstrates that subject relatives are acceptable in the absence of possessor agreement:

(17) [_ ishkap-tin chüsh-üp qal-ghan kitab] chong i-d-i
_ shelf-ABL fall-IP stay-ASP book long be-PST-3sg
'The book that fell off the shelf was long.'

- It is possible to add a genitive possessor to (17), which obligatorily gives rise to possessor agreement on the relativized subject, as in (18), below:
  - The pattern in (17) and (18) can be replicated with any relativizable DP.

(18) [**Ehmet-nIng** _ ishkap-tin chüsh-üp qal-ghan kitab**-i**] chong
Ehmet-GEN _ shelf-ABL fall-IP stay-ASP book**-3sg** long
i-d-i
be-PST-3sg
'Ehmet's book that fell off the shelf was long.'

- Example (18) shows that subject relatives with possessor agreement suffixed to the RC head *are* possible, **when there is an overt possessor**.

- Given the dependency between possessor agreement and the possessor, the possessor agreement in (16) must signal the presence of a possessor underlyingly.
  - I argue that possessor in (16) has been *pro*-dropped.
- Possessor *pro*-drop in Uyghur is only licensed in contexts with a salient antecedent for the *pro*-dropped DP:

(19) men bügün baghchi-da Ehmet$_j$-ni kör-d-üm. $^{?}pro_j$ qiz-i
I today park-LOC Ehmet-ACC see-PST-1sg. *pro* daughter-3sg
u yer-de oyna-wat-qan i-d-i
that place-LOC play-PROG-ASP be-PST-3sg
'I saw Ehmet$_j$ at the park today. His$_j$ daughter was playing there.'

- Subject Agr RCs become acceptable in a context that provides an antecedent for the possessor agreement on the head noun:

(20) a. Context: You are telling me that you saw Ehmet at the library today, where he was donating some of his books. One of his books fell off of the shelf. You say:

b. [_ ishkap-tin chüsh-üp qal-ghan kitab**-i**] chong i-d-i
_ shelf-ABL fall-IP stay-ASP book**-3sg** long be-PST-3sg
'His (Ehmet's) book which fell off the shelf was long.'

- This account makes the following prediction:
  - Possessor agreement on the head noun of a RC in the absence of an overt possessor should be infelicitous any time the context doesn't license *pro*-drop.
- The prediction is borne out; possessor agreement on the head noun of an object RC is illicit in the absence of a licensing context:

(21) #[Ötkür _ oqu-ghan kitab**-i**] chong
Ötkür _ read-ASP book**-3sg** long
Intended: 'The book Ötkür read is long.'

- Taken together, (20) and (21) demonstrate that there is no restriction specific to subjects.
- Rather, the purported unacceptability of (16) is a result of licensing conditions on *pro*-drop.

6. Conclusion and implications

- RC subject/non-subject extraction asymmetries are a longstanding puzzle in the Turkic literature.
- Related languages such as Sakha (Kornfilt 2005, 2008), Kazakh (Óttot-Kovács 2020), and Kyrgyz (Laszakovits 2019a, 2019b), and at least one Mongolic language, Dagur (Hale 2002), exhibit genitive case on (apparent) subjects of RCs, superficially similar RC structure, and a subject/non-subject extraction asymmetry.
- The analysis proposed here for Uyghur may lend itself well to those languages.
- Further typological work is needed to probe those languages' relativization strategies, as well as whether their claimed extraction asymmetries actually arise from unlicensed *pro*-drop.

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Appendices

A. DP fronting

- Agr relative clauses bear a superficial resemblance to nominalized complement clauses (NCCs), which were introduced in section 4.2.
  - In both constructions, the (apparent) subject is genitive marked, with concomitant possessor agreement on either the head noun (RCs) or affixed to a nominalizing morpheme, *-lIQ* [5] (NCCs).

(22) A nominalized complement clause (NCC):

men [së-nIng kitab-ni oqu-ghan-liq-Ing-ni] bil-d-Im
I you-GEN book-ACC read-ASP-lIQ-2sg-ACC know-PST-1sg
'I knew that you read the book.'

[5] I follow Gribanova (2010), for Uzbek, in assuming that *-lIQ* is a nominalizer.

(23) An indirect object Agr relative clause:

men [**oqutquchi-nIng** _ kitab-ni ber-gen oughuchi**-si**-ni]
I **teacher-GEN** _ book-ACC give-ASP student**-3sg**-ACC
kör-d-Im
see-PST-1sg
'I saw the student that the teacher gave the book to.'

- Despite their morphological similarities, there is evidence that the genitive DP of an Agr RC is in a higher position than the genitive DP of a NCC.
  - While it is possible to front a lower, NCC-internal argument across the genitive DP of a NCC (24), DP fronting across the genitive DP is banned in Agr RCs (25).

(24) DP fronting possible across the genitive DP of a NCC:

men [kitab-ni së-nIng oqu-ghan-liq-Ing-ni] bil-d-Im
I book-ACC you-GEN read-ASP-lIQ-2sg-ACC know-PST-1sg
'I knew that, as for the book, you read it.'

(25) DP fronting impossible across the genitive DP of an Agr RC:

*men [kitab-ni **oqutquchi-nIng** _ ber-gen oughuchi**-si**-ni]
I book-ACC **teacher-GEN** _ give-ASP student**-3sg**-ACC
kör-d-Im
see-PST-1sg
Intended: 'I saw the student to whom, the book, the teacher gave.'

- Due to the discourse effects associated with the movement in (24), I assume that DP fronting is an A'-movement targeting the edge of the containing clause.
- I further assume that the genitive DP of a NCC is a true, clause-internal subject.
- In a NCC, a fronted DP is free to target an A' position above the subject and within the clause.
- In an Agr RC, the genitive DP is not inside of the RC, but rather in a clause-external, Spec,DP position.
  - Therefore, fronting of a RC-internal DP will never yield the word order in (25), in which the moved DP surfaces to the left of the genitive DP.

B. Scope

- The genitive DP of an Agr RC patterns like a possessor, and unlike the genitive DP subject of a NCC, with respect to scope-taking.
  - The genitive DP of a RC and possessors may both scope above and below elements that c-command them.
  - The genitive subject of a NCC may not scope above elements that c-command it.

*B.*1. *Establishing scope facts*

- A quantified object can take both narrow and wide scope with respect to a quantified subject.
- This is true regardless of whether the quantified object remains *in-situ* (26-a) or is scrambled across the subject (26-b).

(26) a. Quantified objects exhibit flexible scope, no scrambling:

köp doxtur-lar her bir kësel-ni dawali-d-i
many doctor-pl every one patient-ACC treat-PST-3sg

'Many doctors treated every patient.'
Interpretation 1: many > every
Interpretation 2: every > many

b. Quantified objects exhibit flexible scope, scrambling:

her bir kësel-ni köp doxtur-lar dawali-d-i
every one patient-ACC many doctor-pl treat-PST-3sg

'Every patient, many doctors treated.'
Interpretation 1: many > every
Interpretation 2: every > many

*B.*2. *The scope of genitive DPs*

- The genitive subject of a NCC may not scope out of the embedded clause.
  - It may only take narrow scope with respect to matrix scope-taking elements:

(27) The genitive subject of a NCC takes narrow scope:

her bir doxtur [köp qiz-lar-nIng kël-idighan-liq-i-ni]
Every one doctor many girl-pl-GEN come-ASP-lIQ-3sg-ACC
ëyt-t-i
say-PST-3sg
'Every doctor said that many girls will arrive.'
Interpretation 1: every > many
#Interpretation 2: many > every

- In contrast, the genitive DP of a RC is also able to take both narrow and wide scope with respect to c-commanding elements in the matrix clause (28-a).
- The same is true of possessors (28-b).

(28) a. The genitive DP of a RC can take narrow or wide scope:

her bir mëhman [**ikki ashpez-nIng** _ et-ken tamaq**-i**-ni]
Every one guest **two chef-GEN** _ make-ASP food**-3sg**-ACC
yë-d-i
eat-PST-3sg

'Every guest ate food that two chefs made.'
Interpretation 1: every > two
Interpretation 2: two > every

b. Genitive possessors can take narrow or wide scope:

her bir oqutquchi ikki oqughuchi-nIng maqali-si-ni tekshür-d-i
every one teacher two student-GEN essay-3sg-ACC grade-PST-3sg

'Every teacher graded two students' essays.'
Interpretation 1: every > two
Interpretation 2: two > every

- These facts provide further evidence that the genitive DP of a RC occupies the same position as a possessor in Spec,DP.
- Additionally, they bolster the claim that the genitive subject of a NCC is in a distinct, clause-internal position from which it may not take wide scope.