

Case-matching effects in Georgian long-distance *wh*-questions*

Tamari Berulava (MIT) & Tanya Bondarenko (Harvard)

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1 Introduction

- (Harris, 1981; Hewitt, 1995; Erschler, 2015; Borise, 2019; Bondarenko, 2024): Georgian lacks cross-clausal *wh*-movement, (1). Indirect dependencies, e.g. involving prolepsis, (2), are used to convey the same meanings.

(1) Long-distance *Wh*-extraction

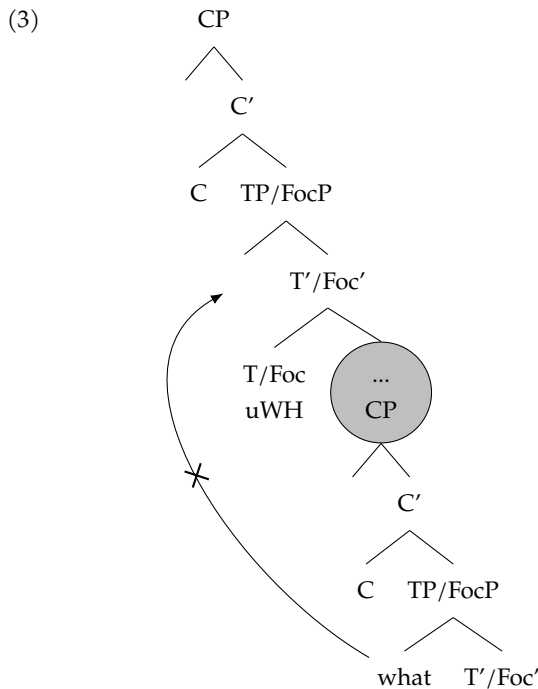
- a. *romel-i kandidat-i pikrobs Mariam-i [rom ____ arčevneb=ši gaimarjvebs]?
which-NOM candidate-nom think.3SG.PRS Mariam-NOM ROM election=IN win.FUT.3SG
Intended: ‘Which candidate does Mary think will win the election?’ T.G. 1/3; L.R. 1/3;
- b. *vin pikrobs Mariam-i [rom ____ arčevneb=ši gaimarjvebs]?
who.nom think.3SG.PRS Mariam-NOM ROM election=IN win.FUT.3SG
Intended: ‘Which candidate does Mary think will win the election?’ T.G. 1/3; L.R. 1/3;

(2) Proleptic Construction

- a. romel kandidat=ze pikrobs Mariam-i [rom ____ arčevneb=ši gaimarjvebs]?
which candidate-on think.3SG.PRS Mariam-NOM ROM election=IN win.FUT.3SG
‘About which candidate does Mary think that they will win the election?’ T.G. 3/3; L.R. 3/3;
- b. vis=ze pikrobs Mariam-i [rom ____ arčevneb=ši gaimarjvebs]?
who.=on think.3SG.PRS Mariam-NOM ROM election=IN win.FUT.3SG
‘About which candidate does Mary think that they will win the election?’ T.G. 3/3; L.R. 3/3;

- Bondarenko (2024), building on Borise (2023) and Erschler (2015): Georgian lacks genuine cross-clausal *wh*-movement because *wh*-phrases in Georgian target a structurally lower position than Spec,CP.
- Passing by higher projections in the functional sequence than the projection of your landing site is known to cause ungrammaticality—the Williams Cycle (WC) effect (Williams, 2003; Williams, 2011; Meadows, 2023).
- We can think of Georgian examples like (1) as exhibiting the same restriction: moving across a CP to a lower TP/FocP projection is a WC violation and hence ungrammatical, (3).

*The data reported here and throughout the handout were collected from 7–11 native speakers of Georgian (ages 18–34) between March and November 2025. Not all speakers allow case-matching *wh*-extraction, in this handout we describe the system of the speakers that have this phenomenon. Beginning in April 2026, we implemented a more structured data collection procedure by developing a questionnaire in which consultants were asked to rate sentences on a 1–3 acceptability scale, here we report initial results of this ongoing study.



- This approach predicts that the ban on long-distance *wh*-extraction is not absolute: if the size of the embedded clause is smaller than CP, it should be available.
- And indeed, subjunctive complements of verbs like *unda*, which are temporally restricted and cross-linguistically known to select for clauses smaller than full CPs, allow *wh*-extraction:

(4) vis unda mariam-s [rom shota da-e-xat'os]
 who.DAT wants Mariam-DAT ROM Shota.NOM PVB-pv-write.OPT.3SG
 'For whom did Mariam want Shota to be painted?'

- **NB:** Here we assume that *rom* is a clause-edge marker that is not indicative of clause size, similar to *hogy* in Hungarian (Egressy, 2023) and *ki* in Hindi-Urdu (Manetta, 2006).
- **Today's empirical claim:** "no *wh* extraction" and "all *wh* extraction" are not the only possible patterns. We find many speakers for whom, for certain verbs, another pattern, which we call *case-matching pattern*, is available: *wh*-extraction of adjuncts is free, but *wh*-DP extraction imposes restrictions on case of the *wh*-DP.

(5) *vin pikrobs Mariam-i [rom ____ arčevneb=ši gaimarjvebs]?
 who.NOM think.3SG.PRS Mariam-NOM ROM election=IN win.FUT.3SG
 Intended: 'Which candidate does Mary think will win the election?' T.G. 1/3; L.R. 1/3;

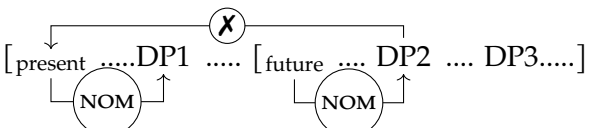
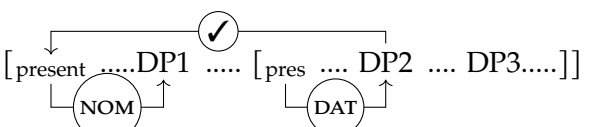
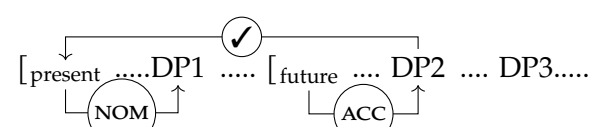
(6) a. vis pikrobs Mariam-i [rom ____ skola=ši siaruli ezizžeba]?
 who.DAT think.3SG.PRS Mariam-NOM [ROM school=IN go hate.3SG.PRS]?
 'Who does Mary think hates going to school?' T.G. 3/3; L.R. 3/3
 b. romel moscavle-s pikrobs Mariam-i [rom ____ skola=ši siaruli ezizžeba]?
 which student-DAT think.3SG.PRS Mariam-NOM [ROM school=IN go hate.3SG.PRS]?
 'Which student does Mary think hates going to school?' T.G. 2/3; L.R. 3/3

- c. ras pikrobs Mariam-i [rom deda dabadeb-is dğis=tvis ___ gamoucxobs]?
 what.ACC pikrobs Mariam-i [ROM mother.NOM birth-GEN day=FOR bake.FUT.3SG]?
 'What does Mary think Mom will bake for her birthday?' T.G. 3/3 L.R. 3/3
- d. romel namcxvar-s pikrobs Mariam-i [rom deda dabadeb-is dğis=tvis ___
 which cake-ACC pikrobs Mariam-i [ROM mother.NOM birth-GEN day=FOR
 gamoucxobs]?
 bake.FUT.3SG]?
 'Which cake does Mary think Mom will bake for her birthday?' T.G. 3/3 L.R. 3/3

CONTEXT: At work, there's been a lot of quiet speculation about when Nona might retire, since her position would open up a valuable opportunity. One of our friends is especially interested in applying for her role when she leaves. Giorgi, who works closely with Nona, should know:

- (7) rodīs pikrobs Giorg-i [rom Nona pensia=ze gava ___]?
 when think.3SG.PRS Giorgi-NOM [ROM Nona.NOM retirement=on go.FUT.3SG]
 'When does Giorgi think that Nona will retire?' T.G. 3/3; L.R. 3/3

- **The contrast between (5) and (6):** extraction of a nominative over a nominative results in ungrammaticality, whereas extraction of accusative or dative over nominative is acceptable.

- (8)  (5)
- (9)  (6a)-(6b)
- (10)  (6c)-(6d)

- Crucially, the pattern that we see does not arise just because the *wh*-DP gets case in the matrix clause, (11):

- (11) *ra-s pikrobs mariami, [rom me ga-m-a-ğizian-eb-s]?
 what-ACC think.PRS.3SG Mariam.NOM ROM 1SG.ACC PVB-1SG-pv-annoy-TS-PRS.3SG
 'Intended: What does Mariam think is annoying me?'

- **NB: quite a bit of speaker variation!** People vary as to which verbs for them fall into which of the three groups (no *wh* extraction, all *wh* extraction, case-matching *wh*-extraction).
- There are tendencies in how this variation is constrained (e.g., if a speaker can do case-matching *wh*-extraction with *pikrobs* 'think', they also allow it with *hgonia* 'think', but not vice versa), but we won't focus on this today.
- **Today's main question:** for the speakers and verbs that do allow case-matching *wh*-extraction, what are the rules of case-matching, and why do they hold? What can this tell us about C/case in Georgian?

- **Assumption:** we'll assume that if a person has the case-matching pattern of *wh*-extraction for a certain verb, the size of the clause generally is not an issue for extraction—we'll assume that the clauses at hand are TPs.
- This is supported by the fact that high, CP-level adverbs cannot occur in the embedded clause when there is *wh*-extraction from it (**NB:** a parenthetical parse is excluded in (12) due to the 1st person direct object):

(12) ra-m pikrobs mariami, [rom (??sabadnierod) me ga-m-a-ğizian-a]?
 what-ERG think.PRS.3SG Mariam.NOM ROM (fortunately) 1SG.NOM PVB-1.SG-pv-annoy-AOR.3SG
 'What does Mariam think that fortunately annoyed me?'

- **The mystery then is this:**

Why, if a *wh*-phrase has the potential to bear case, it can only bear certain cases when it is *wh*-extracted?

2 Long-distance case-matching *wh*-extraction

- Testing the grounds a bit further led us to the following picture of case-matching restrictions:

Matrix \ Embedded				
	NOM	ERG	DAT	ACC
NOM	✗	*vin, ^{ok} ram	✓	✓
ERG	✓	✓	✗	✗
DAT	✓	✓	✗	✗

Table 1: Long-distance case-matching *wh*-extraction

- When the matrix subject is ergative, we see the reverse of the pattern with NOM matrix subjects shown in (5)-(6) above: extracting NOM DPs is grammatical, but ACC or DAT is not, illustrated below with ACC, (13)-(14).

Nominative over Ergative

✓

(13) romel-i kandidat-i ipikra giorgi-m [rom __ arčevneb=ši gaimarjvebda?]
 which-NOM candidate-NOM think.AOR.3SG giorgi-ERG ROM election=in would.win.3SG
 'Which candidate did Giorgi think would win the elections?' T.G. 3/3; L.R. 3/3

Accusative over Ergative

✗

(14) *romel kerdz-s ipikra giorgi-m [rom deda __ vaxšm-ad moamzadebs?]
 which meal-ACC think.AOR.3SG giorgi-ERG ROM mother dinner-ADV prepare.FUT.3SG
 'Which meal did Giorgi think that Mom would prepare for dinner?' T.G. 1/3; L.R. 1/3

Dative over Ergative

✗

(15) *romel mezobel-s ipikra giorgi-m [rom __ sačivar-i dauc'eria?]
 which neighbour-DAT think.AOR.3SG giorgi-ERG ROM complaint-NOM write.PRF.3SG
 Intended: Which neighbour did Giorgi think has written a complaint? T.G. 1/3; L.R. 1/3

- DAT matrix subject pattern together with ERG ones: extracting NOM DPs is grammatical, but ACC or DAT is not, illustrated below with DAT, (16)-(18). Cf. (18) with an “all *wh* extraction” verb like *unda* ‘want’, (4).

Nominative over Dative

✓

- (16) romel-i kandidat-i sjera giorgi-s [rom __ arčevneb=ši gaimarjvebs?]
 which-NOM candidate-NOM believe.3SG.PRS giorgi-DAT [ROM election=in win.FUT.3SG]
 ‘Which candidate does Giorgi believe will win the election?’ T.G. 3/3; L.R. 3/3

Accusative over Dative

✗

- (17) *romel kerdz-s sjera giorgi-s, [rom deda __ vaxshm-ad moamzadebs?]
 which meal-ACC believe.PRS.3SG Giorgi-DAT ROM mother.NOM dinner-ADV prepare.FUT.3SG
 ‘Which meal does Giorgi believe that mom would prepare for dinner?’

Dative over Dative

✗

- (18) *romel mosc’avl-es upikria giorgi-s [rom __ skola=ši siaruli ezareba?]
 which student-DAT think.3SG.PRF giorgi-DAT ROM school=in go be.lazy.3SG.PRS
 ‘Which student has Giorgi thought is lazy to go to school?’ T.G. 1/3; L.R. 1/3

- Extraction of ergative *wh*-DPs shows a more peculiar pattern. First, it is possible to extract ergatives over ergatives, regardless of the type of the ergative phrase:

Ergative over Ergative

✓

CONTEXT: *Giorgi, an expert in economics, was asked to evaluate the cause of a recent price increase. He was given several possible explanations—rising demand, supply chain disruptions, new government policies, and inflationary expectations—and had to choose the most likely one. After considering the options, he confidently selected one. Later, it turned out that his choice was incorrect. I didn’t hear what he picked, so I ask someone who was there:*

- (19) ra-m ipikra Giorgi-m [rom __ imokmeda pas-eb-is zrda=ze]?
 what-ERG think.AOR.3SG Giorgi-ERG ROM affect.AOR.3SG price-PL-GEN increase=on
 ‘What did Giorgi think affected the price increase?’ T.G. 3/3; L.R. 3/3
- (20) romel-ma faktor-eb-ma ipikra Giorgi-m [rom __ imokmeda pas-eb-is zrda=ze]?
 which-ERG factor-PL-ERG think.AOR.3SG Giorgi-ERG ROM affectAOR.3SG price-PL-GEN increase=on
 ‘Which factors did Giorgi think affected the price increase?’ T.G. 3/3; L.R. 2/3
- (21) vin ipikra giorgi-m [rom __ današaul-i čaidina]?
 who think.AOR.3.SG giorgi-ERG [ROM crime-NOM commit.AOR.3SG]?
 ‘Who did Giorgi think committed the crime?’ T.G. 2/3; L.R. 3/3

- Second, ergatives can also be extracted over dative arguments, regardless of animacy:

Ergative over Dative

✓

(22) ra-m upikria giorgi-s [rom __ sadzovr-eb-i gaanadgura]?
 what-ERG think.PRF.3SG giorgi-DAT ROM grazing.land-PL-NOM destroy.AOR.3SG?
 'What has Giorgi thought destroyed the grazing lands?' T.G. 2/3; L.R. 3/3

(23) vin upikria giorgi-s [rom __ arčevn-eb=ši gaimarjva]?
 who think.PRF.3SG giorgi-DAT ROM election-PL=in win.AOR.3SG
 'Who has Giorgi thought won the elections?' T.G. 2/3; L.R. 2/3

- When it comes to *wh*-extraction into clauses with NOM subjects however, we observe the following difference: while extracting inanimate ergative phrases (*ram* 'what') is accepted well, animate ergative *wh*-DP extraction (*vin* 'who') is not allowed, (24)-(25).

Ergative over Nominative

✓

(24) *vin pikrob-s šota [rom __ gadamc'qvet-i gol-i gaitana]?
 WHO.ERG think-3SG.PRS Shota.NOM ROM decisive-NOM goal-NOM SCORE.AOR.3SG
 INTENDED: Who does Shota think scored the decisive goal? T.G. 1/3; L.R. 1/3

(25) ra-m pikrob-s šota [rom __ am mec'arm-is reputacia daaziana]?
 what-ERG think-3SG.PRS Shota.NOM ROM DEM entrepreneur-GEN reputation-NOM damage.AOR.3SG
 'What does Shota think damaged the reputation of this entrepreneur?' T.G. 2/3 L.R. 3/3

3 Is it movement?

- There is evidence that the case-matching *wh*-dependency involves movement. First, there are island effects:

(26) *vis pikrobs mariam-i [rom Ana __ urekavs da Giorgi saxl=ši c'ava?]
 who.DAT think.3SG.PRS Mariam-NOM ROM Ann.NOM call.3SG.PRS and Giorgi.NOM home=in go.FUT.3SG?
 Intended: 'Who is the person x such that Mary thinks Ann calls x and Giorgi will go home?'

- Second, we see **reconstruction for Condition C**:

(27) [giorg-is_i romel megobar-s] pikrobs mariam-i [rom man_{*i,j} __ daureka]?
 giorgi-GEN which friend-DAT think.3SG.PRS Mariam-NOM ROM 3SG.ERG call.AOR.3SG
 'Which Giorgi's_i friend does Mary think that he_{*i,j} called?'

- Third, *wh*-phrase can form an idiomatic expression with the embedded predicate:

(28) vis pikrobs mariami [rom civ-ma opl-ma dauara]?
 who.DAT thinks Mariam.NOM ROM cold-ERG sweat-ERG passed.through
 Literal: 'Through whom does Mariam think that the cold sweat passed?'
 Idiomatic: 'Who does Mariam think that got nervous?'

- Finally, extraction of ERG *wh*-DPs over ergative subjects, (19)-(20), as well as extraction of *wh*-adjuncts, (7), and *wh*-DPs in lexical cases assigned by embedded licensors, (36), all make a matrix base-generation account untenable. For additional evidence in favor of movement, see appendix A.

4 Successive-cyclicity via DP-edges

4.1 Argument structure matters: the clause must be nominalized

- Not all embedded clauses allow case-matching *wh*-extraction for speakers that allow that phenomenon.
- In addition to the variation by the type of embedding predicate and size of the embedded complement, the argument structure of the clause-embedding verb plays a role:

(29) **Argument Structure Generalization**

Verbs that allow case-matching *wh*-extraction are verbs that have an internal argument, which can be either realized by a DP or by a nominalized CP with the same theta-role.

- We illustrate the generalization in (29) with verbs that share the root—*pikr* ‘think’, but differ in transitivity.
- (30) shows that *gaipikrebs* ‘will think’ can combine with an internal argument DP, which is a content noun (‘idea’), and this is also reflected in the conjugation morphology (class I).
- *šepikriandeba* ‘will think’ on the other hand cannot take an internal argument DP and morphologically patterns with unaccusative and passive verbs (class II).

(30) nino [am idea-s]_{DP} ga-i-pikr-eb-s /*še-pikr-ian-d-eb-a.
 Nino.NOM this idea-ACC PVB-PV-think-TS-PRS.3SG /PVB-think-IAN-D-TS-PRS.3SG
 ‘Nino will think this idea.’

- While both verbs can combine with clauses, (31a), only clauses that combine with *gaipikrebs* ‘will think’ allow an overt case-marked demonstrative on top of the clause, (31b). Following (Bondarenko, Fernandes, et al., 2026), we assume that verbs like *gaipikrebs* ‘will think’ always combine with DPs, and clausal complements to these verbs are always nominalized, and what’s optional is whether it is overtly expressed.

(31) a. mariami ga-i-pikr-eb-s /še-pikr-ian-d-eb-a,
 Mariam.NOM PVB-pv-think-TS-PRS.3SG /PVB-think-IAN-D-TS-PRS.3SG
 [rom es c’igni šota-s štaagonebs].
 [ROM this book.NOM Shota-DAT inspire.PRS.3SG]
 ‘Mariam will think that this book is inspiring Shota.’
 b. mariami ga-i-pikr-eb-s /*še-pikr-ian-d-eb-a,
 Mariam.NOM PVB-pv-think-TS-PRS.3SG /PVB-think-IAN-D-TS-PRS.3SG
 [imas rom es c’igni šota-s štaagonebs].
 [that.ACC ROM this book.NOM Shota-DAT inspire.PRS.3SG]
 ‘Mariam will think that this book is inspiring Shota.’

- Interestingly, whether the verb takes DP internal arguments or not correlates with the possibility of *wh*-extraction: while it is possible to do case-matching *wh*-extraction with *gaipikrebs* ‘will think’, it’s not possible to do so with *šepikriandeba* ‘will think’, (32a).

- Note also that overt demonstrative is incompatible with the *wh*-extraction, (32b).¹

¹This might be a restriction similar to the Doubly-filled COMP filter—just as overt C might not be compatible with overt Spec,CP in some languages, it seems that in Georgian we are observing the same constraint within the DP.

- (32) a. vis ga-i-pikr-eb-s /*še-pikr-ian-d-eb-a mariami,
 who.DAT PVB-PV-think-TS-PRS.3SG /PVB-think-IAN-D-TS-PRS.3SG Mariam.NOM
 [rom es c'igni štaagonebs]?
 [ROM this book.NOM inspire.PRS.3SG]
 'Who will Mariam think that this book is inspiring?'
 b. *vis ga-i-pikr-eb-s /še-pikr-ian-d-eb-a mariami,
 who.DAT PVB-PV-think-TS-PRS.3SG /PVB-think-IAN-D-TS-PRS.3SG Mariam.NOM
 [imas rom es c'igni štaagonebs]?
 [that.ACC ROM this book.NOM inspire.PRS.3SG]
 'Who will Mariam think that this book is inspiring?'

- The constraint in (29) seems to extend to all unaccusative verbs. Some additional examples are in (33)-(35).

- (33) *vis aris Giorg-i bednieri [rom šota-m kvavil-eb-i __ ačuka]?
 who.DAT BE.3SG.PRS Giorg-NOM happy, [ROM Shota-ERG flower-PL-NOM gift.AOR.3SG]?
Intended: 'Who is x such that Shota is happy that Giorgi gave x some flowers.'? T.G. 1/3 L.R. 1/3
- (34) *vis aris Giorg-i darcmunebuli [rom šota-m kvavil-eb-i __ ačuka]?
 who.DAT BE.3SG.PRS Giorg-NOM certain, [ROM Shota-ERG flower-PL-NOM gift.AOR.3SG]?
Intended: 'Who is x such that Giorgi is certain that Shota gave x some flowers.'? T.G. 1/3 L.R. 1/3
- (35) *vis šešinda Giorg-i [rom __ virus-i akvs?]
 who.DAT got-afraid.AOR.3SG Giorg-NOM ROM virus-NOM have.3SG.PRS?
Intended: 'Who is x such that Giorgi got afraid that X come down with a virus?' T.G. 1/3 L.R. 1/3

4.2 This is not Raising-to-Object

- **Question:** could the constraint in (29) be due to the fact that the *wh*-DP undergoes (hyper)-Raising-to-Object: it becomes an internal argument of the matrix verb before it moves further to the *wh*-position?
- **Answer:** We'd like to argue that **no**, *wh*-movement does not involve a step of raising to object.
- First, cross-clausal *wh*-movement is not limited to DPs that could become internal argument of the matrix verb. For example, DPs in instrumental case and adjuncts like temporal adverbs can be *wh*-extracted too:

- (36) [romeli t'ransp'ort'-it]₁ pikrobs šota, [rom ninuca t₁ dadis samsaxur-ši]?
which transport-INSTR think.PRS.3SG Shota.NOM ROM Ninutsa.NOM walk.PRS.3SG work-to
 'By what means of transportation does Shota think that Ninutsa goes to work?' T.G. 3/3 L.R. 3/3
- (37) rodis₁ ečvobs giorgi, [rom t₁ am sakme-m shota gaabraza]?
when be.suspicious.PRS.3SG Giorgi.NOM ROM this task-ERG Shota.NOM upset.AOR.3SG
 'When₁ is Giorgi suspicious that this task upset Shota t₁?'

- Second, more than one DP can undergo *wh*-movement, as long as at least one of them obeys the case-matching constraint: as we see in (38), both a NOM direct object and a DAT indirect object can be extracted at the same time. If case-matching involved movement of a DP that saturates an internal argument position of the matrix verb, it is unclear how two DPs at the same time or an adjunct phrase could saturate it.

- (38) vis ra ipikra giorgi-m, [rom nino-m misca]?
 who.DAT what.NOM think.AOR.3SG Giorgi-ERG that Nino-ERG give.AOR.3SG
 ‘What and to whom did Giorgi think that Nino gave?’

- **Take-away:** Raising-to-Object—*becoming internal argument of the matrix verb*—is **not** a requirement for undergoing long-distance *wh*-movement. Yet if some DPs move, one DP must match in case the verb’s object.

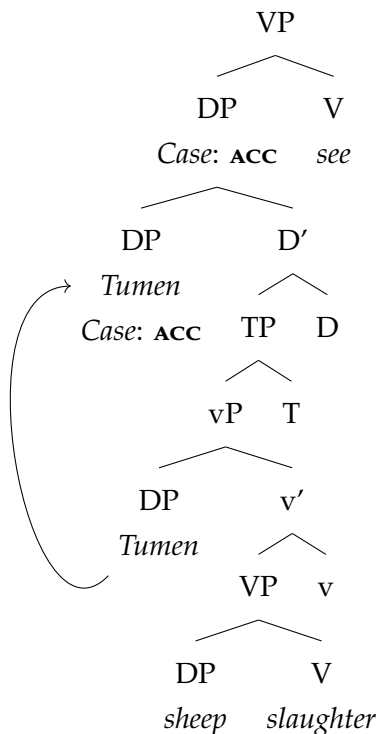
4.3 Successive-cyclic movement via Spec,DP

- We take inspiration from constructions in Altaic languages with nominalized clauses like (39), in which the clause receives the same case marking as its subject located on the left edge of the clause.

- (39) *Buryat ACC-subject Nominalizations*
 bi [tumə-ijə xoni bari-žə bɛ:-h-ijə] xar-a-b.
 1SG.NOM Tumen-ACC sheep slaughter-CONV be-NMN-ACC see-PST-1SG
 ‘I saw that/how Tumen slaughtered a sheep.’ (Bondarenko, 2017, ex.(4))

- In examples like (39) the embedded subject does not become the internal argument of the verb ‘see’—the attitude holder still stands in the seeing relationship with the whole event described by the nominalized clause (‘Tumen slaughtering sheep’), not just with the individual described by the moved DP (‘Tumen’).
- **Question:** How (and why) do both the nominalization and its subject get ACC?
- **Hypothesis:** both the nominalization DP and the individual-denoting DP match in case because the individual-denoting DP moves to the Spec,DP of the nominalized clause and becomes *equidistant* with it.

- (40) *DP and Spec,DP getting the same Case*



- If we adopt the definition of closeness from (Rackowski and Richards, 2005), (93), the DP in the specifier of the nominalization and the nominalized clause itself are equidistant from higher projections.

- (41) **The Closest Goal** (Rackowski and Richards, 2005, p. 579) *(see further revision in Appendix B)*
 A goal α is the closest one to a given probe if there is no distinct goal β such that for some X (X a head or maximal projection), X c-commands α but does not c-command β .²

5 Proposal

- Something very similar to Buryat happens in Georgian: *wh*-phrases make an intermediate stop in Spec,DP of the nominalized clause, and if they are a DP, they'll get the same case as the nominalized clause.
- **Difference:** in Buryat we're not dealing with *wh*-movement, and only the highest DP can move. In Georgian, *wh*-features are driving the movement, and so there is no restriction as to the category or height of the phrase.

5.1 Assumptions about Case

- We will assume an unorthodox view about case assignment, according to which:
 - NOM and ACC are unmarked and dependent cases assigned within the TP Spell-Out domain;
 - ERG is a quirky case assigned by the v^* that is selected by Asp_{pfv} ;
 - DAT is a structural case assigned by Appl;
 - INST and ADV cases are DPs encapsulated in additional KP-shells.
- The asymmetry between ERG and ACC is deliberate: as we have seen, these cases behave dramatically different when it comes to case-matching.

Why dependent case for NOM and ACC?

- (Baker, 2015): Dependent Case and Case-via-Agree co-exist—there are situations when the relationship between Case and Agree could be attributed to Case-discrimination of the Probe, but there are also genuine cases of Case being dependent on Agree (e.g. Sakha nominative).
- **Question:** How do we know how a certain case is assigned?
- **Rule of Thumb:**
 We have to look at the system overall and determine what is the relationship between Case and Agreement.

²Goal for Rackowski and Richards (2005) must be capable of moving, so intermediate projections like D' don't count.

- Here is a brief summary of case and agreement in Georgian:

(42) **Agreement & Case in different TAM-forms in Georgian**

Case Alignment	TAM forms	<i>v</i> -agreement	T/C-agreement
NOM-ACC	Present, Future, Imperfect, Conditional, Conjunctive I, II	subject & object	subject (+#)
ERG-NOM	Aorist, Optative	subject & object	subject (+#)
DAT-NOM	Present Perfect, Pluperfect	subject & object	object (+#)

- We will follow (Bondarenko and Zompì, 2025) in assuming that the omnivorous #-agreement is not indicative of agreement with an actual DP, but is achieved via agreement between the #-probe and *v*.
- Note that ERG-NOM alignment involves ERG marking on all external arguments, including unergative verbs.
- At first glance, Case-via-Agree approach to NOM and ACC might seem attractive when it comes to Georgian, because when we look at clauses smaller in size than fully finite clauses, we see the that lack of agreement and lack of case go hand in hand, (43), which might make us hypothesize (46).

Agreement & Structural Case in an Independent Sentence

- (43) is me m-xed-av-s
 3SG.NOM 1SG.ACC 1-see-TS-3SG
 'He/She sees me.'

No Acc/Nom in Masdars & No Agreement

- (44) a. čem-i da-naxv-a
 1SG.GEN-NOM PVB-see-NMLZ.NOM
 'Seeing me'
- b. *čem-i da-m-naxv-a
 1SG.GEN-NOM PVB-1SG-see-NMLZ.NOM
 'Seeing me'
- c. *me da-naxv-a
 1SG.ACC/NOM PVB-see-NMLZ
 'Seeing me'
- d. *me da-m-naxv-a
 *1SG.ACC/NOM PVB-1SG-see-NMLZ
 'Seeing me'

No Acc/Nom in participle constructions & No Agreement

- (45) a. čem-i da-c'eril-i c'ign-i
 1SG.GEN-NOM PVB-write-PST.PART book-NOM
 'The book I wrote'
- b. *čem-i da-v-c'eril-i
 1SG.GEN-NOM PVB-1SG-write-PST.PART
 c'ign-i
 book-NOM
 Intended: 'The book I wrote'
- c. *me da-v-c'eril-i
 1SG.NOM/ACC PVB-1SG-write-PST.PART
 c'ign-i
 book-NOM
 Intended: 'The book I wrote'

(46) **Case-via-Agree Hypothesis (not to be adopted):**

NOM is assigned by T, ACC is assigned by *v*.

- **Wrong Prediction of (46) #1:** If NOM is assigned by T, we should find no environments where a DP has NOM case but has not been agreed with by T.

- (47) a. bavshv-eb-ma **me** da-m-i-nax-es /*da-m-i-nax-e
 child-PL-ERG **1SG.NOM** PVB-1-pv-see-AOR.3PL /PVB-1-pv-see-AOR.PART
 'The children saw me.'
- b. bavšv-eb-ma gogo da-i-nax-es
 kids-PL-ERG girl.NOM PVB-pv-see-3PL.PST
 'The kids saw a girl.'
- c. *bavšv-eb-ma gogo-s da-i-nax-es
 kids-PL-ERG girl-ACC PVB-pv-see-3PL.PST
Intended: 'The kids saw a girl.'

- As we see in (47), in ERG-NOM alignment the object is not agreed with by the higher T probe, yet it nevertheless bears NOM case. One would need to postulate null agreement to maintain (47).
- **Wrong Prediction of (46) #2:** If ACC is assigned by *v* and reflects Agree, we should find no environments where *v* has agreed with the object but the object lacks ACC.

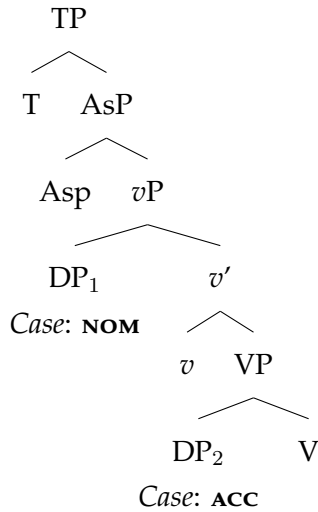
- (48) giorgi-s čven v-u-nax-i-var-t (49) giorgi-s bavšv-eb-i/*s
 giorgi-DAT 1PL.NOM 1-3APPL-SEE-PERF-PRS.1-PL giorgi-DAT child-PL-NOM/-ACC
 'Giorgi has seen us.' u-nax-av-s
 3APPL-SEE-PERF-PRS-3SG
 'Giorgi has seen the children.'

- This prediction is not borne out: objects in both ERG-NOM alignment, (47), as well as in DAT-NOM alignment, (48)-(49), agree with *v*, yet do not get ACC.
- **Take-away:** NOM and ACC cases do not stand in one-to-one correspondence with agreement with T and *v*.
- **Question:** But why then would NOM and ACC cases depend on the presence of T?
- **Our proposal:** because unmarked and dependent cases are assigned at particular Spell-Out domains (Baker, 2015), and NOM and ACC cases are assigned after the CP phase is completed and TP is Spelled-Out.
- **Consequence:** if TP is not present in the structure, as in (44)-(45), NOM and ACC cases will not be available.³

³Note that this proposal does not automatically explain absence of agreement by *v* in these structures. One hypothesis that could explain impossibility of agreement in nominalizations and participial constructions is that agreement probes within a single clause "start out" as a single probe and then are "split" across several functional heads within the structure. Thus, in Georgian we can say that a higher T/C probe is searching for NON-PART & PL, and *v* is searching for PART, which, taken together, make up the ϕ . It could be that there is a ban on searching for only a subset of ϕ , and so if we are putting a PART probe on *v*, we must also have a NON-PART & PL probe in the clause, but without T head being present there is no possible host for this probe.

Quick illustration of case assignment

(50) Nom-Acc Alignment



Spell-Out Domain: TP

New Relationships: $DP_1 < DP_2$

Outcome:

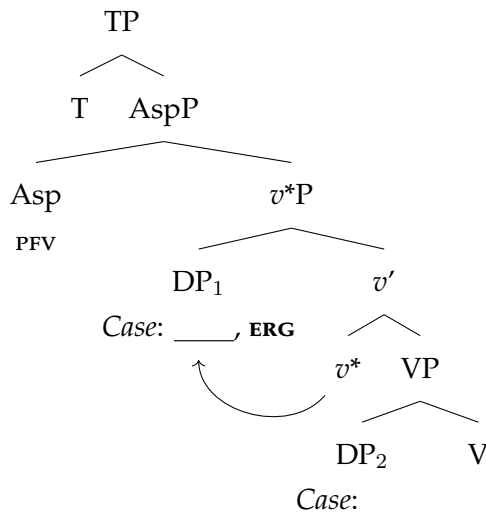
assign dependent ACC to DP_2 ,

assign unmarked NOM to DP_1

No other Spell-Out Domains to consider

- We adopt Baker's (2015) idea that split-ergativity can arise because certain Asp heads are phasal and introduce an additional Spell-Out domain.
- We will assume that Asp that hosts a PFV feature is such a head: what unites aorist and optative forms, which have the ERG-NOM alignment, is that both have *perfective aspect* as opposed to *default aspect* that links (a)telicity to (im)perfectivity (see Bondarenko, 2017 for discussion).
- We suggest that Asp_{pfv} selects for v^*P , a projection whose v^* head has the ability to assign lexical ERG feature.
- v^*P is an additional Spell-Out Domain, but as a domain it does not actually have any new cases to offer, which results in the **underapplication of dependent case** (Baker, 2015, section 6.1.)—a phenomenon where we see two unmarked cases where we could have expected to see a dependent case.

(51) Erg-Nom Alignment, Step#1



Spell-Out Domain: v^*P

Quirky case:

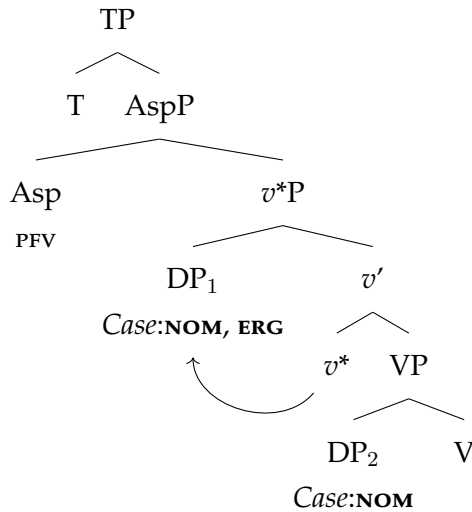
v^* assigns DP_1 an ERG feature

New Relationships: $DP_1 < DP_2$

Outcome:

no structural case is assigned since no dependent cases are available at v^*P ; unmarked case is assigned at TP too

(52) **Erg-Nom Alignment, Step#2**



Spell-Out Domain: TP

New Relationships: no new relationships between DPs

Outcome:

unmarked NOM case assigned to both DP₁ and DP₂

No other Spell-Out Domains to consider

- **Take-away:** Because v^*P is a Spell-Out domain, the relationship between DP₁ and DP₂ is already considered at this stage, preventing it from being considered at the TP Spell-Out, which is the only domain in Georgian that comes with dependent case. The crucial assumption of this analysis is in (53).

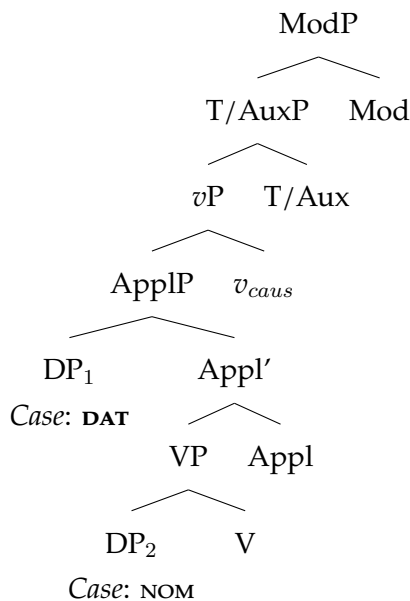
(53) **Strict Cycle Condition on Dependent Case:** (adapted from (Baker, 2015, p. 233))

Only new c-command relationships are considered at later spell outs:

If at an earlier spell-out relationship between DP₁ and DP₂ has been already established, that relationship cannot be considered again at a later spell-out and cannot lead to dependent case assignment.

- We will assume that in DAT-NOM alignment, the structure of the verbal phrase is different from other forms in that it contains an applicative structure (Marantz, 1989; Thivierge, 2021).

(54) **Dat-Nom Alignment**



Spell-Out Domain: T/AuxP

Structural Case via Agree:

Appl assigns DP₁ a DAT feature

New Relationships: DP₁ < DP₂

Outcome:

since DP₁ is already marked for case, no dependent case is assigned to DP₂ even though DP₁ < DP₂; as a result, DP₂ gets unmarked NOM case

No other Spell-Out Domains to consider

- In particular, we will follow the structure proposed in (Bondarenko and Zompì, 2025), where forms like present perfect involve a modal selecting for a T/Aux that takes a *v*P that cannot project a specifier. External arguments will be introduced in Spec,Appl instead, where ApplP is the complement of *v*.
- The derivation of DAT-NOM includes only one Spell-Out domain: T/AuxP, (54).
- Dependent Case rule doesn't apply in DAT-NOM alignment at the T/AuxP Spell-Out domain, because the higher DP gets structural dative case from Appl, and thus becomes case-marked, bleeding ACC case assignment to the object, which can then get unmarked NOM.
- **Asymmetry between ERG and DAT:** Notice that in our proposal ERG and DAT are treated differently.
 - **ERG is quirky case**—it is a feature DP gets in addition to structural Case (unmarked NOM);
 - **DAT is structural case**—the DP that gets it does not get additional structural NOM case.
- **Why:** This difference helps us account for the fact that the T probe skips DAT subjects but not ERG subjects; this follows under assumption that ERG subjects are also NOM but datives are not.

5.2 Case-matching via equidistance of DP and Spec,DP

- Now that we have a framework to think of how case gets assigned within a single clause, we can consider how case-matching arises in cross-clausal *wh*-extraction.
- We are assuming that *wh*-pronouns have the features in (55)-(56), and the Subset Principle, (57).

(55) *VIs for animate wh-DPs*

- vin*: {D, WH, ANIM, NOM}
- vis*: {D, WH, ANIM, ACC}
- vis*: {D, WH, ANIM, DAT}

(56) *VIs for inanimate wh-DPs*

- ram*: {D, WH, INANIM, ERG, NOM}
- ra*: {D, WH, INANIM, NOM}
- ras*: {D, WH, INANIM, ACC}
- ras*: {D, WH, INANIM, DAT}

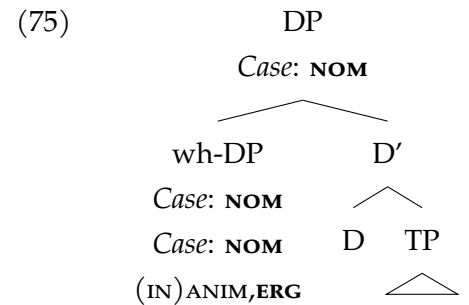
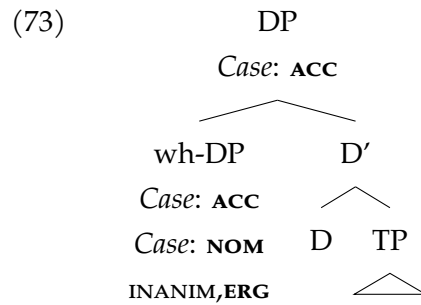
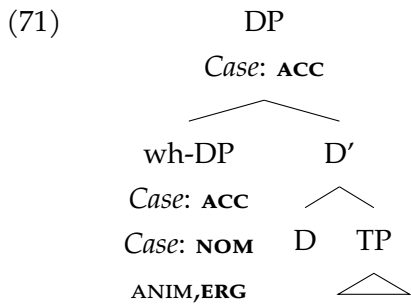
(57) **Subset Principle** (Halle, 2000, p. 128)

- The phonological exponent of a Vocabulary item is inserted into a morpheme in the terminal string if the item matches all or a subset of the grammatical features specified in the terminal morpheme.
- Insertion does not take place if the Vocabulary item contains features not present in the morpheme.
- Where several Vocabulary items meet the conditions for insertion, the item matching the greatest number of features specified in the terminal morpheme must be chosen.
- **NB:** We are assuming that *vin* does not have ERG in its featural specification, which will be crucial.
- We propose that while multiple VIs could match a morpheme, if there is a tie between them with respect to the features that they expone, we get ungrammaticality, (58), unless the two VIs have the same form.

- Both nominalization DP and *wh*-DP will receive unmarked NOM case in the matrix clause.
- **NB:** On this account, unmarked cannot be really seen as a last resort case: **unmarked must be a case that can be assigned to a DP that already has case.** Without this assumption, (67)-(69) would be grammatical.
- Extraction of NOM arguments into a clause with the ERG or DAT subject, (65), is good: *vin* is the best candidate.
- Extraction of ACC arguments into a clause with the with the ERG or DAT subject, (67), is impossible due to the Tie Intolerance: *vin* and *vis* are equally good VIs for the morpheme, and we can't choose between them.
- Extraction of DAT arguments into a clause with the with the ERG or DAT subject, (67), leads to ungrammaticality for the same reason—having both DAT and NOM features makes the choice between *vin* and *vis* impossible.
- Inanimate *wh*-DPs will result in exactly the same pattern because they also have separate NOM forms but syncretic DAT and ACC forms.

5.3 Extraction of Ergatives

- Now consider how our system handles extraction of ERG *wh*-DPs.
- In such cases, the *wh*-DP receives case three times: the quirky ERG case from embedded *v**, the structural unmarked NOM in the embedded clause, and the structural case in the matrix clause.
- Let's first consider the case when an ERG phrase moves into the clause with an ERG or DAT subject, (75).
- If the *wh*-DP is animate, the nominative VI *vin* will be chosen, because it satisfies the Subset Principle, (57).
- If the *wh*-DP is inanimate, the ergative VI *ram* will be chosen over nominative *ra*, because it matches more features than *ra* does (both ERG and NOM).



(72) {D,WH,ANIM,ERG,NOM,ACC}
⇒ ✗

(74) {D,WH,INANIM,ERG,NOM,ACC}
⇒ *ram*

(76) {D,WH,(IN)ANIM,ERG,NOM}
⇒ *vin* or *ram*

- Now let's consider extraction of ergatives into clauses with NOM subjects, (71)-(73).
- It turns out that animacy of the *wh*-DP matters due to the rules of Vocabulary Insertion and the features of available VIs.

- If the ergative *wh*-DP is animate, there is no VI that would be the best match: nominative *vin* and accusative *vis* are tied as to the number of features that they can expone.
- But if the ergative *wh*-DP is inanimate, there is a unique winner: *ram* lexicalizes both ERG and NOM features, and so wins over both *ra* and *ras*. Recall that this is indeed what we observe:

- (77) **vin* *pikrob-s* *šota* [rom __ *gadamc'qvet-i gol-i gaitana*]?
WHO.ERG think-3SG.PRS Shota.NOM ROM decisive-NOM goal-NOM SCORE.AOR.3SG
 INTENDED: Who does Shota think scored the decisive goal? T.G. 1/3; L.R. 1/3
- (78) *ra-m* *pikrob-s* *šota* [rom __ *am mec'arm-is reputacia daaziana*]?
what-ERG think-3SG.PRS Shota.NOM ROM DEM entrepreneur-GEN reputation-NOM damage.AOR.3SG?
 'What does Shota think damaged the reputation of this entrepreneur?' T.G. 2/3 L.R. 3/3

6 Concluding remarks

- We've argued that Georgian has a phenomenon of case-matching long-distance *wh*-extraction (with some verbs, for some speakers). It involves true movement.
- We observed that only verbs that take clauses as internal arguments can do the long-distance case-matching *wh*-extraction, and proposed that this phenomenon arises because *wh*-phrases stop over in Spec,DP of the nominalized clause, where they are visible to the case algorithm of the matrix clause and are treated as equidistant from the nominalization itself, getting the same case as the nominalized clause.
- We proposed while there is no issue with getting case features multiple times, the resulting feature combination might lead to ungrammaticality if there is no unique best candidate among the VIs that could spell it out. We've called it a *Tie Intolerance Principle*. Syncretism can save cases where multiple VIs are tied.
- Our proposal required an unorthodox view of the types of cases we find in Georgian:

- (79) a. NOM and ACC are structural cases: unmarked and dependent, assigned at the TP Spell-Out
 b. DAT is a structural case assigned by Appl
 c. ERG is a quirky case assigned by *v** which co-exists with structurally assigned case (NOM)
 d. lexical cases (ADV, INSTR contain more structure (KP), and thus are shielded from the matrix case assignment when they *wh*-move

- In particular we've argued for an asymmetry between ERG and ACC case assignment in Georgian: ACC is a dependent case, but ERG is not—it is a quirky case that co-exists with a structural case.
- This view seems to be a middle ground between *Ergative-as-inherent case* (Nash, 1996; Legate, 2008) and *Ergative-as-structural case* (Nash, 2017; Berikashvili, 2023) approaches: ERG DPs are both marked with inherent/quirky features, but also get a structural NOM feature. What on this view ERG is *not* is a dependent case.
- Consider what would happen if we viewed ERG as a dependent case on a par with ACC: we'd need to postulate the VIs in (80)-(81), as being ERG would no longer imply being NOM as well.

(80) *Alternative VIs for animate wh-DPs*

- a. *vin*: {D, WH, ANIM, NOM}
- b. *vin*: {D, WH, ANIM, ERG}
- c. *vis*: {D, WH, ANIM, ACC}
- d. *vis*: {D, WH, ANIM, DAT}

 (81) *Alternative VIs for inanimate wh-DPs*

- a. *ram*: {D, WH, INANIM, ERG}
- b. *ra*: {D, WH, INANIM, NOM}
- c. *ras*: {D, WH, INANIM, ACC}
- d. *ras*: {D, WH, INANIM, DAT}

- This would lead to wrong predictions about case-matching extraction of ERG phrases, shown in table 2: we'd wrongly predict all ERG extraction into clauses with NOM subjects to be impossible, because of *vin* and *vis* and *ram* and *ras* being tied for exponence.
- We'd also predict only animate ERG DPs to be extracted into clauses with ERG and DAT subjects (the syncretism save), which is also not what we observe empirically.

Matrix \ Embedded					
	NOM	ERG: PREDICTED	ERG: REALITY	DAT	ACC
NOM	✗	✗	* <i>vin</i> , ^{ok} <i>ram</i>	✓	✓
ERG	✓	^{ok} <i>vin</i> , * <i>ram</i>	✓	✗	✗
DAT	✓	^{ok} <i>vin</i> , * <i>ram</i>	✓	✗	✗

Table 2: ERG as dependent case view

- One interesting thing to note is that verbs that exhibit case-matching *wh*-extraction don't automatically have case-matching for all types of movement. Consider (82)-(84).

- (82) es c'igni₁ mariami ipikrebs, [rom t₁ šota-s štaagonebs] *topicalization*
 this book.NOM Mariam.NOM think.FUT.3SG ROM Šota-ACC inspire.PRS.3SG
 'Mariam will think that this book is inspiring Šota.'
- (83) me vici mosc'avle, [romeli₁-c nene pikrobs, *relativization*
 1SG.ERG know.PRS.1SG student.NOM which.NOM-REC Nene.NOM think.PRS.3SG
 [rom t₁ megobar-s xat'avš]]
 ROM friend-ACC draw.PRS.3SG
 'I know the student that Nene thinks that is drawing a friend.'
- (84) *mariami šota-s ipikrebs, [rom es c'igni štaagonebs] *low scrambling*
 Mariam.NOM Šota-ACC think.FUT.3SG ROM this book.NOM inspire.PRS.3SG
 'Mariam will think that this book is inspiring Šota.'

- A way to understand the difference between (82)-(83) and *wh*-movement—*another Williams Cycle Effect*: the former target a higher landing site in the clause (CP-level), and their movement, even if it happens through Spec,DP, proceeds *later*—at the CP-cycle, *after* TP-level case assignment has taken place.

7 Appendix A: More evidence for movement

- Further support for movement comes from **reconstruction for Anaphor Binding**: when the extracted *wh*-phrase contains an anaphor, that anaphor can be bound by the embedded subject.

CONTEXT: *We're at a high-end auction featuring works by both emerging artists and a few renowned painters. One of the featured artists is famous for his self-portraits, and the auction catalogue suggests that one of his pieces is expected to fetch an exceptionally high price. I'm trying to figure out which of his self-portraits that will be. Mary is organizing the auction, so she should know. I ask a friend of Mary:*

- (85) [tav-is-i tav-is_i romel naxat-s] pikrobs Mariami [rom es cnobil-i
self-GEN-NOM self-GEN which painting-ACC think.3SG.PRS Mariam-NOM ROM DEM famous-NOM
mxatvar-i_i ____ dzalian dzvir-ad gakidis]?
painter-NOM very expensive-ADV sell.3PS.FUT? T.G. 3/3; L.R. 3/3;
'Which painting of himself does Mary think that the painter will sell for a very high price?'

- Furthermore, (86) shows that *wh*-phrases containing reciprocals must reconstruct when the only plural subject is located in the embedded clause.

CONTEXT: *Grandma is babysitting the kids and knows they tend to grab each other's toys and end up fighting. Before the parents leave, she asks them to put away one favorite toy for each child, worried that otherwise the kids might break them. I wasn't there for that conversation, but I know Grandma made that request. Later, I ask one of the parents:*

- (86) ertmanet-is_i romel satamašo-s pikrobs bebo [rom bavš-eb-i_i ____ daamtvreven?]
each-other-GEN which toy-ACC think.3SG.PRS grandma.NOM ROM kid-PL-NOM break.FUT.3SG
'Which of each other's toys does Grandma think the kids will break?' T.G. 2/3; L.R. 3/3

- Examples with **lexical case** like (87) and with **adjunct wh** like (88) are also incompatible with matrix base-generation: the meanings (and case) of the *wh*-phrases indicate that they originated in the embedded clause.

- (87) romeli t'ransp'ort'-it pikrobs šota [rom Ninutsa samsaxur=ši dadis?]
which transportation-INST think.3SG.PRS Shota-NOM ROM NinutsaNOM job=IN go.3SG.PRS?
'By what means of transportation does Shota think that Ninutsa goes to work?' T.G. 3/3; L.R. 3/3

CONTEXT: *Context: Ninutaa suddenly left her job, and none of us know the real reason. People have been speculating—some think she found a better offer, others think she was unhappy at work. Giorgi claims to know what happened and has already shared his theory, but I missed that conversation. Later, talking to someone who heard him, I ask:*

- (88) ratom pikrobs šota [rom Ninutsa samsaxuridan cavida ____?]
Why think.3SG.PRS Shota-NOM ROM Ninutsa.NOM job.FROM leave.AOR.3SG?
'Why does Shota think Ninutza quit?' T.G. 3/3; L.R. 3/3

8 Appendix B: Multiple *wh*-movement

- **Question:** What happens if we extract several *wh*-DPs? How does case-matching work then?
- The definition of closeness in (93) makes the following prediction: if multiple specifiers of Spec,DP are created, only the highest one would be equidistant with the DP itself and get the matrix clause case.
- **That is not what we find:** the height does not seem to matter, and in fact case-matching *wh*-DP movement feeds non-case-matching *wh*-DP movement regardless of the order of the DPs.

(89) **Case-matching with multiple *wh*-DPs**

One of the extracted *wh*-DPs has to match in case with the nominalized clause, others can be any case.

(90) **DAT *wh*-extraction feeding NOM *wh*-extraction**

- a. *ra pikrobs giorgi, [rom nino-m dat'o-s misca]?
 what.NOM think.PRS.3SG Giorgi.NOM ROM Nino-ERG Dato-DAT give.AOR.3SG
 'What does Giorgi think that Nino gave to Dato?'
- b. vis ra pikrobs giorgi, [rom nino-m misca]?
 who.DAT what.NOM think.PRS.3SG Giorgi.NOM ROM Nino-ERG give.AOR.3SG
 'To whom and what does Giorgi think that Nino gave?'

(91) **DAT *wh*-extraction feeding ERG *wh*-extraction**

- a. ??vin pikrobs giorgi, [rom dat'os c'igni misca]?
 who.ERG think.PRS.3SG Giorgi.NOM ROM Dato-DAT book.NOM give.AOR.3SG
 'Who does Giorgi think that gave a book to Dato? '
- b. vin vis pikrobs giorgi, [rom c'igni misca]?
 who.ERG who.DAT think.PRS.3SG Giorgi.NOM ROM book.NOM give.AOR.3SG
 'Who and to whom does Giorgi think that gave a book?'

(92) **NOM *wh*-extraction feeding DAT *wh*-extraction**

- a. *vis ipikra giorgi-m, [rom nino-m c'igni misca]?
 who.DAT think.AOR.3SG Giorgi-ERG ROM Nino-ERG book.NOM give.AOR.3SG
 'Who did Giorgi think that Nino gave a book to?'
- b. vis ra ipikra giorgi-m, [rom nino-m misca]?
 who.DAT what.NOM think.AOR.3SG Giorgi-ERG that Nino-ERG give.AOR.3SG
 'What and to whom did Giorgi think that Nino gave?'

- Here's a revised notion of closeness that would work, and make the nominalization DP and all of its specifiers equidistant from matrix probes:

(93) **The Closest Goal (revised)**

A goal α is the closest one to a given probe if there is no distinct goal β such that for some head X , X c-commands α but does not c-command β .

- Our hypothesis about (89) is that it can be derived by appealing to *impoverishment*: in fact all *wh*-DPs move to the edge of the nominalized clause, and all receive case due to being visible to the matrix clause.
- Impoverishment allows us to remove matrix Case features from all but one DP specifiers of the nominalized clause—one must be maintained, resulting in the “one *wh*-DP must case-match” requirement.

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