Syntax & Semantics Circle, UC Berkeley, 20 September 2019

1 Introduction

West Circassian (Adyghe): Northwest Caucasian, polysynthetic, ergative alignment

Polysynthetic = free word order, pro-drop, no free-standing anaphors, limited case system

Question: In the absence of standard syntactic cues, how can morphology be used to diagnose syntactic structure?

Case study: multiple wh-agreement in relative clauses

Multiple wh-agreement:

• Wh-movement in relative clauses triggers wh-agreement with relativized argument.

(1) a. Declarative clause: b. Relative clause:
$$[DP_i \ ... \ \phi\text{-Agr} \ ... \]$$

$$[Op_i \ ... \ t_i \ ... \ \textbf{WH-Agr} \ ... \]$$

$$\phi\text{-agreement}$$
 wh-agreement

• If relativized argument is co-indexed with another participant in the relative clause, the co-indexed participant may optionally trigger wh-agreement, resulting in a *multi-ple wh-agreement construction*.

(2)
$$[Op_i \dots t_i \dots WH-Agr [pro_i \dots WH-Agr]]$$
 wh-agreement wh-agreement

Main claim:

- Wh-agreement is uniformly triggered by a wh-trace.
- Multiple wh-agreement in West Circassian is the realization of a parasitic gap dependency: the additional wh-agreement is triggered by a parasitic gap.
- The anti-c-command condition on parasitic gaps (Engdahl 1983) provides evidence for:
 - Movement of the absolutive DP to c-command other verbal arguments.
 - Optional A-scrambling of the applied object to c-command ergative agent.

Data from fieldwork with speakers of the Temirgoy dialect (literary standard) in the Republic of Adygea (Russia), unless otherwise noted.¹

Roadmap: 2 Basic clause structure; 3 Background on relative clauses; 4 Multiple whagreement as a parasitic gap dependency; 5 The anti-c-command condition and high absolutive; 6 Interactions between non-absolutive DPs and A-scrambling; 7 Conclusion.

2 Basic clause structure

- Polysynthesis:²
 - (3) sə- qə- p- f- a- r- jə- βe- λεβ^wə-β 1SG.ABS- DIR- 2SG.IO- BEN- 3PL.IO- DAT- 3SG.ERG- CAUS- see -PST 'He showed me to them for your sake.' (Korotkova and Lander 2010:301)
- Cross-reference morphology strictly ordered per ergative alignment:
 - (4) a. ABS- APPL- ERGw- a- de- s- š'aʁ
 1SG.ABS- 3PL.IO- COM- 1SG.ERG- bring.PST
 'I brought you with them' (Rogava and Keraševa 1966:160)
 - b. ABS- APPLwə- q- a- fe- kwaß
 2SG.ABS- DIR- 3PL.IO- BEN- go.PST
 'You went' (Rogava and Keraševa 1966:138)
- Possessee marked with personal marker referring to possessor:
 - (5) s-šəpχwə-xe-r
 1SG.PR-sister-PL-ABS
 'my sisters' (inalienable)
 (6) t-jə-ʁwəneʁwə-xe-m
 1PL.PR-POSS-neighbor-PL-OBL
 'our neighbors' (alienable)
- Ergative alignment in case marking:
 - -r (absolutive) = subject of intransitive verb, theme of transitive verb
 -m (oblique) = agents of transitive verbs, applied objects, possessors, complements of postpositions

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²Glosses: ABSolutive; ADV-adverbial; BENefactive; CAUSative; CNV-converb; COMitative; DATive; DIRective; ERGative; HABITual; INDEFinite; INStrumental; IO-indirect object; LIMitive; LOCative; MODal future; NEGation; OBLique; PLural; POSSessive; PP-complement of postposition; PR-possessor; PREDicative; PRS-present tense; PST-past; Question; REfactive; SG-singular.

- (7) a. mə pŝaŝe-**r** dax-ew Ø-qa-ŝ^we this girl-**ABS** beautiful-ADV 3ABS-DIR-dance 'This girl dances well.'
 - b. sabəj-xe-**m** ha-xe-**r** Ø-q-a-λeв^wə-в child-PL-**OBL**(=ERG) dog-PL-ABS 3ABS-DIR-3PL.ERG-see-PST 'The children saw the dogs.'

 - d. mə ŝwəzə-m Ø-jə-psase this woman-OBL(=POSS) 3SG.PR-POSS-girl 'this woman's daughter'
 - e. mə swəzə-m paje this woman-OBL(=PP) for 'for this woman'
- Indefinite nouns, possessed nominals in the singular, proper names and personal pronouns are usually unmarked for case (Arkadiev et al. 2009:51-52; Arkadiev and Testelets 2015).

3 Background on relative clauses

3.1 Basic structure

Per Lander (2009a,b, 2012); Caponigro and Polinsky (2011)

Relativization is the only type of wh-movement.

(8) General structure of relative clauses (Caponigro and Polinsky 2011):

[CP Op_i C[WH] [TP ...
$$t_i$$
 ...]]

• ϕ -agreement referring to the relativized participant replaced by **wh-agreement** (Caponigro and Polinsky 2011; see also O'Herin 2002; Baier 2018 on Abaza):

z(a) = ergative agents, applied objects, and possessors

 \emptyset - = absolutive arguments

Ergative agent:

(9) a. mə **ç'ale-m**_i(ERG) ə-š velosjəped this boy-OBL 3SG.PR-brother bicycle

Ø- Ø- r- jə- tə -ʁ

3ABS- 3SG.IO- DAT- **3SG.ERG**- give -PST

'This boy gave a bicycle to his brother.'

b. marə ç'al-ew [RC Opi ti(ERG) ə-š velosjəped here boy-ADV 3SG.PR-brother bicycle Ø- Ø- je- zə- tə -ʁe] -r 3ABS- 3SG.IO- DAT- WH.ERG- give -PST -ABS 'Here is the boy that gave a bicycle to his brother.'

Possessor:

[10) marə \hat{s}^w əz-ew [$_{RC}$ Op_i [$_{DP}$ t_i (PR) **z**-jə-pŝaŝe] dax-ew here woman-ADV **WH.PR-**POSS-girl good-ADV \emptyset -qa- \hat{s}^w e-re] -r 3ABS-DIR-dance-PRS -ABS 'Here is the woman whose daughter dances well.'

Absolutive argument:

- (11) a. **ha-r** Ø-jə-xozjajən Ø- Ø- je- ceqa -в **dog-ABS** 3SG.PR-POSS-owner **3ABS** 3SG.IO- DAT- bite -PST 'The dog bit its owner.'
 - b. se səš'eš'əne ha-w [$_{RC}$ Op_i t_i (ABS) Ø-jə-xozjajən I fear dog-ADV 3SG.PR-POSS-owner Ø- Ø- je- ceqa - $_{BE}$] -m WH.ABS- 3SG.IO- DAT- bite -PST -OBL 'I fear the dog that bit its owner.'
- **Nominal head** (i) appears to the left of relative clause with -*ew* (ADV) case marking; (ii) to the right with regular case marking; (iii) is null (in headless relative clauses).

Nominal head to the right of the relative clause:

(12) $[_{RC} \text{ Op}_i \quad t_i(\text{ERG}) \quad \emptyset\text{-jp-$hank}^w \text{ənče} \quad \emptyset\text{-} \quad \text{xe-} \quad \textbf{zp-} \quad \text{wətə -re}] \\ 3\text{SG.PR-POSS-window 3ABS-LOC-} \quad \textbf{WH.ERG-} \text{ break -PST} \\ \textbf{\r{c}'ale-r} \quad \text{mara} \\ \textbf{boy-ABS} \text{ here}$

'Here is the boy that broke his window.'

Headless relative clause:

(13) [RC Opi as\lambda t_i (IO) Ø- **z**\rangle fae -zep\rangle -zep\rangle -m Aslan 3ABS- **WH.IO**- want -HABIT -OBL ρ -\rangle -xe-r fajep 3SG.PR-brother-PL-ABS don't want '[What Aslan always wants] his brothers don't want.'

3.2 Multiple wh-agreement

Multiple wh-agreement: if the relativized participant is co-referent with another argument in the clause, that argument may trigger additional wh-agreement.

(14) marə $\c \xi$ 'al-ew [RC Opi [DP $\c proi(PR)$] $\c a / z = \c s$](ERG) $\c t_i$ (IO) here boy-ADV $\c 3sG/wh.PR$ -brother velosiped $\c \emptyset$ - qə- ze- r- jə- tə -ʁe] -r bicycle 3ABS- DIR- $\c wh.IO$ - DAT- 3SG.ERG- give -PST -ABS 'Here is the boy_i to whom his_i brother gave a bicycle.'

May also appear cross-clausally:

(15) marə ç'al-ew [$_{RC}$ Op_i t_i (ERG) varenje Ø- zə- šxə-re -r here boy-ADV jam 3ABS- WH.ERG- eat -PRS -ABS [$_{CP}$ pro_i (ERG) s w əpə-r Ø- ə/zə- mə- wəx -ze]] soup-ABS 3ABS- 3SG/WH.ERG- NEG- finish -CNV

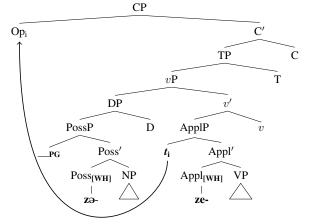
'Here is the boy who is eating jam without finishing the soup.'

One of the wh-agreement markers is additional or parasitic, i.e. cannot appear in the absence of the primary wh-marker (Lander 2012:322-327):

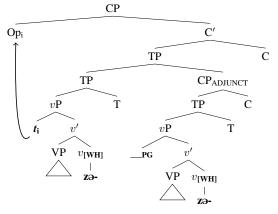
4 Multiple wh-agreement is a parasitic gap dependency

Main claim: multiple wh-agreement is the result of a parasitic gap dependency.

- One-to-one mapping between wh-traces and wh-agreement.
- Additional wh-agreement is agreement with a parasitic wh-trace.
- (17) Structure for (14): ergative DP relativized, possessor of IO is parasitic gap



(18) Structure for (15): ergative agent in main clause relativized, PG in adjunct clause



Multiple wh-agreement displays properties typical of parasitic gaps:

- 1. Additional wh-agreement in multiple wh-agreement is mostly optional.
- 2. Additional wh-agreement may appear within islands for extraction:

(19) Non-absolutive DPs:³

a. * marə \hat{s}^w əz-ew [RC Opi [DP t_i z-jə-ç'ale](ERG) dax-ew here woman-ADV WH.PR-POSS-boy good-ADV wered Ø- q- ə- \hat{z}^w e-re] -r song 3ABS-DIR-3SG.ERG- say -PRS -ABS

Expected: 'Here is the woman whose son sings (lit. says songs) well.'

b. $[_{RC} \text{ Op_i} \quad [_{DP} \quad pro_i/_{PG}(PR) \quad \emptyset \ / \ z\text{-jate} \](ERG) \quad t_i(IO) \\ & 3SG \ / \ WH.PR\text{-father} \\ & \text{mašjane} \quad \emptyset\text{-} \quad qa\text{-} \quad ze\text{-} \quad r\text{-} \quad ja\text{-} \quad ta\text{-} \quad se\text{-}] \quad \check{c}' \text{ale-m} \\ & \text{car} \quad 3ABS\text{-} \quad DIR\text{-} \quad WH.IO\text{-} \quad DAT\text{-} \quad 3SG\text{.}ERG\text{-} \quad give\text{-}PST \quad boy\text{-}OBL} \\ & \text{sjex}^w \text{apse} \\ & \text{I} \quad \text{envy} \\ & \\ \end{array}$

'I envy the boy to whom, his, father gave a car.'

(20) Clausal adjuncts:

a. * xet-a [RC Opi Zarine $\begin{bmatrix} ADJUNCT & t_i(IO) \end{bmatrix}$ Zarine who-o Ø-Ze- mə- wəpč'əž' -ew] mə pŝaŝe-m 3ABS- WH.IO- DAT- NEG- ask this girl-OBL -ADV qəfjəš'efəse] -r 3SG.IO(BEN)+3SG.ERG.buy.PST -ABS

lit. 'Whom did Zarina buy a book for this girl [without asking _].'

Zarine $[ADJUNCT pro_i/_PG(IO)]$ b. xet-a RC Opi Zarine who-Q \emptyset - i/ze- mə- wəpč'əž'-ew] $t_{\rm i}({\rm IO})$ 3ABS-3SG/WH.IO-DAT-NEG-ask -ADV qə- **z**f- jəš'efə -ве] -r 3ABS- DIR- WH.IO- BEN- 3SG.ERG- buy -PST -ABS 'Whom did Zarina buy a book for [without asking].'

3. Parasitic gaps cannot be embedded in an additional island:

Kayne (1983); Chomsky (1986); Nissenbaum (2000); Hornstein (2001); Kennedy (2003); Nunes (2004), *a.o.*: parasitic gap dependency cannot cross more than one island boundary.

In West Circassian:

- a. marə bzəλfəβ-ew [RC Opi [ADJUNCT [COMP proi / ?_PG(IO) səhere woman-ADV 1SG.ABSØ / ?z- de- g^wəš'əʔe-nə -m] sə-pəλə-fe]
 3SG/WH.IO- COM- speak -MOD-OBL 1SG.ABS-attempt-LIM
 zə-g^were t_i(IO) Ø- qə- z- fə- tje- wa-ʁe]-r
 one-INDEF 3ABS- DIR- WH.IO- BEN- LOC- hit -PST -ABS
 'Here is the woman whom someone called [while I was trying [to talk to her]]'
 - b. marə ŝ^wəz-ew [RC Opi [ADJUNCT [ADJUNCT proi / ??_PG(IO)] here woman-ADV Ø / ??zde- g^wəš'ə? -ew] sə-š'e-sə-fe] 1SG.ABS-3SG/??WH.IO-COM-speak -ADV 1SG.ABS-LOC-sit-LIM Øqə- **z**fə- tie- wa -kel -r zə-g^were $t_{\rm i}({\rm IO})$ 3ABS- DIR- WH.IO- BEN- LOC- hit -PST -ABS one-INDEF 'Here is the woman whom someone called [while I was sitting [talking to her]]'
- 4. Parasitic gaps cannot be licensed by a PP wh-trace (Cinque 1990; Postal 1993):
 - (23) a. This is a topic_i you should think about t_i [before talking about _PG]. b. * This is a topic about which_i you should think t_i [before talking _PG].

PPs are cross-referenced on the predicate via applicative (LOC) and can be *pro*:

(24) [CP pŝaŝe-r girl-ABS 3SG.PR-POSS-neighbor-PL-OBL a-dež']_i Ø- Ø- š'- e- čəje -fe] se 3PL.PP-at 3ABS- **3SG.IO- LOC-** PRS- sleep -LIM pro_i(LOC) sə- Ø- š'- e- žeg^w 1SG.ABS- **3SG.IO- LOC-** PRS- play

'While the girl sleeps at her neighbors', I play there.'

 $^{^3\}mbox{See}$ e.g. Bošković (2015, in press) on islandhood of inherent case-marked phrases.

Relativization of postpositional phrases:

(25) $[PP t-j - B^w - Se^w -$

'At our neighbors' is where I play while this girl sleeps there.'

Contrast with a locative DP:

(26) $\begin{bmatrix} _{RC} \text{ Op}_i & \lambda \text{epqp-r} & [_{CP} & __{PG}(\text{LOC}) & \emptyset - & \mathbf{z}\mathbf{e} - & \S'\mathbf{e} - \text{ rehato -} \mathtt{re} & -\mathtt{w} \end{bmatrix}$ tribe-ABS 3ABS- **WH.IO**- LOC- settle -PST -ADV $t_i(\text{LOC}) & \emptyset - & \mathbf{z}\mathbf{e} - & \S'\mathbf{e} - & \mathbf{b}\mathbf{e}\mathbf{e}^\mathbf{w}\mathbf{a} - \mathbf{re} \end{bmatrix}$ -r a wəne-çək $\mathbf{e}^\mathbf{w}\mathbf{e} - \mathbf{x}\mathbf{e} - \mathbf{r}$ 3ABS- **WH.IO**- LOC- reproduce -PST -ABS that house-small-PL-ABS ara PRED 'Those small houses are where the tribe multiplied, having settled there.'

Summary:

- Multiple wh-agreement is the manifestation of a parasitic gap dependency.
- \Rightarrow Constraints on multiple wh-agreement can be mapped to better-studied constraints on parasitic gap dependencies.

5 The Anti-C-Command Condition and high absolutive

Main claim:

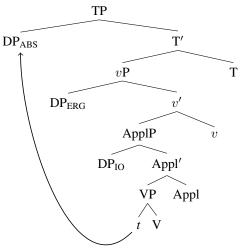
The anti-c-command condition on parasitic gaps (Engdahl 1983) provides evidence for **high position of the absolutive DP**.

• West Circassian is a **high-absolutive** language:

(Adyge Mak', 2017.07.05)

- DP_{ABS} moves to Spec,TP for licensing
- DP_{ERG} and DP_{IO} are licensed in-situ
- details in Appendix A.
- Previous proposals for high absolutive: Bittner and Hale (1996); Manning (1996); Aldridge (2008); Coon et al. (2014); Assman et al. (2015); Yuan (2018)

- ullet an absolutive trace fails to license parasitic gaps within clausemate DPs.
 - **Previous proposals mainly rely on inaccessibility of ergative for extraction, which may be explained via case discrimination (see e.g. Legate 2012; Deal 2016, 2017).
- (27) West Circassian clause structure for three-place predicate:



5.1 The Absolutive Constraint

Multiple wh-agreement construction are subject to the following constraint:

(28) ABSOLUTIVE CONSTRAINT ON MULTIPLE WH-AGREEMENT: Intra-clausal multiple wh-agreement is ungrammatical if the relativized participant is the absolutive DP (Lander 2009a,b, 2012).

In terms of parasitic gaps:

(29) ABSOLUTIVE CONSTRAINT ON PARASITIC GAPS:

An absolutive trace cannot license a parasitic gap in a clausemate DP.

This is true for all types of argument combinations:

Predicate type	Real gap (ABS)	Parasitic gap
Transitive verb	internal argument	possessor of ergative agent
		possessor of applied object
Inverse verb	internal argument	possessor of oblique experiencer
Unergative verb	external argument	possessor of applied object

1. Absolutive internal argument and a possessor of an ergative agent.

[30] [RC Opi ti(ABS) [DP proi / *_PG(PR) Ø / *z-jane](ERG)
3SG/*WH.PR-mother
Ø- mə- Ba- šxe-re] haźwəš'ər-xe-m sə-gw
WH.ABS- NEG- CAUS- eat -PRS puppy-PL-OBL 1SG.PR-heart
Ø-a-fe-wəzə
3ABS-3PL.IO-BEN-ache
'My heart aches for the puppies whom their mother doesn't feed.'

2. Absolutive internal argument and a possessor of an oblique applied object.

(31) marə pŝaŝ-ew [RC Op_i t_i (ABS) [DP pro_i / *_PG(PR) here girl-ADV Ø / *z-jane](IO) Ø- qə- Ø- fe- s- š'a -ʁe] -r 3SG/*WH.PR-mother WH.ABS- DIR- 3SG.IO- BEN- 1SG.ERG- bring -PST -ABS 'Here is the girl whom I brought for her mother.'

3. Absolutive internal argument and a possessor of an oblique experiencer.

(32) pŝeŝeĉəj-ew [RC Op_i t_i (ABS) [DP pro_i / *_PG(PR) Ø / *z-jane](IO) girl-ADV 3SG/*WH.PR-mother Ø- Ø- Š'ə- \mathbf{b}^w əpša - \mathbf{b} e] -m sə- \mathbf{g}^w WH.ABS- 3SG.IO- LOC- forget -PST -OBL 1SG.PR-heart Ø-j-e- \mathbf{b}^w 3ABS-3SG.ERG-PRS-chew 'I pity the girl whom her mother forgot (lit. she chews my heart).'

4. Absolutive external argument and a possessor of an oblique applied object.

(33) se sə-Ø-š'e-š'əne ha-w [
$$_{RC}$$
 Op_i t_i (ABS) [$_{DP}$ pro_i / * $_{_PG}$ (PR) I 1SG.ABS-3SG.IO-LOC-fear dog-ADV Ø / * $_{Z}$ -jə- $_{X}$ wezjajən](IO) Ø- Ø- je- ceqe -ž'ə - $_{BE}$ -m 3SG/* $_{X}$ WH.PR-POSS-owner WH.ABS- 3SG.IO- DAT- bite -RE -PST -OBL 'I fear the dog that bit its owner.'

Summary: An absolutive trace cannot license a parasitic gap within clausemate DPs.

**Absolutive extraction <u>does</u> involve wh-movement: absolutive trace can license PGs in cross-clausal contexts.

(34) marə pŝaŝ-ew [RC Opi [CP [pro_i / $_{PG}$ ə/zə-ŝəp χ^w] Ø-me-čəje-fe] here girl-ADV 3SG/WH.PR-sister 3ABS-PRS-sleep-LIM t_i (ABS) nəs χ ape-m Ø- Ø- rə- χ eg w ə-re] -r doll-OBL WH.ABS- 3SG.IO- INS- play -PRS -ABS 'Here is the girl who plays with the doll while her sister sleeps.'

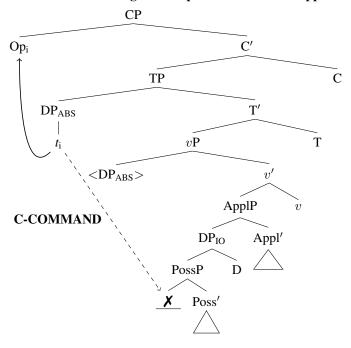
5.2 The Anti-C-Command Condition

Proposal:

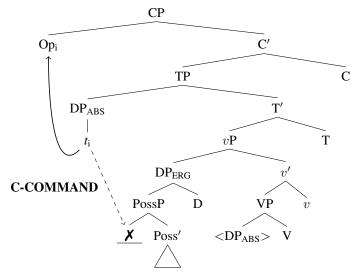
The Absolutive Constraint is due to the **anti-c-command condition** on parasitic gaps. ⇒ The absolutive DP c-commands other argument DPs.

(35) ANTI-C-COMMAND CONDITION: "A parasitic gap may not be c-commanded by the real gap." (Engdahl 1983:22)

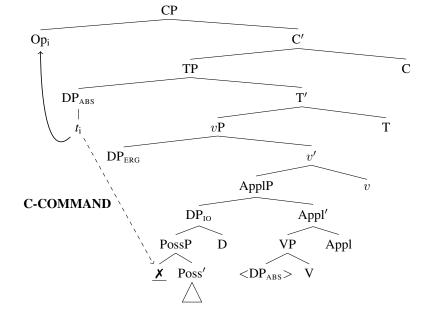
(36) Absolutive external argument + possessor within an applied object DP: *PG



(37) Absolutive internal argument + possessor within an ergative DP: *PG



(38) Absolutive internal argument + possessor within an applied object DP: *PG



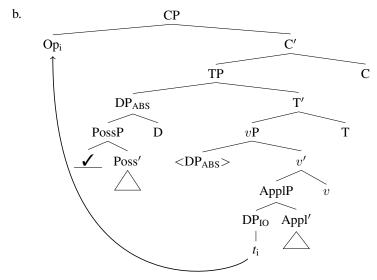
Conclusion: The absolutive DP c-commands the ergative and applied object DPs. ⇒ West Circassian has a **syntactically ergative** clause structure.

Prediction: ergative and IO traces **can** license PG within absolutive DP.

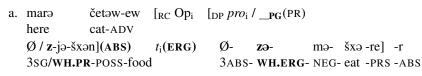
This prediction is confirmed:

(39) Unergative verb with applied object (ABS-IO) /PG

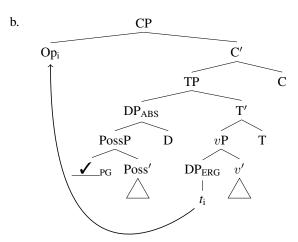
 ${}^{\iota}I$ was consoling the boy whom, his, brother hit.



(40) Transitive verb (ERG-ABS) **✓PG**



'Here is the cat who_i doesn't eat its_i food.'



(41) Transitive verb with applied object (ERG-IO-ABS) /PG

a. pŝaŝ-ew [RC Opi | [DP pro_i / $_PG$ (PR) | Ø / z-jə-txə λ](ABS) girl-ADV | 3SG/WH.PR-POSS-book t_i (IO) | Ø- z- e- sə- mə- tə - \check{z} 'ə- ε - re - SABS- WH.IO- DAT- 1SG.ERG- NEG- give -RE -PST -ABS

Ø-qe-s-e-wəha

3ABS-DIR-1SG.ERG-PRS-avoid

'I avoid the girl to whom I haven't given back her book.'

*Additional support for high absolutive: reciprocal binding (Ershova 2019b).

Summary: West Circassian parasitic gaps are subject to the anti-c-command condition – the absolutive trace in Spec,TP cannot license parasitic gaps in other DPs.

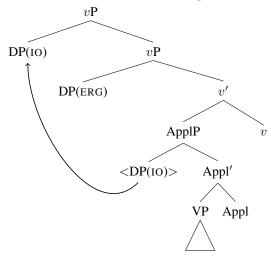
6 Interactions between non-absolutive DPs and A-scrambling

Main claim: The applied object may undergo A-scrambling from Spec, ApplP to Spec, vP above ergative agent.

Evidence: Non-absolutive DPs do not display anti-c-command effects.

Local A-scrambling is common cross-linguistically: e.g. in Hindi (Mahajan 1990, 1994; Dayal 1994), Persian (Karimi 2003, 2005), Japanese (Grewendorf and Sabel 1999), Georgian (McGinnis 1999), and Tlingit (Cable 2009).

(42) Structure of vP after A-scrambling:



${\bf 6.1} \quad Non-absolutive\ DPs\ are\ not\ subject\ to\ the\ anti-c-command\ condition$

Baseline prediction: If XP c-commands YP, wh-movement of XP should fail to license parasitic gap in YP.

 \Rightarrow If DP_{ERG}>DP_{IO}, an ergative trace should fail to license parasitic gaps in DP_{IO}.

This is not borne out.

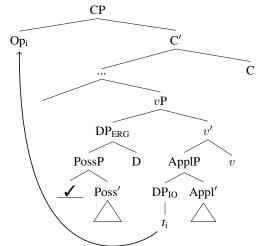
- Applied object trace can license PG in ergative DP:
- (43) marə ç'al-ew [RC Opi [DP pro_i / PG (PR) ə / zə-š](ERG) here boy-ADV 3SG/WH.PR-brother t_i (IO) velosiped Ø- qə- ze- r- jə- tə -ʁe] -r bicycle 3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS 'Here is the boy_i to whom his_i brother gave a bicycle.'
- (!) But ergative trace can likewise license PG in applied object DP:
- (44) marə č'al-ew [RC Opi ti(ERG) [DP proi / _PG(PR) ə / zə-š](IO) here boy-ADV 3SG/WH.PR-brother velosjəped Ø- Ø- je- zə- tə -ве] -г bicycle 3ABS- 3SG.IO- DAT- WH.ERG- give -PST -ABS 'Here is the boy whoi gave a bicycle to hisi brother.'

Proposal: the lack of any anti-c-command effect between non-absolutive DPs is a consequence of A-scrambling within vP.

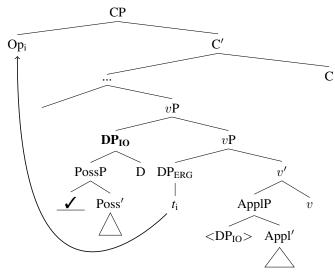
Analysis: v^0 may optionally carry an uEPP feature which allows for the applied object to undergo movement to Spec,vP.

Consequence for parasitic gaps: no anti-c-command effects

(45) a. IO trace licenses PG in ergative DP:



b. ERG trace licenses PG in scrambled applied object DP:



Summary: A-scrambling feeds parasitic gap licensing within the applied object DP by an ergative wh-trace.

6.2 Another puzzle explained: no Weak Crossover effects

Main claim: Clausemate DPs fail to display Weak Crossover effects due to Ascrambling.

Engdahl (1983): potential Weak Crossover configurations give rise to obligatory PGs

- (46) a. Which student_i did [your attempt to talk to _/*him_i] scare _ to death? (Engdahl 1983:16)
 - b. $[CP \text{ which student}_i \dots [TP [DP \dots _/*him}_i] \dots \text{ scare } t_i \dots]]$

The same pattern holds in West Circassian: wh-movement out of an embedded CP licenses an obligatory parasitic gap in the matrix clause

(47) a. marə pŝaŝ-ew [
$$_{RC}$$
 Op_i [$_{CP}$ č'elejeʁaǯe-r t_i (IO) here girl-ADV teacher-ABS

Ø- qə- z- e- çeçe -n -ew]

3ABS- DIR- WH.IO- DAT- scold -MOD -ADV

[$_{DP}$ $__{PG}$ / * pro_i z / *Ø-jane(ABS)] Ø-fe-mə-je] -r

WH/3SG.PR-mother 3ABS-BEN-NEG-want -ABS

'Here is the girl whom; her; mother doesn't want [the teacher to scold __]'

b. marə pŝaŝ-ew [
$$_{RC}$$
 Op_i [$_{CP}$ $t_i(ERG)$ zə- z- ʁe-here girl-ADV REFL.ABS- WH.ERG- CAUS-pskə -n -ew] [$_{DP}$ $_{PG}$ /* pro_i z /* \emptyset -jane(ERG)] bathe -MOD -ADV WH/* 3 SG.PR-mother \emptyset -qə-s-tər-jə-ʁe-pətəha-ʁe] -r 3 ABS-DIR- 1 SG.IO-LOC- 3 SG.ERG-CAUS-enforce-PST -ABS 'Here is the girl who; her; mother told me [should bathe].'

c.
$$[_{RC} Op_i [_{DP} __{PG} / *pro_i ...] ... [_{CP} ... t_i(IO) ...]]$$

A-scrambling analysis correctly predicts lack of Weak Crossover effects between DP_{IO} and DP_{ERG} , i.e. optionality of parasitic gap:

(48) a. marə č'al-ew [RC Opi [DP
$$pro_i$$
 / PG (PR) ə / zə-š](ERG) here boy-ADV 3SG/WH.PR-brother t_i (IO) velosiped Ø- qə- ze- r- jə- tə -ʁe] -r bicycle 3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS 'Here is the boyi to whom his $_{i/i}$ brother gave a bicycle.'

b. Hypothesized structure without scrambling:

* [CP Op_i ... [DP(ERG)
$$pro_i$$
 ...] ... t_i (IO)]

c. Actual structure – no Weak Crossover configuration:

[RC Op_i [
$$_{vP}$$
 t_{i} (IO) [$_{vP}$ [DP(ERG) pro_{i} ...] ...]

Summary: A-scrambling of DP_{IO} to Spec, vP accounts for the absence of both anti-command and Weak Crossover violations between non-absolutive DPs.

7 Conclusion

Main contributions:

- Novel analysis of multiple wh-agreement constructions as the manifestation of a parasitic gap dependency.⁴
- Presents a typologically unusual pattern in a theoretically familiar light.
- Provides a fruitful diagnostic for clause structure in a polysynthetic language.
- The anti-c-command condition on parasitic gaps provides evidence for:
 - a high absolutive structure, i.e. the absolutive DP c-commanding other verbal arguments;
 - A-scrambling of the applied object to c-command the ergative agent.

Future directions:

- Relationship between anti-c-command effects and Condition C in embedded clauses.
- Correlations between scrambling and surface word order.

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⁴See Appendix B for arguments against an alternative.

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Appendices

A Deriving syntactic ergativity via nominal licensing

See Ershova (2019b) for details.

A.1 Theoretical assumptions

Merge and Agree triggered by probe features (following Heck and Müller 2007; Müller 2010):

(49) **Probe features**:

a. Structure-building: ●F●

b. Agree: *F* and $*F_x:V*$

Following work in Minimalist Grammars (Stabler 1997, 2010; Keenan and Stabler 2003; Lecomte and Retoré 1999, 2001), two types of goal features:

(50) Goal features:

a. Non-licensee: F, F:V

b. Licensee: +F+

Features are hierarchically ordered (Georgi and Müller 2010; Müller 2010; Martinović 2015),:

(51) a.
$$[\bullet F \bullet \gg *G* \gg \bullet H \bullet]$$

b. $\begin{bmatrix} \bullet F \bullet \\ *G* \\ \bullet H \bullet \end{bmatrix}$

Definitions for Agree, Merge, and Move (Internal Merge):

(52) AGREE

For any two syntactic objects α and β , such that:

- a. the head of α bears the visible Agree feature *F*, and the label of β includes the matching goal feature F or licensee feature +F+, and there is no γ bearing F or +F+ such that it c-commands β and is c-commanded by α ,
 - α agrees with β , resulting in the checking and deletion of the Agree feature on α , and, if present, the licensee feature +F+ on β ; or
- b. the head of α bears the visible Agree feature $*F_x$: V*, and the label of β includes the matching goal feature F: Y such that $x \subset Y$, and there is no γ bearing F: W such that it c-commands β and is c-commanded by α and $x \subset W$,
 - α agrees with β , resulting in the checking and valuation of the Agree feature on α as F:Z, where $Z = V \cup Y$.

(53) MERGE

For any two syntactic objects α and β , such that the head of α is the feature set \mathcal{F} which includes the visible structure-building feature $\bullet F \bullet$, and the label of β is the feature set \mathcal{G} which includes the matching goal feature F or licensee feature +F+:

Merge(α,β) = { α' ,{ α'' , β' }},

- a. where $\alpha' = \alpha$ with all the probe features of α (if any) removed (i.e. probe features don't project),
- b. and $\alpha'' = \alpha$, except the head of α'' is $\mathcal{G} \bullet F \bullet$ (i.e. $\bullet F \bullet$ is checked and deleted on the head),
- c. and $\beta' = \beta$ except the label of β' is $\mathcal{G} +F + \text{ if } \mathcal{G}$ has $+F + \cdot$.

(54) **MOVE**

Move (α, β) is Merge (α, β) , where α c-commands β and there is no γ bearing F or +F+ such that it c-commands β and is c-commanded by α .

Features are checked in their hierarchical order and must be visible to trigger Agree or Merge:

(55) Feature Visibility Condition (Martinović 2015:67):

A feature F on a head X is visible if F is the highest feature in the hierarchy.

A.2 Implementation: syntactic ergativity as licensing

- Nominals must be syntactically licensed in the course of the derivation \Rightarrow DPs carry the licensee feature +K+ (analogous to -k or \bar{k} in Minimalist Grammars, Lecomte and Retoré 1999; Keenan and Stabler 2003; Stabler and Keenan 2003).
 - (56) All DPs (additional features may be present):

a. Category: D

b. Licensee: +K+

- Ergative agents and applied objects are licensed in-situ; cf. inherent case accounts (Woolford 2006; Legate 2008; Pylkkänen 2008).
- Licensed nominals are rendered inactive for further licensing-related operations; cf. McGinnis's (1998) inert case, Legate's (2008) discussion of eligibility for absolutive case assignment to a theme over an ergative external argument, and Kalin and van Urk 2015 for a similar idea regarding φ-agreement.
 - (57) a. Transitive v^0 (v_{TR}): [*K* $\gg \bullet K \bullet$]

 Agrees with the theme in VP and merges and licenses the ergative agent.⁵

b. Appl⁰: •K•
 Merges and licenses an applied object.

c. T⁰: •K•

Licenses a moved argument – the absolutive DP.

(58) a. Unergative v^0 (v_{UNERG}): $\bullet D \bullet$ Merges an external argument, but does not license it.

b. Unaccusative v^0 (v_{UNACC}): Ø

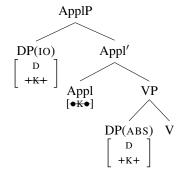
Does not select for an external argument.

 $^{^5}$ See Deal (2010); Clem (2019) for similar analysis of ergative case, wherein ergative case is contingent on v^0 agreeing with the absolutive theme.

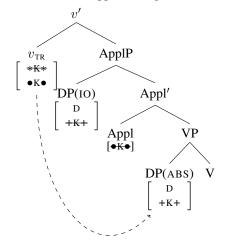
Sample derivation: three-place transitive verb

(59) te(ERG) *pro*(IO) mə txəλə-r(ABS)
we this book-ABS
Ø-qə-w-e-t-tə-ž'ə-ʁ
3ABS-DIR-2SG.IO-DAT-1PL.ERG-give-RE-PST
'We gave this book to you.'

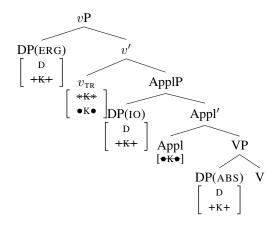
- (60) Three-place predicate (ERG-IO-ABS):
 - a. Appl⁰ selects for VP and merges DP(IO) in its specifier:



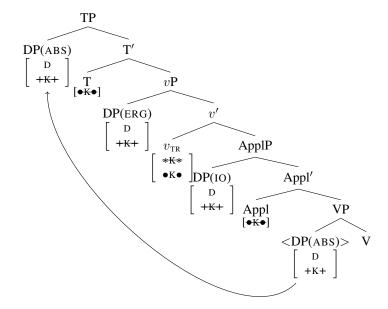
b. v_{TR} selects for ApplP and agrees with DP(ABS):



c. v_{TR} merges with and licenses DP(ERG):



d. T^0 selects for vP; DP(ABS) moves to be licensed in its specifier:



B Against an alternative account: Multiple wh-agreement is not pronominal binding

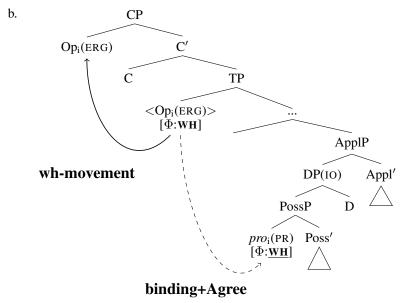
Caponigro and Polinsky (2011):

- Multiple wh-agreement is the result of ϕ -feature transmission via Agree between operator and bound pronoun.
- Absolutive Constraint is evidence for syntactic accusativity: absolutive DP does not c-command possessor of ergative DP
 - ⇒ relativization of ABS + binding/Agree with possessor of ERG renders Weak Crossover violation.

(61) Multiple wh-agreement as Agree via binding:

a. $[_{RC} \text{ Op}_i \ [_{DP} \textit{pro}_i / __{PG}(PR) \ \textit{a}/\textbf{za}-\check{\textbf{s}}](IO)$ $t_i(ERG)$ konfet 3SG/WH.PR-brother candy \emptyset - \emptyset -[je-za-tə-se] $p\hat{\textbf{s}}a\hat{\textbf{s}}e$ -m 3ABS-3SG.IO-DAT-WH.ERG-give-PST girl-OBL Sa- \emptyset -[sa}'-a-b'a-b-b' a-b-c- $\text{$

'I praised the girl_i that gave candy to her_i brother.'



(62) Multiple wh-agreement w/ABS as WCO violation:

a. $[_{RC} Op_i t_i(ABS) [_{DP} pro_i(PR)$

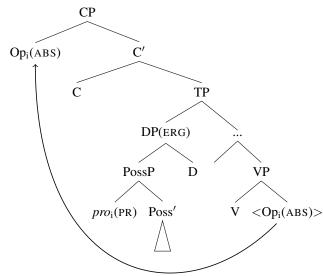
 Ø / *z-jane](ERG)
 Ø- mə- ʁa- šxe -re]

 3SG/*WH.PR-mother
 WH.ABS- NEG- CAUS- eat -PRS

hâz^wəš'ər-xe-m puppy-PL-OBL

'the puppies whom their mother doesn't feed'

b. WCO violation:



COUNTERARGUMENTS:

- Doesn't account for optionality of multiple wh-agreement (61a).
- Weak Crossover is not ungrammatical with regular pronominal agreement (62a).
- Cannot be extended to Absolutive Constraint with absolutive subject (33).
- Falsely predicts ungrammaticality of cross-clausal wh-agreement in potential WCO configurations (47).