What a polysynthetic language can tell us about wh-movement and Phase Theory: Possessor extraction in West Circassian*

Ksenia Ershova (kershova@stanford.edu)

UC Santa Cruz, 4 June 2021

1 Introduction

Cross-linguistically, two types of nominal arguments tend to be islands for subextraction:

1. subjects (Ross 1967, Chomsky 1973 et seq.)
2. oblique case-marked nominals, including ergative agents (Bošković 2018, Branan 2018)

Main claim: islandhood of nominal arguments is best analyzed with a combination of:

- opacity of phase edges (= the Edge Condition, Chomsky 2000, 2001)
- Combined via a revised definition of locality for Agree operations.

Phase opacity is a consequence of failure to Agree with the phase head, i.e. phasehood is variable and contextually determined.

---

*Data for this project was collected through elicitation with speakers of the Temirgoy dialect in the Khatazhukaj rural settlement and Maykop (Adygea, Russia). The author is grateful to Svetlana K. Alisheva, Said Gishpeva, Susana K. Khakova, and Zarema Meretukova for sharing their language. A manuscript on this topic is in revision for resubmission; link to current version: https://ling.auf.net/lingbuzz/005469. The author thanks Karlos Arregi, Vera Gribanova, and Boris Harizanov and three anonymous reviewers for helpful discussion and feedback. This work was funded by the NSF DDRIG #1749299. All mistakes and shortcomings are solely mine.

1 Term coined by Gallego & Uriagereka (2007), but they do not ultimately endorse this as a standalone constraint on extraction.

2 The idea of dynamic phasehood, although different in assumptions and implementation, has been proposed by den Dikken (2007), Gallego (2010), Bošković (2014).
Phasehood of a constituent is the result of syntactic intervention for Agree, not transfer to the interfaces; cf. Chomsky (2000, 2001, 2008); Richards (2011); Bošković (2016), a.o.

The Edge Condition is accounted for via locality and intervention, not constraints on computational complexity; cf. Chomsky (2008:147-148).

**The evidence:** constraints on possessor extraction in West Circassian

**West Circassian** (or Adyghe; Northwest Caucasian):

- polysynthetic, with multiple verbal $\phi$-probes and high degree of synthesis
- syntactically ergative: the absolutive argument moves to c-command the ergative agent (Ershova 2019, 2020b, 2021a)

**Possessor extraction:**

- ungrammatical out of ergative and applied argument DPs in matrix clauses
- grammatical out absolutive DPs
- in long-distance wh-movement from embedded clauses, grammatical out of all types of arguments, including ergative and applied arguments

**Desiderata for a successful analysis:**

- explain the contrast between absolutive and non-absolutive arguments
- explain the contrast between islandhood effects in matrix and embedded contexts
- connect the analysis to other properties of the language

**The analysis in a nutshell:**

- Wh-movement out of a phase is possible if that phase has independently entered Agree with the wh-movement triggering head (C$^0$) prior to wh-probing.
- Otherwise, the phase and its edge are opaque for subextraction.
- Ergative and applied argument DPs are merged and licensed at phase edges: Spec,vP and Spec,ApplP; the absolutive argument is not.
- Contrast between matrix and embedded clauses:
– polypersonal agreement and polysynthetic word-formation are licensed by Agree with C³
– the wh-feature on matrix C⁰ probes prior to the polysynthetic agreement feature, triggering an intervention effect
    \[ \Rightarrow \text{phase edges are opaque for subextraction} \]
– in long-distance wh-movement, movement to embedded Spec,CP is triggered last resort for successive cyclic movement after the polysynthetic agreement feature
    \[ \Rightarrow \text{the lower phase heads do not trigger an intervention effect} \]

Roadmap:

2 Background on West Circassian wh-movement
3 Constraints on possessor extraction
4 The analysis: Agree-based phasehood
5 Conclusion

2 Background on West Circassian wh-movement

2.1 Basic clause structure


  (1) s-ə qə- p- f- a- r- jə- bə- λεβ’wə -b
      1SG.ABS- DIR- 2SG.IO- BEN- 3PL.IO- DAT- 3SG.ERG- CAUS- see -PST
      ‘He showed me to them for your sake.’ (Korotkova & Lander 2010:301)

- ergativity in verbal indexing

  (2) | Absolutive- | Applied object- | Applicative- | Ergative-

- possessors are cross-referenced on the noun:

  (3) s-šəpəxəxer
      1SG.POSS-sister.PL.ABS
      ‘my sisters’
ergativity in case marking

absolutive -r: subject of intransitive verb (5a)
theme of transitive verb (5b)

oblique -m: agent of transitive verb (5b)
applied objects (5c)
possessors (5d)
complements of postpositions (5e)

(5) a. mə pšaše-r(ABS) jane paje Ø-qašwëc
this girl-ABS 3PL.POSS+mother for 3ABS-dance

‘The girl is dancing for her mother.’

b. sjọpšašexex-m(ERG) nọz|apexe-r(ABS)
1SG.POSS.girl.PL-OBL doll.PL-ABS
Ø-a-fep|a|exex
3ABS-3PL.ERG-dress.PST.PL

‘My daughters dressed the dolls.’

c. mọ č’ale-r(ABS) bere jọ?ah|ah|lxex-m(IO)
telephone INS
this boy-ABS much 3SG.POSS.relative.PL-OBL telephone.INS
Ø-a-fe-tjewe
3ABS-3PL.IO-BEN-hil.PRES

‘This boy calls (lit. rings for) his relatives on the telephone a lot.’

d. pšaše-m Ø-jọ-pše|enw
3SG.POSS-ALIEN-female.friend
‘the girl’s friend’

e. mọ ọwọz|ọ-m paje
this woman-ALIEN-OBL for

‘for this woman’

- Indefinite nouns, possessed nouns in the singular, proper names and personal pronouns are generally unmarked for case (Arkadiev et al. 2009:51-52; Arkadiev & Testelets 2019).
- West Circassian is a high absolutive language, based on anaphor binding and parasitic gaps (Ershova 2019, 2020b, 2021a).
2.2 Relative clauses

Per Lander (2009a,b, 2012); Caponigro & Polinsky (2011); Ershova (2021a) Relativization is the only type of wh-movement.

(7) General structure of relative clauses (Caponigro & Polinsky 2011):

\[
[CP \text{ Op} \land C[WH \land [TP \ldots t_i \ldots]]]
\]

- \(\phi\)-agreement referring to the relativized participant replaced by wh-agreement (Caponigro & Polinsky 2011) see also O’Herin (2002); Baier (2018) on Abaza):
  - \(\zeta(\omega)\) = ergative agents, applied objects, and possessors
  - \(\emptyset\) = absolutive arguments

Ergative agent:

(8) a. \(\text{ma } \check{\text{c’ale-mi}}(\text{ERG}) \quad \omega-\check{\text{s}} \quad \text{velosjape}\)

\(\text{this boy-obl} \quad 3\text{SG.POSS-brother bicycle}\)

\(\emptyset - \emptyset - r - j\omega - t\omega - r\)

\(3\text{ABS} - 3\text{SG.IO-DAT} - 3\text{SG.ERG-give-PST}\)

‘This boy gave a bicycle to his brother.’
b. marɔ ć’al-ew [\text{RC Op}_i t_i(\text{erg}) \circ-\$ velosjaped
here boy-ADV 3SG.POSS-brother bicycle
Ø- Ø- je- zɔ- tɔ -\text{we}] -r
3ABS- 3SG.IO- DAT- WH.\text{erg}- give -PST -ABS

‘Here is the boy that gave a bicycle to his brother.’

\textbf{Possessor:}

(9) mar ʒwaz-ew [\text{RC Op}_i [\text{dp} t_i(\text{poss}) z-jɔ-pṣaše ]
dax-ew here woman-ADV \text{wh.\text{poss-alien-girl good-adv}
Ø-qa-ʒwwe-re] -r
3ABS-DIR-dance-PRES -ABS

‘Here is the woman whose daughter dances well.’

\textbf{Absolutive argument:}

(10) a. ha-r Ø-jɔ-xozjæn Ø- Ø- je- ceqa -\text{n}
dog-ABS 3SG.POSS-ALIEN-owner 3ABS- 3SG.IO- DAT- bite -PST

‘The dog bit its owner.’

b. se səš’eš’one ha-w [\text{rc Op}_i t_i(\text{abs}) Ø-jɔ-xozjæn
I fear dog-ADV 3SG.POSS-ALIEN-owner
Ø- Ø- je- ceqa -\text{we}] -m
WH.ABS- 3SG.IO- DAT- bite -PST -OBL

‘I fear the dog that bit its owner.’

• \textbf{Nominal head} (i) appears to the left of relative clause with -\text{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:

(11) [\text{rc Op}_i t_i(\text{erg}) Ø-jɔ-ʃan\$w\text{ønčɛ} Ø- xe- zɔ- wɔtɔ -\text{we}]
3SG.POSS-ALIEN-window 3ABS- LOC- WH.\text{erg}- break -PST
č’ale-r marɔ
boy-ABS here

‘Here is the boy that broke his window.’

Headless relative clause:

(12) [\text{rc Op}_i \text{as\text{xan} } t_i(\text{io}) Ø- zɔ- fae -zepɔtɔ -\text{m}
Aslan 3ABS- WH.IO- want -HABIT -OBL
ə-ʃ-xe-r fajep
3SG.POSS-brother-PL-ABS don’t want
‘[What Aslan always wants] his brothers don’t want.’

Syntax of relative clauses, per O’Herin (2002) on Abaza, Caponigro & Polinsky (2011); Ershova (2021a) on West Circassian:

- Relativization of all types of arguments involves wh-movement and wh-agreement: Ø- for absolutive and zω- for all other arguments.4
- There is no overt relative pronoun, i.e. the wh-movement is covert and can be diagnosed by (i) islandhood sensitivity and (ii) the ability of the moved operator to license parasitic gaps (see Appendix A).

3 Constraints on possessor extraction

Summary of the data:5

- possessor extraction is grammatical out of absolutive DPs
- ergative and applied arguments are islands for possessor extraction
- the islandhood of non-absolutive DPs is ameliorated in long-distance wh-movement configurations

3.1 Clausebound possessor extraction

- Possessor extraction is the only type of productive wh-movement from within nominal constituents.
- Generalization for clause-bound wh-movement:

(13) CONSTRAINT ON POSSESSOR EXTRACTION (PREMILINARY). A possessor may be extracted only from an absolutive argument; other types of clausal arguments are adjuncts.

---

4 See Lander (2009a, b, 2012); Lander & Daniel (2020) for an alternative analysis of zω- as a morphologically expressed relative or resumptive pronoun.

5 The constraints outlined here are subject to dialectal variation. E.g. the majority of speakers Lander (2012) consulted allow possessor extraction from all types of arguments, and a small set of speakers disallow possessor extraction from non-absolutive arguments. The speakers that I consulted for this project uniformly disallow possessor extraction from non-absolutive arguments, and the analysis proposed here is solely concerned with this, more restrictive, version of West Circassian.
possessor extraction from absolutive external argument

(14) mar @ woman-ADV PHOSE-ALIEN-girl good-ADV Ø-q@-e-°e-°e-dance-PRES -ABS
‘Here is the woman whose daughter dances well.’

possessor extraction from absolutive internal argument

(15) mwar@ woman-ADV PHOSE-son prison-OBL Ø-Ø-°c.-a-°e-°e-throw-PST -ABS
‘Here is the woman whose son they threw in jail.’

*possessor extraction from ergative external argument (→ pseudocleft repair)

(16) a. [m@ this woman-OBL 3SG.POSS-ALIEN-boy beautiful-ADV wered(ABS) Ø-q@-e-°e-song 3ABS-DIR-3SG.ERG-sing-PRES -ABS
‘This woman’s son sings well.’

Intended: ‘Whose son sings well?’

c. xet-a who-Q PHOSE-ALIEN-boy wered(ABS) Ø-que-°e-re-sing 3ABS-DIR-WH.ERG-sing-PRES -ABS
‘Whose son sings well. (lit. Whose son is the one who sings well?)’

6See Ershova 2021a for evidence that this is a pseudocleft.
*possessor extraction out of applied argument[7]

(17) a. [mwe ʃwəz-m(POSS) ə-q\textsuperscript{w}e ](IO) ɛ’ele\textsuperscript{e}r\textsuperscript{ə}je-r(ABS)  
    this woman-OBL WH.POSS-son teacher-ABS  
    3ABS-3SG.IO-DAT-scold-PST

    ‘The teacher scolded this woman’s son.’

b. * mwarə [RC ʃwəz-\textit{e}w] [t\textsubscript{0}(POSS) ə-q\textsuperscript{w}e ](IO) ɛ’ele\textsuperscript{e}r\textsuperscript{ə}je-r(ABS)  
    here woman-ADV WH.POSS-son teacher-ABS  
    3ABS-3SG.IO-DAT-scold-PST -ABS

    Intended: ‘Here is the woman whose son the teacher scolded.’

c. mwarə [RC ʃwəz-\textit{e}w] [t\textsubscript{0}(POSS) ə-q\textsuperscript{w}e ](ABS) [RC Op\textsubscript{1} t\textsubscript{1}(IO)  
    here woman-ADV WH.POSS-son  
    ɛ’ele\textsuperscript{e}r\textsuperscript{ə}je-r(ABS)  Ő-\textit{e}c\textsuperscript{ə}c\textsuperscript{a}je-r ]  
    teacher-ABS 3ABS-WH.IO-DAT-scold-PST-ABS

    lit. ‘Here is the woman whose son is the one whom the teacher scolded.’

3.2 Long-distance possessor extraction

Based on long-distance wh-movement, revised generalization on possessor extraction:

(18) CONSTRAINT ON POSSESSOR EXTRACTION (FINAL). Non-absolutive DPs  
    behave as islands if they appear within the same clause (CP) as the wh- 
    movement triggering C\textsuperscript{0}.

Example of (non-possessor) long-distance wh-movement:

(19) xet-a [RC Op\textsubscript{1} we [CP t\textsubscript{1}(IO) wə-\textit{z}ʃ’-ə-t\textsuperscript{w}a-n-\textit{e}w ]  
    who-Q you 2SG.ABS-WH.IO-LOC-praise-MOD-ADV  
    Ő-je-b-\textit{e}c-ʒ’a-he ] -r  
    3ABS-DAT-2SG.ERG-CAUS-begin-PST -ABS

    ‘Who did you begin to praise?’

[7See Appendix B for other types of applied arguments.
✓ long-distance wh-movement from ergative external argument (→ no islandhood effect)


lit. ‘Whose did you not consent for _ children to sing?’

✓ long-distance wh-movement from applied argument (→ no islandhood effect)


lit. ‘Here is the woman whose I began to call _ daughter.’

Summary:

• Absolutive DPs are not islands for possessor extraction.

• Ergative and applied argument DPs are islands for possessor extraction in clausebound wh-movement configurations, but not in long-distance movement configurations.
4 Agree-based phasehood, locality, and the Edge Condition

The proposal:
Selective DP islandhood effects in West Circassian provide evidence for an Agree-based model of syntactic domains and phase boundaries (Rackowski & Richards 2005; Van Urk & Richards 2015; Halpert 2019):

• Islandhood of DP$_{erg}$ and DP$_{io}$ depends on agreement properties of C$_0$ and the heads that select for the corresponding arguments: v$_0$ and Appl$_0$ respectively.

• v$_0$ and Appl$_0$ are phase heads; DP$_{erg}$ and DP$_{io}$ are merged at the phase edges.

• The internal contents of the phase edge are opaque for syntactic operations per Chomsky (2008).

• If v$_0$ and Appl$_0$ have successfully agreed with wh-movement triggering C$_0$, they do not behave as phases and their phase edge is correspondingly accessible for subextraction.

Existing analyses of selective DP islandhood cannot account for West Circassian data:

• islandhood as a result of subjacency violations = too many phase boundaries crossed (Chomsky 1973 et seq.).

• islandhood connected to ungoverned (specifier) status of DP (Huang 1982; Takahashi 1994; Stepanov 2001)

• moved DPs are islands (Boeckx 2003; Bošković 2018)

• DPs that have been agreed with are islands (Gallego & Uriagereka 2007; Gallego 2010)

• DPs that have not been agreed with are islands (Branan 2018)

• non-absolutive DPs are structurally larger than absolutive DP (= PPs); cf. Polinsky (2016)

Each of these approaches faces problems in accounting for the basic contrast: absolutive DPs versus non-absolutive DPs; see Ershova (2020a).

More importantly: Cannot explain lack of islandhood effect with long-distance wh-movement from embedded CP.

*Embedded and matrix CPs are structurally identical: no difference in argument licensing, case or agreement properties.
4.1 Agree-based phasehood and intervention

Rackowski & Richards’s (2005) Agree-based phasehood:

- Phases may be made transparent for subextraction if they enter an independent agreement relation with the head that attracts the extracted element.
- All and only phases may undergo syntactic movement, per Chomsky (2000, 2001).
- For any movement-triggering operation, any phase acts as a potential goal.
- Per standard locality constraints, only the closest goal may successfully satisfy the feature on the movement probe.
- If the closest goal cannot satisfy the feature on the movement probe, defective intervention is triggered, resulting in ungrammaticality.
- Theoretical assumptions from Rackowski & Richards (2005:582):
  1. A probe must Agree with the closest goal $\alpha$ that can move.
  2. A goal $\alpha$ can move if it is a phase.
  3. Once a probe $P$ is related by Agree with a goal $G$, $P$ can ignore $G$ for the rest of the derivation (Richards 1998; Hiraiwa 2001).

My additions to Rackowski & Richards (2005):

- To capture the Edge Condition:
  1. Modified definition of closest from Rackowski & Richards (2005:579); my addition is in boldface:
    
    A goal $\alpha$ is the closest one to a given probe if there is no distinct goal $\beta$ such that for some distinct $X$ (X a head or maximal projection), $X$ c-commands or dominates $\alpha$ but does not c-command or dominate $\beta$.

---

8 Only in the case of an unsatisfied movement feature; failed agree that does not require movement does not necessarily result in ungrammaticality (Preminger 2014).
E.g. if \(vP\) is a phase, only DP1 in Spec,\(vP\) can undergo movement; any constituent embedded within DP1 (e.g. DP2 or whP) is inaccessible for extraction:

\[
\begin{align*}
&\text{(24)} \\
&\begin{array}{c}
\text{CP} \\
\quad \text{C} \\
\quad \ldots \\
\quad vP \\
\quad \text{DP}_1 \\
\quad \text{DP}_2 \\
\quad \text{whP} \\
\end{array} \\
&\begin{array}{c}
\text{\(v'\))} \\
\text{\(v\))} \\
\text{VP} \\
\end{array} \\
\end{align*}
\]

- Two types of probe features ([Heck & Müller 2007] [Müller 2010] a.o.):
  - Agree \(\ast F\ast\) trigger agreement without movement
  - Structure-building \(\ast F\ast\) trigger external or internal Merge

- Probe features are hierarchically ordered and only the highest feature in the hierarchy is visible for syntactic operations per [Georgi & Müller 2010] [Müller 2010] [Martinović 2015] [Ershova 2019].

- Goal features may be specified as ‘movement-type’ (labeled here as +F+): they must be checked by a structure-building feature.

- For successive cyclic A'-movement through phase edges (see e.g. [Chomsky 2000] [2001] [2008]):
  - At the time a phase is formed, a structure-building edge feature (+F+) may be added to the phase head to trigger movement of the corresponding goal to the phase edge.
  - This edge feature is inserted after all other featural requirements of the phase head are satisfied, per [Chomsky 2008] and counter to [Heck & Müller 2003] [Müller 2010] [2011].

- CP, \(vP\), ApplP, and DP are phases ([Chomsky 2000] [2001] [Legate 2003] [McGinnis 2000] [2001] a.o.)
**possessor extraction from ergative DP:**

(25)

- C$^0$ probes with the $[\bullet \text{WH$^\bullet$}]$ feature, and the possessor within the ergative DP bears the matching $[+\text{WH+}]$ feature.
- There are two eligible goals for C$^0$: the $vP$ phase and the DP at the edge of this phase.
- $vP$ and DP cannot move because this requires pied-piping ($[+\text{WH+}]$ is embedded), which is disallowed in West Circassian.
- The possessor in $\text{DP}_{\text{erg}}$ is not an eligible goal: $vP$ is an intervener.
- $\Rightarrow$ The possessor is trapped within the ergative DP.
*possessor extraction from applied argument:

(26)

- Movement of possessor from DP₁₀ must pass through Spec, vP (a phase edge).
- Movement to Spec, vP is triggered by the successive cyclic edge feature [•+•].
- ApplP is an intervener for the movement of the possessor from DP₁₀.
- ⇒ the possessor is trapped, triggering an islandhood effect.

✓ possessor extraction from absolutive DP:

no phase boundaries between DPₐₛ and C⁰.

Summary so far: Islandhood of ergative and applied object DPs can be captured with an Agree-based account of phasehood as intervention.

Upcoming: Evidence for phasehood as intervention for Agree – no islandhood effect if phase successfully agrees.
4.2 Unlocking phases via polysynthesis and the edge feature

The puzzle: Why are ergative and applied argument DPs transparent for subextraction in long-distance wh-movement configurations?

Why are ergative and applied argument DPs transparent for subextraction in long-distance wh-movement configurations?

Rackowski & Richards (2005): in Tagalog agreement between \(v^0\) and direct object unlocks direct object CP for subextraction.

My proposal: In West Circassian, agreement between \(C^0\) and lower verbal phase heads (\(v^0\) and Appl\(^0\)) unlocks \(vP\) and ApplP (and, correspondingly, their edges) for subextraction.

• Agreement between \(C^0\), \(v^0\) and Appl\(^0\) is connected to polysynthetic morphology.

• Head movement to \(C^0\) is triggered by agreement in the feature [\(V\)]:
  – \(C^0\) has the agreement feature [\(*V*\)]
  – all other verbal projections bear the corresponding goal feature [\(V\)]
  – See e.g. Roberts (2010) for Agree-driven head movement and Biberauer et al. (2014) on applying this approach to polysynthetic languages.

Rackowski & Richards (2005): in Tagalog agreement between \(v^0\) and direct object unlocks direct object CP for subextraction.

This analysis requires placing head movement in the narrow syntax per e.g. Koopman (1984); Travis (1984); Baker (1988); Kayne (1994); Roberts (2010); Arregi & Pietraszko (2020) and counter to e.g. Chomsky (2001; Embick & Noyer 2001; Harizanov & Gribanova 2019). See Roberts (2010) on differentiating Agree-driven phrase and head movement.

\[\text{lit. ‘Whose did you not consent for _ children to sing?’}\]

\(\checkmark\) long-distance possessor extraction from ergative DP
Why are there no DP islandhood effects in embedded clauses?

A combination of two factors:

1. the presence of the agreement feature [*V*] on embedded C°
2. the absence of the wh-movement triggering feature [•WH•] on embedded C°
   (the [•WH•] feature is on matrix C°)

✓ long-distance possessor extraction from ergative DP

- Embedded C° agrees with v°
- vP is transparent for further probing by C°
- C° attracts whP with edge feature [+F+]

(30)

```
CP
  \[\text{whP} \quad [+\text{WH+}]\]  
  \[\text{C'} \quad \text{TP}\]  
  \[\text{T} \quad [+V+] \quad [+\text{WH+}]\]  
  \[\text{DP}_{\text{ERG}} \quad \text{vP} \]  
  \[\text{whP} \quad [+\text{WH+}]\]  
  \[\text{v} \quad \text{VP}\]  
```

- whP moves from embedded Spec,CP to Spec,vP via successive cyclic movement
- Spec,vP is an eligible goal for [•WH•] on matrix C°

(31)

```
\[\text{vP} \quad [+\text{WH+}]\]  
\[\text{v'} \quad \text{v} \quad \text{VP}\]  
\[\text{[*[+]]} \quad \text{V}\]  
\[\text{CP} \quad \text{DP}_{\text{ERG}} \quad \text{whP} \quad [+\text{WH+}]\]  
\[\text{C'} \quad \text{TP}\]  
```
long-distance possessor movement from applied argument

- embedded $C^0$ agrees in $[\nu]$ with $\nu$, and subsequently $\text{Appl}^0$
- whP within applied argument is attracted to embedded Spec,CP with edge feature $[\star \nu \star]$ 

$$\text{(32)}$$

Difference with clausebound extraction:

- matrix $C^0$ also hosts the $[\star \nu \star]$ feature
- but matrix $C^0$ also hosts $[\star \text{WH} \star]$, which probes prior to $[\star \nu \star]$
- $\Rightarrow$ intervention effect with lower phase heads

5 Conclusion

- West Circassian DP arguments display a puzzling combination of syntactic effects: ergative and applied argument DPs are islands for extraction, but only when they are clausemates of the wh-movement triggering head ($C^0$).
- A DP becomes an island if merged at a phase edge, rendering the internal structure of the corresponding DPs opaque for subextraction.
- The amelioration of the islandhood effects in embedded contexts provides evidence of an agree-based model of phasehood, where phases behave as opaque domains due to them serving as interveners for the probe in question.
- The unusual dynamic/selective DP islandhood is connected to polysynthesis: $C^0$ agrees with all the lower heads in the verbal extended projection, triggering head movement to $C^0$ and resulting in a morphologically complex predicate.
• As a polysynthetic language, West Circassian presents novel evidence for an Agree-based theory of phasehood, per Rackowski & Richards (2005); Van Uruk & Richards (2015); Halpert (2019).

Appendices

A Diagnosing covert wh-movement

Wh-movement is island sensitive:

\[(33)\]  
\[\begin{align*}
[RC \text{Op}_i \text{wone}(\text{ABS}) t_i(\text{ERG}) & \quad \text{Ø- qə- s- fe- zə- še} \\
\text{house} & \quad 3\text{ABS- DIR- 1SG.IO- BEN- WH.ERG- do} \\
\text{-ie]} & \quad \text{blaire-r sa-pe} \\
\text{-PST relative-ABS 1SG.PP-front 3ABS-DIR-3SG.IO-LOC-fall-PST}
\end{align*}\]

‘I met the relative who built a house for me.’

\[(34)\]  
\[\begin{align*}
\text{mar} & \quad [RC \text{t}_i(\text{ERG}) \quad \text{varenje} \quad \text{Ø- zə- šxə-re} \\
\text{here} & \quad \text{boy-ADV} \quad \text{jam} \quad 3\text{ABS- WH.ERG- eat -PRES} \\
\text{-r} & \quad [\text{CP} \text{pro}_i(\text{ERG}) \quad \text{səpər-r} \quad \text{Ø- a/zə- mə- wəx -ze}] \\
\text{-ABS} & \quad \text{soup-ABS 3ABS- 3SG/WH.ERG- NEG- finish -CVN}
\end{align*}\]

‘Here is the boy who is eating jam without finishing the soup.’ (Ershova 2021a)

Wh-movement can license parasitic gaps (Ershova 2021a).

• ergative trace licenses a parasitic gap in the adjunct clause:

\[(35)\]  
\[\begin{align*}
\text{mar} & \quad [RC \text{pro}_i(\text{PG}) \quad \text{t}_i(\text{ABS}) \quad \text{nəσyape-m} \quad \text{Ø- Ø- rə-} \\
\text{here} & \quad \text{girl-ADV} \quad 3\text{ABS-PRES-sleep-LIM} \quad \text{doll-OBL WH.ABS- 3SG.IO- INS-}
\end{align*}\]

Intended: ‘Here is the boy who is eating jam without finishing the soup.’ (Ershova 2021a)
‘Here is the girl who plays with the doll while her sister sleeps.’ (Ershova 2021a)

B  Possessor extraction is ungrammatical from all types of applied argument DPs

Experiencer of two-place unaccusative verb: baseline (36a); possessor extraction is ungrammatical (36b); pseudocleft repair strategy (36c).

(36) a. [mø bhɔlɔwe-m(POSS) Ñ-jɔ-pšaše ](IO) this woman-OBL   WIPOSS-ALIEN-girl sɔ-Ñ-s’ɔ-b’wpša-be 1SG.ABS-3SG.IO-LOC-forget-PST

‘This woman’s daughter forgot about me.’

b. * mɔ bhɔlɔwe-r arɔ [RC Op_i [ t_i(POSS) z-jɔ-pšaše ](IO) this woman  PRED   WH.POSS-ALIEN-girl sɔ-Ñ-s’ɔ-b’wpša-be -r 1SG.ABS-3SG.IO-LOC-forget-PST  -ABS

Intended: ‘This woman is the one whose daughter forgot about me.’

c. mɔ bhɔlɔwe-r arɔ [RC Op_i [ t_i(POSS) z-jɔ-pšaše ](ABS) this woman-ABS  PRED   WH.POSS-ALIEN-girl [RC Op_j t_j(10) sɔ-Ñ-s’ɔ-b’wpša-be-r ] 1SG.ABS-WH.IO-LOC-forget-PST-ABS

lit. ‘This woman is the one whose daughter is the one who forgot about me.’

Indirect object of di-transitive verb: baseline (37a); possessor extraction is ungrammatical (37b); pseudocleft repair strategy (37c).

(37) a. se(ERG) ŋegw’alə-r(ABS) I toy-ABS Ñ-Ñ-je-s-tɔ-ɔ 3ABS-3SG.IO-DAT-1SG.ERG-give-PST č’ele-çɔk’ɔ-m(POSS) ɔ-s 1IO) boy-small-OBL 3SG.POSS-brother

‘I gave the toy to the boy’s brother.’

b. * mwarɔ [RC č’ele-çɔk’ɔ-wi [ t_i(POSS) ɔ-s 1IO) here boy-small-ADV  WH.POSS-brother

20
\[ \text{\textgreek{z}eg\textquoteright{}a\text{\textgreek{\textae}}-r(ABS)}\quad \text{Ø-Ø-je-s-t\text{\textae}be} \quad \text{-r} \]

\text{toy-ABS} \quad 3\text{ABS-3SG.IO-DAT-1SG.ERG-give-PST} \quad \text{-ABS}

Intended: ‘Here is the boy to whose brother I gave the toy.’

c. \text{mwar\text{\textgreek{\textae}} [\text{RC \textgreek{\textcedilla}ele-\textgreek{\textcedilla}ok\text{\textae}ew} \quad [t(POSS)\quad \text{z\text{\textae}š ](ABS)}]

here \quad \text{boy-small-ADV} \quad \text{WH.POSS-brother}

[\text{RC Op}_{j}\quad t_{j}(10)\quad \text{\textgreek{z}eg\textquoteright{}a\text{\textae}}-r(ABS)

\text{toy-ABS}

\text{Ø-Ø-e-s-t\text{\textae}be-r} \quad ]

3\text{ABS-WH.IO-DAT-1SG.ERG-give-PST-ABS}

lit. ‘Here is the boy whose brother is the one to whom I gave the toy.’

High applicative: baseline (38a); possessor extraction is ungrammatical (38b); pseudo-cleft repair strategy (38c).

(38) a. \text{se(ERG)}\quad \text{wered(ABS)} \quad [\text{mwe \textgreek{\textae}z\text{\textae}m(POSS)}\quad \text{Ø-jo-\textgreek{\textcedilla}ale }]_{(10)}

\text{I song this woman-OBL 3SG.POSS-ALIEN-boy}

\text{Ø-qo-Ø-fe-s-R\text{\textae}a-b}

3\text{ABS-DIR-3SG.IO-BEN-1SG.ERG-say-PST}

‘I sang for this woman’s son.’

b. * \text{mar\text{\textae} [\text{RC \textgreek{\textae}z-ew} \quad [t(POSS)\quad \text{z-jo-\textgreek{\textcedilla}ale }]_{(10)}\quad \text{wered(ABS)}

\text{here woman-ADV} \quad \text{WH.POSS-ALIEN-boy song}

\text{Ø-qo-Ø-fe-s-R\text{\textae}a-be} \quad \text{-r}

3\text{ABS-DIR-3SG.IO-BEN-1SG.ERG-say-PST} \quad \text{-ABS}

Intended: ‘Here is the woman for whose son I sang.’

c. \text{mar\text{\textae} [\text{RC \textgreek{\textae}z-ew} \quad [t(POSS)\quad \text{z-jo-\textgreek{\textcedilla}ale }]_{(ABS)}\quad [\text{RC Op}_{j}\quad t_{j}(10)}

\text{here woman-ADV} \quad \text{WH.POSS-ALIEN-boy}

\text{Ø-que-z\text{\textae}fe-s-R\text{\textae}a-be-r} \quad ]

3\text{ABS-DIR-WH.IO-BEN-1SG.ERG-say-PST-ABS}

lit. ‘Here is the woman whose son is the one for whom I sang.’

References


Bošković, Željko. 2014. Now i’m a phase, now i’m not a phase: On the variability of phases with extraction and ellipsis. Linguistic Inquiry 45 (1): 27–89.
Gallego, Ángel J. & Juan Uriagereka. 2007. Conditions on sub-extraction. In Corefer-


Lander, Yury. 2009b. Subject properties of the Adyghe absolutive: Evidence from relatives. Ms..


Lander, Yury A. & Yakov G. Testelets. 2017. Adyghe (Northwest Caucasian). In The Ox-


Travis, Lisa demena. 1984. Parameters and effects of word order variation. PhD diss, MIT.


Zeijlstra, Hedde. 2004. Sentential negation and negative concord. LOT.