

# Phasehood as defective intervention: Possessor extraction and selective DP islandhood in West Circassian

Ksenia Ershova (kershova@mit.edu)

To appear in *Syntax*

July 17, 2022

## Abstract

$\bar{A}$ -extraction of possessors in West Circassian is constrained in a puzzling way: the possessor of an ergative or applied argument DP may not undergo clausebound wh-movement, but long-distance possessor extraction across a clausal boundary is grammatical. Based on the variable islandhood of these DPs, this talk argues for an agree-based approach to phasehood. Phase opacity is treated as defective intervention, with the phase intervening between the probe and the goal. Defective intervention does not take place if the corresponding phase has independently entered an Agree relation with the movement-triggering probe. Islandhood is thus correctly predicted to be contextually determined: in West Circassian, the difference between clausebound and long-distance possessor extraction is conditioned by the set of agreement features on the local movement-triggering probe: a wh-feature on  $C^0$  in the case of clausebound extraction and a successive-cyclic edge feature on embedded  $C^0$  in the case of long-distance wh-movement. Additionally, the account appeals to the opacity of phase edges to explain the contrast between DPs which display islandhood effects (ergative and applied argument DPs) and constituents which are uniformly transparent for subextraction (the absolutive DP and postpositional phrases).

## Keywords

Wh-movement; relativization; possessor extraction; islandhood; Phase Theory; West Circassian; successive-cyclic movement.

# 1 Introduction: Phasehood as intervention and the Edge Condition

This paper presents an analysis of possessor extraction in West Circassian (or Adyghe; of the Northwest Caucasian family), a polysynthetic language with ergative-absolutive case alignment.<sup>1</sup> In some dialects of West Circassian, possessor extraction displays a constellation of puzzling constraints: ergative and applied argument DPs behave as islands in cases of clause-bound *wh*-movement (1), but the effect is ameliorated with *wh*-movement across a clausal boundary (2). These arguments contrast with the absolutive DP, which is transparent for subextraction (3), but their islandhood is not connected to case markedness or obliqueness – unlike ergative and applied argument DPs, canonically oblique nominals selected by postpositions are not islands (4).

- (1)  $\underbrace{\uparrow C_{[WH]} \quad [DP \ t_{POSS}] \quad ]_{ERG/IO} \dots}_X$       (2)  $\checkmark \quad \underbrace{\uparrow C_{[WH]} \quad \dots \quad [CP \quad [DP \ t_{POSS}] \quad ]_{ERG/IO} \dots}$
- (3)  $\checkmark \quad \underbrace{\uparrow C_{[WH]} \quad [DP \ t_{POSS}] \quad ]_{ABS} \dots}$       (4)  $\checkmark \quad \underbrace{\uparrow C_{[WH]} \quad [PP \quad [DP \ t_{POSS}] \quad ] \ P] \dots}$

In the absence of structural differences between ergative and applied argument DPs in matrix and embedded contexts, the variable islandhood of these constituents requires a contextual understanding of extraction domains: the transparency of a constituent for subextraction depends on the features of the local movement probe ( $C^0$ ). This type of contextually determined opacity cannot be captured with analyses which appeal to specifierhood or ungoverned positions (Huang 1982; Takahashi 1994; Stepanov 2001), freezing of moved constituents (Boeckx 2003; Bošković 2018), the agreement properties of the DPs themselves (Gallego & Uriagereka 2007; Gallego 2010; Branen 2018), the internal structure of the nominal constituents (Corver 1990, 1992; Bošković 2005; see also Polinsky 2016 for a PP analysis of ergatives), or subadjacency (Chomsky 1973 *et seq.*).

I argue that the West Circassian facts are best captured with the Agree-based theory of phasehood developed by Abels (2003); Rackowski & Richards (2005); Van Urk & Richards (2015); Halpert (2019). Within this framework, the impenetrability of a given phase – in this case, *v*P and ApplP – is treated as a consequence of syntactic intervention, rather than transfer to the interfaces (cf. Chomsky 2000, 2001, 2008; Richards 2011; Bošković 2016, a.o.). This approach predicts that islandhood effects may be ameliorated if the corresponding phase has independently entered an Agree relation with the higher probe, thus no longer serving as an intervener. In West Circassian this prediction is confirmed by the amelioration of DP islandhood in long-distance *wh*-movement configurations. While differing in implementation, this approach joins a broader line of research arguing for dynamic phasehood, where the opacity

<sup>1</sup>Unless otherwise indicated, data were collected through elicitation with four speakers of the Temirgoy dialect in the Khatazhukaj rural settlement and Maykop (Adyghe, Russia). Additional data is taken from the Adyghe Language Corpus (AC) designed by Timofey Arkhangel'skiy, Irina Bagirokova, and Yury Lander (<http://adyghe.web-corpora.net/>).

of a given constituent is determined contextually by the larger syntactic structure (den Dikken 2007; Gallego 2010; Bošković 2014).

The contrast between ergative and applied argument DPs on the one hand, and absolutive DPs and PPs on the other hand is connected to Chomsky’s (2000; 2001) generalization that phase edges are opaque for subextraction (named the Edge Condition by Gallego & Uriagereka 2007): the ergative and applied argument DPs are merged at the *v*P and ApplP phase edges correspondingly. I propose to capture the Edge Condition with a revised definition of locality for Agree operations, rather than constraints on computational complexity; cf. Chomsky (2008:147-148).

I connect variable DP islandhood in West Circassian to the polysynthetic nature of the language, i.e. the propensity to form morphologically complex predicates: verbal heads, including *v*<sup>0</sup> and Appl<sup>0</sup>, enter an Agree relation with the highest head in the extended verbal projection (*C*<sup>0</sup>), resulting in head movement to form complex polysynthetic words (see e.g. Roberts 2010 on Agree-triggered head movement). The lack of any morphosyntactic differences between DPs in matrix clauses where they display islandhood properties and embedded clauses where they are transparent for subextraction calls for this indirect relationship between DP islandhood and agreement properties of the verbal heads in the extended projection. In both clausebound and long-distance wh-movement, the movement of the possessor is triggered by a feature on *C*<sup>0</sup>. In cases of clausebound wh-movement, it is triggered by a semantically contentful wh-feature which probes *prior* to the polysynthetic verbal agreement feature, with the lower phases (*v*P and ApplP) triggering defective intervention. With long-distance wh-movement, on the other hand, the possessor undergoes successive-cyclic movement to the embedded Spec,CP via an edge feature which probes *after* the verbal agreement feature. As a result, *v*P and ApplP do not behave as phases in respect to the embedded *C*<sup>0</sup> and allow for subextraction from the corresponding phase edges.

From the descriptive and typological perspective, this paper presents an unusual set of constraints on relativization out of nominal constituents: in West Circassian, ergative and applied arguments behave as islands for possessor extraction only in a subset of contexts, namely in cases of clausebound relativization, and furthermore, cannot be united into an obvious natural class with other constituents which tend to behave as islands cross-linguistically, such as adjunct PPs.

The remainder of the paper is structured as follows. Section 2 provides the background on West Circassian clause structure and the syntax of wh-movement. Section 3 outlines the constraints on possessor extraction. Section 4 presents the Agree-based analysis of the West Circassian data and discusses the shortcomings of previous accounts of selective DP islandhood. Section 5 concludes.

## 2 Background on West Circassian wh-movement

This section provides the necessary background on West Circassian clause structure and wh-movement configurations.

## 2.1 Basic clause structure

This subsection provides a brief overview of West Circassian morphosyntax which is necessary for the understanding of wh-extraction. West Circassian is polysynthetic, with prevalent head marking for predicates, nominal constituents, and postpositions (see Kumakhov & Vamling 2009; Testelefs 2009; Korotkova & Lander 2010; Lander & Letuchiy 2010; Lander 2017; Lander & Testelefs 2017, *inter alia*). A predicate expones cross-reference morphology for all participants of the event it denotes; for example, the verb in (5) includes prefixes referencing four participants, from left to right: an absolutive theme, a benefactive applied object, a dative applied object denoting the causee of a transitive base verb, and an ergative agent denoting the causer. The markers referring to the applied objects appear alongside applicative prefixes marking the semantic role of the corresponding applied object. The applicative markers may vary based on the theta-role of the applied object (e.g. benefactive *fe-*, comitative *de-*, locative *š'ə-*, etc.).

- (5) sə- qə- p- f- a- r- jə- be- λeβ<sup>wə</sup> -β  
 1SG.ABS- DIR- 2SG.IO- BEN- 3PL.IO- DAT- 3SG.ERG- CAUS- see -PST  
 'He showed me to them for your sake.'<sup>2</sup> (Korotkova & Lander 2010:301)

Cross-reference prefixes are ordered in accordance with an ergative alignment system: ABS – IO+APPL – ERG. The prefix referring to the theme of a transitive verb – e.g. λeβ<sup>wə</sup> 'see' in (6) – and the subject of an intransitive verb (7) appears in the leftmost position. The absolutive prefix is then followed by any cross-reference morphology referring to applied objects, e.g. the malefactive in (7) or the benefactive in (8). The ergative prefix appears closest to the verbal root (8).

- (6) wə- s- e- λeβ<sup>wə</sup>  
 2SG.ABS- 1SG.ERG- DYN- see  
 'I see you.'
- (7) wə- s- š<sup>wə</sup>e- səmežə -β  
 2SG.ABS- 1SG.IO- MAL- ill -PST  
 'You were ill against my will.'
- (8) Ø- p- fe- s- thač'ə -be -x  
 3ABS- 2SG.IO- BEN- 1SG.ERG- wash -PST- PL  
 'I washed them for you.'

Possessed nouns are marked with a personal prefix referring to the possessor (9); in cases of alienable possession this prefix is followed by the possessive marker *jə-* (10) (see Gorbunova 2009 on alienable versus inalienable possession).

- (9) s-šəpχ<sup>wə</sup> -xe-r  
 1SG.PR-sister-PL-ABS  
 'my sisters'
- (10) t-jə-β<sup>wə</sup>neβ<sup>wə</sup> -xe-m  
 1PL.PR-POSS-neighbor-PL-OBL  
 'our neighbors'

The syntax of cross-reference morphology lies outside the scope of this paper. Per Ershova (2020) I assume that the personal prefixes expone  $\phi$ -agreement between an argument and a

<sup>2</sup>The examples are glossed in accordance with the Leipzig conventions, with the following additions: DIR – directional; DYN – present tense on dynamic verbs; LIM – limitative; MOD – modal future; PR – possessor; RE – refactive.

verbal functional head:  $v^0$  for ergative,  $\text{Appl}^0$  for applied arguments, and  $T^0$  for absolutive. The proposed analysis is compatible with treating these morphemes as clitics in the sense of Arregi & Nevins (2012); Yuan (2018), a.o.<sup>3</sup> or with positing dedicated  $\text{Agr}^0$  projections, as e.g. in Ershova (2019).

Case marking displays ergative alignment as well: e.g. the theme of the transitive verb *fepen* ‘dress’ (11a) and the single argument of the intransitive verb *qes<sup>w</sup>en* ‘dance’ (11b) are marked with the absolutive suffix *-r*, while the ergative agent (11a), applied objects, such as the location in (11c), possessors (12), and complements of postpositions (13) are assigned the oblique marker *-m*.

- (11) a. *mə pšaše-r(ABS) jane paje Ø-qa-š<sup>w</sup>e*  
 this girl-ABS 3PL.PR+mother for 3ABS-DIR-dance  
 ‘The girl is dancing for her mother.’
- b. *s-jə-pšaše-xe-m(ERG) nəsxape-xe-r(ABS) Ø-a-fepa-ɸe-x*  
 1SG.PR-POSS-girl-PL-OBL doll-PL-ABS 3ABS-3PL.ERG-dress-PST-PL  
 ‘My daughters dressed the dolls.’
- c. *žeg<sup>w</sup>ə-m(IO) sə-qə-Ø-š<sup>w</sup>ə-ɸa-ɸ-ep*  
 wedding-OBL 1SG.ABS-DIR-3SG.IO-LOC-dance-PST-NEG  
 ‘I didn’t dance at the wedding.’
- (12) *pšaše-m Ø-jə-pšešɸ<sup>w</sup>*  
 girl-OBL 3SG.PR-POSS-female.friend  
 ‘the girl’s friend’
- (13) *mə š<sup>w</sup>əzə-m paje*  
 this woman-OBL for  
 ‘for this woman’

Following classic and recent work on West Circassian (Rogava & Keraševa 1966; Arkadiev et al. 2009; Arkadiev & Letuchiy 2011; Lander 2012; Letuchiy 2015; Lander & Testelelets 2017; Ershova 2019, 2020, 2021a, *inter alia*), I treat the marker *-m* as the exponent of a single case and gloss it as *oblique*.<sup>4</sup> The main claims of the paper do not rely on a particular theory of how case is assigned; see Caponigro & Polinsky (2011); Ershova (2019) on the syntax of case assignment.

Nouns may be unmarked for case; the lack of case marking is associated with indefiniteness. Additionally, possessed nominals in the singular, proper names and personal pronouns generally do not inflect for case (Arkadiev et al. 2009:51-52; Arkadiev & Testelelets 2019). Arkadiev & Testelelets (2019) suggest that the lack of case marking in indefinite nouns correlates with a diminished nominal structure, but possessed nominals, which are the subject under discussion in this paper, always constitute a full DP even in the absence of overt case marking. The order

<sup>3</sup>Cliticization here means movement and adjunction of a  $D^0$  head to a verbal projection; it does not correlate with the traditional definition of *clitic* as a syntactically independent, but prosodically and morphologically deficient element (Zwicky & Pullum 1983; Halpern 1995; Anderson 2005, a.o.). In terms of surface morphosyntax, the cross-reference markers are unambiguously affixes.

<sup>4</sup>But see Caponigro & Polinsky (2011), who posit two homophonous case markers: ergative on agents of transitive verbs and oblique on applied arguments.

of arguments in a full clause is free, but the language is prevalently left-branching, with suffixal case markers, postpositions, verb-final embedded clauses, and relative clauses to the left of their nominal external head.

West Circassian is a high absolutive language: Ershova (2019, 2021c) argues based on reciprocal binding facts that the absolutive argument moves to Spec,TP while the ergative and applied arguments remain in situ in Spec,vP and Spec,AppIP respectively (14).

- (14) [TP DP<sub>ABS</sub> [<sub>vP</sub> DP<sub>ERG</sub> [<sub>AppIP</sub> DP<sub>IO</sub> [<sub>VP</sub> <DP<sub>ABS</sub>> V ] Appl ] v ] T ]
- 

Reciprocals in West Circassian are diagnosed via specialized agreement which appears in the position corresponding to the syntactic role of the bound argument. For example, if an applied argument is used with the verb *kʷen* ‘yell’, it triggers  $\phi$ -agreement to the immediate left of the corresponding applicative marker – in this case *tje-* (15a). The agent of this verb triggers absolutive agreement, exponed as the leftmost prefix on the verb. Reciprocal agreement thus appears in the position associated with the applied object while the absolutive antecedent continues to trigger regular  $\phi$ -agreement, as expected given standard assumptions about argument structure (15b).

- (15) a. səd-a šʷə- qə- čʷə- t- tje- kʷe -re -r  
 what-Q **2PL.ABS-** DIR- RSN- **1PL.IO-** LOC- yell -DYN -ABS  
 ‘Why are you yelling at us? (lit. What is the reason you are yelling at us?)’  
 b. səd-a šʷə- čʷə- ze- tje- kʷe -re -r  
 what-Q **2PL.ABS-** RSN- **REC.IO-** LOC- yell -DYN -ABS  
 ‘Why are you yelling at each other?’

An absolutive argument functions as the antecedent for reciprocal pronouns even if it is the theme of a transitive verb, i.e. an internal argument. For example, the ergative agent of the verb *λeβʷən* ‘see’ in (16a) is indexed with the first person plural prefix to the left of the verbal root, and an absolutive theme is indexed by the leftmost agreement prefix – second person plural. Reciprocal agreement appears in the ergative position (16b) – this is evident from its position immediately to the left of the verbal root – while the absolutive antecedent triggers regular  $\phi$ -agreement (16b).<sup>5</sup> This leads us to the conclusion that the absolutive theme c-commands the ergative agent.

- (16) a. šʷə- t- λeβʷə -β  
 2PL.ABS- 1PL.ERG- see -PST  
 ‘We saw you.’  
 b. te- zere- λeβʷə -β  
 1PL.ABS- **REC.ERG-** see -PST  
 ‘We saw each other.’

Other evidence for a derived high position of the absolutive argument comes from conditions on parasitic gap licensing; for details see Ershova (2021a). See also Bittner & Hale (1996); Baker (1997); Aldridge (2004, 2008); Coon et al. (2014, 2021); Yuan (2018); Tollan & Clemens (2021), a.o. on high absolutive syntax in other ergative languages.

<sup>5</sup>The absolutive prefix in (16b) undergoes vowel assimilation with the following vowel in this case; this is not standard for the written language, but robustly attested in colloquial speech.

## 2.2 Relative clauses

This subsection outlines the structure of wh-movement configurations in West Circassian. Wh-movement is observed only in relative clauses: wh-questions, focus and topic constructions are formed on the basis of a pseudocleft (Sumbatova 2009; Caponigro & Polinsky 2011). The syntax of relative clauses in West Circassian has been described in Lander (2009a,b, 2012) and analyzed in Minimalist terms by Caponigro & Polinsky (2011); see also Ershova (2021a) for recent discussion.

Following Caponigro & Polinsky (2011); Ershova (2021a), I assume that relativization in West Circassian involves the movement of a relative operator to Spec,CP. In externally headed relative clauses, the operator is phonologically null, in relative clauses that are considered internally headed (Lander 2009a, 2012) the relative operator is spelled out as the internal head.

Relativization of non-absolutive participants in West Circassian involves the use of a special relativizing morpheme *zə-* in place of the regular cross-reference morphology referring to the relativized participant (Lander 2009a, 2012; Caponigro & Polinsky 2011); the prefix surfaces as *z-* prevocally or before the glide /j/ in accordance with regular morphophonological rules (Arkadiev et al. 2009:27-29). For example, the ergative agent of the finite predicate in (17a) triggers the third person ergative marker *ə-š*; if this argument is relativized, the corresponding agreement marker is replaced with *zə-* (17b). The nominal head of the relative clause appears on the left edge of the relative clause and is marked with the adverbial case marker *-ew*; I return to the properties of the head of the relative clause below.

- (17) a. **mə** **č'ale-m(ERG)** *ə-š* *velosjoped*  
**this boy-OBL** 3SG.PR-brother bicycle  
*Ø- Ø- r- jə- tə -B*  
 3ABS- 3SG.IO- DAT- **3SG.ERG-** give -PST  
 'This boy gave a bicycle to his brother.'
- b. *marə* [**č'al-ew<sub>i</sub>** *t<sub>i</sub>(ERG)* *ə-š* *velosjoped*  
 here **boy-ADV** 3SG.PR-brother bicycle  
*Ø- Ø- je- zə- tə -be] -r*  
 3ABS- 3SG.IO- DAT- **WH.ERG-** give -PST -ABS  
 'Here is the boy that gave a bicycle to his brother.' (Ershova 2021a:6)

The prefix *zə-* cannot be used in the absence of wh-movement, indicating that it is specialized to reference a wh-trace. For example, the marker *zə-* in (18) appears in place of the prefix referencing the relativized ergative participant; the use of this marker in the absence of wh-movement is ungrammatical (19) (adapted from Caponigro & Polinsky 2011:84).

- (18) [*Op<sub>i</sub> t<sub>i</sub> xate-r* *š<sup>w</sup>anə-m* *Ø- Ø- rə- zə- pč'e -š'tə*]  
 orchard-ABS hoe-OBL 3ABS- 3SG.IO- INSTR- **WH.ERG-** weed -FUT  
*č'ale-r*  
*boy-ABS*  
 'the boy who will be weeding the orchard with a hoe' (Caponigro & Polinsky 2011:84)

- (19) \* ǰ'ale-m ǰ<sup>w</sup>anə-m xate-r Ø- Ø- rə- zə- pǰ'e -š't  
 boy-OBL hoe-OBL orchard-ABS 3ABS- 3SG.IO- INSTR- **WH.ERG-** weed -FUT  
 Intended: 'The boy will be weeding the orchard with a hoe.' (*ibid.*)

The same pattern can be seen with the relativization of an applied argument: the applied object of the finite predicate in (20a) triggers third person singular agreement; if this argument is relativized, the corresponding agreement marker is once again replaced with *zə-* (20b).

- (20) a. mǝ ǰ'ele-ǰǝk<sup>w</sup>ə-m Ø-jane Ø- Ø- fe- g<sup>w</sup>əbž -zepəṭ  
 this boy-small-OBL 3SG.PR-mother 3ABS- **3SG.IO-** BEN- angry -always  
 'His mother is always angry at this boy.'
- b. marə [ǰ'ele-ǰǝk<sup>w</sup>-ew<sub>i</sub> t<sub>i</sub>(IO) Ø-jane Ø- zə- fe- g<sup>w</sup>əbž  
 this boy-small-ADV 3SG.PR-mother 3ABS- **WH.IO-** BEN- angry  
 -zepəṭə -re] -r  
 -always -DYN -ABS  
 'Here is the boy at whom his mother is always angry.' (Ershova 2021a:6)

If a possessor is relativized, the cross-reference marker on the possessed nominal is likewise replaced with the marker *zə-*: this is true for both alienable (21) and inalienable possession (22).<sup>6</sup>

- (21) [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-pšəše ](ABS) dax-ew Ø-qa-š<sup>w</sup>e-re] -r  
 woman-ADV **WH.PR-POSS-girl** good-ADV 3ABS-**DIR-dance-DYN** -ABS  
 'the woman whose daughter dances well'
- (22) mwarə [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) zə-q<sup>w</sup>e ](ABS) hapse-m  
 here woman-ADV **WH.PR-son** prison-OBL  
 Ø-Ø-ǰ-a-ǰa-ḅe ] -r  
 3ABS-3SG.IO-LOC-3PL.ERG-throw-PST -ABS  
 'Here is the woman whose son they threw in jail.'

A relativized absolutive argument is indexed with a phonologically null morpheme, meaning that the agreement morphology of the predicate heading the relative clause remains unaltered compared to its finite form with third person agreement. For example, the absolutive argument triggers null agreement on *ceqen* 'bite' in (23a); when relativized, this agreement remains null (23b).

- (23) a. **ha-r** Ø-jə-xozjajən Ø- Ø- je- ceqa -ḅ  
**dog-ABS** 3SG.PR-POSS-owner **3ABS-** 3SG.IO- DAT- bite -PST  
 'The dog bit its owner.'
- b. se sə-Ø-š'-e-š'əne [RC **ha-w<sub>i</sub>** t<sub>i</sub>(ABS)  
 I 1SG.ABS-3SG.IO-LOC-DYN-fear **dog-ADV**  
 Ø-jə-xozjajən Ø- Ø- je- ceqa -ḅe] -m  
 3SG.PR-owner **WH.ABS-** 3SG.IO- DAT- bite -PST -OBL

<sup>6</sup>The demonstrative *mwarə* in (22) is a colloquial variant of the form *marə* 'here' in (20b).



‘I fear the dog that bit its owner.’ (Ershova 2021a:7)

Absolutive internal arguments, e.g. the theme of  $\lambda eB^w\partial n$  ‘see’ in (24), are also relativized without overt wh-morphology.

- (24) marə [RC pšaš-ew<sub>i</sub> t<sub>i</sub>(ABS) bere Ø-jə-B<sup>w</sup>əneB<sup>w</sup>ə-m dež’  
 here girl-ADV much 3SG.PR-POSS-neighbor-OBL at  
 Ø-Ø-š’ə-s-λeB<sup>w</sup>ə-re ] -r  
 WH.ABS-3SG.IO-LOC-1SG.ERG-see-DYN -ABS  
 ‘Here is the girl whom I see at her neighbor’s place a lot.’

As mentioned above, relativization is the only type of wh-movement observed in West Circassian. Questions are formed either with the wh-expression appearing in-situ with no wh-agreement (25a), or through the formation of a pseudocleft construction where the wh-expression serves as the focus of the pseudocleft (25b) (Sumbatova 2009; Caponigro & Polinsky 2011). In the pseudocleft construction, the wh-word is marked with the question particle *-a*, and the remainder of the sentence takes the form of a headless relative clause, with the predicate bearing wh-agreement with the relativized argument and suffixed with the absolutive case marker (25b).

- (25) a. xet(ERG) kartof(ABS) Ø-q-ə-hə-B-a  
 who potato 3ABS-DIR-3SG.ERG-bring-PST-Q  
 ‘Who brought potatoes?’  
 b. xet-a [RC Op<sub>i</sub> t<sub>i</sub>(ERG) kartof(ABS) Ø-qe-zə-hə-B-e ] -r  
 who-Q potato 3ABS-DIR-WH.ERG-bring-PST -ABS  
 ‘Who brought potatoes?’

Following O’Herin (2002) on the related language Abaza, and Caponigro & Polinsky (2011); Ershova (2021a) on West Circassian, relativization of any argument involves wh-movement and, correspondingly, wh-agreement. The morpheme *zə-* and its null absolutive allomorph (Ø-) are the spellout of this wh-agreement.<sup>7</sup> There is no overt relative pronoun, and wh-movement is diagnosed by (i) islandhood sensitivity and (ii) the ability of the moved operator to license parasitic gaps.

Islandhood sensitivity of relativization chains is discussed in Caponigro & Polinsky (2011) and Lander (2012). For example, the relative clause in (26a) contains an operator which binds a trace in the ergative position; the absolutive argument cannot be relativized from within this clause (26b). The ungrammaticality of (26b) may be due either to the presence of the wh-operator within the relative clause, or the intervening head of the relative clause; it suffices

<sup>7</sup>See Lander (2009a,b, 2012); Lander & Daniel (2019) for an alternative account where *zə-* is treated as a relative or resumptive pronoun and absolutive relativization involves an *unmarked* relativization strategy that does not involve any special morphology, overt or otherwise. This paper is compatible with this approach, as long as absolutive relativization is derived with covert wh-movement of the same type as the marked relativization strategy. Since nothing in this account relies on this, a uniform wh-agreement account is chosen as the simpler analytical option.

that there is an islandhood effect, and even absolutive arguments which do not trigger overt wh-morphology are subject to it.

- (26) a. [<sub>RC</sub> Op<sub>i</sub> wəne(ABS) t<sub>i</sub>(ERG) Ø- qə- s- fe- **zə-** še -be ]  
house 3ABS- DIR- 1SG.IO- BEN- **WH.ERG-** do -PST  
blaɛ-r sa-pe Ø-q-Ø-jə-fa-ɸ  
relative-ABS 1SG.PP-front 3ABS-DIR-3SG.IO-LOC-fall-PST  
‘I met the relative who built a house for me.’
- b. \* səd-a [<sub>RC</sub> Op<sub>j</sub> [<sub>RC</sub> Op<sub>i</sub> t<sub>j</sub>(ABS) t<sub>i</sub>(ERG) Ø- qə- s- fe-  
what-Q 3ABS- DIR- 1SG.IO- BEN-  
**zə-** še -be ] blaɛ-r sa-pe  
**WH.ERG-** do -PST relative-ABS 1SG.PP-front  
Ø-q-Ø-jə-fa-be ] -r  
3ABS-DIR-3SG.IO-LOC-fall-PST -ABS  
Intended: ‘What did I meet the relative who built \_ for me?’ (Lander 2012:286-287)

Parasitic gaps may appear within nominal and clausal constituents and trigger wh-agreement, which appears in addition to wh-agreement with the licensing gap (Ershova 2021b). For example, the predicate heading the relative clause in (27) expones wh-agreement with the relativized ergative agent. The ergative agent in the adjunct clause is bound by the relativized argument and may be replaced by a parasitic gap, correspondingly triggering wh-agreement on the embedded verb.

- (27) marə [<sub>RC</sub> č’al-ew<sub>i</sub> t<sub>i</sub>(ERG) varenje Ø- **zə-** šxə-re -r  
here boy-ADV jam 3ABS- **WH.ERG-** eat -DYN -ABS  
[<sub>CP</sub> *pro*<sub>i</sub> / <sub>PG</sub> s<sup>w</sup>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.’ (Ershova 2021a:10)

A relativized absolutive argument may license a parasitic gap despite the lack of overt wh-agreement with the absolutive trace. Thus, the absolutive argument of *žeg<sup>w</sup>ən* ‘play’ is relativized in (28), and, analogous to the previous example, the co-indexed possessor in the adjunct clause may be replaced with a parasitic gap, triggering wh-agreement on the corresponding nominal.

- (28) marə [<sub>RC</sub> pšaš-ew<sub>i</sub> [<sub>CP</sub> [ *pro*<sub>i</sub> / <sub>PG</sub> ə / **zə-**šəpχ<sup>w</sup> ] Ø-me-čəje-fe ]  
here girl-ADV 3SG/**WH.PR**-sister 3ABS-DYN-sleep-LIM  
t<sub>i</sub>(ABS) nəsxape-m Ø- Ø- rə- žeg<sup>w</sup>ə-re ] -r  
doll-OBL **WH.ABS-** 3SG.IO- INS- play -DYN -ABS  
‘Here is the girl who plays with the doll while her sister sleeps.’ (Ershova 2021a:17)

The head of the relative clause may appear (i) to the right of the relative clause, with the case of the full DP suffixed to the nominal (29) or (ii) to the left of the predicate heading the relative clause, often on the left edge of the clause; in this construction, the predicate of the relative



details. This section is divided into two parts: the first part presents the basic generalizations regarding clausebound possessor extraction and the second part discusses long-distance wh-movement configurations.

### 3.1 Clausebound possessor extraction

As demonstrated in the previous section, all types of arguments may be relativized: ergative agents (17b), applied objects (20b), and absolutive external (23b) or internal arguments (24). Subextraction from these constituents is, however, restricted. The only type of subextraction that is productive in West Circassian is possessor extraction – there is no non-possessor complement position within a DP, and nominal-internal adjunct postpositional phrases cannot be subextracted from or extracted themselves. For example, the instrumental marker *-č'e*, which displays properties of both a suffix and a postposition (Serdobolskaya & Kuznetsova 2009; Serdobolskaya 2011), may be used to indicate the subject matter of the lesson in (31a). Attempts to extract the full instrumental phrase (31b) or the possessor within the instrumental phrase (31c) are deemed ungrammatical by speakers.

- (31) a. [ rweʃəje-m(PR) Ø-jə-tarjəχ ] -č'e ](PP) wərek  
 Russia-OBL 3ABS-POSS-history -INS lesson  
 'a lesson in Russian history'
- b. \*sədə-m-č'e [RC Op<sub>i</sub> njewəš' [ [ t<sub>pp</sub> wərek]  
 what-OBL-INS tomorrow lesson  
 Ø-t-jə-ʔe-š'tə]-r  
 3ABS-1PL.IO-LOC-be-FUT-ABS  
 Intended: 'In what will we have a lesson tomorrow?'
- c. \*səd-a [RC Op<sub>i</sub> [ [ t<sub>i</sub>(PR) z-jə-tarjəχ ] -č'e ](PP) wərek ]  
 what-Q WH.PR-POSS-history -INS lesson  
 njewəš' Ø-t-jə-ʔe-š'tə ] -r  
 tomorrow 3ABS-1PL.IO-LOC-be-FUT -ABS  
 Intended: 'In the history of what will we have a lesson tomorrow?'

Since possessor extraction is the only type of wh-movement allowed from nominal constituents, this paper is concerned solely with constraints on this type of subextraction. If we are to take into account only clausebound wh-movement of possessors, the generalization in (32) holds.

- (32) **CONSTRAINT ON POSSESSOR EXTRACTION (PREMILINARY).** Absolutive DPs and PPs allow possessor subextraction, while ergative and applied argument DPs are islands.

Thus, we observed in (21)-(22) that the possessor of an absolutive argument (internal or external) may be successfully relativized. This is in sharp contrast with ergative and applied arguments: neither type of DP allows possessor subextraction. For example, (33a) presents an ungrammatical attempt to relativize the possessor from within the DP denoting the ergative agent of *P<sup>w</sup>en* ‘say’, as shown in the baseline version of this sentence (33b).

- (33) a. \* xet-a [ Op<sub>i</sub> [ t<sub>i</sub>(PR) **z-jə-č’ale** ](ERG) dax-ew wered(ABS)  
           who-Q **WH.PR-POSS-boy** beautiful-ADV song  
           Ø-q-ə-ɾ<sup>w</sup>e-re] -r  
           3ABS-DIR-3SG.ERG-say-DYN -ABS  
           Intended: ‘Whose son sings well?’
- b. [mə bzəlfəɸe-m(PR) Ø-jə-č’ale ](ERG) dax-ew wered(ABS)  
      this woman-OBL **3SG.PR-POSS-boy** beautiful-ADV song  
      Ø-q-j-e-ɾ<sup>w</sup>e  
      3ABS-DIR-3SG.ERG-DYN-say  
      ‘This woman’s son sings well.’

Possessor extraction out of applied arguments is ungrammatical, regardless of their structural height or theta-role. For example the possessed DP in (34a) is the dative indirect object of the verb *jeçeçen* ‘scold’ – this verb belongs to a large class of predicates which select for two arguments: an absolutive case-marked agent and an oblique case-marked argument that is indexed with applicative morphology. The possessor of the applied object cannot be extracted (34b). See Appendix A for additional data showing that this generalization holds for all types of applied argument DPs.

- (34) a. [mwe š<sup>w</sup>əzə-m(PR) ə-q<sup>w</sup>e ](IO) č’elejeɸažə-r(ABS)  
      this woman-OBL **WH.PR-son** teacher-ABS  
      Ø-Ø-je-çeça-ɾ  
      3ABS-3SG.IO-DAT-scold-PST  
      ‘The teacher scolded this woman’s son.’
- b. \* mwarə [RC š<sup>w</sup>əz-ew<sub>i</sub> [ t<sub>i</sub>(PR) **zə-q<sup>w</sup>e** ](IO) č’elejeɸažə-r(ABS)  
      here woman-ADV **WH.PR-son** teacher-ABS  
      Ø-Ø-je-çeça-ɸe] -r  
      3ABS-3SG.IO-DAT-scold-PST -ABS  
      Intended: ‘Here is the woman whose son the teacher scolded.’

The repair strategy for possessor extraction from ergative and applied argument DPs is a pseudocleft with the possessed DP in the focus position, with subsequent extraction of the possessor from this focus DP, which is in the absolutive position. For example, extraction of the possessor from the ergative agent in (33b) involves a two-step process: first, the full ergative DP is relativized, triggering ergative wh-agreement in the corresponding relative clause, and then the possessor is subsequently relativized from the DP which is now in the absolutive position (35).

- (35) xet-a [ Op<sub>i</sub> [ t<sub>i</sub>(PR) **z-jə-č’ale** ](ABS) [RC Op<sub>i</sub> t<sub>j</sub>(ERG) wered(ABS)  
      who-Q **WH.PR-POSS-boy** sing  
      Ø-qe-**zə**-ɾ<sup>w</sup>e-re-r ] ]  
      3ABS-DIR-**WH.ERG**-sing-DYN-ABS  
      ‘Whose son sings well? (lit. Who is the one whose son is the one who sings well?)’

The same relativization strategy is observed for possessors of applied arguments. Thus, the grammatical way of extracting the possessor of the applied object in (34a) likewise involves a pseudocleft wherein the applied object is first relativized, and then the possessor is extracted from the corresponding DP in the absolutive position (36).

- (36) mwarə [RC š<sup>w</sup>əz-ew<sub>i</sub> [ t<sub>i</sub>(PR) zə-q<sup>w</sup>e ](ABS) [RC Op<sub>j</sub> t<sub>j</sub>(IO)  
 here woman-ADV WH.PR-son  
 č'elejeβažə-r(ABS) Ø-z-e-çeça-βe-r ] ]  
 teacher-ABS 3ABS-WH.IO-DAT-scold-PST-ABS  
 'Here is the woman whose son the teacher scolded.' (lit. 'Here is the woman who is the one whose son is the one whom the teacher scolded.')

The constructions in (35)-(36) involve the use of a pseudocleft and, correspondingly, two steps of relativization, rather than a type of cyclic wh-agreement, wherein a wh-operator triggers several instances of wh-agreement along its movement path; see e.g. Chung (1998) on Chamorro; McCloskey (2001) on Irish, a.o. The main reason to believe that a pseudocleft construction is involved, also discussed in Ershova (2021a), concerns the impossibility of regular case-marking on the constituent containing the wh-trace of the possessor. While possessed nominals are generally unmarked for case, the plural suffix *-xe* requires an overt case marker even for possessed nominals. Surprisingly, neither the oblique marker *-m*, nor the absolutive marker *-r* are deemed acceptable in the context of wh-extraction from a ergative or applied argument; instead, speakers prefer to drop both the number and case marking. This is in line with Kumakhov's (1971) observation that nominals that are unmarked for number may be interpreted as plural; see also Arkadiev & Testelets (2019).<sup>8</sup>

This is observed for ergative DPs, such as the ergative agent of *ʔ<sup>w</sup>en* 'say' in (37), as well as for applied arguments, as shown for the dative applied object of *jetən* 'give' in (38).

- (37) marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č'ale /  
 here woman-ADV WH.PR-POSS-boy /  
 ??z-jə-č'ale-xe-r / ??z-jə-č'ale-xe-m ]<sub>j</sub> [RC Op<sub>j</sub> t<sub>j</sub>(ERG)  
 WH.PR-POSS-boy-PL-ABS / WH.PR-POSS-boy-PL-OBL  
 dax-ew wered Ø- qe- zə- ʔ<sup>w</sup>e-re] ] -r  
 pretty-ADV song 3ABS- DIR- WH.ERG- say -DYN -ABS  
 'Here is the woman whose child/children sing(s) well.' (Ershova 2021a:15)
- (38) mə bzəlfəβe-r arə [RC Op<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č'ale /  
 this woman-ABS PRED WH.PR-POSS-boy  
 \*z-jə-č'ale-xe-r / \*z-jə-č'ale-xe-m ]<sub>j</sub> [RC Op<sub>j</sub> t<sub>j</sub>(IO)  
 WH.PR-POSS-boy-PL-ABS WH.PR-POSS-boy-PL-OBL

<sup>8</sup>Arkadiev & Testelets (2019) connect the ambiguous number interpretation of unmarked nominals with a diminished functional structure which does not include case or the projections that encode number or license possessors. The number ambiguity of the possessed nominals in the pseudocleft constructions thus has a different source than the examples discussed by the authors. According to Kumakhov (1971), number ambiguity is not limited to non-specific noun phrases with a diminished functional structure: nominals without an overt number marker may be interpreted as plural, regardless of case or possessive morphology.

velwesjoped Ø- z- e- s- tə -ɣe ] -r  
bicycle 3ABS- **WH.IO**- DAT- 1SG.ERG- give -PST -ABS

‘This woman is the one whose child/children I gave a bicycle to.’

The impossibility of overt case marking on the DP containing the *wh*-trace in (37)-(38) is likely to be a connectivity effect which is otherwise observed in specificational pseudocleft constructions cross-linguistically (Akmajian 1979; Higgins 1979; Declerck 1988; Heycock & Kroch 1999; den Dikken et al. 2000; Heller 2002, a.o.). Cross-linguistically, the focus of a specificational pseudocleft tends to bear the case that is assigned to the relativized participant in the corresponding relative clause. In West Circassian, the pseudocleft repair for possessor extraction from ergative or applied arguments as in (37)-(38) leads to a clash between the oblique case of the relativized participant with the absolutive case that is assigned to the focus of the pseudocleft construction. A full analysis of the pseudocleft repair strategy lies outside the scope of this paper: the important point is that the focused DP is promoted to a position where it becomes transparent for subextraction – this may be the position of an absolutive argument of a null predicative copula (see e.g. Akmajian 1979; Bošković 1997; Heycock & Kroch 1999) or a left periphery position of an elided CP per ellipsis-based analyses of specificational pseudoclefts (see e.g. Emonds 1970; Schlenker 2003; den Dikken et al. 2000, a.o. on ellipsis-based analyses and den Dikken 2017 on discussion raising to the CP periphery per Merchant’s (2001) constraints on ellipsis).

The impossibility of overt case marking on the DP containing the *wh*-trace in (37)-(38) is in stark contrast with constructions involving possessor extraction from an absolutive DP, e.g. the theme of the verb *ɬeβ<sup>w</sup>ən* ‘see’ in (39) – in this case the DP may bear overt absolutive case marking and may not bear oblique case marking, as expected given its syntactic position.

- (39) mə bzəɬfəɣe-r arə [RC Op<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č’ale-xe-**r/\*m**](ABS)  
this woman-ABS PRED **WH.PR**-POSS-boy-PL-ABS/**\*OBL**  
bedzerə-m Ø-Ø-š’ə-s-ɬeβ<sup>w</sup>ə-xe] -r  
market-OBL 3ABS-3SG.IO-LOC-1SG.ERG-see-PL -ABS

‘This woman is the one whose sons I saw at the marketplace.’

*Wh*-agreement with absolutive participants is phonologically null (21)-(22), which makes it impossible to diagnose the presence of a pseudocleft repair in (39) based on the verbal morphology. However, the possibility of overt absolutive case in this construction suggests the absence of a pseudocleft repair: based on the case marking, the DP containing the possessor *wh*-trace is occupying an absolutive position. Given that the base position of the possessed DP is the absolutive theme of a transitive verb, it is unclear what the function of a pseudocleft repair would be: the possessed DP would simply be promoted from one absolutive case-marked position to another.

The islandhood of ergative or applied argument DPs cannot be connected to their ‘oblique’ or PP-like status; cf. Polinsky’s (2016) analysis of ergative agents as PPs. Unlike these DPs, PPs are transparent for subextraction. In contrast to the possessor of an ergative or applied argument, the possessor of a noun phrase that is selected by a postposition – e.g. *paje* ‘for’ (40) and *dež* ‘at’ (41) – may be directly relativized without the use of the pseudocleft repair; this is shown for the complement of *paje* ‘for’ in (40) and the complement of *dež* ‘at’ in (41).

- (40) mə pʃeʃe-ʒəje-r arə [RC Op<sub>i</sub> [PP [DP t<sub>i</sub>(PR) z-jane ] paje ] haləw<sup>w</sup>  
 this girl-small-ABS PRED WH.PR-mother for bread  
 Ø-b-ʁe-ʒ'a-ʁe ] -r  
 3ABS-2SG.ERG-CAUS-boil-PST -ABS  
 'This is the girl for whose mother you baked some bread.'
- (41) xet-a [RC Op<sub>i</sub> [PP [DP t<sub>i</sub>(PR) z-jə-wəne ] deʒ' ] mezə-r  
 who-Q WH.PR-POSS-house at forest-ABS  
 ʁe-r-je-k<sup>w</sup>e Ø-Ø-ʃ'a-stə-ʁe ] -r  
 year-LOC-DAT-go 3ABS-3SG.IO-LOC-burn-PST -ABS  
 'Near whose house did the forest burn last year?'

Extraction from a postpositional phrase does not involve the same pseudocleft strategy as relativization from an ergative or applied argument DP. Relativization of postpositional phrases is accompanied with *wh*-agreement in the applied object position, as shown for the locative PP in (42). It is thus evident from the lack of applicative *wh*-agreement in (40)-(41) that possessor extraction from the PP does not involve the relativization of the postpositional phrase to an absolutive position as in the pseudocleft repair – instead, the possessor is relativized directly.

- (42) [t-jə-ʁ<sup>w</sup>əneʁ<sup>w</sup>ə-xe-m a-deʒ' ](PP) arə [RC Op<sub>i</sub> t<sub>i</sub>(PP)  
 1PL.PR-POSS-neighbor-PL-OBL 3PL.PP-at PRED  
 sə-z-ʃ'e-ʒeg<sup>w</sup>ə-re-r mə pʃaʃe-r Ø-Ø-ʃ'e-č'əje-fe ]  
 1SG.ABS-WH.IO-LOC-play-DYN-ABS this girl-ABS 3ABS-3SG.IO-LOC-sleep-LIM  
 'It is at the neighbors' that I am playing while the girl sleeps.'

Like absolutive DPs, postpositional phrases are thus not islands for subextraction. In section 4 I argue that these two types of constituents are transparent for subextraction by virtue of not appearing at phase edges, in contrast to ergative and applied argument DPs. Thus, the analysis does not treat PPs and absolutive DPs as a natural class; rather, ergative and applied arguments form a natural class of constituents which are opaque by virtue of merging at phase edges.

To conclude this subsection, possessor extraction is possible only from absolutive DPs and PPs, but not from ergative or applied argument DPs. The repair strategy for possessor extraction from ergative and applied argument DPs involves a pseudocleft construction where the constituent containing the *wh*-trace is promoted to an absolutive position. The following subsection discusses a context where this generalization does not hold – long-distance *wh*-movement.

### 3.2 Long-distance possessor extraction and parasitic gaps

With clausebound *wh*-movement, possessor extraction from ergative and applied argument DPs is ungrammatical. Surprisingly, this constraint is not observed with long-distance *wh*-movement from clausal complements and in parasitic gap constructions, which are otherwise island sensitive. This subsection first outlines the basic properties of long-distance *wh*-



movement in West Circassian and then proceeds to discuss cases of possessor extraction in these contexts.

### 3.2.1 Wh-extraction from embedded CPs

Wh-movement in West Circassian embedded CPs is subject to several constraints which are variable across dialects; see Lander (2012) for a thorough discussion. For the four speakers I have consulted, possessor extraction behaves uniformly across different strategies of cross-clausal wh-movement and for parasitic gap configurations and do not interact with the variation observed in this domain. This section presents possessor extraction from complement clauses in the absolutive position, which is not subject to cross-speaker variation. The variation in wh-movement from other types of complement clauses is discussed in Appendix B and possessor extraction from these complement clauses and embedded clauses with parasitic gaps is presented in Appendix C.

Verbs such as *jebež'en* ‘begin’<sup>9</sup> and *den* ‘allow’ select for a CP in the absolutive position, as evinced by their usage with absolutive case-marked nominal arguments (43)-(44).

- (43) aw    adre-xe-m(ERG)    a-r(ABS)    Ø-a-da-ɸ-ep  
       but   other-PL-OBL        that-ABS    3ABS-3PL.ERG-allow-PST-NEG  
       ‘But others did not accept that.’ (AC)
- (44) λə-m(ERG)    ʔ<sup>w</sup>efə-r(ABS)    Ø-r-jə-ɸe-ž’a-ɸ  
       man-OBL        work-ABS        3ABS-DAT-3SG.ERG-CAUS-begin-PST  
       ‘The man started the job.’

The complement clauses under discussion are full CPs and display the same agreement and case assigning properties as matrix clauses. For example, the unergative predicate *š’ətχ<sup>w</sup>ən* ‘praise’ assigns absolutive case to the agent and oblique case to the applied object; the personal prefixes correspondingly index absolutive external argument and the applied object (45). When embedded under the predicate *jebež'en* ‘begin’, this verb continues to assign oblique case to its applied argument and expone cross-reference marking for both arguments (46).

- (45) se    we    sə-p-š’a-tχ<sup>w</sup>ə-ɸ  
       I    you    1SG.ABS-2SG.IO-LOC-praise-PST  
       ‘I praised you.’
- (46) se    [pšaše-m    sə-Ø-š’a-tχ<sup>w</sup>ə-n-ew ]  
       I    girl-OBL    1SG.ABS-3SG.IO-LOC-praise-MOD-ADV  
       Ø-je-z-ɸe-ž’a-ɸ  
       3ABS-DAT-1SG.ERG-CAUS-begin-PST  
       ‘I began to praise the girl.’

---

<sup>9</sup>The verb *jebež'en* ‘begin’ is listed as a raising predicate which selects for a TP by Potsdam & Polinsky (2012). Ershova (2019) argues that this predicate – as well as the other raising predicate discussed by Potsdam & Polinsky (2012) – behave as control verbs and select for full CPs. The speakers consulted for this study align in their judgments with Ershova (2019).

The same is true for transitive verbs which assign oblique case to the ergative agent and absolutive case to the theme. For example, the verb *jetən* ‘give’ selects for an ergative agent, dative recipient and absolutive theme and correspondingly indexes these three arguments with prefixal agreement morphology, even when embedded under *jebež’en* ‘begin’ (47).

- (47) mə š<sup>w</sup>əzə-m [CP Ø-jə-sabəj-xe-**m**(IO) š<sup>w</sup>əhaftən-xe-**r**(ABS)  
 this woman-OBL 3SG.PR-POSS-child-PL-OBL gift-PL-ABS  
**Ø-a-r-jə-tə-n-x-ew** ]  
**3ABS-3PL.IO-DAT-3SG.ERG-give-MOD-PL-ADV**  
**Ø-r-jə-βe-ž’a-β**  
**3ABS-DAT-3SG.ERG-CAUS-begin-PST**  
 ‘This woman began to give gifts to her children.’

In (48) the transitive verb *pəčən* ‘tear down’ is embedded under the verb *den* ‘allow’; all arguments of the embedded verb bear case and trigger agreement as they would in a matrix clause.

- (48) [CP mə sabəj-xe-**m**(ERG) məʔerəse-xe-**r**(ABS)  
 this child-PL-OBL apple-PL-ABS  
**Ø-qə-p-a-čə-n-ew** ] **Ø-š<sup>w</sup>ə-da-β-ep**  
**3ABS-DIR-LOC-3PL.ERG-tear-MOD-ADV 3ABS-2PL.ERG-allow-PST-NEG**  
 ‘You did not allow for the children to pick the apples.’

Further evidence that the complement clauses in question are full CPs is that they are marked with the modal future suffix *-nə*. Outside of clausal embedding, the tense marker *-nə* is associated with a range of modal interpretations (Serdobolskaya 2009). For example, it may be used to mark the apodosis of a conditional clause (49). Thus, complement clauses of the type discussed here include a tense projection that cannot be treated as functionally deficient in any way.

- (49) bere wə-daʔ<sup>w</sup>e-me mač’-ew Ø-p-ʔ<sup>w</sup>e-**n**  
 much 2SG.ABS-listen-COND few-ADV 3ABS-2SG.ERG-say-MOD  
 ‘If you listen a lot, you will speak little.’ (Rogava & Keraševa 1966:198)

Subextraction from a complement clause in the absolutive position triggers obligatory wh-agreement on the embedded predicate, for example with the relativized applied argument in (94a).

- (50) xet-a [RC Op<sub>i</sub> we [CP t<sub>i</sub>(IO) wə-**z**/\*Ø-š’ə-tχ<sup>w</sup>ə-n-ew ]  
 who-Q you 2SG.ABS-**WH**/\***3SG.IO**-LOC-praise-MOD-ADV  
**Ø-je-b-βe-ž’a-βe** ] -r  
**3ABS-DAT-2SG.ERG-CAUS-begin-PST -ABS**  
 ‘Who did you begin to praise?’

### 3.2.2 Possessor extraction in embedded clauses

Possessor extraction behaves in a markedly different manner in embedded contexts compared to clausebound wh-movement: unlike matrix contexts discussed in subsection 3.1, possessor extraction from all types of arguments is grammatical in embedded clauses, meaning that ergative and applied argument DPs are transparent for subextraction, analogous to absolutive DPs and PPs. In theoretical terms, the generalization concerns whether or not the wh-trace in question appears in the same clause as the wh-movement triggering  $C^0$ : ergative and applied argument DPs behave as islands only if they are clausemates of the type of  $C^0$  which heads a relative clause and drives wh-operator movement. A revised version of the constraint on possessor extraction is in (51).

- (51) **CONSTRAINT ON POSSESSOR EXTRACTION (FINAL).** Ergative and applied argument DPs are islands if they appear in the same clause (CP) as the wh-movement triggering  $C^0$ .

This effect is illustrated below for complement clauses in the absolutive position of the verbs *jebež'en* ‘begin’ and *den* ‘allow’. The effect is productive across a variety of predicates and complement clause positions, and is also observed in parasitic gap configurations, which involve local operator movement within the clause hosting the parasitic gap; see e.g. Chomsky (1986); Postal (1998); Nissenbaum (2000); see Appendix C for additional evidence.

Unsurprisingly, absolutive DPs are transparent for long-distance subextraction, analogous to clausebound wh-movement. This is shown for the possessor of the absolutive theme of *bešxen* ‘feed’ (52) and the absolutive external argument of *žeg<sup>w</sup>ən* ‘play’ (53).

- (52) xet-a [RC Op<sub>i</sub> [CP [DP *t<sub>i</sub>*(PR) **z-jə-ha-xe-r** ](ABS) **WH.PR-POSS-dog-PL-ABS**  
 who-Q  
 Ø-b-*be-šxe-n-ew* ] Ø-je-b-*be-ž'a-be* ] -r  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-DAT-2SG.ERG-CAUS-begin-PST -ABS  
 lit. ‘Whose did you begin to feed \_\_ dogs?’
- (53) marə [RC bzəlfə<sup>w</sup>-ew<sub>i</sub> [CP [DP *t<sub>i</sub>*(PR) **z-jə-č'ale** ](ABS) mə-š' dež'ə-m  
 here woman-ADV **WH.PR-POSS-boy this-OBL at-OBL**  
 Ø-Ø-š'ə-*žeg<sup>w</sup>ə-n-ew* ] Ø-wə-mə-da-*be* ] -r  
 3ABS-3SG.IO-LOC-play-MOD-ADV 3ABS-2SG.ERG-NEG-allow-PST -ABS  
 lit. ‘Here is the woman whose I would consent for \_\_ son to play here.’

In contrast with clausebound wh-movement, long-distance possessor extraction from ergative and applied argument DPs does not involve a repair strategy: the possessor may be extracted directly. For example, in (54) the possessor of the applied object of *fetjewen* ‘call’ is relativized directly from the complement CP of *jebež'en* ‘begin’. In (55) the possessor of the ergative agent of *ɽ<sup>w</sup>en* ‘sing’ is relativized, triggering corresponding wh-agreement on the possessed nominal. The DP appears within the complement CP of *den* ‘allow’, so once again, this extraction is perfectly grammatical. (56) illustrates the same point for possessor extraction from an applied argument – in this case, the dative addressee of the verb *jetən* ‘give’.

- (54) marə [RC  $\hat{s}^w\text{əz-ew}_i$  [CP [DP  $t_i(\text{PR})$  **z-jə-pšaše** ](IO)  
 here woman-ADV **WH.PR-POSS-girl**  
 sə-Ø-fə-tje-we-n-ew ] Ø-je-z-æ-ž'a-æ ]  
 1SG.ABS-3SG.IO-BEN-LOC-hit-MOD-ADV 3ABS-DAT-1SG.ERG-CAUS-begin-PST  
 -r  
 -ABS  
 lit. 'Here is the woman whose I began to call \_\_ daughter.'
- (55) xet-a [RC Op<sub>i</sub> [CP [DP  $t_i(\text{PR})$  **z-jə-sabəj-xe-m** ](ERG) wered(ABS)  
 who-Q **WH.PR-POSS-child-PL-OBL** song  
 Ø-q-a-ʔ<sup>w</sup>e-n-ew ] Ø-wə-mə-de-re ] -r  
 3ABS-DIR-3PL.ERG-say-MOD-ADV 3ABS-2SG.ERG-NEG-consent-DYN -ABS  
 lit. 'Whose do you not consent for \_\_ children to sing?'
- (56) marə [RC  $\hat{s}^w\text{əz-ew}_i$  [CP [DP  $t_i(\text{IO})$  **z-jə-sabəj-xe-m** ](IO)  
 here woman-ADV **WH.PR-POSS-child-PL-OBL**  
 s-jə-aχš'e-xe-r(ABS) Ø-a-r-a-tə-n-ew ]  
 1SG.PR-POSS-money-PL-ABS 3ABS-3PL.IO-DAT-3PL.ERG-give-MOD-ADV  
 Ø-sə-mə-da-æ ] -r  
 3ABS-1SG.ERG-NEG-consent-PST -ABS  
 lit. 'Here is the woman whose I did not allow to give my money to \_\_ kids.'

This subsection has demonstrated that ergative and applied argument DPs do not display islandhood effects in embedded clauses, where possessor extraction targets a constituent within a CP that is not headed by a wh-feature bearing  $C^0$ . See Appendix C for additional data.

### 3.3 Constraints on possessor extraction: Summary

In summary, possessor extraction is grammatical from DPs in a subset of syntactic positions: while absolutive DPs and PPs are not islands for subextraction, ergative and applied argument DPs are opaque for possessor extraction. This contrast is further complicated by the observation that the islandhood effect disappears in embedded CPs: complements which allow for long-distance wh-movement (and parasitic gap configurations; see Appendix C) – in this case, possessor extraction is grammatical out of all types of argument DPs regardless of their syntactic role. Since the DPs in question trigger the same type of  $\phi$ -agreement and are assigned the same case marking in the embedded CP contexts, the only tangible difference between the contexts triggering islandhood effects and ones which do not trigger an islandhood effect is in the flavor of the projection heading the CP –  $C^0$ . In particular, an islandhood effect is observed only if the wh-movement triggering  $C^0$  is merged in the same clause as the DP in question. In all other cases – long-distance wh-movement cases and parasitic gap configurations – there is a CP boundary between the wh-movement triggering  $C^0$  and the base position of the moved wh-operator. The following section argues that the observed variable islandhood effect provides evidence for an Agree-based model of phase domains, wherein phases are defined by their capacity to serve as defective interveners.



## 4.1 Agree-based phasehood and intervention

This subsection lays out the details of the view of phases as interveners for Agree and how such an analysis may successfully capture the basic asymmetry between ergative and applied argument DPs, which behave as islands for subextraction, and absolutive DPs and PPs, which do not.

Based on Tagalog long-distance wh-movement configurations, Rackowski & Richards (2005) propose that phases may be made transparent for subextraction if they enter an independent agreement relation with the head that attracts the extracted element. In Tagalog, this readily explains why extraction out of embedded clauses requires  $v^0$  to agree with the embedded clause, which is manifested via special morphology on the predicate. I argue that the same approach can account for (i) why ergative and applied argument DPs in West Circassian are islands, and absolutive DPs and PPs are not; and (ii) why these islandhood effects are not observed with long-distance wh-movement. A precursor to Agree-based phasehood is proposed in Abels (2003), where phase heads are interveners by virtue of bearing the full set of movement features; Rackowski & Richards's (2005) approach to phasehood has been further developed by Van Urk & Richards (2015); Halpert (2019).

Following Chomsky (2000, 2001), Rackowski & Richards (2005) assume that all and only phases may undergo syntactic movement. This means that for any movement-triggering operation, any phase that dominates the feature that is relevant to the probe acts as a potential goal, and, given the standard assumption that movement operations are subject to strict locality constraints, only the *closest* goal may successfully satisfy the feature on the movement probe. The current proposal aims to capture the Edge Condition, i.e. the generalization that phase edges are opaque for subextraction under this same understanding of locality by augmenting the definition of *closest* proposed by Rackowski & Richards (2005:579) to include dominance as a potential type of intervention (59).

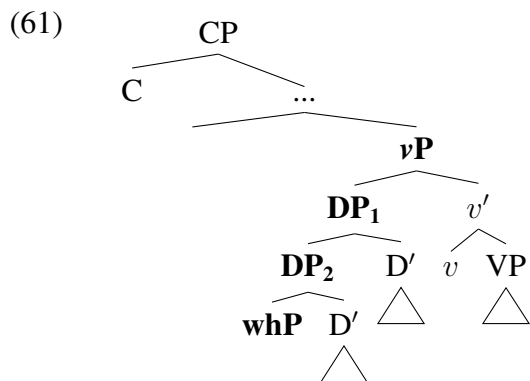
(59) **Modified definition of *closest* from Rackowski & Richards (2005:579); my addition is in boldface:**

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**  $\beta$ .

The distinct X indicated in (59) need not be a phase itself; only  $\alpha$  and  $\beta$  are potential phases. This definition thus captures standard locality constraints on movement, such as Superiority effects. The original definition captured both Shortest Attract and the A-over-A Condition; the additions proposed here aim to also account for the Edge Condition. A few additional assumptions must be put in place, taken directly from Rackowski & Richards (2005:582):

- (60) a. A probe must Agree with the *closest* goal  $\alpha$  that *can move*.  
b. A goal  $\alpha$  *can move* if it is a phase.  
c. 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).

Assumptions (60a)-(60b) predict that a phase, being a potential goal for any Agree operation, will either enter a successful Agree relation with a higher probe, or trigger an intervention effect if it cannot be successfully agreed with. Assumption (60c), which is based on Richards's (1998) Principle of Minimal Compliance, predicts that a phase may be rendered transparent for further probing (i.e. a non-intervener), if the probe in question has successfully agreed with that phase in a different feature. Rackowski & Richards (2005) connect the accessibility of direct objects for subextraction to the fact that these objects agree with  $v^0$  on independent grounds, thus allowing for  $v^0$  to probe for the wh-element inside the direct objects. Subjects, they argue, are inaccessible due to the lack of such an agreement relation between subjects and  $v^0$ . However, the original definition of *closest* does not necessarily rule out extraction out of subjects as the authors intended – in particular, if subjects happen to be merged at the phase edge – Spec, $v$ P – and the only structural relation relevant for defining *closest* is c-command, subextraction out of subjects is falsely predicted to be possible. This is because the original definition was meant to capture the accessibility of the phase edge for extraction – per this definition, the phase edge is equidistant with the phase to the higher goal. For example, when the probe P in (61) probes, both the phase  $v$ P and its specifier  $DP_1$  are accessible goals. This is because there is no distinct head X or maximal projection XP which c-commands DP in Spec, $v$ P and does not c-command  $v$ P. Unfortunately, at face value, this allows for infinite recursive probing into the specifier of the specifier of a given phase: the  $DP_2$  in the specifier position of  $DP_1$  likewise is not c-commanded by any X or XP which does not c-command  $v$ P, and likewise, the same applies for whP in the specifier of  $DP_2$ . Thus, within the structure in (61) there are four equidistant goals for P:  $v$ P,  $DP_1$ ,  $DP_2$ , and whP.



The modified version of the definition of *closest* in (59) intends to rule this out: by appealing to dominance, the search domain of probe P in (61) is constrained to  $v$ P and  $DP_1$ , i.e. the phase and its immediate edge, but the internal structure of the edge is no longer accessible. This is because for  $DP_1$ , there is no distinct X or XP which dominates  $DP_1$ , but does not dominate  $v$ P ( $v$ P itself, while dominating  $DP_1$ , does not count, because it is indistinct from one of the goals in question).  $DP_2$ , on the other hand, is dominated by  $DP_1$ , while  $v$ P is not –  $DP_2$  and any lower specifiers are thus not accessible goals for this Agree operation, thus capturing the Edge Condition as desired.

The current account differs from Van Urk & Richards (2015), which also builds on an Agree-based approach to phasehood, in explicitly banning subextraction from phase edges.

Van Urk & Richards (2015), on the contrary, argue that subextraction from CP constituents in Dinka is accompanied by movement of the CP in question to the phase edge – a purported violation of the Edge Condition. As discussed by the authors (fn.32 on page 144), the head that triggers subextraction in this case is the same head that attracts the CP to its specifier ( $v^0$ ), and within a definition of *closest* which appeals to strict c-command as in (59) this requires probing into the lower copy of the moved CP rather than the higher copy in Spec, $v$ P. Thus, a potential violation of the Edge Condition as in Dinka is possible if the constituent in question has moved to the phase edge and there is a lower copy that is accessible to the probe in question.

Following Heck & Müller (2007); Müller (2010), a.o. I distinguish between two types of Probe features: Agree features labeled as \*F\*, which trigger agreement without movement, and structure-building features labeled as •F•, which trigger external or internal Merge. Probe features may be hierarchically ordered and only the highest feature in the hierarchy is visible for syntactic operations per Georgi & Müller (2010); Müller (2010); Georgi (2014, 2017); Martinović (2015, to appear); Ershova (2019), *inter alia*. Hierarchical ordering of probe features is supported by cross-linguistically attested feeding and bleeding effects between Merge and Agree; see Georgi (2017) and references therein. This paper presents novel evidence for the ordering of Probe features, where Agree feeds the subsequent application of Merge.

I also assume that features may be specified as ‘movement-type’ (labeled here as +F+), meaning that they must enter an Agree relation with a corresponding structure-building feature in order to converge – standard WH-features are assumed to be this type of movement feature. Positing movement-type goal features is necessary for modeling feature-driven successive cyclic movement and is in line with approaches which appeal to the properties of the goal to derive intermediate movement steps, e.g. Bošković (2007); Nunes (2021). Finally, in order to allow for cyclic A'-movement through phase edges, as is assumed in Phase Theory (see e.g. Chomsky 2000, 2001, 2008), at the time a phase is formed a structure-building edge feature may be inserted to trigger movement of a movement-feature bearing goal to the edge of this phase. Following Chomsky (2008) and counter to Heck & Müller (2003); Müller (2010, 2011), I assume that this feature is inserted *after* all other featural requirements of the phase head are satisfied, meaning that the edge feature is always ordered *last* on a probe. Counter to McCloskey (2002); Abels (2012); Van Urk (2015), the edge feature is thus distinct from the feature associated with the final landing site (e.g. focus or wh-features); see discussion in e.g. Heck & Müller (2000); Bošković (2007); Nunes (2021) on the challenges associated with treating successive-cyclic edge features as identical to semantically contentful A'-features. In West Circassian, this difference manifests itself in the variable islandhood of ergative and applied argument DPs depending on whether movement is triggered by a wh-feature or an edge feature; see Georgi (2014, 2017) for evidence from cross-linguistic variation in morphosyntactic reflexes of successive-cyclic movement. Another important difference between the edge feature and a standard movement-triggering feature is that only the latter is capable of discharging a goal's movement feature, while the edge feature triggers movement without checking the corresponding goal feature in order to allow subsequent movement of the goal to a higher position. In this respect, the present account differs from Rackowski & Richards's (2005) analysis of Tagalog, where movement to a phase edge must be driven by an independent agreement feature, such as object agreement on  $v^0$  for the movement of the object to Spec, $v$ P. The differ-

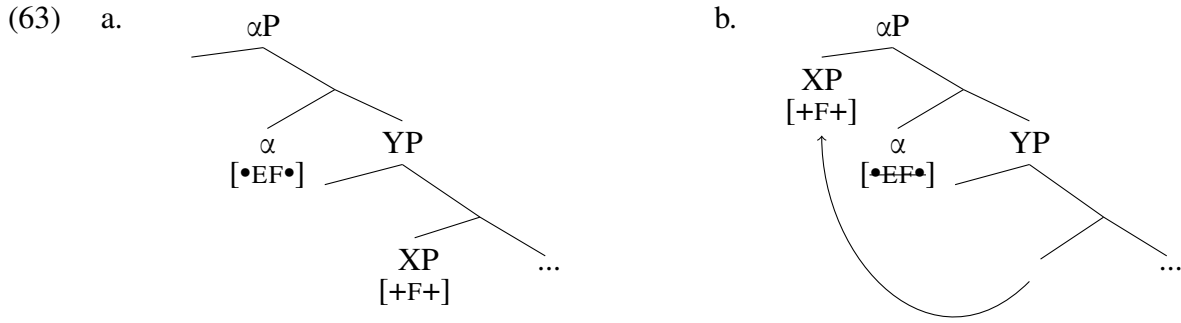


ences between the Tagalog facts and languages like West Circassian, where edge features do not overtly correlate with independent agreement operations, suggests that languages may vary in the availability of the successive-cyclic edge feature – in Tagalog, such an edge feature is unavailable.

Within this approach, successive-cyclic movement is treated as a repair strategy to avoid a structure with an unchecked movement-type feature; the offending configuration is salvaged by the insertion of an edge feature, labeled  $\bullet EF \bullet$  following Georgi (2014, 2017); see also Heck & Müller (2000); Fox & Pesetsky (2005); Bošković (2007) for similar well-formedness constraints. The conditions for the insertion of this edge feature are as follows:

(62) CONDITION ON EDGE FEATURE INSERTION:

At the time  $\alpha P$  is formed, if  $\alpha$  is a phase head and there is an element bearing a movement feature  $+F+$  within its complement,  $\bullet EF \bullet$  is inserted on  $\alpha$ .

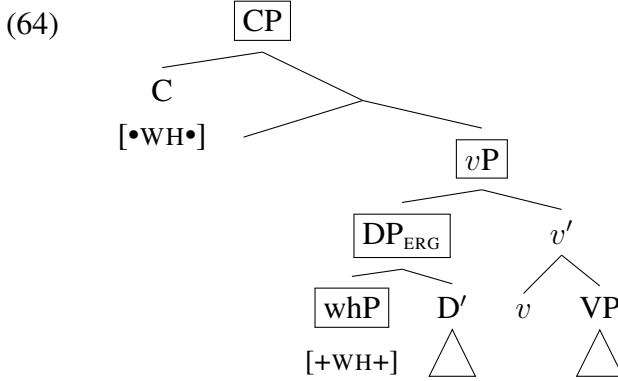


Per (62) the edge feature is inserted only if a movement-type feature appears within the complement of the corresponding phase head – this configuration is illustrated in (63a). This edge feature is then discharged by the movement of the constituent containing the movement-type feature to the corresponding probe’s specifier (63b). An edge feature is not inserted if the movement-type feature appears in the specifier of the phase head – since the movement feature remains intact on the moved goal, this would predict superfluous sprouting of the edge feature in configurations like (63b), where the corresponding goal has already moved to the phase edge. This also captures the Edge Condition: the presence of a movement-type feature within the specifier of a phase head does not trigger edge feature insertion, thus ruling out probing by the edge feature into the phase edge.

All things being equal, the opacity of a given constituent for subextraction is due to that constituent being a phase, i.e. a potential goal for the movement-triggering (structure-building) probe. Following standard assumptions about phasehood (Chomsky 2000, 2001, *et seq.*), I take CP,  $vP$  (regardless of transitivity; Legate 2003), and DP to be phases. Additionally, following McGinnis (2000, 2001), ApplP – the projection which introduces the applied argument – is also a phase.

Under this system, the ergative DP is an island due to its position at the edge of the  $vP$  phase. This is shown in (64):  $C^0$  probes with the  $\bullet WH \bullet$  feature, and the possessor of the ergative DP bears the matching  $+WH+$  feature. Given the definition of *closest* in (59), there are two eligible goals for  $C^0$ : the  $vP$  phase and the DP at the edge of this phase. Since there is no distinct X or XP which c-commands or dominates this DP, it is equidistant with  $vP$  to

the probe. Both of these phrases dominate the matching feature, but cannot move to satisfy the feature requirement on  $C^0$  because this would require massive pied-piping, which is not observed in the language – in West Circassian, a structure-building feature may only target the smallest maximal projection containing a movement goal feature.<sup>10</sup> The possessor within the ergative DP is eligible to move to the edge of the DP phase due to the insertion of an edge feature on  $D^0$  (this mechanism will be discussed more below). However, it is still too far from  $C^0$  to be an eligible goal. In particular,  $vP$  serves as an intervener, because the ergative DP dominates the possessor DP, but does not dominate  $vP$ . Thus, the possessor is trapped within the ergative DP, deriving the observed islandhood effect.

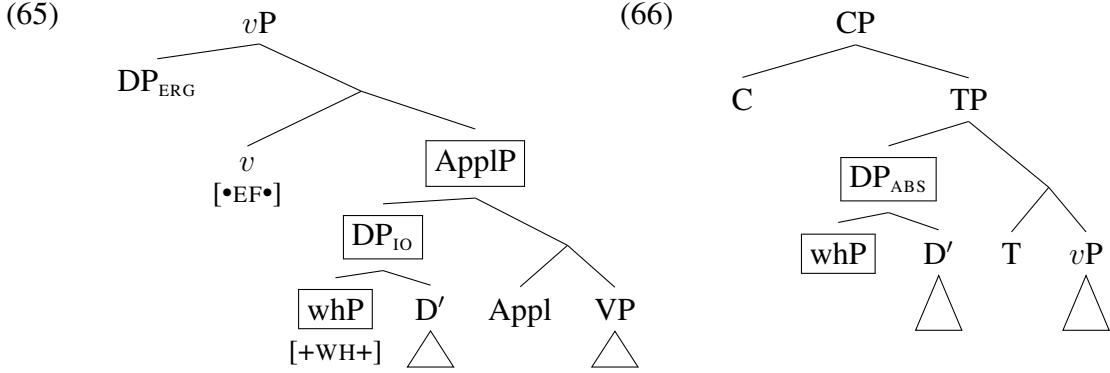


An applied object is an island for similar reasons, the main difference being that subextraction from an applied argument must be established lower in the structure – at the time the next phase ( $vP$ ) is formed. At the time the  $vP$  phase is formed, the presence of an unchecked movement feature (+F+) in the complement of  $v^0$  triggers the insertion of the edge feature (•EF•) per the rule in (62). This feature would allow for the extraction of, for example, the applied argument itself: if the corresponding argument bears a +WH+ feature, this would trigger the insertion of •EF• on  $v^0$ , and since the specifier of the ApplP phase is equidistant with this phase to the higher probe, the applied object would be able to successfully move to Spec, $vP$ . This would allow the higher probe on  $C^0$  to attract the corresponding wh-operator to its specifier. However, a possessor within the applied object is not within the search space of  $v^0$ , as shown in (65): ApplP serves as a defective intervener, because the DP containing the possessor (the applied argument) dominates the whP in the possessor position, but does not dominate ApplP.

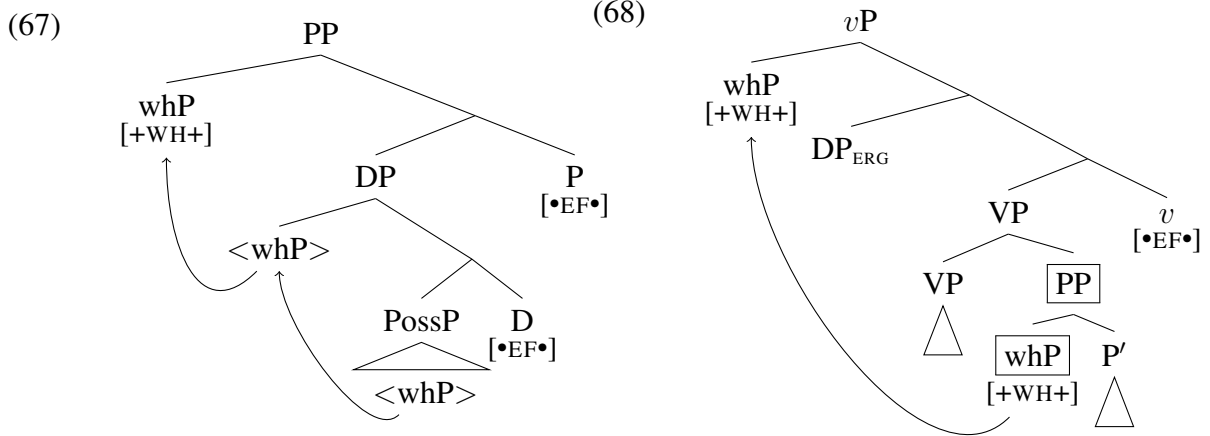
An absolutive DP is transparent for subextraction due to the lack of phase boundaries between the corresponding DP and  $C^0$ : as discussed in section 2, the absolutive DP moves out of  $vP$  to Spec,TP, as shown in (66). In this case, the absolutive DP itself and the possessor in Spec,DP are equidistant goals to the probe in  $C^0$ , which means that the possessor is free to move. If the reader remains unconvinced by the high absolutive analysis discussed in section 2, the transparency of the absolutive DP can be attributed to it being merged in a position that does not correspond to a phase edge; for unergative verbs, this would be a position that is distinct

<sup>10</sup>The analysis does not rule out pied-piping, which can be seen as a type of repair for cases where the wh-phrase is embedded within a larger phase. Per Rackowski & Richards (2005) I assume that there may be language-specific constraints on how deeply embedded a movement feature may be in the moved constituent.

from Spec,*v*P where the ergative agent is merged, as proposed by Massam (2009, 2020); Tollan (2018); Tollan & Massam (2022) for unergative subjects.



Finally, PPs are transparent for subextraction because they are not merged at a phase edge. The precise syntactic position of PPs remains outside of the scope of this paper, but it is sufficient to say that they do not occupy Spec,*v*P or Spec,ApplP. For example, if we assume that PPs are merged as adjuncts to VP and are phases following e.g. Bošković (2013), the *wh*-element undergoes two successive cyclic movement steps within the PP, both triggered by the edge feature •EF• on the corresponding phase heads: first to Spec,DP from its base position in Spec,PossP, and then to Spec,PP (67). At the edge of the PP, the *wh*-element is equidistant with the PP itself to *v*<sup>0</sup> (or Appl, if present in the structure) and thus may successfully undergo movement to Spec,*v*P, triggered by the edge feature on *v*<sup>0</sup> and is thus accessible for subsequent movement to Spec,CP (68).



Thus, the understanding of phases as interveners for Agree and the definition of closest in (59) account for the islandhood asymmetries observed in simple clauses. The following subsection presents compelling evidence that the agreement-based approach successfully accounts for the West Circassian data where other analyses fall short by explaining the cases where DP islandhood effects are not observed: long-distance *wh*-movement and parasitic gap configurations.

## 4.2 Unlocking phases via polysynthesis and the edge feature

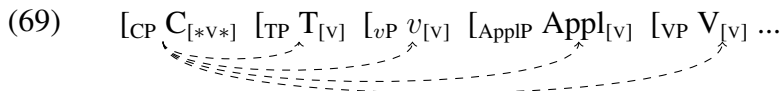
As discussed above, agreement between  $v^0$  and the direct object is one type of agree operation which can render the CP or DP in the direct object position transparent for subextraction. What then is the relevant agree operation for West Circassian selective DP islandhood? Recall that ergative and applied argument DPs behave as islands for subextraction if there is no clausal boundary between them and the wh-feature bearing  $C^0$ ; if, on the other hand, the relevant DP is embedded in a CP which is not headed by a wh- $C^0$ , the DP no longer behaves as an island. The featural content on  $C^0$  is the only tangible difference between the two contexts: the DPs in question are assigned the same case, trigger the same  $\phi$ -agreement and occupy identical syntactic positions in the two contexts. It is reasonable then to tie the islandhood of the DPs in question to the featural content on  $C^0$ . I propose that the relevant feature on  $C^0$  is an agreement feature which probes for lower projections in the extended verbal domain, labeled  $*V*$ .

I propose that the presence of  $*V*$  on  $C^0$  in West Circassian is connected to the polysynthetic nature of the language. In particular, the  $*V*$  feature on  $C^0$  is the driver of head movement which gives rise to the morphologically complex polysynthetic verbal form. Ershova (2020) provides evidence for word formation via head movement in the West Circassian verbal domain, but remains agnostic as to whether this operation belongs in the narrow syntax as argued e.g. by Koopman (1984); Travis (1984); Baker (1988); Kayne (1994); Roberts (2010); Arregi & Pietraszko (2021), a.o., or is established post-syntactically (Chomsky 2001; Embick & Noyer 2001; Harizanov & Gribanova 2019). A feature-driven account of head movement requires placing this operation in the narrow syntax, and the fact that head movement must be driven by  $C^0$ , rather than cyclically by the immediately c-commanding head, narrows down the analytical options to Roberts's (2010) approach; see also Biberauer et al. (2014) on applying this approach to polysynthetic languages.

Under the analysis proposed by Roberts (2010), head movement is an alternative to phrasal movement which happens in strictly constrained circumstances: an Agree operation between a probe and a goal may result in head movement (i.e. the formation of a complex head which includes the featural content of both the head and the probe), if the featural content of the goal comprises a proper subset of the featural content of the probe. For example, v-to-T movement is triggered by a  $uV$  feature on  $T^0$  (equivalent to  $*V*$  in this paper), which is checked by the corresponding  $iV$  feature on  $v^0$ . Since head movement happens as a result of an Agree operation, it is not subject to the Head Movement Constraint (Travis 1984 *et seq.*) and may be long-distance, as long as the projections between the probe and goal do not act as interveners. Assuming that terminal nodes are trivially phases and the possibility of Multiple Agree, i.e. a single probe agreeing with all goals (Hiraiwa 2001, 2005; Zeijlstra 2004; Nevins 2007, 2011), a single head may drive what appears to be successive head movement of the lower functional projections.  $*V*$  can be thought of as a selectional feature; West Circassian differs from a language that limits head movement to v-to-T configurations in that all functional heads in the verbal extended projection bear the category feature  $v$  in addition to the feature associated with their specific function (e.g. T, Appl, etc.). There is independent evidence suggesting that  $C^0$  enters an Agree relation with lower verbal heads. Ershova (2021b) argues that verbal  $\phi$ -agreement in West Circassian is triggered by several distinct probes:  $T^0$  agrees with the absolutive DP,  $v^0$  agrees with the ergative, and Appl<sup>0</sup> agrees with applied arguments. Successful

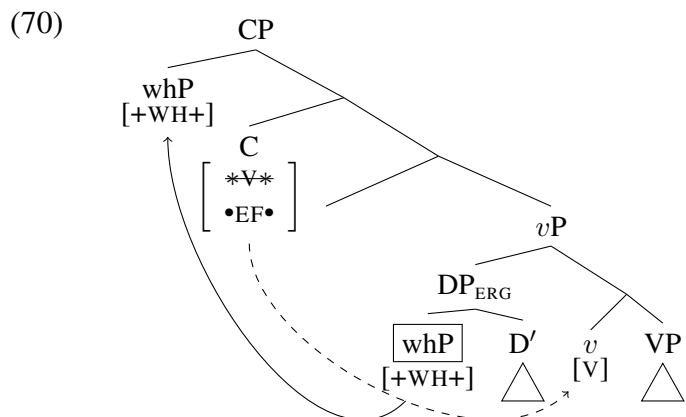
$\phi$ -agreement with these heads is possible, however, only if they have independently agreed with  $C^0$ ; otherwise they behave as defective probes, akin to English infinitival  $T^0$ .

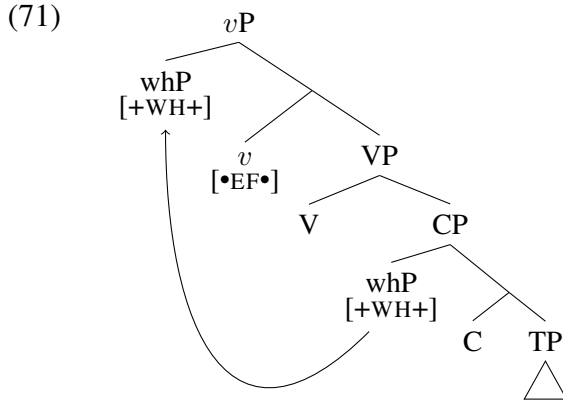
For example, a structure of the form presented in (69) would trigger successive probing by  $C^0$  with the  $*V*$  feature, attracting each of the lower verbal projections to form a single complex head. Per the system devised by Rackowski & Richards (2005), the successive probing by  $C^0$  is made possible by the fact that every verbal head bears a matching feature and successfully agrees with the probe. This in turn makes that goal invisible for the next probing cycle, making the lower functional head an eligible goal, allowing  $C^0$  to probe for  $v^0$ ,  $Appl^0$ , and  $V^0$ .



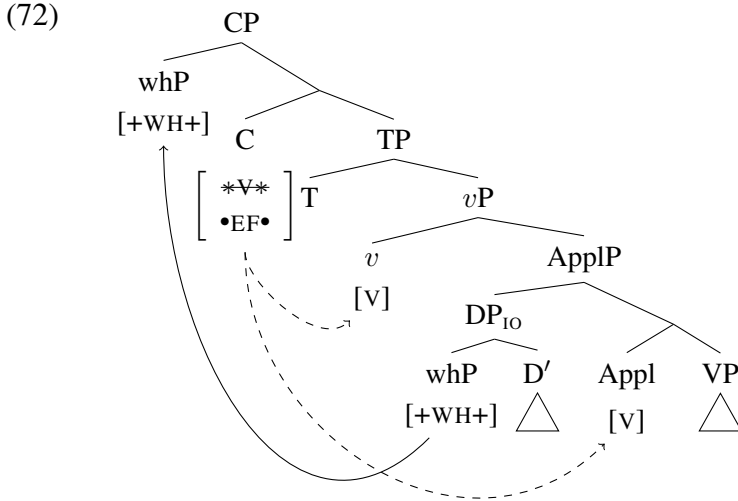
The lack of DP islandhood effects in embedded CP is due to (i) the presence of the agreement feature  $*V*$  and (ii) the absence of the  $wh$ -movement feature  $\bullet WH \bullet$  on the embedded  $C^0$  – in this case, the  $wh$ -feature bearing  $C^0$  is in the higher clause. Agreement with the lower verbal functional projections expands the search domain of embedded  $C^0$  to include the  $vP$  and  $ApplP$  phases and the internal contents of the corresponding phase edges. The insertion of the edge feature on  $C^0$  allows for the extraction of the  $wh$ -operator, even if it is embedded within the ergative or applied argument DP, since these DPs are no longer opaque for subextraction.

Subextraction from an ergative DP in an embedded clause is illustrated in (70): the embedded  $C^0$  does not bear a  $\bullet WH \bullet$  feature, so the first feature to probe is the verbal agreement feature  $*V*$ . As discussed above, this feature probes as long as there are eligible goals in the structure, so it first agrees with  $T^0$ , and then  $v^0$ . Once  $C^0$  has agreed with  $v^0$ ,  $vP$  can be ignored by  $C^0$  for any future agree operations and no longer serves as an intervener. This means that not only the ergative DP at the edge of  $vP$  becomes part of the search space for  $C^0$ , but also the specifier of the ergative DP, which in this case contains the possessor  $whP$ . In the presence of the movement feature  $+WH+$  within its complement,  $C^0$  spawns the edge feature  $\bullet EF \bullet$ , which attracts the possessor to the embedded  $Spec,CP$ . Since (i) the  $whP$  is now at the edge of  $CP$  and (ii)  $CP$  is a complement of a phase, and not an edge, the  $whP$  is free to move to the higher phase edge, triggered by the edge feature on  $v^0$  (71). The position of  $Spec, vP$ , being equidistant to any higher probe with the  $vP$  itself, is accessible for further extraction to the specifier of the  $wh$ -feature bearing  $C^0$ , thus deriving a grammatical structure for the subextraction of the possessor of the embedded ergative DP.





Extraction from an applied object proceeds in a similar fashion: embedded  $C^0$  does not bear a  $\bullet WH \bullet$  feature and instead probes with the agree feature  $*V*$  (72). This feature probes multiple times as long as there are eligible goals in its search domain, and if it agrees with a phase head, the corresponding phase becomes transparent for further probing. Thus, after  $C^0$  agrees with  $v^0$  it is free to search for goals within its complement and agree with the lower phase head –  $Appl^0$ . After  $C^0$  agrees with  $Appl^0$ ,  $ApplP$  is ignored by this probe for further operations, which means that when  $CP$  is formed, the possessor in the specifier of the applied argument  $DP$  is visible to the probe on  $C^0$ , the edge feature is inserted and the possessor successfully moves to  $Spec,CP$ .



One unusual assumption this system makes is that the  $whP$ , despite being extracted out of  $vP$ , does not stop over in  $Spec,vP$ , but moves directly to  $Spec,CP$  – this is possible because  $vP$  does not behave as a phase for the purposes of the probe on  $C^0$  and its complement is directly visible for subextraction. The  $wh$ -element in fact *cannot* stop over in  $Spec,vP$ : movement to  $Spec,vP$  must be triggered by an edge feature on  $v^0$ , however, since  $v^0$  has not entered an independent Agree relation with  $ApplP$ ,  $ApplP$  remains opaque for subextraction for this edge feature, and the edge of  $ApplP$  is thus inaccessible for probing by  $v^0$ . This emphasizes the relative nature of phasehood within this framework: a constituent having successfully agreed

with a higher head does not make it universally transparent for subextraction – it only makes it transparent for the head it has already agreed with. After the possessor phrase moves to the specifier of the embedded CP, the remainder of the derivation proceeds in the same manner as with the possessor of an ergative DP – the wh-phrase in Spec,CP is visible to the higher phase head ( $v^0$ ) and can successfully move to Spec, $v$ P and then subsequently be probed by the wh- $C^0$  in that higher clause (71).

In parasitic gap configurations, the derivation proceeds in the same manner within the embedded clause – following Chomsky (1986); Postal (1998); Nissenbaum (2000), I take parasitic gaps to be traces of a null wh-operator which moves locally within the constituent hosting the parasitic gap. I assume, following Nissenbaum (2000), that this movement is necessary for interpretive reasons. Importantly, the  $C^0$  heading the embedded clause does not bear the wh-movement feature •WH•, meaning that syntactically, the movement of the operator to Spec,CP in the embedded clause is achieved via the repair edge feature, as in the cases of long-distance wh-movement.

Returning to cases of clausebound possessor extraction where ergative and applied argument DPs behave as islands, we are now faced with the question: if  $C^0$  hosts the agreement feature \*V\* which allows for the subextraction of possessors from these constituents in embedded contexts, why doesn't this feature allow for possessor extraction in matrix contexts? The answer is simply in the ordering of the probe features: just as in embedded contexts, the wh- $C^0$  bears the agreement feature \*V\* which triggers head movement to form the complex predicate observed on the surface. In contrast to embedded contexts, wh- $C^0$  also hosts the structure-building feature •WH•, which is responsible for triggering wh-movement, and this feature is ordered *before* the agreement feature in the hierarchy of features on  $C^0$ .<sup>11</sup> Since the agreement probe which can successfully agree with  $v^0$  and Appl<sup>0</sup> is ordered *after* the wh-probe, the corresponding phases ( $v$ P and ApplP) behave as interveners for the wh-probe, rendering the corresponding structures ungrammatical.

The ordering of \*V\* after •WH• is stipulated – a natural prediction of this analysis is that there may be an identical grammatical system to the one presented here, where the relevant agreement feature probes *prior* to the wh-movement feature rather than after it. I propose that this is exactly the state of affairs for the speakers described by Lander (2012) who allow for possessor extraction out of all types of DPs regardless of syntactic position. For these speakers,  $C^0$  probes with the \*V\* agreement feature prior to any movement features in both matrix and embedded contexts, thus rendering  $v$ P and ApplP – and correspondingly their edges – transparent for subextraction.

### 4.3 Against previous approaches to selective DP islandhood

The variable islandhood of ergative and applied argument DPs can only be captured within an agree-based model of phasehood which allows for phase unlocking depending on the agreement properties of the phase heads and the movement-triggering probe. In addition to falling short

---

<sup>11</sup>Georgi (2017) makes a similar claim regarding the ordering of probe and agree features on  $C^0$ , as well as the distinction between contentful wh-features and edge features, based on cross-linguistic data on morphosyntactic reflexes of successive-cyclic movement.

in accounting for this effect, previous analyses of selective DP islandhood fail to capture the basic distinction between DPs which behave as islands and those which do not. The observed contrast cannot be due to (i) the specifierhood of the corresponding arguments; (ii) their moved status; (iii) the agreement properties of the DPs in question; (iv) or their oblique or PP-like status.

The islandhood of ergative and applied argument DPs cannot be connected to their un-governed (specifier) status, as was originally argued by Huang (1982), and taken up in various forms in subsequent literature (Takahashi 1994; Stepanov 2001, a.o.; see also discussion in Gallego & Uriagereka 2007). The ergative agent is indeed in the specifier of  $v^0$  and the applied argument is merged as the specifier of  $\text{Appl}^0$ , but the absolutive DP, which is always transparent for subextraction, may be introduced as an external argument of an unergative verb, i.e. the specifier of  $v^0$ ; see Ershova (2019, 2021c) on the position of absolutive external arguments.

The islandhood of ergative and applied argument DPs cannot be connected to the moved status of the corresponding arguments; cf. Boeckx (2003); Bošković (2018): as discussed in section 2 there is evidence that the absolutive DP moves from a position within  $vP$  to  $\text{Spec,TP}$  while the ergative and applied arguments remain in situ. Absolutive arguments are nevertheless uniformly accessible for possessor extraction, while the ergative and applied argument DPs, which are not moved constituents, are islands. A possibility of reconciling the West Circassian subextraction data with movement-based approaches to DP islandhood would be to consider the data provided here as evidence against the raising of the absolutive argument. The main issue of taking up such an approach, however, is that even if we were to discard a high absolutive analysis of the West Circassian clause and assume that absolutive arguments remain in-situ in their base-generated positions, we would not be any closer to accounting for the observed islandhood facts: as discussed above, absolutive arguments are not uniformly merged in the same position and may be merged as external arguments – tangibly the same position as the ergative agent of a transitive verb.

The West Circassian islandhood facts cannot be easily captured within an agreement-based account of selective DP islandhood. Boeckx (2003), for example, ties the possibility of left branch extraction to the lack of agreement between the extracted element and any element within the larger noun phrase. This approach cannot be applied to the West Circassian data, where the extraction asymmetries uniformly concern possessors which agree with the possessed noun in  $\phi$ -features in non-wh-movement contexts and trigger wh-agreement when extracted. Gallego & Uriagereka (2007); Gallego (2010), on the other hand, appeal to ‘agreement freezing’ – a DP entering a  $\phi$ -agreement relation with  $T^0$  – to account for the Subject Condition, while Branan (2018) argues that  $\phi$ -agreement may ‘unlock’ a DP phase for subextraction. Neither of these approaches can successfully account for the West Circassian subextraction facts: West Circassian is polysynthetic and all types of arguments – absolutive, ergative, and applied – trigger overt  $\phi$ -agreement on the predicate.<sup>12</sup> Thus, while displaying an asymmetry

---

<sup>12</sup>A reviewer notes that despite surface similarity, the cross-reference prefixes may be the result of agreement in some cases and clitic doubling in others per e.g. Preminger (2009); Arregi & Nevins (2012). While an analysis of the cross-reference markers lies outside the scope of this paper, none of the prefixes display clitic-like properties. For example, there are no known cases of defective intervention resulting in the absence of cross-reference marking.

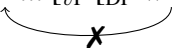


in terms of accessibility for subextraction, these arguments behave in an identical way in regards to  $\phi$ -agreement. The analysis proposed here is similar to Branan’s (2018) in connecting dynamic phasehood with the presence or absence of an agreement relation; in contrast to their account, this paper ties selective DP islandhood to the appearance of that DP at the edge of a phase, rather than the phasehood of the DP itself, and subsequently to the agreement properties of the larger phase this DP appears in.<sup>13</sup>

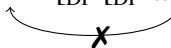
It is likewise not possible to connect the islandhood of the ergative and applied argument DPs to their oblique case marking or the internal structure of these constituents. Corver (1990, 1992); Bošković (2005), for example, connect the possibility of left branch extraction with the absence of a DP layer: left branch extraction is ungrammatical in the presence of a determiner, which means that constituents which are transparent for subextraction are smaller than a DP. West Circassian, however, does not provide any evidence for a difference in the functional structure between island DPs and other nominal constituents. Alternatively, Polinsky (2016) proposes that for a subset of ergative-absolutive languages, the ergative DP is syntactically a PP, i.e. it includes an additional  $P^0$  projection which is absent in absolutive arguments. West Circassian, however, does not display properties of a typical ergative PP language (Polinsky 2016:151-154): the ergative DP in the language displays properties of a true argument in the domains of binding, control, and raising. Secondly, even if considered language-internally, ergative and applied argument DPs do not pattern in a similar way to true PPs, which are not islands for subextraction.

Finally, it is not sufficient to appeal to subjacency or the number of crossed phase boundaries (or barriers) to derive the observed islandhood effects, as posited in earlier work (Chomsky 1973 *et seq.*). Given that the absolutive DP, as discussed above, moves to a position outside of  $vP$ , while the ergative and applied argument DPs remain in-situ within  $vP$ , a reasonable hypothesis would be to derive the islandhood of ergative and applied argument DPs from their appearance within the  $vP$  phase. In terms of a subjacency account, one might assume that the impossibility of possessor extraction from within an ergative DP is due to the fact that the possessor must cross two phase boundaries in order to move to Spec,CP: DP and  $vP$  (73). However, this explanation falsely predicts that subextraction out of a DP that is embedded within another DP to be impossible (74). This is in fact grammatical if the DP in question is the possessor of an absolutive argument (75).

(73)  $[_{CP} \dots [_{vP} [_{DP} \text{whP} \dots]$



(74)  $[_{DP} [_{DP} \text{whP} \dots]$



<sup>13</sup>One possible difference between absolutive arguments and other types of DPs is in the use of a suffixal plural agreement marker *-xe* that is standardly labeled as cross-referencing third person plural absolutive arguments (see e.g. Rogava & Keraševa 1966:135-170; Kumakhov 1971:30-31; Arkadiev et al. 2009:47). At least one of the speakers I have consulted, however, allows for the use of this affix to cross-reference non-absolutive plural participants as well; for example, the appearance of the plural suffix in (i) is triggered by the ergative DP *mə haxem* ‘these dogs’.

(i) *mə ha-xe-m(ERG) sə-q-a-lex<sup>w</sup>ə-x*  
 this dog-PL-OBL 1SG.ABS-DIR-3PL.ERG-see-PL  
 ‘These dogs see me.’

- (75) marə [RC pšaš-ew<sub>i</sub> [DP [DP t<sub>i</sub>(PR) zə-šəpχ<sup>w</sup>](PR) Ø-jə-pšeše<sup>w</sup>](ABS)  
 here girl-ADV WH.PR-sister 3SG.PR-POSS-girlfriend  
 dexe-ded-ew Ø-qa-š<sup>w</sup>e-re ] -r  
 beautiful-very-ADV 3ABS-DIR-dance-DYN -ABS  
 ‘Here is the girl whose sister’s friend dances very beautifully.’

As expected, this type of extraction from within a possessor is not possible for ergative or applied argument DPs, which must be promoted to an absolutive position with the pseudocleft repair strategy used for simple possessor extraction. Thus, subextraction from the possessor of an ergative DP – here the agent of the verb *ʔ<sup>w</sup>en* ‘say’ – is ungrammatical (76a); as a repair strategy, a pseudocleft is formed, wherein the ergative participant is relativized, and then the wh-operator may be extracted from within the focused DP (76b). Assuming that the repair strategy involves promotion to an absolutive case-marked position, the grammaticality of (76b) parallels the grammaticality of subextraction from possessors of absolutive DPs more generally (75).

- (76) a. \* marə [RC pšaš-ew<sub>i</sub> [DP [DP t<sub>i</sub>(PR) zə-šəpχ<sup>w</sup>](PR) Ø-jə-pšeše<sup>w</sup>](ERG)  
 here girl-ADV WH.PR-sister 3SG.PR-POSS-friend  
 dexe-ded-ew wered Ø-q-ə-ʔ<sup>w</sup>e-re ] -r  
 beautiful-very-ADV song 3ABS-DIR-3SG.ERG-say-DYN -ABS  
 Intended: ‘Here is the girl whose sister’s friend sings very beautifully.’
- b. marə [RC pšaš-ew<sub>i</sub> [DP [DP t<sub>i</sub>(PR) zə-šəpχ<sup>w</sup>](PR) Ø-je-pšeše<sup>w</sup>](ABS)  
 here girl-ADV WH.PR-sister 3SG.PR-POSS-friend  
 [RC Op<sub>j</sub> t<sub>j</sub>(ERG) dexe-ded-ew wered Ø-qe-zə-ʔ<sup>w</sup>e-re ] ]  
 beautiful-very-ADV song 3ABS-DIR-WH.ERG-say-DYN  
 -r  
 -ABS  
 lit. ‘Here is the girl whose sister’s friend is the one who sings very beautifully.’

The possibility of subextraction from a possessor of an absolutive DP has several consequences for our understanding of subextraction asymmetries. First, as discussed above, the islandhood of ergative and applied argument DPs cannot be accounted for with simple subadjacency: under such an account, extraction from a DP embedded within another DP should not be possible. Second, assuming that both DP and *v*P are phases, there must be a systematic difference between the positions occupied by a possessor DP and an applied argument or ergative DP, which allows for the observed differences between the two types of arguments. I propose that this difference lies in the position of merge: while ergative and applied argument DPs are merged at phase edges (Spec,*v*P and Spec,ApplP respectively), possessors are introduced below the DP phase edge via a dedicated Poss<sup>0</sup> head. This allows for the cyclic extraction of a possessor from the edge of the embedded possessor to the edge of the absolutive DP, and subsequently, to Spec,CP (77).

- (77) [CP Op<sub>i</sub> ... [DP <Op<sub>i</sub>> [PossP [DP <Op<sub>i</sub>> [PossP <Op<sub>i</sub>> ...

The problem with the ergative and applied argument DPs is not that they appear within a phase, but that they are merged at the *edge* of a phase – *v*P and ApplP respectively, and this structural property renders them opaque for subextraction.

In summary, an agree-based analysis of phasehood as intervention can successfully account for the puzzling variable islandhood of DP arguments in West Circassian. Ergative and applied argument DPs behave as islands for extraction in contexts where they must be directly probed by a *wh*-probe, rather than the successive-cyclic edge feature. This is best captured within a system of dynamic phasehood, wherein a phase may cease to behave as one for the purposes of movement and agreement, if it has entered an agree relation with a higher probe. One important aspect of this approach is that phasehood and domain opacity is then relativized to a particular probe: if a phase XP has successfully agreed with a probe Y, this makes the corresponding phase transparent for probing *only by Y*, and it is still expected to behave as a phase for other probes in the structure.

## 5 Conclusion

In regards to subextraction, 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 ( $C^0$ ). Even if the variable islandhood of these arguments is set aside, the observed constraints on extraction are difficult to account for with existing analyses of selective DP islandhood. The DPs which display islandhood effects are not moved constituents, do not systematically contrast with non-island DPs in structural status or agreement patterns, and cannot be analyzed as involving additional functional structure.

This paper argues that the observed islandhood effects are a result of the arguments in question being merged at phase edges, 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. I propose that the lack of islandhood effects in embedded clauses is connected to the polysynthetic nature of the language, coupled with a set of assumptions about ordering probe features. In particular,  $C^0$  uniformly hosts an agreement feature  $*V*$ , which agrees with all the lower heads in the verbal extended projection – per Roberts (2010), this agreement triggers head movement to  $C^0$ , resulting in a morphologically complex predicate. A *wh*-movement triggering  $C^0$ , however, first probes with the *wh*-movement feature  $\bullet WH \bullet$ , and the lower phases – *v*P and ApplP – serve as interveners, disallowing subextraction from their edges, i.e. the ergative and applied argument DPs. In an embedded context, on the other hand,  $C^0$  does not host a *wh*-movement feature and probes directly with the verbal agreement feature  $*V*$ , successfully agreeing with  $v^0$  and Appl<sup>0</sup> and correspondingly expanding the search domain for this  $C^0$  to include the internal structure of the phase edges. Cyclic *wh*-movement is then achieved via the insertion of an edge feature at the time the phase is formed, allowing for the grammatical subextraction out of constituents which behave as islands in simple clause cases.

The presented analysis confirms the correlation between agreement properties and phase-

hood, as proposed by Abels (2003); Rackowski & Richards (2005); Van Urk & Richards (2015); Halpert (2019), but disengages islandhood of arguments or adjuncts from their agreement properties, in contrast to e.g. Boeckx (2003); Gallego & Uriagereka (2007); Branen (2018). Instead, the analysis capitalizes on the agreement properties of the head triggering wh-movement and the verbal phases which contain the corresponding island constituents. This suggests that the presence or absence of  $\phi$ -agreement per se does not correlate with extraction properties. Rather, if the head that triggers  $\phi$ -agreement also triggers wh-movement, a correlation may be observed. In West Circassian, the two phenomena do not correlate:  $C^0$  triggers wh-movement, but is not responsible for  $\phi$ -agreement.

The agree-based model of phasehood fits in well with the idea of that phasehood is dynamic and contextually determined, with the same constituent acting as a phase in one syntactic configuration, but failing to display phase-like properties in another configuration; see e.g. den Dikken (2007); Gallego (2010); Bošković (2014). Cross-linguistically, the structural effects of agree-based phasehood may differ based on (i) the presence of ameliorating agreement features on the movement-triggering probe, coupled with (ii) the features present on the phase heads in question.

The variable islandhood effects in West Circassian emphasize the distinction between a semantically contentful wh-features and successive-cyclic edge features. This is a desirable outcome, since both a syntactic and semantic distinction must be made between heads which *drive* movement and heads which *allow* movement to their edges when necessary (see discussion e.g. in Heck & Müller 2003; Georgi 2014, 2017). While providing an account for the islandhood effects of argument DPs, this approach leaves open the possibility that other types of syntactic islands, such as e.g. wh-islands and adjuncts, must be accounted for via independent means.

## Data-availability statement

All original data generated by this study are given explicitly in the text and in the appendix.

## Acknowledgments

The author is grateful to Svetlana K. Alishaeva, Saida Gisheva, Susana K. Khatkova, and Zarema Meretukova for sharing their language. The author also thanks Karlos Arregi, Vera Gribanova, Boris Harizanov, Klaus Abels, audiences at the UC Santa Cruz S-Circle and the NYU Brown Bag series, and three anonymous reviewers for helpful discussion. This work was funded by the NSF DDRIG #1749299. All mistakes and shortcomings are solely mine.

## References

Abels, Klaus. 2003. *Successive cyclicity, anti-locality, and adposition stranding*. Doctoral thesis. University of Connecticut.

- Abels, Klaus. 2012. *Phases: An essay on cyclicity in syntax*. de Gruyter.
- Akmajian, Adrian. 1979. *Aspects of the grammar of focus in English*. Garland.
- Aldridge, Edith. 2004. *Ergativity and word order in Austronesian languages*. Doctoral thesis. Cornell University.
- Aldridge, Edith. 2008. Generative approaches to syntactic ergativity. *Language and Linguistics Compass: Syntax and Morphology* 2.5.966–995.
- Anderson, Stephen R. 2005. *Aspects of the theory of clitics*. Oxford University Press.
- Arkadiev, Peter M., and Alexander B. Letuchiy. 2011. Prefixes and suffixes in the Adyghe polysynthetic wordform: Types of interaction. **In:** Vittorio S. Tomelleri, Manana Topadze, and Anna Lukianowicz, editors. *Languages and cultures in the Caucasus*. Otto Sagner. 495–514.
- Arkadiev, Peter M., and Yakov G. Testeleets. 2019. Differential nominal marking in Circassian. *Studies in Language* 43.3.715–751.
- Arkadiev, P.M., Yu.A. Lander, A.B. Letuchiy, N.R. Sumbatova, and Ya.G. Testeleets. 2009. Vvedeniye. Osnovnyye svedeniya ob adygejskom jazyke [Introduction: Basic information on Adyghe]. **In:** Ya. G. Testeleets, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 17–120.
- Arregi, Karlos, and Andrew Nevins. 2012. *Morphotactics. Basque auxiliaries and the structure of spellout*. Springer.
- Arregi, Karlos, and Asia Pietraszko. 2021. The ups and downs of head displacement. *Linguistic Inquiry* 52.2.241–290.
- Baker, Mark C. 1988. *Incorporation. A Theory of Grammatical Function Changing*. Chicago/London: University of Chicago Press.
- Baker, Mark C. 1997. Thematic roles and syntactic structure. **In:** Liliane Haegeman, editor. *Elements of grammar: Handbook in generative syntax*. Springer. 73–137.
- Biberauer, Theresa, Anders Holmberg, Ian Roberts, and Michelle Sheehan. 2014. Complexity in comparative syntax: the view from modern parametric theory. **In:** Laurel B. Preston and Frederick J. Newmeyer, editors. *Measuring grammatical complexity*. OUP. 103–127.
- Bittner, Maria, and Kenneth Hale. 1996. The structural determination of case and agreement. *Linguistic Inquiry* 27.1–68.
- Boeckx, Cedric. 2003. *Islands and chains: Resumption as stranding*. John Benjamins.
- Bošković, Željko. 1997. Pseudoclefts. *Studia Linguistica* 51.235–277.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59.1.1–45.
- Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38.589–644. <http://dx.doi.org/10.1162/ling.2007.38.4.589>.
- Bošković, Željko. 2013. Phases beyond clauses. **In:** L. Schürcks, A. Giannakidou, U. Etxeberria, and P. Kosta, editors. *Nominal constructions in slavic and beyond*. De Gruyter. 75–128.
- 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.
- Bošković, Željko. 2016. What is sent to spell-out is phases, not phasal complements. *Linguistica* 56.1.25–66.
- Bošković, Željko. 2018. On extraction out of inherently case-marked elements. **In:** Wayles

- Browne, Miloje Despic, Naomi Enzinna, Simone Harmath-de Lemos, Robin Karlin, and Draga Zec, editors. *Proceedings of FASL 25*. Michigan Slavic Publications. 57–78.
- Branan, Kenyon. 2018. Attraction at a distance:  $\bar{A}$ -movement and case. *Linguistic Inquiry* 49.3.409–440.
- Caponigro, Ivano, and Maria Polinsky. 2011. Relative embeddings: A Circassian puzzle for the syntax/semantics interface. *NLLT* 29(1).71–122.
- Chomsky, Noam. 1973. Conditions on transformations. **In:** Stephen Anderson and Paul Kiparsky, editors. *A festschrift for Morris Halle*. Holt, Rinehart & Winston. 232–286.
- Chomsky, Noam. 1986. *Barriers*. MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries: the framework. **In:** Roger Martin, David Michaels, and Juan Uriagereka, editors. *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. MIT Press. 89–155.
- Chomsky, Noam. 2001. Derivation by phase. **In:** Michael Kenstowicz, editor. *Ken Hale: A life in language*. MIT Press. 1–52.
- Chomsky, Noam. 2008. On phases. **In:** Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, editors. *Foundational issues in linguistic theory*. MIT Press. 133–166.
- Chung, Sandra. 1998. *Design of agreement: Evidence from Chamorro*. University of Chicago Press.
- Coon, Jessica, Nico Baier, and Theodore Levin. 2021. Mayan agent focus and the ergative extraction constraint: Facts and fictions revisited. *Language* 97.2.269–332.
- Coon, Jessica, Mateo Mateo Pedro, and Omer Preminger. 2014. The role of case in A-bar extraction asymmetries: Evidence from Mayan. *Linguistic Variation* 14(2).179–242.
- Corver, Norbert. 1990. *The syntax of left branch extraction*. Doctoral thesis. Tilburg University.
- Corver, Norbert. 1992. On deriving certain left branch extraction asymmetries: A case study in parametric syntax. *North East Linguistics Society* 22.1.67–84.
- Declerck, Renaat. 1988. *Studies in copular sentences, clefts and pseudo-clefts*. Leuven University Press / Foris.
- den Dikken, Marcel. 2007. Phase extension: Contours of a theory of the role of head movement in phrasal extraction. *Theoretical Linguistics* 33.1–41.
- den Dikken, Marcel. 2017. Pseudoclefts and other specificational sentences. **In:** Martin Everaert and Hank van Riemsdijk, editors. *The Wiley Blackwell companion to syntax*, second edition. John Wiley & Sons, Inc. 3245–3382.
- den Dikken, Marcel, André Meinunger, and Chris Wilder. 2000. Pseudoclefts and ellipsis. *Studia Linguistica* 54.41–89.
- Embick, David, and Rolf Noyer. 2001. Movement operations after syntax. *Linguistic Inquiry* 32.555–595.
- Emonds, Joseph. 1970. *Root and structure-preserving transformations*. Doctoral thesis. MIT.
- Ershova, Ksenia. 2019. *Syntactic ergativity in West Circassian*. Doctoral thesis. University of Chicago.
- Ershova, Ksenia. 2020. Two paths to polysynthesis: Evidence from West Circassian nominalizations. *Natural Language and Linguistic Theory* 38.425–475. <http://dx.doi.org/10.1007/s11049-019-09455-w>.
- Ershova, Ksenia. 2021a. Diagnosing clause structure in a polysynthetic language:

- Wh-agreement and parasitic gaps in West Circassian. *Linguistic Inquiry* 52.1.1–38. [http://dx.doi.org/10.1162/ling\\_a00371](http://dx.doi.org/10.1162/ling_a00371).
- Ershova, Ksenia. 2021b. Multiple feature inheritance makes polysynthesis: Evidence from West Circassian nominalizations.
- Ershova, Ksenia. 2021c. Syntactic ergativity and the theory of subjecthood: Evidence from anaphor binding in West Circassian. <https://ling.auf.net/lingbuzz/005168>. Ms.
- Fox, Danny, and David Pesetsky. 2005. Cyclic linearization of syntactic structure. *Theoretical Linguistics* 31.1–45.
- Gallego, Ángel J. 2010. *Phase theory*. John Benjamins.
- Gallego, Ángel J., and Juan Uriagereka. 2007. Conditions on sub-extraction. **In:** Luis Eguren and Olga Fernández-Soriano, editors. *Coreference, modality, and focus: Studies on the syntax-semantics interface*. John Benjamins. 45–70.
- Georgi, Doreen. 2014. *Opaque interactions of Merge and Agree: On the nature and order of elementary operations*. Doctoral thesis. Leipzig University.
- Georgi, Doreen. 2017. Patterns of movement reflexes as the result of the order of Merge and Agree. *Linguistic Inquiry* 48.4.585–626.
- Georgi, Doreen, and Gereon Müller. 2010. Noun phrase structure by reprojection. *Syntax* 13.1–36.
- Gorbunova, I.M. 2009. Possessivnye konstrukcii [possessive constructions]. **In:** Ya. G. Testelet, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 146–165.
- Halpern, Aaron. 1995. *On the placement and morphology of clitics*. Stanford, CA: CSLI Publications.
- Halpert, Claire. 2019. Raising, unphased. *Natural Language and Linguistic Theory* 37.123–165.
- Harizanov, Boris, and Vera Griбанова. 2019. Whither head movement? *Natural Language and Linguistic Theory* 37.461–522.
- Heck, Fabian, and Gereon Müller. 2000. Successive cyclicity, long-distance superiority, and local optimization. **In:** Roger Billerey and Brook Danielle Lillehaugen, editors. *Proceedings of WCCFL 19*. Cascadia Press. 218–231.
- Heck, Fabian, and Gereon Müller. 2003. Derivational optimization of wh-movement. *Linguistic Analysis* 33.97–148.
- Heck, Fabian, and Gereon Müller. 2007. Extremely local optimization. **In:** Erin Bainbridge and Brian Agbayani, editors. *Proceedings of WECOL34*. California State University, Fresno. 170–182.
- Heller, Daphna. 2002. On the relation of connectivity and specificational pseudoclefts. *Natural Language Semantics* 10.243–284.
- Heycock, Caroline, and Anthony Kroch. 1999. Pseudo-cleft connectivity: Implications for the LF interface level. *Linguistic Inquiry* 30.365–397.
- Higgins, F. Roger. 1979. *The pseudo-cleft construction in English*. Garland.
- Hiraiwa, Ken. 2001. Multiple Agree and the Defective Intervention Constraint in Japanese. **In:** Ora Matushansky, Albert Costa, Javier Martin-Gonzalez, Lance Nathan, and Adam Szczegielniak, editors. *The proceedings of HUMIT 2000*. MITWPL. 67–80.

- Hiraiwa, Ken. 2005. *Dimensions of symmetry in syntax: agreement and clausal architecture*. Doctoral thesis. MIT.
- Huang, Cheng-Teh James. 1982. *Logical relations in Chinese and the theory of grammar*. Doctoral thesis. MIT.
- Kayne, Richard. 1994. *The antisymmetry of syntax*. MIT Press.
- Koopman, Hilda. 1984. *The syntax of verbs: From verb movement rules in the Kru languages to Universal Grammar*. Doctoral thesis. Tilburg University.
- Korotkova, Natalia, and Yury Lander. 2010. Deriving affix ordering in polysynthesis: Evidence from Adyghe. *Morphology* 20.299–319.
- Kumakhov, M.A. 1971. *Slovoizmenenie adygskix jazykov [Inflection in Circassian languages]*. Nauka.
- Kumakhov, Mukhadin, and Karina Vamling. 2009. *Circassian clause structure*. Malmö University.
- Lander, Yury. 2009a. Množestvennaja reljativizacija: podlinnaja i mnimaja [Multiple relativization: genuine and imaginary]. **In:** Ya. G. Testeleťs, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 612–653.
- Lander, Yury. 2009b. Subject properties of the Adyghe absolutive: Evidence from relatives. Unpublished paper. Ms.
- Lander, Yury. 2012. *Reljativizacija v polisintetičeskom jazyke: adygejskie otnositel'nye konstrukcii v tipologičeskoj perspektive [Relativization in a polysynthetic language: Adyghe relative clauses in a typological perspective]*. Doctoral thesis. Russian State University for the Humanities.
- Lander, Yury. 2017. Nominal complex in West Circassian: Between morphology and syntax. *Studies in Language* 41.1.76–98.
- Lander, Yury, and Michael Daniel. 2019. West Caucasian relative pronouns as resumptives. *Linguistics* 57.6.1239–1270. <http://dx.doi.org/10.1515/ling-2020-2003>.
- Lander, Yury, and Alexander Letuchiy. 2010. Kinds of recursion in Adyghe morphology. **In:** Harry van der Hulst, editor. *Recursion and Human Language*. De Gruyter Mouton. 263–284.
- Lander, Yury A., and Yakov G. Testeleťs. 2017. Adyghe (Northwest Caucasian). **In:** Michael Fortescue, Marianne Mithun, and Nicholas Evans, editors. *The Oxford handbook of polysynthesis*. Oxford University Press. 948–970.
- Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34.3.506–516.
- Letuchiy, Alexander. 2015. Scope versus ordering of operations: causativization and ordering of valency-changing operations in Adyghe. **In:** Stela Manova, editor. *Affix ordering across languages and frameworks*. Oxford University Press. 53–81.
- Martinović, Martina. 2015. *Feature geometry and head-splitting: Evidence from the Wolof clausal periphery*. Doctoral thesis. University of Chicago.
- Martinović, Martina. to appear. Feature geometry and head-splitting in the wolof clausal periphery. *Linguistic Inquiry*.
- Massam, Diane. 2009. The structure of (un)ergatives. **In:** Sandra Chung, Daniel Finer, Ileana Paul, and Eric Potsdam, editors. *Proceedings of the Sixteenth Meeting of the Austronesian Formal Linguistics Association (AFLA 16)*. University of California, Santa Cruz. 125–135.



- Massam, Diane. 2020. *Isolating grammar: Predication, case & argument structure in Niuean*. Oxford University Press.
- McCloskey, James. 2002. Resumption, successive cyclicity, and the locality of operations. **In:** Samuel David Epstein and Daniel T. Seely, editors. *Derivation and explanation in the Minimalist Program*. Blackwell. 184–226.
- McCloskey, Jim. 2001. The morphosyntax of wh-extraction in Irish. *Journal of Linguistics* 37.1.67–100.
- McGinnis, Martha. 2000. Phases and the syntax of applicatives. **In:** Min-Joo Kim and Uri Strauss, editors. *NELS 31*. GLSA. 333–349.
- McGinnis, Martha. 2001. Variation in the phase structure of applicatives. *Linguistic Variation Yearbook* 1.105–146.
- Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands and the theory of ellipsis*. Oxford University Press.
- Müller, Gereon. 2010. On deriving CED effects from the PIC. *Linguistic Inquiry* 41.1.35–82.
- Müller, Gereon. 2011. *Constraints on displacement: A phase-based approach*. John Benjamins.
- Nevins, Andrew. 2007. The representation of third person and its consequences for person-case effects. *Natural Language & Linguistic Theory* 25.2.273–313.
- Nevins, Andrew. 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29.4.939–971.
- Nissenbaum, Jonathan W. 2000. *Investigations of covert phrase movement*. Doctoral thesis. MIT.
- Nunes, Jairo. 2021. On the locus and licensing of edge features. *Glossa: a journal of general linguistics* 6.1.38. <http://dx.doi.org/10.5334/gjgl.1113>.
- O’Herin, Brian. 2002. *Case and agreement in abaza*. SIL International / Univ. of Texas at Arlington.
- Polinsky, Maria. 2016. *Deconstructing ergativity: Two types of ergative languages and their features*. Oxford University Press.
- Postal, Paul. 1998. *Three investigations of extraction*. MIT Press.
- Potsdam, Eric, and Maria Polinsky. 2012. Backward raising. *Syntax* 15(1).75–108.
- Preminger, Omer. 2009. Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40.4.619–666.
- Rackowski, Andrea, and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36.4.565–599.
- Richards, Marc. 2011. Deriving the edge: What’s in a phase? *Syntax* 14.74–95.
- Richards, Norvin. 1998. The Principle of Minimal Compliance. *Linguistic Inquiry* 29.599–629.
- Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation, and defective goals*. The MIT Press.
- Rogava, G.V., and Z.I. Keraševa. 1966. *Grammatika adygejskogo jazyka [The grammar of Adyghe]*. Krasnodarskoe knižnoe isdatelstvo.
- Schlenker, Philippe. 2003. Clausal equations: A note on the connectivity problem. *Natural Language & Linguistic Theory* 21.157–214.
- Serdobolskaya, Natalia. 2011. Grammaticalization patterns of the Adyghe instrumental case.

- In:** *Languages and cultures in the Caucasus*. München – Berlin: Verlag Otto Sagner. 515–539.
- Serdobolskaya, N.V. 2009. Vtoroje buduš'eje, infinitiv, masdar i supin v adygejskom jazyke: argumenty za i protiv jedinoj traktovki [Second future, infinitive, masdar and supinum in Adyghe: Pro and contra their unification]. **In:** Ya. G. Testeleets, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 454–497.
- Serdobolskaya, N.V., and J.L. Kuznetsova. 2009. Dvojnoje padežnoje markirovanije: unikal'nyj slučaj adygejskogo jazyka [Double case marking: the unique case of Adyghe]. **In:** Ya. G. Testeleets, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 166–200.
- Serdobolskaya, N.V., and A.V. Motlokhov. 2009. Semantika konstrukcij s sentencialnymi ak-tantami v adygejskom jazyke [The semantics of sentential complementation in Adyghe]. **In:** Ya. G. Testeleets, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 498–558.
- Stepanov, Arthur. 2001. *Cyclic domains in syntactic theory*. Doctoral thesis. University of Connecticut.
- Sumbatova, Nina. 2009. Kommunikativnaja struktura adygejskogo predloženiya [Information structure of the Adyghe sentence]. **In:** Ya. G. Testeleets, editor. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*. RGGU. 559–611.
- Takahashi, Daiko. 1994. *Minimality of movement*. Doctoral thesis. University of Connecticut.
- Testeleets, Ya. G., editor. 2009. *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka* [Aspects of polysynthesis: Sketches on the grammar of Adyghe]. RGGU.
- Tollan, Rebecca. 2018. Unergatives are different: Two types of transitivity in Samoan. *Glossa: A journal in general linguistics* 3.1.35.
- Tollan, Rebecca, and Lauren Clemens. 2021. Syntactic ergativity as a constraint on crossing dependencies: The perspective from Mayan. *Linguistic Inquiry* [http://dx.doi.org/10.1162/ling\\_a00421](http://dx.doi.org/10.1162/ling_a00421).
- Tollan, Rebecca, and Diane Massam. 2022. Licensing unergative objects in ergative languages: The view from Polynesian. *Syntax* 25.242–275.
- Travis, Lisa deMena. 1984. *Parameters and effects of word order variation*. Doctoral thesis. MIT.
- van Urk, Coppe. 2015. *A uniform syntax for phrasal movement: A case study of Dinka Bor*. Doctoral thesis. MIT.
- van Urk, Coppe, and Norvin Richards. 2015. Two components of long-distance extraction: Successive cyclicity in Dinka. *Linguistic Inquiry* 46.1.113–155.
- Yuan, Michelle. 2018. *Dimensions of ergativity in Inuit: Theory and microvariation*. Doctoral thesis. MIT.
- Zeijlstra, Hedde. 2004. *Sentential negation and negative concord*. LOT.
- Zwicky, Arnold M., and Geoffrey K. Pullum. 1983. Cliticization vs. inflection: English n't. *Language* 59.502–513.

# Appendices

## A Possessor extraction is ungrammatical from all types of applied argument DPs

Experiencer of two-place unaccusative verb: baseline (78a); possessor extraction is ungrammatical (78b); pseudocleft repair strategy (78c).

- (78) a. [mə bzəlfəwe-m(PR) Ø-jə-pšaše ](IO) sə-Ø-š'ə-ɸ'əpša-ɸ  
 this woman-OBL WH.PR-POSS-girl 1SG.ABS-3SG.IO-LOC-forget-PST  
 'This woman's daughter forgot about me.'
- b. \*mə bzəlfəwe-r arə [RC Op<sub>i</sub> [ t<sub>i</sub>(PR) z-jə-pšaše ](IO)  
 this woman PRED WH.PR-POSS-girl  
 sə-Ø-š'ə-ɸ'əpša-ɸe ] -r  
 1SG.ABS-3SG.IO-LOC-forget-PST -ABS  
 Intended: 'This woman is the one whose daughter forgot about me.'
- c. mə bzəlfəwe-r arə [RC Op<sub>i</sub> [ t<sub>i</sub>(PR) z-jə-pšaše ](ABS) [RC Op<sub>j</sub> t<sub>j</sub>(IO)  
 this woman-ABS PRED WH.PR-POSS-girl  
 sə-z-š'ə-ɸ'əpša-ɸe-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 (79a); possessor extraction is ungrammatical (79b); pseudocleft repair strategy (79c).

- (79) a. se(ERG) žeg<sup>w</sup>aɸe-r(ABS)  
 I toy-ABS  
 Ø-Ø-je-s-tə-ɸ [ č'ele-čəḵ<sup>w</sup>-m(PR)  
 3ABS-3SG.IO-DAT-1SG.ERG-give-PST boy-small-OBL  
 ə-š ](IO)  
 3SG.PR-brother  
 'I gave the toy to the boy's brother.'
- b. \*mwarə [RC č'ele-čəḵ<sup>w</sup>-ew<sub>i</sub> [ t<sub>i</sub>(PR) zə-š ](IO) žeg<sup>w</sup>aɸe-r(ABS)  
 here boy-small-ADV WH.PR-brother toy-ABS  
 Ø-Ø-je-s-tə-ɸe ] -r  
 3ABS-3SG.IO-DAT-1SG.ERG-give-PST -ABS  
 Intended: 'Here is the boy to whose brother I gave the toy.'
- c. mwarə [RC č'ele-čəḵ<sup>w</sup>-ew<sub>i</sub> [ t<sub>i</sub>(PR) zə-š ](ABS) [RC Op<sub>j</sub> t<sub>j</sub>(IO)  
 here boy-small-ADV WH.PR-brother  
 žeg<sup>w</sup>aɸe-r(ABS) Ø-z-e-s-tə-ɸe-r ] ]  
 toy-ABS 3ABS-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 (80a); possessor extraction is ungrammatical (80b); pseudocleft repair strategy (80c).

- (80) a. se(ERG) wered(ABS) [ mwe š<sup>w</sup>əzə-m(PR) Ø-jə-č’ale ](IO)  
 I song this woman-OBL 3SG.PR-POSS-boy  
 Ø-qə-Ø-fe-s-ʔ<sup>w</sup>a-ɛ  
 3ABS-DIR-3SG.IO-BEN-1SG.ERG-say-PST  
 ‘I sang for this woman’s son.’
- b. \* marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [ t<sub>i</sub>(PR) z-jə-č’ale ](IO) wered(ABS)  
 here woman-ADV WH.PR-POSS-boy song  
 Ø-qə-Ø-fe-s-ʔ<sup>w</sup>a-ɛ ] -r  
 3ABS-DIR-3SG.IO-BEN-1SG.ERG-say-PST -ABS  
 Intended: ‘Here is the woman for whose son I sang.’
- c. marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [ t<sub>i</sub>(PR) z-jə-č’ale ](ABS) [RC Op<sub>j</sub> t<sub>j</sub>(IO) wered  
 here woman-ADV WH.PR-POSS-boy song  
 Ø-qə-zə-fe-s-ʔ<sup>w</sup>a-ɛ-r ] ]  
 3ABS-DIR-WH.IO-BEN-1SG.ERG-say-PST-ABS  
 lit. ‘Here is the woman whose son is the one for whom I sang.’

## B Long-distance wh-movement from non-absolutive complement clauses

This section outlines the variation in wh-movement strategies in embedded complement clauses. The variation does not interact with the possessor extraction facts described in the paper. Regardless of the strategy used, the generalizations regarding possessor extraction remain constant: possessor extraction is grammatical out of all argument DPs in embedded clauses, including ergative and applied argument DPs, which do not allow subextraction in simple clauses.

Section 3 of the paper discusses complement clauses which appear in the absolutive position. Some predicates select for complement clauses in the applied object position; examples of such predicates include *fejen* ‘want’ which is composed of the benefactive prefix *fe-* and the otherwise unattested root *je* which I gloss as ‘want’ for exposition, *jezeš’an* ‘tire of’ and *fjež’en* ‘begin’.<sup>14</sup> The applied argument position of the complement clause can be discerned from the case marking and agreement properties of the predicates in question when they select for a nominal, rather than a clausal, argument (81)-(83).

- (81) šə-me(IO) se(ABS) sə-Ø-fa-j-ep  
 horse-PL.OBL I 1SG.ABS-3SG.IO-BEN-want-NEG

<sup>14</sup>*fjež’en* ‘begin’ is classified as an unaccusative raising predicate by Potsdam & Polinsky (2012), but the speakers consulted for this study uniformly treat it as a two-place predicate which selects for two thematic arguments in the absolutive and applied argument positions.

‘I do not want horses.’ (Rogava & Keraševa 1966:109)

- (82) tatjane(ABS) nawəke-m(IO) Ø-Ø-je-zeš’ə-š’tə-ɸ-ep  
 Tatjana science-OBL 3ABS-3SG.IO-DAT-tire-IPF-PST-NEG  
 ‘Tatjana didn’t get tired of science.’ (Ershova 2019:221)

- (83) λə-r(ABS) ʔ<sup>w</sup>efə-m(IO) Ø-Ø-f-je-ž’a-ɸ  
 man-ABS work-OBL 3ABS-3SG.IO-BEN-DAT-begin-PST  
 ‘The man began the task.’ (Ershova 2019:221)

Analogous to the complement clauses discussed in section 3, the embedded clauses of all of these predicates display properties of full CPs and are generally marked with the combination of the modal future suffix and the adverbial subordinator: *-n-ew*; for other strategies of marking complement clauses see Serdobolskaya & Motlokhov (2009); Ershova (2019:Ch.5). Examples of clausal embedding with the predicates *fejen* ‘want’, *jezeš’an* ‘tire of’, and *fjež’en* ‘begin’ are shown correspondingly in (84), (85) and (86).

- (84) [<sub>CP</sub> s-a-ɸe-šxe-n-ew ] s-šəpχ<sup>w</sup>ə-xe-r  
 1SG.ABS-3PL.ERG-CAUS-eat-MOD-ADV 1SG.PR-sister-PL-ABS  
 Ø-Ø-fa-je-x-ep  
 3ABS-3SG.IO-want-PL-NEG  
 ‘My sisters do not want to feed me.’
- (85) [<sub>CP</sub> č’ale-m Ø-Ø-λə-pɸe-n-ew ] ə-šəpχ<sup>w</sup>  
 boy-OBL 3ABS-3SG.IO-LOC-look-MOD-ADV 3SG.PR-sister  
 Ø-Ø-je-zeš’ə-ɸ  
 3SG.ABS-3SG.IO-DAT-tire-PST  
 ‘His sister is tired of watching after the boy.’
- (86) ha-r [<sub>CP</sub> sabjəj-me Ø-ja-ceqe-n-ew ]  
 dog-ABS child-PL.OBL 3ABS-3PL.IO+DAT-bite-MOD-ADV  
 Ø-Ø-f-je-ž’a-ɸ  
 3ABS-3SG.IO-BEN-DAT-begin-PST  
 ‘The dog began to bite the children.’

For complement clauses in non-absolutive positions, most speakers require the appearance of wh-agreement in both the embedded clause (the initial site of the wh-trace) and on the matrix predicate. The resulting multiple wh-agreement constructions can be divided into two types: (i) proleptic constructions, wherein the embedded wh-trace is parasitic on a relativized proleptic argument in the matrix clause, and (ii) cyclic wh-agreement, wherein the presence of wh-agreement on the matrix predicate is contingent on the presence of the embedded wh-trace. The two can be distinguished by the choice of which wh-marker is optional: in the proleptic construction, it is the embedded wh-marker, in the cyclic wh-agreement construction, it is the matrix wh-marker (for a subset of speakers; for others both markers are obligatory). These two options are illustrated schematically below: (87) represents the proleptic configuration, wherein a dummy argument is relativized in the matrix clause and licenses an optional parasitic gap in

the complement clause, and (88) illustrates the configuration involving long-distance cyclic wh-movement, wherein the relativized participant originates in the embedded complement clause and the matrix predicate expones (optional) agreement with this participant.

- (87)  $[_{CP} Op_i \dots <Op_i> [_{CP} \dots PG_i \dots ] ]$       (88)  $[_{CP} Op_i \dots <Op_i> [_{CP} \dots <Op_i> \dots ] ]$

An example of a clearly proleptic construction involving extraction out of an adjunct clause is presented in (89): in order to relativize the applied object of *jepλən* ‘look’ a dummy benefactive argument is inserted and relativized in the matrix clause (89a); a parasitic gap is then used in the position of the embedded applied object. Importantly, the benefactive applied argument cannot be licitly used in the declarative version of the corresponding relative clause (89b).

- (89) a.  $p\hat{s}a\hat{s}\text{-}ew_i$   $[_{CP} \text{ } \_\text{PG}(\text{IO}) \text{ } s\partial\text{-}z\text{-}e\text{-}p\lambda\text{-}ze ]$   $t_i(\text{IO})$   
 girl-ADV 1SG.ABS-**WH.IO**-DAT-look-CNV  
 $s\partial\text{-}z\text{-}f\partial\text{-}\lambda epewa\text{-}\mathfrak{K}e\text{-}r$   
 1SG.ABS-**WH.IO**-BEN-stumble-PST-ABS  
 ‘the girl watching whom I stumbled’ (lit. ‘the girl for whom I stumbled, watching her’)
- b.  $[_{CP} p\hat{s}a\hat{s}e\text{-}m(\text{IO}) \text{ } s\text{-}\emptyset\text{-}je\text{-}p\lambda\text{-}ze ]$   
 girl-OBL 1SG.ABS-**3SG.IO**-DAT-look-CNV  
 $s\partial\text{-}(*\emptyset\text{-}f\partial\text{-})\lambda epewa\text{-}\mathfrak{K}$   
 1SG.ABS-(\***3SG.IO**-BEN)-stumble-PST  
 ‘Watching the girl, I stumbled.’ (Lander 2012:339)

The distinction between the proleptic construction and long-distance wh-movement is made difficult by the possibility of ambiguous structures for some types of predicates – this is the case for predicates which require the appearance of a wh-marker in the agreement slot referring to the syntactic position of the complement clause, rather than in a clearly proleptic, additional argument position; Lander (2012) considers these to be cases of reanalysis, wherein the complement clause is interpreted as a de facto adjunct. This situation is schematically represented in (90a): a wh-marker appears in the position indexing the embedded complement clause, which is the applied argument position. Unlike in cases of clear long-distance wh-movement, the wh-marker in the embedded clause is optional, which is consistent with the interpretation that this embedded wh-marker is expressing agreement with a parasitic gap. This in turn suggests that there is a proleptic argument in the matrix clause which licenses this parasitic gap (90b). Three of the four speakers I have consulted, however, allow for the omission of the matrix wh-marker, suggesting that this type of construction may be interpreted as a long-distance wh-movement configuration, as shown in (90c).

- (90) a.  $[_{CP} Op_i \text{ } \mathbf{WH.IO}\text{-verb} \dots [_{CP(\text{IO})} \dots \mathbf{WH/3SG}\text{-verb} \dots ] ]$
- b.  $[_{CP} Op_i \dots <Op_i> \dots \mathbf{WH.IO}\text{-verb} \dots [_{CP(\text{IO})} \dots PG_i \dots ] ]$
- c.  $[_{CP} Op_i \dots <Op_i> \dots (\mathbf{WH.IO}\text{-})\text{verb} \dots [_{CP(\text{IO})} \dots <Op_i> \dots ] ]$

An example of a verb that employs this type of proleptic construction is *fejen* ‘want’, which selects for an absolutive experiencer and a complement clause as the applied object: if an argument is extracted from the complement clause, all speakers allow for the appearance of a wh-marker on the matrix predicate; for some speakers, this marker is obligatory, for others, it may be optionally dropped (91a). The optionality of the matrix wh-marker for some speakers is compatible with a structure involving long-distance wh-movement, where the relativized participant originates in the embedded clause and undergoes cyclic wh-movement to the matrix clause, triggering optional wh-agreement on the matrix predicate, as shown schematically in (90c). In addition to the long-distance wh-agreement construction, this predicate is compatible with a proleptic construction, wherein there is a single wh-marker on the matrix predicate, while the semantically relativized argument is expressed as a regular pronoun (91b). As with other proleptic constructions, the wh-trace in the matrix clause may license a parasitic gap in the embedded clause, rendering two wh-markers (91c). Thus, a construction containing two wh-markers is structurally ambiguous between proleptic wh-movement in the matrix clause and a parasitic gap in the embedded clause, and long-distance wh-movement, with a cyclic wh-agreement marker on the matrix predicate.

- (91) a. marə [RC λ-ew<sub>i</sub> [CP t<sub>i</sub>(ERG) mašjəne-r  
 here man-ADV car-ABS  
 Ø-qə-s-e-zə-š’e-n-ew ]  
 3ABS-DIR-1SG.IO-DAT-**WH.ERG**-sell-MOD-ADV  
 sə-zə/%Ø-fa-je ] -r  
 1SG.ABS-**WH/3SG.IO**-BEN-want -ABS  
 ‘Here is the man who I want to sell me the car.’ **long-distance wh-movement**
- b. marə [RC λ-ew<sub>i</sub> t<sub>i</sub>(IO) [CP pro<sub>i</sub>(ERG) mašjəne-r  
 here man-ADV car-ABS  
 Ø-qə-s-jə-š’e-n-ew ] sə-zə-fa-je ] -r  
 3ABS-DIR-1SG.IO-**3SG.ERG**-sell-MOD-ADV 1SG.ABS-**WH.IO**-BEN-want -ABS  
 ‘Here is the man who I want to sell me a car.’ **prolepsis**
- c. marə [RC λ-ew<sub>i</sub> t<sub>i</sub>(IO) [CP \_\_PG(ERG) mašjəne-r  
 here man-ADV car-ABS  
 Ø-qə-s-e-zə-š’e-n-ew ] sə-zə-fa-je ] -r  
 3ABS-DIR-1SG.IO-**3SG.ERG**-sell-MOD-ADV 1SG.ABS-**WH.IO**-BEN-want -ABS  
 ‘Here is the man who I want to sell me the car.’ **prolepsis + parasitic gap**

A predicate that behaves analogously to *fejen* ‘want’ and will be used in a number of examples below is *jezeš’an* ‘tire of’. This verb selects for an absolutive experiencer and a dative applied argument as the stimulus and allows for a long-distance wh-movement configuration, wherein the embedded wh-marker is obligatory and, for some speakers, the matrix wh-marker in the applied argument position may be dropped (92a). This predicate is compatible with a proleptic structure, where there is a single wh-marker in the applied object position in the matrix clause, and the argument that is expected to be relativized based on the semantics is

expressed as a regular third person pronoun in the embedded clause (92b). Finally, the embedded pronoun in the proleptic construction may be replaced by a parasitic gap which triggers wh-agreement on the embedded predicate, rendering a surface string which is identical to the long-distance wh-movement configuration with overt matrix wh-agreement (92c).

- (92) a. marə [RC č'al-ew<sub>i</sub> [CP t<sub>i</sub>(IO) aχš'e  
 here boy-ADV money  
 Ø-Z-e-s-tə-n-ew ] sə-Z-e-zeš'ə-be ]/  
 3ABS-**WH.IO**-DAT-1SG.ERG-give-MOD-ADV 1SG.ABS-**WH.IO**-DAT-tire.of-PST /  
 %s-Ø-je-zeš'ə-be ] -r  
 1SG.ABS-**3SG.IO**-DAT-tire.of-PST -ABS  
 'Here is the boy to whom I'm tired of giving money.' **long-distance  
 wh-movement**
- b. marə [RC č'al-ew<sub>i</sub> t<sub>i</sub>(IO) [CP pro<sub>i</sub>(IO) aχš'e  
 here boy money  
 Ø-Ø-je-s-tə-n-ew ] sə-Z-e-zeš'ə-be ]  
 3ABS-**3IO**-DAT-1SG.ERG-give-MOD-ADV 1SG.ABS-**WH.IO**-DAT-tire.of-PST  
 -r  
 -ABS  
 'Here is the boy to whom I'm tired of giving money.' **prolepsis**
- c. marə [RC č'al-ew<sub>i</sub> t<sub>i</sub>(IO) [CP \_\_PG(IO) aχš'e  
 here boy money  
 Ø-Z-e-s-tə-n-ew ] sə-Z-e-zeš'ə-be ]  
 3ABS-**WH.IO**-DAT-1SG.ERG-give-MOD-ADV 1SG.ABS-**WH.IO**-DAT-tire.of-PST  
 -r  
 -ABS  
 'Here is the boy to whom I'm tired of giving money.' **prolepsis + parasitic gap**

Some predicates which select for a complement clause in an applied argument position do not allow for the proleptic or reanalyzed variant of the construction and require long-distance wh-movement: relativization of a participant within the embedded clause is accompanied by obligatory wh-agreement with the corresponding argument, i.e. with an obligatory wh-trace in the embedded clause. An example of such a predicate is *fjež'en* 'begin', which selects for an absolutive external argument and an applied object theme: if the applied argument of *jeχ<sup>w</sup>enən* 'scold' in the embedded clause is relativized, the matrix predicate expones a wh-agreement marker in the applied object position (93a). Unlike with *fejen* 'want' in (91b), the wh-marker referring to the relativized argument in the embedded clause is obligatory, indicating that this construction unambiguously involves long-distance relativization with cyclic wh-agreement on the matrix predicate (93b).

- (93) a. xet-a [RC Op<sub>i</sub> we [CP t<sub>i</sub>(IO) wə-Z-e-χ<sup>w</sup>enə-n-ew ]  
 who-Q you 2SG.ABS-**WH.IO**-DAT-scold-MOD-ADV  
 wə-Zə-f-je-ž'a-be ] -r  
 2SG.ABS-**WH.IO**-BEN-DAT-begin-PST -ABS



‘Who did you begin to scold?’

- b. \* xet-a [RC Op<sub>i</sub> we t<sub>i</sub>(IO) [CP pro<sub>i</sub>(IO)  
 who-Q you  
 w-Ø-je-χ<sup>w</sup>enə-n-ew ] wə-zə-f-je-ž’a-βe ]  
 2SG.ABS-3SG.IO-scold-MOD-ADV 2SG.ABS-WH.IO-BEN-DAT-begin-PST  
 -r  
 -ABS

Intended: lit. ‘For whom did you begin to scold them?’

Finally, if a complement clause is in the absolutive position, no overt wh-marker is required in the matrix clause – this is the type of complement clause discussed in section 3 of the paper. Since both wh-agreement and regular third person agreement for absolutive arguments is phonologically null, it is impossible to diagnose the presence of wh-agreement on the matrix predicate. However, for most predicates which select for a complement clause in the absolutive position, the only available analysis of wh-movement involving an embedded constituent is long-distance extraction, since the wh-marker in the embedded clause is obligatory. For example, this is true for *jeβež’en* ‘begin’: if the applied argument of the predicate *š’ətχ<sup>w</sup>ən* ‘praise’ is relativized, the corresponding wh-agreement marker appears on the embedded predicate (94a); a version of this sentence where the embedded wh-marker is absent and there is a presumed absolutive proleptic argument in the matrix clause is ungrammatical (94b).

- (94) a. xet-a [RC Op<sub>i</sub> we [CP t<sub>i</sub>(IO) wə-z-š’ə-tχ<sup>w</sup>ə-n-ew ]  
 who-Q you 2SG.ABS-WH.IO-LOC-praise-MOD-ADV  
 Ø-je-b-βe-ž’a-βe ] -r  
 3ABS-DAT-2SG.ERG-CAUS-begin-PST -ABS  
 ‘Who did you begin to praise?’

- b. \* xet-a [RC Op<sub>i</sub> we t<sub>i</sub>(ABS?) [CP pro<sub>i</sub>(IO)  
 who-Q you  
 wə-Ø-š’ə-tχ<sup>w</sup>ə-n-ew ]  
 2SG.ABS-3SG.IO-LOC-praise-MOD-ADV  
 Ø-je-b-βe-ž’a-βe ] -r  
 WH.ABS-DAT-2SG.ERG-CAUS-begin-PST -ABS  
 Intended: lit. ‘For whom did you begin to praise them?’

Another predicate that selects for an absolutive clausal complement and behaves in the same manner as *jeβež’en* ‘begin’ in regards to subextraction is *den* ‘allow’. This verb selects for an ergative agent and a CP in the absolutive position. Relativization of an argument from within the complement clause involves obligatory long-distance wh-movement. In (95a) the applied object of *jepλən* ‘look’ is relativized and correspondingly triggers wh-agreement in the embedded predicate; (95b) indicates that the only available interpretation of the previous example is one involving long-distance wh-movement from within the embedded clause, since an alternative of this sentence where the relativized participant is expressed as a regular pronoun and is presumably co-indexed with a proleptic absolutive wh-trace in the matrix clause is deemed ungrammatical.

- (95) a.  $\text{marə}$  [<sub>RC</sub>  $\text{kjən-w-ew}_i$  [<sub>CP</sub>  $t_i(\text{IO})$   $\text{tə-z-e-pλə-n-ew}$  ]  
 here film-ADV 1PL.ABS-**WH.IO**-DAT-look-MOD-ADV  
 $\text{Ø-qə-t-fe-ŝ}^w\text{ə-da-ɸe}$  ] -r  
 3ABS-DIR-1PL.IO-BEN-2SG.ERG-consent-PST -ABS  
 ‘Here is the film that you allowed us to watch.’
- b. \*  $\text{marə}$  [<sub>RC</sub>  $\text{kjən-w-ew}_i$   $t_i(\text{ABS}?)$  [<sub>CP</sub>  $\text{pro}_i(\text{IO})$   
 here film-ADV  
 $\text{t-Ø-je-pλə-n-ew}$  ]  
 1PL.ABS-**3SG.IO**-DAT-look-MOD-ADV  
 $\text{Ø-qə-t-fe-ŝ}^w\text{ə-da-ɸe}$  ] -r  
**WH.ABS**-DIR-1PL.IO-BEN-2PL.ERG-consent-PST -ABS  
 Intended: lit. ‘Here is the film which you allowed us to watch it.’

Importantly for the discussion of possessor extraction, both parasitic gap constructions which are licensed by a proleptic argument in the matrix clause and long-distance wh-movement configurations involve operator movement within the embedded clause and are island sensitive. As discussed in Ershova (2021a), parasitic gap constructions, of which proleptic constructions are a subtype, are generally island sensitive: there cannot be more than one island boundary between the licensing and parasitic gaps.

## C Possessor extraction in different types of embedded clauses

The lack of islandhood effect with ergative and applied argument DPs in embedded CPs is robustly observed with various types of predicates. Below are some examples with CP-embedding verbs which are ambiguous between a proleptic and long-distance wh-movement configuration: *fejen* ‘want’ and *jezeš’an* ‘tire of’. As with the verbs discussed above, ergative and applied argument DPs do not display islandhood effects in these contexts. For example, in (96) the possessor of the ergative agent of *šten* ‘take’ is successfully relativized from the clausal complement of the verb *fejen* ‘want’. In (97) the possessor of the dative addressee of *ježen* ‘call’ is relativized, once again within a CP which is embedded under *fejen* ‘want’. Finally, (98) demonstrates that the possessor of an applied argument may be relativized, when embedded under the verb *jezeš’an* ‘tire of’.

- (96)  $\text{marə}$  [<sub>RC</sub>  $\text{bzəlfəw-ew}_i$  [<sub>CP</sub> [<sub>DP</sub>  $t_i(\text{PR})$   $\text{z-jə-č’ale}$  ](ERG)  
 here woman-ADV **WH.PR**-POSS-boy  
 $\text{s-jə-txəλ-xe-r}$   $\text{Ø-ə-šte-n-ew}$  ]  
 1SG.PR-POSS-book-PL-ABS 3ABS-3SG.ERG-take-MOD-ADV  
 $\text{sə-z-fe-mə-je}$  ] -r  
 1SG.ABS-**WH.IO**-BEN-NEG-want -ABS  
 lit. ‘Here is the woman whose I don’t want \_\_ son to take my books.’
- (97)  $\text{xet-a}$  [<sub>RC</sub>  $\text{Op}_i$  [<sub>CP</sub> [<sub>DP</sub>  $t_i(\text{PR})$   $\text{z-jə-pšaše}$  ](IO)  
 who-Q **WH.PR**-POSS-girl

(98) marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [CP [DP t<sub>i</sub>(IO) z-jə-sabəj-xe-m ] (IO) aχš'e  
 here woman-ADV WH.PR-POSS-child-PL-OBL money  
 Ø-q-ja-s-tə-n-ew ] sə-z-e-zeš'ə-be ]  
 3ABS-DIR-3PL.IO+DAT-1SG.ERG-give-MOD-ADV 1SG.ABS-WH.IO-DAT-tire.of-PST  
 -r  
 -ABS  
 'Here is the woman whose I'm tired of giving money to \_\_ children.'

(99) marə [RC pšaš-ew<sub>i</sub> [CP [DP \_\_PG(PR) **z-jane** ](ERG) məʔerəse-xe-r  
 here girl-ADV **WH.PR**-mother apple-PL-ABS  
 Ø-q-j-e-šəpə-fe ] *t<sub>i</sub>*(ERG) laɓe-xe-r  
 3ABS-DIR-3SG.ERG-DYN-collect-LIM dish-PL-ABS  
 Ø-**zə**-thač'ə-ž'ə-xe-re ] -r  
 3ABS-**WH.ERG**-wash-RE-PL-DYN -ABS  
 'Here is the girl who is washing the dishes while her mother is picking apples.'

51