This article identifies and tests a novel diagnostic for clause structure in West Circassian, a polysynthetic language with ergative alignment. The diagnostic concerns an unusual construction involving multiple \textit{wh}-agreement in relative clauses. I argue that \textit{wh}-agreement morphology uniformly tracks agreement with a \textit{wh}-trace, and sentences with more than one instance of \textit{wh}-agreement are surface manifestations of a parasitic gap dependency. Once multiple \textit{wh}-agreement is understood in this theoretically familiar light, it can be used as a powerful tool for diagnosing asymmetries between various constituents in the West Circassian clause. By appealing to well-known constraints on parasitic gap licensing, the article demonstrates that the absolutive DP raises to a position c-commanding other clausemate DPs, and applied objects may undergo optional scrambling to a position above the ergative agent.

\textbf{Keywords:} \textit{wh}-agreement, parasitic gaps, syntactic ergativity, West Circassian

\section{1 Introduction}

Polysynthetic languages pose a unique challenge for syntactic analysis in that they often lack the usual structural cues such as word order restrictions, nominal case, and freestanding anaphors. However, they often display nontrivial morphological cues, which, if understood correctly, can be used as a productive tool for diagnosing syntactic operations. This article presents such a case study: West Circassian (also known as Adyghe, of the Northwest Caucasian family) is generally classified as polysynthetic, with verbs hosting prefixes corresponding to all the participants of a predication, possessor marking on the possessum, prominent pro-drop, and a system of two morphological case markers that are omitted in certain environments. Relativization, which is the only type of \textit{wh}-movement in the language, manifests itself first and foremost in the morphological
makeup of the predicate or nominal carrying cross-reference morphology relating to the relativized participant, with a special $wh$-agreement marker appearing in place of $\phi$-agreement with that participant. A peculiar property of constructions involving relativization in West Circassian is that they may contain more than one reflex of $wh$-agreement if the relativized participant is coreferential with another argument in the relative clause, rendering what is labeled throughout the article as a multiple $wh$-agreement configuration.

This article argues that multiple $wh$-agreement is best analyzed as the morphological reflex of a parasitic gap dependency, with one of the $wh$-markers expressing agreement with a parasitic $wh$-trace. This analysis is supported by the fact that West Circassian multiple $wh$-agreement constructions share all the core properties of parasitic gap structures: (a) one of the $wh$-markers is dependent on the other and cannot appear in its absence; (b) the additional $wh$-marker shows selective island sensitivity; (c) the additional $wh$-marker cannot refer to a PP-trace; (d) the additional $wh$-marker often alternates with a regular third person pronoun. Once multiple $wh$-agreement constructions are understood as a parasitic gap dependency, they can be used as a productive diagnostic for clause structure. In particular, restrictions on multiple $wh$-agreement provide evidence that the absolutive DP occupies a position c-commanding all other verbal participants, including the ergative agent. Furthermore, possible patterns of multiple $wh$-agreement, as well as the optionality of multiple $wh$-agreement in certain configurations, allow us to diagnose optional A-scrambling of the applied object to Spec,vP—a position c-commanding the ergative external argument.

The proposed analysis explains in a familiar light a construction that otherwise appears to be unusual and typologically rare, similar patterns being documented only for other languages within the Northwest Caucasian family, Abo (Bantu), and Ibibio (Niger-Congo) (see Lander 2009a, Baier and Yuan 2018, and references therein). This analysis also makes an important contribution to the debate regarding the existence of syntactically ergative languages by using a previously untested structural diagnostic for c-command relations between the ergative and absolutive participants. Finally, the article presents a novel way of using parasitic gaps as a diagnostic for the A vs. Ā nature of scrambling: while the ability to license parasitic gaps is taken as a diagnostic for Ā-scrambling, the ability of parasitic gaps to appear productively within DPs makes nontrivial predictions for the interaction of A-scrambling and parasitic gap licensing within a scrambled DP.

The remainder of the article is structured as follows: section 2 provides the necessary background on general clause structure and relative clause formation in West Circassian; section 3 outlines the evidence for a parasitic gap analysis of multiple $wh$-agreement constructions; section 4 argues for the high position of the absolutive DP on the basis of restrictions on parasitic gaps and the Anti-C-Command Condition; section 5 applies the parasitic gap analysis to diagnose A-scrambling of the applied object; and section 6 concludes.

2 Background on West Circassian

This section contains a short introduction to West Circassian clause structure and mechanisms of relativization.
2.1 General Clause Structure

This section provides a brief overview of the general morphological and syntactic properties of the West Circassian clause that are necessary for understanding relative clause formation.

West Circassian is generally characterized as a polysynthetic language, with prevalent head marking in both the verbal and nominal domains (see, e.g., Kumakhov 1964, Kumakhov and Vamling 2009, Testelets 2009a, Korotkova and Lander 2010, Lander and Letuchiy 2010, Lander 2017, Lander and Testelets 2017). Thus, a verbal form includes cross-reference morphology referring to all participants of the event it denotes. For example, the predicate in (1) includes prefixes cross-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 that is introduced by the causative morpheme ˛e-. The markers referring to the applied objects appear alongside applicative prefixes marking the semantic role of the corresponding applied object. The applicative markers vary depending on the θ-role of the applied object (benefactive ˛e-, comitative ˛e-, locative ˛e-, etc.).

(1) sə- qa- p- f- a- r- ja- ˛e- λe[,w] ,-˛e
 1sg.abs- dir- 2sg.io- ben- 3pl.io- dat- 3sg.erg- caus- see -pst

‘He showed me to them for your sake.’
(Korotkova and Lander 2010:301)

Cross-reference prefixes are strictly ordered in accordance with an ergative alignment system: the personal marker referring to the theme of a transitive verb and the sole argument of an intransitive verb appears in the leftmost position; this is followed by any cross-reference morphology referring to applied objects; and the marker cross-referencing the ergative agent appears closest to the verbal root. This ordering can be seen most clearly in the presence of the directive prefix qa/-qe-, which in (2a–d) is used to mark the directedness of the action. This prefix surfaces to the immediate right of the absolutive personal marker and to the left of the ergative and applied object markers. Thus, the first person cross-reference markers referring to the ergative agent (2a) or applicative indirect object (2b) surface to the right of the directive prefix, while the first person marker referring to the theme of the transitive verb (2c) or the subject of an intransitive verb (2d) appears to the left of the directive prefix. It can be noted as well that in (2b) the first person marker referring to the applied object appears to the left of the benefactive prefix ˛e-, which is then followed by a third person prefix, while in (2a) this same first person prefix marks the ergative agent and thus appears directly adjacent to the verbal root.

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1 The examples are glossed in accordance with the Leipzig conventions, with the following additions: DIR = directive; DYN = present tense on dynamic verbs; LIM = limitative; MOD = modal future; PR = possessor; RE = refactive. In line with recent literature on West Circassian, I use the following nonstandard symbols for the transcriptions: c = IPA /t/; ˛ = IPA /tš/; e = IPA /tʃ/; h = IPA /h/; 1 = IPA /hj/; ˛ = IPA /ŋ/; ˛e = IPA /ŋ/; ˛e = IPA /ŋ/; ˛e = IPA /ŋ/; ˛h = IPA /ŋ/; ˛h = IPA /ŋ/; C* = palatalization, Ç = ejective.

2 The prefix qa/-qe- has a number of uses, including marking directionality toward the speaker or inversion in accordance with the personal hierarchy 1 > 2 > 3 (Arkadiev et al. 2009:43, Arkadiev 2017, 2018).
(2) a. ə- qə- [ə- fe-] s- š’a -vir
3SG.ABS- DIR- 3SG.IO- BEN- 1SG.ERG- bring -PST
‘I (transitive subject) brought him/her to him/her.’
b. ə- qə- [s- f-] ja- š’a -vir
3SG.ABS- DIR- 1SG.IO- BEN- 3SG.ERG- bring -PST
‘He/She brought him/her to me (indirect object).’
c. sə- qə- ja- š’a -vir
1SG.ABS- DIR- 3SG.ERG- bring -PST
‘He/She brought me (direct object).’
d. sə- qə- kə- ə- -vir
1SG.ABS- DIR- go -PST
‘I (intransitive subject) came here.’

(Rogava and Keraševa 1966:137–138)

In the nominal domain, possessed nominals are marked with prefixal cross-reference morphology referring to the possessor; in cases of alienable possession, this prefix is followed by the possessive marker jə-.

Examples of an inalienably possessed noun and of a noun marked with the alienable possessive marker jə- are given in (3) and (4), respectively.

(3) s-šəpχʷə xe-r
1SG.PR-sister-PL-ABS
‘my sisters’

(4) t-jə-wə neχʷə xe-m
1PL.PR-POSS-neighbor-PL-OBL
‘our neighbors’

West Circassian displays ergative alignment in the domain of case marking as well: the theme of a transitive verb and the single argument of an intransitive verb are marked with the absolutive suffix -r, while the ergative agent, as well as any applied objects, receive the oblique marker -m. Thus, the subject of the intransitive verb qešen ‘dance’ (5a) and the theme of the transitive verb qən ‘plow’ (5b) are both assigned absolutive case -r, while the ergative agent of the latter verb carries the oblique case marker -m. Additionally, any indirect objects—such as the comitative applied object šəχəχə ‘woman’ in (5c)—are assigned oblique case as well. The oblique case suffix -m is also used to mark possessors (6a) and complements of postpositions (6b).

(5) a. č’ale-r ə-q-e-šə
boy-ABS 3ABS-DIR-DYN-dance
‘The boy is dancing.’
b. əwakʷe-m qəbke-ə-r ə-əwə-a-v
plowman-OBL field-ABS 3ABS-3SG.ERG-plow-PST
‘The plowman plowed the field.’

3 See Gorbunova 2009 on alienable vs. inalienable possession in West Circassian.
c. ɬa-r $w\,\text{az}a\,\text{-m} \ 0-[\emptyset\text{-d}]\text{-e}\text{?e}\text{p}\text{a}\text{?e} \\
man\text{-ABS} \ \text{woman}\text{-OBL} \ 3\text{SG.ABS}\text{-}[3\text{SG.IO-COM}]\text{-help.DYN} \\
‘The husband is helping the wife.’ \\
(Arkadiev et al. 2009:53)

(6) a. $w\,\text{az}a\,\text{-m} \ \text{q}\text{-}\text{e} \\
woman\text{-OBL} \ 3\text{SG.PR-son} \\
‘the woman’s son’

b. m\text{a} $w\,\text{az}a\,\text{-m} \ \text{paje} \\
this woman\text{-OBL} \ for \\
‘for this woman’

Caponigro and Polinsky (2011) differentiate between the use of the oblique case marker -m on ergative DPs and its other uses; Rogava and Keraševa (1966), Arkadiev et al. (2009), Arkadiev and Letuchiy (2011), Lander (2012), Letuchiy (2015), and Lander and Testelets (2017), among others, provide a uniform treatment for all instances of this marker. In this article, I follow recent work on West Circassian in glossing both case markers as oblique, but follow Caponigro and Polinsky (2011) in assuming that the source of the case differs for the various types of arguments. In cases of potential ambiguity, the examples are labeled accordingly.

Nouns may appear without overt case marking; the lack of case marking is generally 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 and Testelets to appear). While the order of arguments in a full clause is free, the language is prevalently left-branching: case markers are suffixal; the language has postpositions rather than prepositions; embedded clauses tend to be verb-final; and relative clauses appear to the left of their nominal external head.

Case is assigned in the following way: following Caponigro and Polinsky’s (2011) adaptation of Legate’s (2008) and Pylkkänen’s (2008) proposals to West Circassian, Appl⁰ and v⁰ assign inherent case to their specifiers—oblique in the former case and ergative in the latter case. Both are spelled out via the same exponent -m, which is uniformly glossed as ‘OBL’. Counter to Caponigro and Polinsky (2011), who assume that absolutive case has two distinct structural sources based on syntactic role, T⁰ for intransitive subjects and v⁰ for direct objects, I propose here that absolutive case is uniformly assigned by T⁰. I argue that absolutive case assignment drives movement of the absolutive DP to Spec,TP—a position c-commanding both the ergative agent and any applied objects.

2.2 Relative Clauses

This section outlines the general structure of relative clauses. The morphosyntactic properties of relative clauses in West Circassian, including patterns of multiple wh-agreement, have been documented in detail by Lander (2009a,b, 2012) and analyzed in Minimalist terms by Caponigro and Polinsky (2011); this section relies heavily on generalizations made in these papers. Following Caponigro and Polinsky (2011), I propose that relativization in West Circassian involves the movement of a relative operator to Spec,CP. In externally headed relative clauses, the operator
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is phonologically null; in relative clauses that have been labeled in the literature as internally headed (Lander 2009a, 2012), the relative operator is spelled out as the internal head.

Relativization of nonabsolutive participants in West Circassian involves the use of a special relativizing morpheme za- in place of the regular cross-reference morphology referring to the relativized participant (Lander 2009a, 2012, Caponigro and Polinsky 2011). This is shown in (7): in (7a), the ergative agent triggers third person ergative personal marking (–ơ–) on the predicate heading the clause; if that participant is relativized, as in (7b), the corresponding cross-reference morphology is replaced with the prefix za- . The noun phrase corresponding to the relativized participant surfaces with adverbial marking at the left edge of the relative clause; I take this to be the overt spell-out of the relative operator.

(7) a. ma č’ale-m(ERG) ə-š velosjoped
  this boy-OBL 3SG.PR-brother bicycle
  0- 0- r- ja- tə -x
  3ABS- 3SG.IO- DAT- 3SG.ERG- give -PST
  ‘This boy gave a bicycle to his brother.’

b. marə [č’al-ew1 t1(ERG) ə-š velosjoped
  here boy-ADV 3SG.PR-brother bicycle
  0- 0- je- za- tə -ikə] -r
  3ABS- 3SG.IO- DAT- WH.ERG- give -PST -ABS
  ‘Here is the boy that gave a bicycle to his brother.’

The same pattern arises if an applied object is relativized. Thus, the applied object in (8a) triggers third person singular cross-reference marking that appears adjacent to the benefactive applicative prefix. If this participant is relativized, the corresponding personal marker is replaced with za- (8b).

(8) a. ma č’ele-čäkʷə-m 0-jane 0- 0- fe- gʷəbž -zepət
  this boy-small-OBL 3SG.PR-mother 3ABS- 3SG.IO- BEN- angry -always
  ‘His mother is always angry at this boy.’

b. marə [č’ele-čäkʷ-ew1 t1(10) 0-jane
  here boy-small-ADV 3SG.PR-mother
  0- za- fe- gʷəbž -zepətə -re] -r
  3ABS- WH.IO- BEN- angry -always -DYN -ABS
  ‘Here is the boy at whom his mother is always angry.’

If a nominal possessor is relativized, the personal cross-reference marker on the possessed nominal is likewise replaced with the marker za- (9).

(9) marə [RC gʷəz-ew1 [DP t1(PR) z-jo-pšaše] dax-ew 0-qa-gʷe-re] -r
  here woman-ADV WH.PR-POSS-girl good-ADV 3ABS-DIR-dance-DYN -ABS
  ‘Here is the woman whose daughter dances well.’

4 In accordance with regular morphophonological rules (Arkadiev et al. 2009:27–29), the prefix za- surfaces as za- prevocally or before the glide /j/; additionally, the allomorph ze- is used to mark a dative applied object.
Relativization of an absolutive DP does not involve an overt relativizing morpheme. Since absolutive third person participants do not trigger overt cross-reference morphology, this means that if an absolutive DP is relativized, the predicate heading the clause remains unchanged in terms of cross-reference marking. Thus, the absolutive participant in (10a) triggers null absolutive cross-reference marking on the predicate; if this argument is relativized, the cross-reference morphology on the predicate does not change (10b).

(10) a. ha-r 0-ja-xozjajên 0- je- ceqa -b
    dog-abs 3sg.pr-poss-owner 3abs- 3sg.io- dat- bite -pst
    'The dog bit its owner.'
    b. se sê-0-š’e-š’one [ha-wi t(ABS) 0-ja-xozjajên
    I 1sg.abs-3sg.io-loc-fear dog-adv 3sg.pr-owner
    0- 0- je- ceqa -be]-m
    wh.abs- 3sg.io- dat- bite -pst -obl
    'I fear the dog that bit its owner.'

Following O’Herin’s (2002) analysis of a similar construction in Abaza (Northwest Caucasian) and Caponigro and Polinsky (2011), I take the morpheme za- to be the spell-out of $\phi$-agreement with the relativized participant. In line with Baier 2018,5 I assume that the $\phi$-features are neutralized in this case due to a feature impoverishment rule. Every $\phi$-agreement probe hosts the feature [AGR], while a relativized argument bears the feature [WH] alongside regular $\phi$-features. After agreement takes place, all $\phi$-features on the probe are deleted in the presence of the feature [WH] per the rule in (11a) (adapted from Baier 2018:67). The morpheme za- is then the spell-out of agreement with an oblique case-marked wh-element (11b), and the allomorph 0- is the elsewhere exponent of agreement (11c); the same null morpheme is used for agreement with third person absolute arguments.

(11) a. Impoverishment rule: [$\phi$] $\rightarrow$ 0 / [___;WH;AGR]
    b. Oblique wh-agreement: [WH;OBL;AGR] $\rightarrow$ /za-/ 
    c. Elsewhere case: [AGR] $\rightarrow$ /0-/ 

This approach contrasts with Lander’s (2009a,b, 2012) and Lander and Daniel’s (to appear). These authors assume that za- is a morphologically expressed relative or resumptive pronoun and that absolutive relativization is a distinct unmarked relativization strategy that does not involve the use of any special morphology, overt or otherwise. The main motivation for treating the null morphology in cases of absolutive relativization as wh-agreement rather than the absence of wh-agreement is that it involves wh-movement of the absolutive argument. This is evinced by the fact that an absolutive trace may license parasitic gaps in embedded clauses; see example (29) below.

In terms of the position of the head, there are two constructions in West Circassian: one where the relative clause appears to the left of a nominal that bears case in accordance with the

5 See also Stiebels 2006 for a similar analysis of Mayan agent focus, which, like overt wh-agreement in West Circassian, occurs when a nonabsolutive argument is extracted.
syntactic position of the full DP, and one where the head appears within the relative clause, often on the left edge, and is marked with adverbial case. (7)–(10) are examples of the latter type. The former type is illustrated in (12).

(12) [RC Op, t(ERG) 0-jo-shane"anche 0- xe- zə- wətə -ke] č’ale-r march
3SG.PR-POSS-window 3ABS- LOC- wh.ERG- break -PST boy-ABS here

‘Here is the boy that broke his window.’

The two types of relative clauses differ only in the position of the nominal head; they appear to be semantically equivalent and acceptable in the same range of contexts (Lander 2012:244). As can be seen in (12), the predicate heading the relative clause displays wh-agreement with the relativized participant regardless of the position of the nominal head.

Finally, relative clauses may be headless, with no overt nominal head. In this construction, the predicate heading the relative clause shows the same patterns of wh-agreement as in a headed relative clause and carries the case assigned by the matrix verb. For example, in (13) a headless relative clause is used as the indirect object of the matrix verb and is correspondingly marked with oblique case. Within the relative clause, the predicate is marked with wh-agreement for the relativized participant.

(13) [RC Op, Aslan t(1O) 0- zə- fæ -zepətə] m ə-š- xe-r
0-0-faj-ep
3ABS- wh.1O- want -always -OBL 3SG.PR-brother-PL-ABS

‘[What Aslan always wants] his brothers don’t want.’

Following Caponigro and Polinsky (2011), I assume that West Circassian relative clauses are formed via the movement of a relative operator to Spec,CP; this is schematically represented in (14). In externally headed relative clauses, the operator is phonologically null, and in internally headed relative clauses, where the nominal head appears within the relative clause and is marked with adverbial case, the internal head is the overt spell-out of this operator.

(14) General structure of a West Circassian relative clause

[CP Op, C[wh] [TP . . . t, . . . ]]

The primary reason to believe that both externally and internally headed relative clauses involve the movement of a relative operator to Spec,CP is that both types of clauses display wh-agreement with the relativized argument. This is in stark contrast with wh-in-situ questions, where the wh-word remains in its base position and there is no overt wh-agreement. There are two strategies for forming wh-questions in West Circassian (Sumbatova 2009). The first is a pseudo-left construction, with the wh-word acting as a focused predicate, and a headless relative clause appearing as the absorptive argument. In this case, the headless relative clause displays overt wh-agreement, as expected (15a). The second involves the use of the wh-word in situ. In this case, the predicate heading the clause does not display any wh-agreement (15b).
(15) a. sad(-a) [RC Op, mθ c’ale-θ t(10) 0- z- e- pλο-θr -θr] -θr
   who-θ this boy-ABS 3ABS- WH.IO- DAT- watch -PST -ABS
   ‘What did this boy watch?’
b. mθ c’ale-θ sad 0- θ- je- pλο-θr (-a)
   this boy-ABS what 3ABS- 3SG.IO- DAT- watch -PST -Q
   ‘What did this boy watch?’ (Lit. ‘This boy watched what?’)

This contrast between wh-in-situ questions and questions that involve relativization can easily be explained if we assume that wh-words that remain in situ lack the wh-feature that triggers movement to Spec,CP and wh-agreement. If this logic is extended to internally headed relative clauses, they are expected to involve the same type of wh-feature-triggered movement as externally headed relative clauses.

Additionally, the internal head may not carry the case marker that is assigned to the corresponding argument within the relative clause; instead, as the examples above show, it must carry the adverbial case marker. Finally, as shown in the following section, internally headed relative clauses may host multiple wh-agreement configurations, which I argue in section 4 to involve a parasitic gap dependency that is licensed by wh-movement. On the basis of this evidence, I analyze the internal head as the overt spell-out of the relative operator.

2.3 Multiple Wh-Agreement

West Circassian relative clauses may contain more than one instance of wh-agreement, if the relativized participant is coreferential with another argument in the clause, resulting in patterns of multiple wh-agreement. For example, the relative clause in (16a) contains a null pronoun (indicated as pro) in the position of the possessor of the ergative agent, triggering corresponding third person singular agreement on the possessed noun. In this case, the possessor pronoun may be optionally interpreted as coreferential with the relativized indirect object. In (16b), on the other hand, the third person possessor agreement is replaced with the wh-agreement marker zθ; in this case, the possessor is obligatorily interpreted as coreferential with the relativized indirect object.

(16) a. mara [RC c’al-ewi [DP pro,ij(PR) a-θ]θ(ERG) t(10) velosjoped
   here boy-ADV 3SG.PR-brother bicycle
   0- qa- ze- r- ja- tθ -θr] -θr
   3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS
   ‘Here is the boyj to whom hisij brother gave a bicycle.’
b. mara [RC c’al-ewi [DP pro,ij(PSR) zθ-θ]θ(ERG) t(10) velosjoped
   here boy-ADV WH.PR-brother bicycle
   0- qa- ze- r- ja- tθ -θr] -θr
   3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS
   ‘Here is the boyj to whom hisij brother gave a bicycle.’

The additional wh-agreement may appear in all types of relative clauses: internally headed, as in (16b), as well as externally headed and headless relative clauses, as illustrated in (22) and
(25) below, providing an additional piece of evidence that these three constructions are structurally identical.

Such patterns of multiple wh-agreement may appear intraclausally—between a relativized participant and a coreferential pronoun embedded within another DP, as in (16b), as well as cross-clausally, with the additional wh-agreement marker surfacing inside an embedded clause. An example of cross-clausal wh-agreement is shown in (17). The baseline finite construction is given in (17a): the ergative DP in the matrix clause is interpreted as coreferential with the ergative agent of the embedded adverbial adjunct. If the ergative participant of the matrix clause is relativized, the predicate in the embedded clause may retain regular third person singular agreement with the coreferential pronoun in the ergative position, or this agreement may be replaced with an additional instance of wh-agreement (17b).

(17) a. mə ɕ’ale-mə(ERG) varenje ȱ- j- e- šxə [CP pro₁(ERG) swəpa-r
this boy-obl jam 3ABS-3SG.ERG- DYN- eat soup-ABS
ȱ- ø- mə- wəx -ze]
3ABS-3SG.ERG- NEG- finish -CVB
‘This boy is eating jam without finishing the soup.’

b. marə [RC ɕ’al-ew, t₁(ERG)] varenje ȱ- za- šxə -re -r [CP pro₁(ERG)
here boy-ADV jam 3ABS- wh.ERG- eat -DYN -ABS
sʷəpa-r ȱ- ø/za- mə- wəx -ze]]
soup-ABS 3ABS- 3SG/wh.ERG- NEG- finish -CVB
‘Here is the boy who is eating jam without finishing the soup.’

The wh-marked participants in a multiple wh-agreement construction are not equally accessible for A*-movement: one of the wh-agreement markers is additional or parasitic in the sense that the argument it refers to may not be extracted directly over the coreferential argument (Lander 2012:322–327). Thus, while it is possible to mark only the ergative participant in (16a) with wh-agreement, the inverse pattern is not possible: the coreferential possessor of the indirect object may not be marked with wh-agreement if the ergative participant triggers regular third person agreement (18).⁷

(18) *marə [RC ɕ’al-ew, pro₁(ɪo) [DP t₁ za-š][ERG] velosjoped
here boy-ADV wh.pr-brother bicycle
ȱ- ȱ- r- jə- tə -be]-r
3ABS-3SG.10- DAT-3SG.ERG- give -PST -ABS
Intended: ‘Here is the boy to whom his brother gave a bicycle.’

In the following section, I propose an analysis of multiple wh-agreement that connects directly to the additional nature of one of the wh-markers. In particular, I argue that multiple wh-agreement

⁶ Lander (2009a, 2012) argues that cross-clausal cases of multiple wh-agreement are structurally distinct from intraclausal cases. The analysis proposed here dispenses with the necessity of treating these two cases as separate phenomena; for discussion, see section 3.5.

⁷ While some types of possessors may be relativized directly, the possessor of an indirect object, as in (18), may not. This is why the sentence is simply ungrammatical, as opposed to having an interpretation wherein the possessor is not coreferential with the ergative agent.
constructions are manifestations of parasitic gap dependencies, whereby each of the wh-agreement markers is the spell-out of agreement with a wh-trace, licensing or parasitic.

3 Multiple Wh-Agreement as a Parasitic Gap Dependency

This section presents an analysis of multiple wh-agreement as a case of a parasitic gap dependency. I argue that all cases of wh-agreement are uniformly agreement with a wh-trace. In cases of multiple wh-agreement, the relative clause contains more than one trace: a licensing trace and a parasitic gap. I adopt the proposal put forth by Chomsky (1986), Postal (1998), Nissenbaum (2000), and others, that parasitic gap constructions involve local operator movement to the edge of the constituent hosting the gap. Both the parasitic gap and the licensing gap are c-commanded by the relative operator in Spec,CP of the relative clause, but the licensing gap does not c-command the parasitic gap, per the Anti-C-Command Condition on parasitic gaps. The structures for the multiple wh-agreement constructions in (16b) and (17b) are presented schematically in (19) and (20). In (19), the relativization of the applied object licenses a parasitic gap within the ergative DP; the parasitic gap configuration is built via wh-movement of a null operator from Spec,PossP to the edge of the corresponding DP. In (20), the parasitic gap is analogously licensed within an adjunct to TP.
The argumentation for this structure proceeds as follows:

- The additional wh-agreement is parasitic on the primary wh-agreement: either it appears within a constituent that is otherwise an island for extraction, or it cannot surface in the absence of the primary wh-agreement while preserving the intended coreference interpretation between the participants in question.
- The parasitic gap cannot be separated from the licensing operator in the matrix clause by more than one island boundary.
- The parasitic wh-agreement can only be licensed by a DP gap, not by a PP gap—a robustly observed property of parasitic gaps.
- Like parasitic gaps, multiple wh-agreement is almost always optional. Just as parasitic gaps freely alternate with pronouns, the additional wh-agreement marker can generally be replaced with φ-agreement with a pronoun.

3.1 Multiple Wh-Agreement Is Parasitic

This section aims to show that the appearance of additional wh-agreement is parasitic on the relativization of the participant triggering the primary wh-agreement: either the participant triggering the additional wh-agreement in a multiple wh-agreement construction appears within an island for extraction, or that participant cannot be relativized directly in the presence of a coreferential argument in a potential licensing position. Islands for extraction that allow parasitic gaps include nonabsolutive DPs and adjunct clauses; nonisland contexts that allow parasitic gaps are absolutive DPs and complement clauses.

3.1.1 Islands As was shown in (16b), a possessor that is coreferential with the relativized participant may trigger additional wh-agreement. Most types of possessors, however, are not accessible for relativization. In particular, many speakers disallow the direct relativization of possessors of
nonabsolutive arguments. In such cases, the corresponding nonabsolutive DP must be relativized to form a pseudocleft construction, with that relativized DP acting as the absolutive subject. The possessor is then extracted out of that absolutive DP. How possessors of various nonabsolutive arguments are relativized is illustrated below (see also Lander 2012:284–285, 360–361).

1 Possessor of an indirect object. The baseline sentence for the extraction of the possessor of an applied indirect object is provided in (21a): the DP *mwe šwəzəm ‘this woman’ appears within the DP that is functioning as the applied object of the main verb; the possessor triggers third person singular possessive agreement on the possessed noun, and the applied object in turn triggers third person singular agreement on the predicate. In (21b), we can see that direct relativization of the possessor, with *wh-agreement replacing possessor agreement on the possessed nominal and no other structural changes, is ungrammatical. Instead, in order for the possessor of the indirect object to be relativized, the indirect object must first be “promoted” to the position of the absolutive argument in a pseudocleft construction, with the newly formed relative clause acting as the predicate of the pseudocleft. This results in a structure involving recursive relativization, where both the indirect object and the possessor of that indirect object are relativized (21c).

(21) a. [DP [mwe šwəzə-m](PR) a-qʷe]=(IO) č’elejɛ’zə-r 0- 0- je- čəça -r
   this woman-oobl 3sg.pr-son teacher-abs 3abs- 3sg.io- dat- scold -pst
   ‘The teacher scolded this woman’s son.’

b. *mwarə [RC šwəz-ewi [DP t_i(PR) zə-qʷe]=(IO) č’elejɛ’zə-r
     here woman-adv  wh.pr-son teacher-abs
     0- 0- je- čəça -re] -r
     3abs- 3sg.io- dat- scold -pst -abs
   Intended: ‘Here is the woman whose son the teacher scolded.’

c. mwarə [RC šwəz-ewi [DP t_i(PR) zə-qʷej(abs)] [RC Op_j č’elejɛ’zə-r t_j(IO)
     here woman-adv  wh.pr-son teacher-abs
     0- 0- e- čəça -re] -r
     3abs- wh.io- dat- scold -pst -abs
     ‘Here is the woman whose son the teacher scolded.’ (Lit. ‘Here is the woman whose son is the one the teacher scolded.’)

While the possessor of an indirect object is not accessible for direct relativization, it may trigger additional *wh-agreement in the presence of a coreferential relativized participant. Thus, in a relative clause like the one in (22), the *φ-agreement tracking the possessive pronoun within the indirect object DP may be optionally replaced with the *wh-agreement marker if that possessor is coreferential with the relativized ergative participant.

8 Lander (2012:280–281) lists all types of possessors as accessible for relativization, and Lander (2009b) notes that certain dialects of West Circassian ban the extraction of possessors of a nonabsolutive DP. The majority of my consultants uniformly ban extraction of possessors from nonabsolutive DPs.
(22) \[ \text{RC Op}_1 \text{ DP pro}_1 / \text{ ___PG(pr) a/\text{za}-\text{š}}(10) t_i(\text{erg}) \text{ konfet} \]
\[ \text{3sg/wh. pr}-\text{brother} \text{ candy} \]
\[ \emptyset- \emptyset- \text{ je- \text{za}-} \text{ tò -\text{re}} \text{ pšaše-m sò-\text{š}-s’-\text{ta}-\text{tx}^{\prime}_{\text{š}-\text{š}} \]
\[ \text{3abs- 3sg. io- dat- wh. erg}- \text{ give- pst} \text{ girl-obl 1sg.abs-3sg. io- loc- praise-pst} \]
‘I praised the girl that gave candy to her brother.’

2 Possessor of the ergative agent. Like the possessor of an indirect object, the possessor of an ergative agent may not be relativized directly. If one attempts to relativize the possessor of the ergative DP directly, as in (23a), the result is ungrammatical. Instead, as with the relativization of the possessor of an indirect object, the ergative DP must first be relativized in order to form a pseudocleft with the former ergative agent acting as the absolutive argument (23b).

(23) a. *\text{mwar} [\text{RC s}^{\prime}\text{waz-ew}_i \text{ [DP t}_i(\text{pr}) \text{ z-\text{j}-\lambda}] (\text{erg}) \text{ wāne-xe-r}]
\text{here woman-adv wh. pr-poss- man house-pl-abs}
\[ \emptyset- \text{ə- \text{s}-} \text{ \text{s}-re} \text{ -t} \]
\[ \text{3abs- 3sg. erg}- \text{ do -dyn -abs} \]
Intended: ‘Here is the woman whose husband builds houses.’

b. \text{mwar} [\text{RC s}^{\prime}\text{waz-ew}_i \text{ [DP t}_i(\text{pr}) \text{ z-\text{j}-\lambda}] (\text{abs}) [\text{RC Op}_j \text{ t}_j(\text{erg}) \text{ wāne-xe-r}]
\text{here woman-adv wh. pr-poss- man house-pl-abs}
\[ \emptyset- \text{za- \text{s}-} \text{ \text{s}-re}] \text{ -t} \]
\[ \text{3abs- wh. erg}- \text{ do -dyn -abs} \]
‘Here is the woman whose husband builds houses.’ (Lit. ‘Here is the woman whose husband is the one that builds houses.’)

As was shown in (16b), while the possessor of an ergative agent is not accessible for direct relativization, it may trigger wh-agreement in a multiple wh-agreement construction.

The appearance of two wh-agreement markers in cases where a possessor of a nonabsolutive argument is extracted, as in (21c) and (23b), superficially resembles multiple wh-agreement constructions like (22). However, there are several important differences that suggest that this construction is distinct and involves recursive relativization, rather than a parasitic gap dependency.

First, the wh-agreement in (21c) and (23b) replaces agreement with the DP from which the possessor is being extracted. This is markedly different from cases of multiple wh-agreement, where the primary wh-agreement tracks a coreferential argument.

Second, the pseudocleft analysis of the constructions in (21c) and (23b) predicts that the DP with the relativized possessor occupies the absolutive position and should be assigned absolutive case. While possessed nouns do not generally carry case markers, case must be overtly expressed in the presence of the plural suffix -xe; in such a structure, the prediction is that the clefted nominal will carry the absolutive case marker -r.\textsuperscript{9} This prediction is illustrated in (24) for the

\textsuperscript{9} Thank you to Yury Lander for suggesting this diagnostic and accurately predicting its outcome on the basis of his own previously collected data.
analogous pseudocleft construction when it is used as a matrix clause: the plural DP sq\textsuperscript{w}exer ‘my sons’ appears as the absolutive argument and, despite carrying a possessive marker, requires the case suffix -r. For the relative clause to be used in the predicative position, it must be accompanied by the predicational copula ar\text{a}, which is absent in the relative clause.\footnote{For details on the behavior of the predicative copula ar\text{a} and pseudoclefts as a way of marking information structure, see Sumbatova 2009.}

(24) s-q\textsuperscript{w}e-xe-r ar\text{a} [\text{RC Op}_i t_i(\text{erg}) ze\text{\c{c}}e lahe-xe-r  \\
1\text{sg.pr-son-pl-abs pred} all dish-pl-abs  \\
\emptyset- z\text{\o} q\textsuperscript{w}ot\text{\o} -re] -xe -r  \\
3\text{abs- wh.erg- break -pst -pl -abs}

‘My sons are the ones who broke all the dishes.’

In a multiple \textit{wh}-agreement construction, on the other hand, the DP containing the \textit{wh}-agreeing possessor is expected to carry the case assigned to it by the predicate heading the relative clause. Thus, in (25) the \textit{wh}-agreement triggered by the possessor of the indirect object is parasitic on the \textit{wh}-agreement with the ergative agent of the predicate \textit{\textsc{\textit{\footnotesize ef\textit{w}}}} ‘buy’.

(25) xet-a [\text{RC Op}_i b\text{ere} t_i(\text{erg})  \$\text{\o}\text{\o} \text{\o}n [\text{dp ___pg z-j\text{\o}-sab\text{\o}-xe-m}] (io)  \\
who-\text{q} often clothing \text{wh.pr-poss-child-pl-obl}  \\
\emptyset- a- fe- z\text{\o} m\text{\o} -\text{\textsc{\textit{\footnotesize ef\textit{w}}-re]} -r  \\
3\text{abs- 3pl.io- ben- wh.erg- neg- buy -dyn -abs}

‘Who \text{\o} rarely buys clothes for their,\text{\o} children?’

Turning back to relativization of possessors of nonabsolutive arguments, the picture with case marking is surprisingly blurry. Most speakers do not have a clear judgment regarding the case marking: some speakers allow absolutive case marking on the plural possessed noun, and some allow oblique marking, but both strategies are judged only marginally acceptable. Thus, the only grammatical way of expressing the meaning in (26) is to omit plural marking—and, correspondingly, case marking as well—on the possessed nominal.\footnote{Unmarked nominals in West Circassian are unspecified for number and are interpreted in light of the context (Kumakhov 1971, Arkadiev and Testelets to appear).}

(26) mar\text{\o} [\text{rc} \$\text{\o}\text{\o}z-ew, [\text{dp} t_i z-j\text{\o}-\text{\c{c}}’ale / ??z-j\text{\o}-\text{\c{c}}’ale-xe-r  \\
here woman-\text{adv} \text{wh.pr-poss-boy / ??wh.pr-poss-boy-pl-abs /}  \\
??z-j\text{\o}-\text{\c{c}}’ale-xe-m] [\text{rc Op}_i t_i(\text{erg}) dax-ew wered  \\
??\text{wh.pr-poss-boy-pl-obl} pretty-\text{adv} song  \\
\emptyset- qe- z\text{\o} -??e -re]} -r  \\
3\text{abs- dir- wh.erg- say -dyn -abs}

‘Here is the woman whose children sing well.’

The fact that oblique case is not readily available in this construction suggests that this construction is distinct from multiple \textit{wh}-agreement constructions like (25). The unavailability
of absolutive case, however, is puzzling, if this is a simple pseudocleft construction. A possible explanation for the unavailability of overt case marking in (26) may lie in syncretism effects (e.g., Pullum and Zwicky 1986, Bjorkman 2016): the nominal that hosts the relativized possessor carries two conflicting case feature values (oblique and absolutive) and the only way to resolve this conflict is to use a form that is unmarked for case and thus syncretic between oblique and absolutive. Such a conflict arises in this case because a DP marked with oblique case has moved to an absolutive case position, schematically represented in (27).

\[
(27) \ [\text{DP-OBL}] - \text{ABS} \ [\text{CP} \ldots \text{DP-OBL}] 
\]

A detailed analysis of how this syncretism effect arises is outside the scope of this article; for the purposes of discussion here, it suffices to say that in order for a possessor to be extracted from a nonabsolutive DP, that DP must be moved to an absolutive case position. The reasons for the islandhood of nonabsolutive DPs likewise lies outside the scope of the current article. It is worth noting that none of the existing analyses for nonextractability out of oblique or inherently case-marked nominals are readily applicable to the West Circassian data. Analyses that rely on freezing effects (e.g., Bošković to appear) are not applicable because the absolutive DP undergoes movement to Spec,TP but is not an island. Importantly, even if we were to discard the main claim of the article and assume that the absolutive DP remains in situ in an attempt to salvage a freezing effect account, we would be no closer to accounting for the islandhood facts, because we would not be able to structurally differentiate between unergative external arguments and ergative agents. The specifier or external argument status of nonabsolutive arguments likewise cannot be appealed to, as proposed by (e.g.) Chomsky (2008) and Haegeman, Jiménez-Fernández, and Radford (2014), since absolutive arguments may originate both as complements of transitive verbs and as external arguments of unergative verbs. Finally, Branan’s (2018) proposal to tie the islandhood of inherently case-marked DPs to the lack of φ-agreement with these DPs does not appear to be correct for West Circassian, where all argument DPs trigger overt φ-agreement.

3 A DP within an adjunct clause. West Circassian adjunct clauses behave as islands for extraction: a DP cannot be relativized from within an adjunct clause directly. An adjunct clause may contain a wh-agreement marker, however, if an argument in the matrix clause that is coreferential with the participant triggering that wh-agreement is relativized. This is illustrated in (28). In (28a), if the indirect object of the matrix clause is relativized, the coreferential applied object in the adjunct clause may be expressed as a regular pronoun triggering third person agreement on the embedded predicate, or it may also trigger wh-agreement.\(^{12}\) However, if no participant is

\(^{12}\) The coreference of the applied object is not obligatory—the indirect object of the embedded clause may refer to a contextually provided antecedent. In isolation, however, the interpretation is biased toward a coreference reading, just as it is in English (cf. the translation of (28a)).
relativized from the matrix clause, the indirect object cannot be relativized directly from within the embedded clause (28b).

(28) a. xet-a [RC Opj aslan_{i} mafe-m rjene [CP pro_{t(ABS)} pro_{j(10)}/___pg
who-Q Aslan day-obl whole
\( \theta-\) \( \theta\)-je- / z-e- \( m\)-w -ew] \( t_{j}(10) \)
\( 3_{ABS} \) WH.IO-DAT- / WH.IO-DAT- NEG- hit -ADV
\( \theta- \) z-a- de- \( \hat{\text{eg}}^{w_{a}}\)-re] -r
\( 3_{ABS} \) WH.IO- COM- play -DYN -ABS
‘Who does Aslan play with ____ all day without hitting them / ____?’

b. *xet-a [RC Opj aslan\_{i} mafe-m rjene [CP pro_{t(ABS)} \( t_{j}(10) \)
who-Q Aslan day-obl whole
\( \theta-\) z-e- \( m\)-w -ew] \( \theta-\) \( \theta\)-de- \( \hat{\text{eg}}^{w_{a}}\)-re] -r
\( 3_{ABS} \) WH.IO- DAT- NEG- hit -ADV \( 3_{ABS} \) WH.IO- COM- play -DYN -ABS
Intended: ‘Who does Aslan play (with him/her) all day without hitting ____?’

A parasitic gap within an adjunct clause may be licensed by any gap in the matrix clause, including an absolutive trace, indicating that absolutive relativization involves \textit{wh}-movement despite the lack of overt \textit{wh}-morphology. This is shown in (29): the relativized absolutive external argument of \( \hat{\text{eg}}^{w_{a}}\text{an} ‘play’ may license a parasitic gap in place of the coreferential possessor pronoun on the embedded absolutive argument within the adjunct.

(29) mar\_\_ [RC psa\_{i} ewi [CP [pro/___pg \( \hat{\text{a}}\)-\( \text{sa}_p\text{x}^{w_{x}}\)] \( \theta\)-me-\( \hat{\text{e}}\)-je-fe] \( t_{j}(ABS) \)
here girl-ADV 3SG/WH.PR-sister 3ABS-DYN-sleep-LIM
n\( \text{a}_x\text{ape-m} \( \theta-\) \( \theta\)-ro- \( \hat{\text{eg}}^{w_{a}}\)-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.’

Thus, we have seen that multiple \textit{wh}-agreement constructions often involve additional \textit{wh}-agreement replacing agreement with a participant that is otherwise inaccessible for extraction—that is, that the additional \textit{wh}-agreement is \textit{parasitic} on the primary \textit{wh}-agreement.

3.1.2 Nonislands Additional \textit{wh}-agreement may appear within a number of nonisland constituents, including complement clauses and absolutive DPs. Despite being in a position that is accessible for extraction, the \textit{wh}-agreement in this case is parasitic on the primary \textit{wh}-agreement marker, meaning that it cannot appear in the absence of the primary \textit{wh}-agreement marker while retaining the same coreferential interpretation.

4 A DP within a complement clause. The accessibility of complement clauses for \textit{wh}-movement varies considerably (see also Lander 2009a, 2012). The majority of the speakers I consulted did not treat nonfactual clausal complements as islands for extraction. Importantly, however, even for speakers who allow direct extraction of an argument from within the embedded clause, such extraction is not allowed in case one of the arguments of the matrix verb is coreferential with the corresponding embedded participant. For example, in (30a) the applied object of the
matrix verb *jač’esen* ‘like’ is coreferential with the applied object of the embedded verb jetan ‘give’; the coreferential matrix participant may be relativized, triggering *wh*-agreement on the matrix predicate, while the embedded coreferential pronoun triggers regular \( \phi \)-agreement on the embedded verb. Optionally, the embedded coreferential pronoun may be replaced with a parasitic gap that then triggers additional *wh*-agreement on the embedded verb. Importantly, however, the embedded applied object cannot be extracted directly in the presence of the coreferential pronoun in the matrix clause. Such a configuration is judged ungrammatical (30b).

(30) a. xet-a [RC Op, \( t_1(\text{IO}) \) 0- z- jə- č’ase -r [CP pro,____(PG(\text{IO}))] who-Q 3ABS- wh,IO- LOC- like -ABS podarke-xe-r 0- ō/ze- r- a- tə -n -ew]]
gift-PL-ABS 3ABS- 3SG/wh,IO- DAT- 3PL.ERG- give -MOD -ADV
‘Who likes to be given gifts?’ (Lit. ‘Who likes for them to give gifts to him/her?’)

b. *xet-a [RC Op, pro(\text{IO}) 0- 0- jə- č’ase -r [CP \( t_1(\text{IO}) \) podarke-xe-r who-Q 3ABS- 3SG,IO- LOC- like -ABS gift-PL-ABS 0- ze- r- a- tə -n -ew]]
3ABS- wh,IO- DAT- 3PL.ERG- give -MOD -ADV
Intended: ‘Who likes to be given gifts?’

5 Possessor of an absolutive DP. As we saw in (9), the possessor of an absolutive DP may be relativized directly. As possessors of ergative and indirect object DPs, this type of possessor may trigger additional *wh*-agreement in a multiple *wh*-agreement construction. Thus, if an indirect object is relativized, a coreferential possessor of the absolutive DP may be expressed as a null pronoun triggering regular \( \phi \)-agreement, or it may be replaced with a parasitic gap, correspondingly triggering *wh*-agreement on the possessed nominal (31).

(31) [RC Op, [DP pro,____(PG(\text{PR}))] 3/za-š](ABS) \( t_1(\text{IO}) \)
3SG/wh,PR-brother
0- qə- z- e- wa -ke] č’ale-m s-0-je-wəšəjo-š’ta-ə
3ABS- DIR- wh,IO- DAT- hit -PST boy-OBL 1SG,ABS-3SG.IO-DAT-console-IPF-PST
‘I consoled the boy whom i his brother hit.’

While absolutive DPs are not islands for extraction, the *wh*-agreement triggered by the possessor in (31) is parasitic on the primary *wh*-agreement triggered by the indirect object in the sense that the possessor cannot be directly relativized in the presence of a coreferential verbal participant (32).

(32) *[RC Op, [DP \( t_1(\text{IO}) \) za-š](ABS) pro(\text{IO}) 0- q- 0- je- wa -ke] č’ale-m
WH,PR-brother 3ABS- DIR- 3SG,IO- DAT- hit -PST boy-OBL
s-0-je-wəšəjo-š’ta-ə
1SG,ABS-3SG.IO-DAT-console-IPF-PST
Intended: ‘I consoled the boy whose brother hit him.’

The generalization regarding the relativization of coreferential arguments is that the verbal participant always acts as the licensing gap, and the coreferential possessor of another DP is
always parasitic on that licensing gap and cannot be relativized directly. I leave the question of what governs this restriction for future research.

To conclude: in multiple wh-agreement constructions, one wh-agreement marker is parasitic on the other. The parasitic nature of this marking can easily be made sense of within a parasitic gap analysis of the additional wh-agreement.

3.2 Parasitic Gaps Cannot Be Embedded in an Additional Island

It has long been observed that while parasitic gaps appear robustly within syntactic islands, the dependency between the matrix operator and the parasitic gap cannot cross more than one island boundary (e.g., Kayne 1983, Chomsky 1986, Nissenbaum 2000, Hornstein 2001, Kennedy 2003, Nunes 2004). This is illustrated with the following examples from Nissenbaum 2000:24: while one island boundary between the embedded and licensing gaps is perfectly licit, two such boundaries render the parasitic gap dependency ungrammatical.

(33) Who did John visit ___
Nonisland: [without claiming [that he knew ___]]
Adjunct island: ??[after offending me [by not introducing me to ___]]

The same constraint applies to additional wh-agreement in multiple wh-agreement constructions; this is shown in (34). In both sentences, the licensing gap appears in the matrix clause in the applied object position and correspondingly triggers wh-agreement in the applied object slot preceding the benefactive morpheme. In (34a), a pronoun that is coreferential with the relativized applied object appears within the complement of the verb pəλən ‘attempt, undertake’; this complement is in turn embedded within a temporal adjunct to the predicate heading the relative clause. Since clausal complements are not islands for extraction, the embedded coreferential pronoun may be replaced with a parasitic gap.13 If, however, the coreferential pronoun is embedded within another temporal adjunct, as in (34b), it may not be replaced by a parasitic gap, because the potential parasitic gap dependency would have to cross two island boundaries.

(34) a. mara [RC bazəλəvək-ewi [ADJUNCT [COMP pro/ʔ___PG(IO) here woman-ADV
sə- ə)/z- de- gəvəšəʔe -nə -m] sə-pəλə-fe] zə-gʷere
1SG.ABS 3SG/ʔWH.IO- COM- speak -MOD -OBL 1SG.ABS-attempt-LIM ONE-INDEF
t₁(IO) ŋə- qə- z- fə- tje- wa -bej -r
3ABS- DIR- WH.IO- BEN- LOC- hit -PST -ABS
‘Here is the woman whom someone called [while I was trying [to speak with her]].’

13 That (34a) with z is not perfect is likely because direct relativization out of the complement is degraded for many speakers, regardless of the construction in this particular example.
3.3 Parasitic Gaps Cannot Be Licensed by a PP Wh-Trace

Another long-observed property of parasitic gaps is that they may only be licensed by a DP-trace (see, e.g., Cinque 1990, Postal 1993).14 The following examples illustrate this constraint for English: in (35a), a nominal trace successfully licenses a parasitic gap in the adjunct clause, but the equivalent of this sentence with a PP-trace is ungrammatical (35b).

(35)  a. This is a topic you should think about t₁ [before talking about ____PG].
    b. *This is a topic about which you should think t₁ [before talking ____PG].

   (Postal 1993:736)

The same generalization holds for additional wh-agreement in West Circassian multiple wh-agreement constructions: in all the examples so far, the licensing gap corresponds to a DP, and a PP-trace cannot license additional wh-agreement.

Locative postpositional phrases are usually accompanied by a semantically appropriate applicative prefix on the predicate; they may also be referred to via a null pronoun. These two properties are demonstrated for the locative postposition dež’ ‘at’: in (36), the postpositional phrase in the embedded adjunct is cross-referenced on the predicate via the prefix š’(o)- and referred to with a null pronoun (indicated as pro) in the matrix clause.

(36)  [CP pšaše-r [PP 0-jo-ëwæneæwæ-xe-m a-dež’]i,
       girl-ABS 3SG.PR-POS-neighbor-PL-OBL 3PL.PP-at
       0- 0- š’- e- čaje -fe] se proᵢ(LOC) sø- 0- š’- e- řegw
       3ABS- 3SG.IO- LOC- DYN- sleep -LIM I 1SG.ABS- 3SG.IO- LOC- DYN- play
   ‘While the girl sleeps at her neighbors’, I play there.’

14 There is a body of literature countering the claim that this is a universal property of parasitic gaps (see, e.g., Tellier 1991, Engdahl 2001, Levine, Hukari, and Calcagno 2001). However, as Culicover (2001:65) notes, the nominal nature of the antecedent of a parasitic gap remains a robust crosslinguistic tendency.
A postpositional phrase may be relativized, triggering wh-agreement in the applied object slot preceding the corresponding locative prefix. A relativized PP, however, may not license a parasitic gap. This is illustrated in (37): the PP \textit{tjəw'ə̃neb'ə̃xem ađež} ‘at our neighbors’ [place]’ is relativized from the matrix clause, triggering wh-agreement on the corresponding predicate. While this PP can be referred to in the embedded clause via a null pronoun, this null pronoun may not be replaced by a parasitic gap.

(37) \[PP \textit{t-jə-} w'ə̃ne- xem ađež] arə [RC Op \_ t\_i (LOC)]

\[1SG.PP-POSS-neighbor-PL-OBL 3PL.PP-at PRED\]

sə- zə- ŋə- gəw- re - r [CP mə pšaše-r proj/*PG (LOC)]

\[1SG.ABS- WH.IO- LOC- play -DYN-ABS this girl-ABS\]

\[0- 0/*zə- ʂ'ə̃- e- čoje -fe]\]

\[3ABS- 3SG/*WH.IO- LOC- DYN- sleep -LIM\]

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

This can be contrasted with a case where a locative applicative prefix is used to cross-reference a DP rather than a PP: if such a DP is relativized, it can successfully license a parasitic gap. This is illustrated in (38), where both the licensing gap and the parasitic gap occupy the applied object position that is cross-referenced with the same locative prefix ʂ'ə̃- as in (37). However, unlike in the previous example, the DP wh-trace may successfully license a parasitic gap within the temporal adjunct.

(38) \[RC Op \_ lepqə-r [CP ___PG (LOC) 0- zə- ʂ'ə̃- rehatə -ke -w] t\_i (LOC)\]

\[tribe-ABS 3ABS- WH.IO- LOC- settle -PST -ADV\]

\[0- zə- ʂ'ə̃- bekwə -ke] - r a wəne-čək'ə̃-xem arə\]

\[3ABS- WH.IO- LOC- reproduce -PST -ABS that house-small-PL-ABS PRED\]

‘Those small houses are where the tribe multiplied, having settled there.’

(http://adyghe.web-corpora.net/index_en.html)

It is worth noting that while the restriction of parasitic gaps to the nominal category has been used as evidence for the pronominal nature of these gaps (Cinque 1990), the data in (36)–(37) are at odds with such an analysis: as can be seen in (36), there is nothing wrong with a PP-proform, but a parasitic gap cannot appear in the same position. This also counters Engdahl’s (2001) claim that nonnominal parasitic gaps can appear in languages that have proforms corresponding to the syntactic category in question.

### 3.4 Parasitic Gaps Are Optional

This section provides the final argument for a parasitic gap analysis of multiple wh-agreement. It was first observed by Engdahl (1983:15–17) that a large subset of parasitic gaps are optional and may freely alternate with an overt DP. An English example is given in (39).

(39) Here is the paper that John read \_ before filing ___PG / his mail.

(adapted from Engdahl 1983:14)
As shown in sections 3.1–3.3, the majority of multiple wh-agreement constructions in West Circassian alternate freely with constructions that do not involve additional wh-agreement, but have a pronoun in that position instead. For example, the coreference relationship between the relativized indirect object and the possessor of the ergative DP in (16a–b) allows for the appearance of additional wh-agreement, but does not require it; a null third person pronoun may be used instead of the parasitic gap, triggering the corresponding φ-agreement on the possessed nominal. The optionality of additional wh-agreement is yet another property that parallels multiple wh-agreement constructions with parasitic gap dependencies.

3.5 Intraclausal vs. Cross-clausal Parasitic Gap Constructions

Lander (2009a, 2012) treats intraclausal and cross-clausal cases of multiple wh-agreement in West Circassian as two distinct constructions, labeling them respectively as genuine and “fake” multiple relativization. I argue that, given that both types of constructions display the properties presented above, the differences the two configurations display do not warrant such a distinction, and a parasitic gap analysis is adequate for both constructions.

Lander presents the following considerations for distinguishing intraclausal and cross-clausal multiple wh-agreement constructions. First, relativization out of some types of embedded clauses involves prolepsis, that is, the insertion of an additional argument that is coreferential with the relativized participant. Lander argues that because relativization out of simple clauses does not involve comparable argument insertion, the two constructions must be structurally distinct. Second, Lander observes that multiple wh-agreement constructions differ in constraints on word order: while the internal head in a cross-clausal multiple wh-agreement construction may appear between the constituent containing the additional wh-agreement and the predicate heading the relative clause, this order is not possible in intraclausal multiple wh-agreement constructions.

Given these differences, Lander concludes that intraclausal multiple wh-agreement involves simultaneous relativization out of two positions, while cross-clausal cases are the union of two relative clauses, one formed within the embedded clause and one within the matrix clause. If we are to assume that relativization involves an Á-dependency between a relative operator and a wh-trace, this would mean that within an intraclausal multiple wh-agreement construction a single relative operator binds two wh-traces, akin to some accounts of across-the-board movement (Citko 2005, De Vries 2013) and Nunes’s (2004) analysis of multiple gap constructions, including across-the-board movement and parasitic gaps. Cross-clausal configurations, on the other hand, then have a structure similar to what is assumed under a null operator analysis of parasitic gap constructions, where there is Á-movement within the constituent hosting the parasitic gap.

None of the differences between intraclausal and cross-clausal multiple wh-agreement constructions warrant a fundamentally different analysis for the wh-agreement markers that appear within these two constructions. First, prolepsis, which appears in cross-clausal contexts but is not used in intraclausal multiple wh-agreement constructions, has long been observed to be a standard way of obviating long-distance Á-movement (see, e.g., Salzmann 2017). Thus, the absence of proleptic constructions in simple clauses, which lack comparable long-distance Á-movement configurations, cannot be taken as indicative of a fundamental difference in the wh-agreement con-
tructions involved. And second, while the difference in word order restrictions between intra-clausal and cross-clausal multiple *wh*-agreement constructions is intriguing and warrants closer investigation, it does not in itself indicate that the two constructions are fundamentally different in nature.\footnote{There is interspeaker variation regarding word order in these constructions: my consultants endorse examples analogous to the ones Lander (2009a) labels as ungrammatical.}

An additional argument against this approach is that while it appeals to constraints on multiple *wh*-agreement (to be discussed in section 4) as evidence that these two constructions are distinct, it does not account for how these constraints come about. In contrast, the parasitic gap analysis proposed here accounts for the observed constraints and additionally provides a fruitful avenue for exploring the syntax of clausal embedding and how it differs from the structure of simple clauses; this is also noted in the conclusion.

3.6 Summary: Multiple Wh-Agreement Is a Parasitic Gap Dependency

In this section, I have provided evidence for treating West Circassian multiple *wh*-agreement constructions as parasitic gap dependencies. Multiple *wh*-agreement constructions display the following properties typical of parasitic gap configurations: (a) one of the *wh*-agreement markers in a multiple *wh*-agreement construction is parasitic on the presence of the other *wh*-agreement marker; (b) the additional, or parasitic, *wh*-agreement may be licensed within a syntactic island, but not if it is further embedded within another island; (c) the additional *wh*-agreement cannot be licensed by a PP-trace; (d) the additional *wh*-agreement in a multiple *wh*-agreement construction freely alternates with a pronoun.

The remainder of the article explores the possibility of using the parasitic gap analysis of multiple *wh*-agreement as a diagnostic for syntactic structure. Section 4 demonstrates how restrictions on patterns of multiple *wh*-agreement provide evidence for the high position of the absolutive DP (i.e., for structural syntactic ergativity), while section 5 shows how the lack of restrictions on multiple *wh*-agreement, coupled with its optionality in certain configurations, is a consequence of optional A-scrambling of the applied object to Spec,vP.

4 The Anti-C-Command Condition and Syntactic Ergativity

Section 3 argued for a parasitic gap analysis of multiple *wh*-agreement constructions in West Circassian, outlining the similarities between the patterns of *wh*-agreement and properties of parasitic gaps. This section explores the consequences of the proposed analysis for our understanding of West Circassian clause structure and, in particular, of c-command relations between DPs. This is done by demonstrating how a restriction on the appearance of multiple *wh*-agreement constructions provides evidence for the absolutive DP c-commanding all other verbal arguments,
including the ergative DP. The restriction in question is the following: a possessor that is coreferential with a relativized clausemate absolutive participant may not trigger additional wh-agreement. This restriction can be made sense of in light of general properties of parasitic gaps and in particular in light of the Anti-C-Command Condition, which states that the licensing gap cannot c-command a parasitic gap (Engdahl 1983). This leads to the conclusion that the absolutive DP c-commands other clausemate DPs, including the ergative agent. West Circassian then falls into the class of high absolutive languages in Coon, Mateo Pedro, and Preminger’s (2014) terms, in which syntactic ergativity effects arise due to the high position of the absolutive DP. Other proposals for a high absolutive in syntactically ergative languages include those by Bittner and Hale (1996) and Aldridge (2008), among others.

The structure I argue for is the following: the absolutive DP is merged within vP, as the complement of V if it is the internal argument or as the specifier of v if it is the external argument of an unergative verb. The ergative agent is merged as the specifier of v, and any applied indirect objects are introduced as high applicatives as specifiers of Appl. The ergative agent and the applied object are assigned inherent case in situ, but the absolutive argument is assigned nominative case by T and moves to Spec,TP to satisfy the uEPP feature. The structure of a TP containing a three-place predicate with absolutive, ergative, and applied arguments is represented in (40).

(40)

The remainder of this section is organized as follows: section 4.1 presents the data illustrating the restriction imposed on multiple wh-agreement constructions, and section 4.2 connects this restriction to the parasitic gap analysis of multiple wh-agreement.
4.1 The Absolutive Constraint

Multiple wh-agreement constructions in West Circassian are not always possible; in particular, they are subject to the constraint in (41), first described by Lander (2009a,b, 2012).

(41) Absolutive Constraint on Multiple Wh-Agreement

Intraclausal multiple wh-agreement is ungrammatical if the relativized participant is the absolutive DP.

If understood in light of the parasitic gap analysis of multiple wh-agreement, this constraint can be rephrased as follows:

(42) Absolutive Constraint on Parasitic Gaps

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

This constraint is applicable in all cases of relativization of an absolutive-case-marked nominal, whether it is an external argument or an internal argument, and in combination with all types of clausemate DPs. Below are examples of relative clauses with various argument structure configurations; in all of them, the absolutive participant is relativized and a parasitic gap within a clausemate DP is deemed ungrammatical.

1 Absolutive external argument and a possessor of an oblique applied object. The verb jeceqen ‘bite’ is an example of a predicate that takes an absolutive external argument (the one who bites) and an oblique applied object (the victim of the biting). If the absolutive agent of this predicate is relativized, the applied object may have as a possessor a pronoun that is coreferential with the relativized participant; however, this possessor pronoun may not be replaced with a parasitic gap that would trigger wh-agreement on the possessed noun (43).

(43) se so-Ø-š’e-š’an [RC ha-Wi t_(ABS) [DP pro_i/*PG(PR)
  I 1SG.ABS-3SG.IO-LOC-fear dog-ADV
  0*/z-j0-x*ezjajan](IO) 0.- 0.- je-ceqen-ž’e-še -m
  3SG/*WH.PR-POSS-owner WH.ABS- 3SG.IO- DAT- bite -RE -PST -OBL
  ‘I fear the dog that bit its owner.’

2 Absolutive internal argument and a possessor of an oblique applied object. In (44), the absolutive theme of the verb gešen ‘bring’ is relativized. In this example, this verb also takes an applied object, which is cross-referenced on the predicate via the benefactive applicative prefix. The possessor of this applied object is expressed as a null third person pronoun and triggers corresponding possessor agreement on the possessed nominal; this pronoun may be interpreted as coreferential with the relativized absolutive participant. However, this pronoun cannot be replaced with a parasitic gap and, correspondingly, cannot trigger wh-agreement.

16 Lander (2009b) connects the Absolutive Constraint to the structurally privileged status of the absolutive DP, but does not discuss the exact nature of this connection.
Here is the girl whom I brought for her mother.

3 Absolutive internal argument and a possessor of an ergative agent. In (45), the absolutive argument of the causative verb kešen ‘feed’ is relativized; the null pronoun in the position of the possessor of the ergative agent may in this case be interpreted as coreferential with the relativized participant. As in the previous cases, however, a parasitic gap may not replace this pronoun.

(45) [RC Op t1(ABS) [DP pro/*PG(pr) 0/z-jane](erg) 3SG/*wh.pr-mother 0- ma- ra- šxe-re] hažwśśr-xe-m sə-gw 0-a-fe-wəzə wh.abs- neg- caus- eat -dYN puppy-pl-oBL 1sg.pr-heart 3ABS-3PL.IO-BEN-ache

‘My heart aches for the puppies whom their mother doesn’t feed.’

4 Absolutive internal argument and a possessor of an oblique experiencer. The final type of verb discussed here belongs to a small set of so-called inverse predicates, which take an oblique external argument and an absolutive theme (Rogava and Keraševa 1966:98, Smeets 1992:122–123, Arkadiev et al. 2009:64–65, Letuchiy 2013:741–742). One such verb is š’ə ae apa-əe-m sə-gw 0-a-fe-wəzə ‘forget’. In (46), the absolutive theme of this verb is relativized; as in the previous examples, the null pronoun triggering third person singular possessor agreement on the oblique experiencer argument may be interpreted as coreferential with the relativized participant. As in the previous cases, this pronoun cannot then be replaced with a parasitic gap.

(46) [RC pšešəzəj-ew1 t1(ABS) [DP pro/*PG(pr) 0/z-jane](io) girl-ADV 3SG/*wh.pr-mother 0- 0- š’ə- bʷəpəšə-ke] -m sə-gw 0-j-e-bw wh.abs- 3SG.IO- LOC- forget -PST -OBL 1sg.pr-heart 3ABS-3SG.ERG-DYN-chew

‘I pity the girl whom her mother forgot.’ (Lit. ‘The girl whom her mother forgot chews my heart.’)

To summarize: we have seen that, regardless of the 0-role it is assigned, an absolutive trace cannot license a parasitic gap in any of its clausemate DPs—ergative or oblique external arguments or applied indirect objects.

4.2 The Anti-C-Command Condition

This section aims to connect the Absolutive Constraint in (42) with general structural restrictions that parasitic gaps are subject to. A well-known condition on the licensing of parasitic gaps is the Anti-C-Command Condition, which states that the licensing gap may not c-command a parasitic gap (see, e.g., Engdahl 1983, Aoun and Clark 1985, Chomsky 1986, Contreras 1987).
Anti-C-Command Condition

“A parasitic gap may not be c-commanded by the real gap.”
(Engdahl 1983:22)

A possible account for the Absolutive Constraint then is the following: the absolutive trace cannot license a parasitic gap in a clausemate DP because it c-commands that DP and correspondingly the potential site of the parasitic gap. On the other hand, if a parasitic gap can appear within a construction, that means that the licensing gap does not c-command it.

For some of the argument structure configurations listed in section 4.1, the assumption that the absolutive trace c-commands the potential parasitic gap site is noncontroversial. For example, the absolutive external argument in (43) would c-command the possessor of the applied object under any theoretical account. This structure is illustrated in (48): assuming that the absolutive DP merges as the specifier of vP and the applied object is introduced lower, as a specifier of ApplP, a trace in the absolutive position would c-command, and thus fail to license, a parasitic gap within the applied object.

\[
(48) \begin{array}{c}
\text{CP} \\
\text{Op} \\
\vdots \\
\text{vP} i_t(\text{ABS}) \\
\text{[vP [ApplP [DP(IO) – PG] \ldots]]]}
\end{array}
\]

Recall, however, that the Absolutive Constraint applies to all types of absolutive arguments and in combination with all types of clausemate DPs: an absolutive trace cannot license a parasitic gap in an ergative, applied object, or oblique experiencer DP. This forces us to conclude that the absolutive DP c-commands all of these arguments.

Subjecthood diagnostics such as reflexive binding suggest that the base-generated position of the absolutive DP varies according to its \( \theta \)-role: an absolutive theme is introduced as the complement of \( V^0 \) and an absolutive agent is introduced in Spec,vP.\(^17\) This means that the c-commanding position of the absolutive DP is derived. I propose that this position is Spec,TP: the absolutive DP is assigned case by \( T^0 \) and moves to Spec,TP to satisfy the \( aEPP \) feature. Ergative and applicative case, on the other hand, are assigned in situ within vP, so neither the ergative nor the indirect object DP moves to a position higher than Spec,TP. This leads to a configuration where the absolutive DP c-commands all other verbal arguments. Thus, if the absolutive argument is relativized, its trace appears in a position that c-commands both the ergative and applied object DPs, ruling out the possibility of a parasitic gap in either position (49).

\[
(49) \begin{array}{c}
\text{CP} \text{Op} \ldots \\
\text{vP} i_t(\text{ABS}) [\text{vP [DP(ERG) – PG] [ApplP [DP(IO) – PG] \ldots]]]}
\end{array}
\]

The ergative, applied object, and oblique experiencer DPs, on the other hand, do not c-command the absolutive DP; this predicts that a relativized participant in any of these positions should be able to license a parasitic gap within the absolutive DP. This prediction is in fact borne

out. As (50) shows, an ergative trace can successfully license a parasitic gap within the absolutive DP.

\[(50) \text{mar} \circ \{ \text{DP pro} / \_\text{PG} \circ (\text{PR}) \circ (\text{ABS}) \circ t_1(ERG) \}\]

\[\text{here cat-ADV} \quad 3SG/WH.PR-poss-food} \]

\[\emptyset - z\circ - m\circ - \text{b}x\circ - \text{re} \quad -r \]

\[3ABS- \text{WH.ERG- neg- eat -DYN -ABS} \]

‘Here is the cat that doesn’t eat its food.’

An indirect object wh-trace can likewise license a parasitic gap within an absolutive theme (51) or external argument (52), and the applied external argument of an inverse predicate can license a parasitic gap within the absolutive theme (53).

\[(51) \text{mar} \circ \{ \text{DP pro} / \_\text{PG} \circ (\text{PR}) \circ (\text{ABS}) \circ t_1(IO) \}\]

\[\text{girl-ADV} \quad 3SG/WH.PR-poss-book} \]

\[\emptyset - z\circ - e\circ - s\circ - m\circ - \text{to} - \text{b}z\circ - \text{ke} \quad -r \quad \emptyset - \text{qe-s-e-w} \circ \text{ha} \]

\[3ABS- 3SG.IO- dat- 1SG.ERG- neg- give -re -pst -abs 3ABS-dir-1SG.ERG-DYN-avoid \]

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

\[(52) \text{mar} \circ \{ \text{DP pro} / \_\text{PG} \circ (\text{PR}) \circ (\text{ABS}) \circ t_1(IO) \}\]

\[\text{here boy-small-ADV} \quad 3SG/WH.PR-maker} \]

\[\emptyset - z\circ - \text{fe} - \text{g}x\circ \text{b}z - \text{zep}\circ - \text{re} \quad -r \]

\[3ABS- \text{WH.IO- ben- be.angry -always -DYN -ABS} \]

‘Here is the boy at whom his mother is always angry.’

\[(53) s\circ - \text{w-s}\circ - \text{ke}\circ - \text{re} - \text{en} - \text{ep} \quad \{ \text{DP pro} / \_\text{PG} \circ (\text{PR}) \}\]

\[\text{good 3ABS-1SG.ERG-see-DYN-neg} \]

\[\emptyset - z\circ - \text{b} - \text{b} - \text{zep}\circ - \text{ke} \quad \text{cet}\circ \text{w}\circ \text{ke} \]

\[3SG/WH.PR-poss-cub-pl-abs} \quad 3ABS- \text{WH.IO- loc- forget -pst cat-abs} \]

‘I don’t like the cat that forgot its kittens.’

To conclude: an absolutive trace cannot license a parasitic gap within clausemate DPs. An ergative or indirect object trace, on the other hand, can readily license a parasitic gap within the absolutive DP. Given the Anti-C-Command Condition on parasitic gaps, this leads us to conclude that the absolutive DP occupies the highest A-position within the clausal spine, c-commanding both the ergative agent and any applied objects.18

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18 A reviewer points out that given the Phase Impenetrability Condition (PIC) and standard assumptions about the phasehood of vP (see, e.g., Chomsky 2001), we might expect the absolutive DP to move to Spec,vP on its way to Spec,TP. The proposed analysis is not readily compatible with this (strong) version of the PIC, since it would falsely predict that this intermediate movement should license parasitic gaps within vP. There are two main approaches to phasehood that are compatible with the analysis: (a) per the Weak PIC, a phase becomes inaccessible only at the time the next phase is merged, meaning that the absolutive DP moves directly to Spec,TP before the higher CP phase is formed and thus does not need to move to Spec,vP; (b) vP in West Circassian is not a phase—this is indirectly supported by its failure to act as a distinct prosodic Spell-Out domain, in contrast to DP and CP (Ershova 2019). I leave determination of the correct approach for future research.
4.3 Multiple Wh-Agreement Is Not Pronominal Binding

An alternative account for the Absolutive Constraint is offered by Caponigro and Polinsky (2011), who address a subset of constructions involving multiple wh-agreement—in particular, cases where a possessor pronoun bears wh-agreement if an argument that is coreferential with that pronoun is relativized. They propose to treat this construction as a case of φ-agreement between the wh-trace and a bound pronoun, following a similar proposal by O’Herin (2002) for Abaza. The structure they assume for a multiple wh-agreement construction like (22), repeated in (54), is shown in (55): the relativized ergative participant (which, under their analysis, raises to Spec,TP) binds the possessor pronoun within the applied object DP and transfers the wh-feature to this pronoun via φ-agreement.

An example of such a construction is (56), repeated in (57). In this construction, wh-agreement with the possessor in the ergative DP is not possible because the movement of the operator from the absolutive position within VP triggers a Weak Crossover violation (57).

This approach faces several empirical challenges. First, as we saw above, the Absolutive Constraint applies generally for all absolutive traces regardless of θ-role. For example, the posses-

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19 See also Baier and Yuan 2018 for a recent discussion of O’Herin’s (2002) analysis.
or of an applied object cannot trigger *wh*-agreement if the absolutive external argument is relativized despite this not being a Weak Crossover configuration. Second, a binding-based account fails to capture the systematic optionality of multiple *wh*-agreement constructions: if this is a case of Φ-agreement, then it is unclear why the transfer of the *wh*-feature is merely optional. Third, if the relativization of the absolutive theme over the *wh*-agreeing possessor within the ergative DP is a Weak Crossover violation, it is unclear why the possessor pronoun within the ergative DP may still be interpreted as coreferential with the relativized argument in the absence of *wh*-agreement, a consideration also noted by Lander (2012:332). Additionally, the pronominal binding account makes false predictions for cross-clausal Weak Crossover configurations (examples (62)–(63)), to be discussed in the following section.

In summary, a parasitic gap analysis of multiple *wh*-agreement provides a principled explanation for the Absolutive Constraint: the absolutive trace fails to license parasitic gaps within clausalmate DPs due to the Anti-C-Command Condition on parasitic gaps.

5 Interactions between Nonabsolutive DPs and A-Scrambling

In this section, I demonstrate how constraints on parasitic gaps can be used to argue for A-scrambling in West Circassian: in particular, I argue that the applied object is introduced in Spec,ApplP below the ergative agent and may then undergo optional A-scrambling to Spec,vP. Evidence for this movement comes from (a) the ability of an ergative trace to license a parasitic gap within the applied object DP; (b) the optionality of the parasitic gap within the ergative DP when an applied object is relativized. This means that nonabsolutive DPs simultaneously fail to display Anti-C-Command Condition and Weak Crossover effects.

As mentioned in section 1, West Circassian displays rampantly free word order, often with no apparent correlation with sentence prosody or information structure (see, e.g., Kumakhov and Vamling 2006:72–119, Lander 2012:89–92, Lander and Testelets 2017:951), suggesting that this may be a nonconfigurational language, with full DPs appearing in adjoined or dislocated positions, as proposed by Jelinek (1984), Hale (1994), and Baker (1996), among others. However, in section 4 we saw that restrictions on parasitic gap licensing provide evidence that the absolutive DP asymmetrically c-commands the ergative and applied object DPs—a structure that is incompatible with a nonconfigurational account. This section demonstrates how applying the same parasitic gap diagnostic used in section 4 fails to determine the relative c-command relations between the ergative and applied object DPs. I argue that this is due to optional A-movement of the applied object to Spec,vP—a position c-commanding the ergative agent. The proposed operation is parallel to other cases of scrambling that exhibit A-properties crosslinguistically, in Hindi (Mahajan 1990, 1994, Dayal 1994), Persian (Karimi 2003, 2005), Japanese (Grewendorf and Sabel 1999), Georgian (McGinnis 1999), and Tlingit (Cable 2009), among others.

The analysis set forth in section 4.3 predicts that in all cases where a DP c-commands another DP, it should fail to license a parasitic gap within the DP it c-commands. Thus, if we assume that the ergative DP is merged as the specifier of vP and an applied object is merged within vP as the specifier of ApplP and both arguments remain in situ, we expect an ergative trace to fail to license a parasitic gap within the applied object, but not vice versa. However, this prediction
is not borne out. An applied object trace may license a parasitic gap within the ergative DP, as shown in (16), repeated in (58a). However, the inverse configuration is also possible: in (58b), an ergative trace successfully licenses a parasitic gap within the applied object.

(58) a. *mar [RC č’al-ewi [DP proi [____pg(pr) ṣ/zə-š](erg) ti(io) velosjoped
here boy-Adv 3sg/wHlPr-brother bicycle
θ- qə- ze- r- jə- tə -i$_{e}$ ] -r
3abs- Dir- wH10- Dat- 3sg.erg- give -pst -abs
‘Here is the boy to whom his$_i$ brother gave a bicycle.’

b. *mar [RC č’al-ewi ti(erg) [DP proi [____pg(pr) ṣ/zə-š](io) velosjoped
here boy-Adv 3sg/wHlPr-brother bicycle
θ- 0- je- zə- tə -i$_{e}$ ] -r
3abs- 3sg.io- Dat- wH.erg- give -pst -abs
‘Here is the boy who$_i$ gave a bicycle to his$_i$ brother.’

I propose that the lack of any anti-c-command effect between nonabsolutive DPs is a consequence of A-scrambling within vP. In particular, v$^0$ may optionally carry an uEPP feature that allows the applied object to undergo movement to Spec,vP, that is, a position that c-commands the ergative agent (59). This means that for any configuration that involves an ergative agent and an applied object, two structures are available: the base-generated configuration with the ergative DP c-commanding the applied object and the structure that is derived by scrambling the applied object to a position that c-commands the ergative DP.

(59) 

In regard to parasitic gaps, the consequence of this scrambling is that just as an applied object trace may license a parasitic gap within the ergative DP if it is relativized from its base position (60a), a relativized ergative trace may license a parasitic gap within a scrambled indirect object, since it no longer c-commands the potential site of the parasitic gap (60b).
The availability of the structure in (59) explains another puzzle regarding conditions on parasitic gap licensing in West Circassian. In particular, it has been robustly observed since Engdahl 1983 that certain configurations give rise to obligatory parasitic gaps that cannot be replaced with a personal pronoun. An example of such a configuration in English is provided in (61). The parasitic gap in (61) is obligatory under the bound reading of the possessor because the use of an overt pronoun in this position would trigger a Weak Crossover violation, with the wh-phrase which student undergoing A-movement from the object position to Spec,CP over a coreferential pronoun within the subject DP.

(61) Which student, did [your attempt to talk to ___/*him] scare ___ to death?
(Engdahl 1983:16)

However, no such effect is observed between clausemate DPs in West Circassian. For example, the parasitic gap in (58a) is optional and freely alternates with a null pronoun that triggers regular \( \phi \)-agreement, despite this being a potential Weak Crossover violation. This is especially striking, given that the language does in fact display a Weak Crossover effect in cross-clausal contexts, with an obligatory parasitic gap inside the DP that c-commands the wh-trace, as in the English example (61). Thus, if the ergative agent of the complement clause in (62) is relativized, the coreferential possessive pronoun on the ergative DP in the matrix clause must be replaced with a parasitic gap; the same effect is observed in (63), where the applied object is relativized out of the complement clause, licensing an obligatory parasitic gap in place of the possessor of the absolutive DP in the matrix clause.

(62) mar\( \tilde{\text{a}} \) [RC p\( \tilde{s} \)\( \tilde{a} \)-\( \text{ew} \)i [CP \( t \)\( \text{io} \)(ERG) \( z \)-\( \text{e} \)-p\( \text{sk} \)\( \text{r} \)-n\(-\text{ew} \)] here girl-ADV REFL.ABS WH.ABS-CAUS-bathe -MOD-ADV \( z \)/\( *\)\( \text{Ø} \)-jane(ERG) \( \text{Ø} \)-q\( \text{a} \)-s-ta\( \text{r} \)-ja-\( \text{e} \)-pa\( \text{t} \)\( \text{a} \)-\( \text{e} \)] -r WH/\( *\)3SG.PR-mother 3ABS-DIR-3SG.IO-LOC-3SG.ERG-CAUS-enforce-PST-ABS ‘Here is the girl who\( _i \) her\( _i \) mother told me [ ___ should bathe].’

(63) mar\( \tilde{\text{a}} \) [RC p\( \tilde{s} \)\( \tilde{a} \)-\( \text{ew} \)i [CP \( \tilde{\text{e}} \)elejek\( \text{a} \)\( \text{z} \)-\( \text{er} \)\( t \)\( \text{io} \)\( \text{io} \)\( \text{io} \)] \( \text{Ø} \)-q\( \text{a} \)-\( \text{z} \)-e-\( \text{ce} \)\( \text{e} \)-\( \text{n} \)-\( \text{ew} \)] here girl-ADV teacher-ABS 3ABS-DIR-3JIO-DAT-scold-MOD-ADV \( z \)/\( *\)\( \text{Ø} \)-jane(ABS) \( \text{Ø} \)-fe-\( \text{m} \)-\( \text{a} \)-\( \text{je} \)] -r WH/\( *\)3SG.PR-mother 3ABS-BEN-NEG-want-ABS ‘Here is the girl whom\( _i \) her\( _i \) mother doesn’t want [the teacher to scold ___].’

The fact that the language displays Weak Crossover effects cross-clausally, but fails to do so with clausemate DPs, can be explained via locally constrained A-scrambling within vP. Thus, the Weak Crossover data, together with the lack of anti-c-command effects between the ergative DP and the applied object, provide evidence for A-movement of the applied object to Spec,vP.
The examples in (62)–(63) also pose a challenge to the Weak Crossover analysis of the Absolutive Constraint proposed by Caponigro and Polinsky (2011) (see section 4.3): since these are unquestionably Weak Crossover configurations, Caponigro and Polinsky’s analysis predicts the possessor *wh*-agreement in the matrix clause to be ungrammatical.

There is, however, an important difference between Weak Crossover and anti-c-command effects: while, as we saw in section 4, the absolutive DP shows Anti-C-Command Condition effects in regard to other clausemate DPs, it fails to show any Weak Crossover effects, behaving as if it does not asymmetrically c-command the ergative agent or the applied object. This can be seen in examples (51)–(53): if an ergative agent or applied object is relativized, the parasitic gap within the absolutive DP does not become obligatory even though the resulting structure displays a Weak Crossover violation. I propose that this mixed behavior is due to the possibility of optional reconstruction of the absolutive DP in its base-generated position (see, e.g., Romero 1997, Fox 2000, and Sportiche 2005, 2017 for discussion of reconstruction under A-movement). This leads to two possible structures, which are illustrated in (64). In one, the absolutive DP is interpreted in Spec,TP; in this case, the parasitic gap is obligatory, because a possessor pronoun in this position would trigger a Weak Crossover violation (64a). In the other, the absolutive DP is interpreted in its base-generated position within VP; in this case, a parasitic gap cannot be licensed due to the Anti-C-Command Condition, and a pronoun may successfully surface instead (64b).

(64) a. \[[\text{CP} \text{Op}_i [\text{TP} [\text{DP(ABS)} \triangleleft \text{PG}/^*\text{pro}_j] [\text{vP} \text{t}_i(\text{ERG})] [\text{vP} \text{DP(ABS)}]]]]

b. \[[\text{CP} \text{Op}_i [\text{TP} [\text{DP}_j(\text{ABS})] [\text{vP} \text{t}_i(\text{ERG})] [\text{vP} [\text{DP(ABS)} \triangleright \text{PG}/\text{pro}_j]]]]

To conclude this section: we have seen that the lack of anti-c-command effects between ergative and applied object DPs provides evidence for optional A-scrambling of the applied object to a position c-commanding the ergative DP.

6 Conclusion

I have proposed a novel analysis of multiple *wh*-agreement constructions in West Circassian as the manifestation of a parasitic gap dependency. I have shown how the distribution of the additional *wh*-agreement in multiple *wh*-agreement constructions shares the full set of properties associated with parasitic gaps crosslinguistically. I then explored the consequences of this analysis by examining the distribution of parasitic gaps within clausemate DPs. Multiple *wh*-agreement thus proves to be a fruitful diagnostic for clause structure: we observe that the absolutive DP cannot license parasitic gaps within ergative or applied object DPs, which means that they are within the c-command domain of the absolutive DP. We further observe that an ergative *wh*-trace can license a parasitic gap within the applied object DP, indicating that the applied object may undergo scrambling to Spec,vP.

The presented analysis allows us to view a puzzling morphological phenomenon as the surface manifestation of a well-understood syntactic configuration, thus supplying us with a power-
ful tool for diagnosing the syntax of a polysynthetic language. This analysis demonstrates how, in the absence of traditional syntactic cues such as word order restrictions, free-standing anaphors, or consistent dependent marking, the study of morphological forms and their distribution may shed light on the underlying syntactic structure of a language.

Moving forward, the syntactic analysis of the morphological phenomenon of *wh*-agreement presents a promising avenue for further investigation into the syntax of West Circassian as well as the theory of parasitic gaps. For example, anti-c-command effects appear to be altogether absent in cross-clausal parasitic gap dependencies: a *wh*-trace in any of the argument positions within the matrix clause, including the absolutive, may license a parasitic gap within the embedded clause (see examples (28)–(30)). This is true of both complement and adjunct clauses. At first glance, the lack of anti-c-command effects in cross-clausal contexts poses a challenge to the parasitic gap analysis of multiple *wh*-agreement. However, it is likely to be connected to another peculiar property of West Circassian: the language generally displays Condition C insensitivity across clausal boundaries, regardless of the syntactic status of the embedded clause (Testelets 2009b). Given that anti-c-command effects have often been compared to Condition C effects (see, e.g., discussion in Culicover 2001), the cooccurrence of these two phenomena in West Circassian seems to be more than a coincidence, and further investigation of this phenomenon may lead to a better understanding of the nature of the Anti-C-Command Condition. In particular, in order to capture these data within Nissenbaum’s (2000) tree-geometric framework, where anti-c-command effects are derived via constraints on semantic types and attachment sites, one would have to posit that all embedded clauses in West Circassian are dislocated and thus not c-commanded by any arguments of the matrix clause (as, for example, Dayal (1996) has proposed for Hindi). The dislocation approach would likewise be necessary within the sideward movement approach to parasitic gaps advocated by Nunes (2001, 2004), where the anti-c-command effect is derived as a locality violation on the formation of the chain between the higher operator and the parasitic gap. On the other hand, if no evidence for clausal dislocation can be found, cross-clausal parasitic gap constructions may be used to argue for a Condition C account of anti-c-command effects, wherein the null operator in the parasitic gap construction is understood as a special type of referential expression and clausal boundaries obviate Condition C requirements for referential DPs in embedded contexts, thus connecting these data to other documented counterexamples to the Anti-C-Command Condition (see, e.g., Contreras 1987, Horvath 1992).

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20 Lander (2009a, 2012) argues that the fact that the Absolutive Constraint does not apply in cross-clausal contexts indicates that this construction is structurally distinct from intraclausal cases, where the additional *wh*-agreement appears within a clausemate DP. Given that the two constructions otherwise have a very similar distribution, a more fruitful approach is to apply a unified analysis to both types of structures and derive the lack of the Absolutive Constraint from structural differences between the two constructions.

21 See also Potsdam and Polinsky 2012 for a backward raising analysis of a subset of constructions displaying cross-clausal Condition C insensitivity.
References


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