

THE UNIVERSITY OF CHICAGO

SYNTACTIC ERGATIVITY IN WEST CIRCASSIAN

A DISSERTATION SUBMITTED TO  
THE FACULTY OF THE DIVISION OF THE HUMANITIES  
IN CANDIDACY FOR THE DEGREE OF  
DOCTOR OF PHILOSOPHY

DEPARTMENT OF LINGUISTICS

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CHICAGO, ILLINOIS

JUNE 2019

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## ACKNOWLEDGMENTS

First and foremost I would like to thank my language consultants in Russian:

В первую очередь я хочу поблагодарить всех консультантов по адыгейскому языку с которыми я имела честь работать с 2010-го по 2018-й год в Хатажукайском сельском поселении, Уляпе, Нешукае, Ходзе и Майкопе. Я в особенности благодарна Светлане Кимовне Алишаевой, Сусане Кимовне Хатковой, Саиде Гишевой и Зареме Меретуковой, которые работали со мной в последние две поездки и без чьей терпеливой помощи эта диссертация не состоялась бы. Я также хотела бы выразить благодарность Ирине Багировой за помощь и поддержку в поле.

Throughout my time at UChicago, I have felt incredibly supported, and saying goodbye is not easy. Words cannot express the thanks I owe to my advisor, Karlos Arregi. Karlos has been there for me every step of the way, and truly, I cannot imagine what this journey would have been like without him. Karlos, thank you for always challenging and encouraging, for your unfailing belief in me, for the countless hours of discussions, for the energy, the patience, and for your friendship. Thank you for supporting me through the failures and for sharing in the joy and excitement of the successes. I can only hope to one day be as good a mentor to my students.

I am also grateful to the other members of my committee for their enthusiastic support throughout this process: Jason Merchant, Itamar Francez, and Yakov G. Testele. This dissertation has benefited immensely from my conversations with Jason, who has the uncanny ability to ask the hardest questions and suggest relevant literature and cross-linguistic data for any phenomenon. I am grateful for the constant encouragement to both dig further with the empirical data and to strive for maximal precision in the theoretical modeling. I am thankful to Itamar for his friendly criticism and for helping me build stronger argumentation by challenging every theoretical assumption I put forward. And thank you, Itamar, for not giving up on my inner semanticist despite all odds, and for bringing a truly contagious sense of joy and wonder into every conversation. I knew I wanted to do syntax ever since I took my first syntax class with Yakov Georgiyevich, and I am honored

to have him on my committee, both as a syntactician and a Circassianist. Yakov Georgiyevich has always been encouraging of my theoretical pursuits, and I am grateful for his feedback on my first attempts at theoretical work and for always accurately identifying the empirical challenges a given analysis would face.

Many of the faculty at UChicago have contributed to making my time here a happy and productive one. I owe a special thanks to Lenore Grenoble for guidance in all things related to fieldwork, funding, and difficult life situations. Lenore has been an indispensable source of emotional and logistical support throughout my time at UChicago, assisting me with everything from IRB forms to grant proposals to emergencies in the field. I am thankful to Anastasia Giannakidou and Greg Kobele for useful comments and discussion of my qualifying papers, which in many ways laid the foundation for this project. I owe thanks to Diane Brentari, Amy Dahlstrom, John Goldsmith, Chris Kennedy, Jerry Sadock, Ming Xiang, and Alan Yu for contributing to my intellectual growth and for making the department a friendly and welcome one. In my final year at UChicago, this project benefited greatly from lively conversations with Michelle Yuan and Erik Zyman. Heartfelt thanks also goes to my Georgian instructor, Tamra Wysocki-Niimi. On the administrative side, I am thankful to the department assistant, Suzanne Torres Friedman, for easing the bureaucratic burdens of the academic experience.

I am deeply grateful for the friendship and support of my fellow graduate students, some of which have become very dear friends. I thank Jeff Geiger for the conversations in fake Polish, Betsy Pillion for cinnamon bread and companionship at Zumba, Jacob Phillips for ‘Ksnjushka’, Robert Lewis for the endearingly bad jokes, Jessica Kantarovich for conversations about all things Russian, Adam Singerman for the chocolate-covered espresso beans, Gallagher Flinn for introducing me to my favorite computer games, and Emily Hanink and Asia Pietraszko for being my syntactic role models. Other people who contributed to the vibrant and welcoming community at UChicago are Helena Aparicio, Andrea Beltrama, Ross Burkholder, Carlos Cisneros, Janet Connor, Emily Coppess, Ömer Eren, Josh Falk, Katie Franich, Julian Grove, Matt Hewett, Peet Klecha, Jackie Lai, Hannah McElgunn, Hilary McMahan, Aurora Martinez del Rio, Martina Mar-

tinović, Kat Montemurro, Mike Pham, Eszter Ronai, Laura Stigliano, Mike Tabatowski, Tamara Vardomskaya, and Anqi Zhang. Outside, but related to, the department, I am thankful to Tatiana Burkholder, Bryan Head McMahan, Saule Tuganbaeva, and Asya Tsaturyan.

I would have never gotten here without the help and support of the Russian linguistic community. I owe a great deal to Yury Lander and Peter Arkadiev, who I am proud to call friends and colleagues. Yury and Peter supervised my first several trips to Adygea and taught me many lessons in both theory and methodology that I have carried with me throughout the years. Yury has remained to this day an invaluable source of support, always available to lend advice or a helping hand and to share his deep knowledge of West Circassian grammar and his theoretical insights, despite our many disagreements regarding frameworks and approaches.

I look back with great fondness at my time at the Russian State University for the Humanities, in large part due to the incredible community there. I am immensely grateful to Nina R. Sumbatova for being a wonderful role model in my formative years as a researcher, and for the respect and cheerful friendliness she displayed in teaching and mentorship, both in class and in the field in Dagestan. Many people aided me along in my linguistic education, especially Natalia Serdobolskaya, who supervised my undergraduate thesis, Alexander Letuchiy, Sergey I. Gindin, Vera Podlesskaya, and Irina A. Muravyeva, who has sadly passed away since I graduated. A special thanks is due to Anna G. Belova at the Institute of Oriental Studies who supervised two of my year-end papers on Modern Standard Arabic.

A special place in my heart is reserved for all the people who participated in my fieldwork experience at RSUH and after joining UChicago. As a student at RSUH I participated in three collective field trips to Adygea, and was allowed to come along for two more trips after becoming a graduate student at UChicago. My linguistic interests and my love of field methodologies all take root in those trips, which were funner and more fulfilling than anything else for years surrounding them. I am thankful to the people who made those trips the way they were, especially Ekaterina Ilina, Ivan Kapitonov, Natasha Korotkova, Maria Kyuseva, Grigory Lomize, George Moroz, Lubov

Nesterenko, Ludger Paschen, Maria Ponomareva, and Anton Somin. I wish I could thank Artem Kozmin, who passed away much too soon. My work would not have been possible without the many non-trivial generalizations and insights that were made by generations of students and faculty who conducted fieldwork in Adygea.

In the larger world of linguistics, I am incredibly thankful to Barbara Partee, who came to Moscow every spring semester while I was a student there to teach formal semantics. I would not have gotten into graduate school without Barbara's support and encouragement, and I am always immensely touched that she remembers me and all her other students and remains the warmest, most approachable person imaginable. Throughout my time at UChicago, my work has greatly benefited from discussion of various aspects and reincarnations of this project with many wonderful linguists: Barbara Citko, Boris Harizanov, Heidi Harley, Peter Jenks, Ruth Kramer, Idan Landau, Julie Legate, Jim McCloskey, Neil Myler, David Pesetsky, Maria Polinsky, and Maziar Toosavardani. A special thanks goes to Line Mikkelsen for her continuous interest in my research and for supporting me on the job market.

Outside of my academic endeavors, there was a year when I worked at ABBYY in Moscow, and another two years when I spent some time working at the Chicago Language Center at UChicago. I am thankful to my former colleagues, especially Irina Gorbunova and Alexey Leontyev on the ABBYY side and Catherine Baumann, Rod Edwards, Ellen Hohmann, and Nick Swinehart at the CLC.

I would not have been able to enjoy my experience at UChicago to the full extent without the ongoing support of the staff at Student Counseling Services, especially Dr. Elyse Rocco, and the gentle optimism and supportive environment cultivated by Maria Cruz Gonzalez-Cadel at FitChicago and Anna May at the Brass Ring.

I am endlessly grateful to my friends around the world, both linguist and not, for their support and encouragement throughout this journey, and for being there for me across any distance. Nikita Bezrukov has provided endless hours of emotional support for more times than I can count, despite

a thousand miles dividing us, and I appreciate it to no end. I am thankful to Rafael Abramovitz for enduring all my teasing and always having an interesting linguistic topic up his sleeve. I am thankful to Liza Kushnir, who has been one of my closest friends since our first year of college and whose love and support has gotten me through more than one crisis, and to Vadim Kimmelman, whom I met during my first trip to Adygea in 2010 and who has influenced my academic and personal growth in more ways than I can say. Yulya, Olya and Alya, my favorite rhyming trio, thank you for making me part of your circle despite me spending most of my time on the other side of the globe. Polina, my oldest, dearest of friends, thank you for never failing to welcome me back in Russia with the biggest of smiles and warmest of hugs. Misha, thank you for overcoming all the distances to keep us company in all parts of the world.

I am grateful to my family for the love, support and encouragement throughout this long journey: my sisters, my parents and my grandmothers Vera Ershova and Sofia Byzova. My sisters Liza, Natasha and Masha, despite being spread across the globe, have always provided an anchor and a sense of home. My grandmother Sofia passed away a mere month before my first trip to Adygea, but her kindness and dedication to the pursuit of truth have left a lasting influence on my own life and research. This dissertation is dedicated to my mother, Ekaterina Ershova, who had the uncanny intuition many years ago that I would really like to study languages and introduced me to linguistics. She was right, of course, for which I am grateful to no end. And Osja, thank you for sharing this life with me and for making every day ever so slightly brighter.

This project was supported by the Graduate Research Aid Initiative in Linguistics at UChicago, the Association for Slavic, East European, and Eurasian Studies Dissertation Research Grant, and the Dissertation Research Improvement Grant from the National Science Foundation (BCS-1749299). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author and do not necessarily reflect the views of the National Science Foundation.

## ABSTRACT

This dissertation explores the relation between the notion of subjecthood and syntactic ergativity through the lens of West Circassian (or Adyghe; of the Northwest Caucasian family), a polysynthetic morphologically ergative language. West Circassian displays a number of unusual syntactic ergativity effects, i.e. effects which indicate that the absolutive argument occupies the structurally prominent position which is generally believed to be associated with subjecthood. Through the close examination of two such effects – reciprocal binding patterns and constraints on parasitic gap licensing – I arrive at the conclusion that the absolutive argument in West Circassian may be generated in a variety of positions within the verbal theta-domain, but then uniformly undergoes A-movement to the highest argument position in the clause regardless of its theta-role.

The derived status of the high absolutive explains why a number of subjecthood diagnostics, such as reflexive binding and obligatory control configurations, single out the ergative agent as the subject: this is because the syntactic properties of these constructions rely on the voice projection, which is merged directly above the verbal theta-domain, i.e. *vP*. Given the low position of Voice<sup>0</sup>, diagnostics which involve the use of this head single out the highest argument in *vP* as the subject, rather than the highest argument in the full clause. The proposed analysis provides support for the idea that subjecthood properties may be disbursed across several positions – in a syntactically ergative language like West Circassian, these positions are often occupied by two distinct nominals. In the absence of a single position or single nominal which could be labeled as a subject within a given clause structure, the term ‘subject’ becomes theoretically vacuous.

The dissertation provides insight into the nature of syntactic ergativity, the structural status of subjecthood, and the syntax of anaphor binding, parasitic gap licensing and obligatory control constructions. Through the examination of argument asymmetries in a polysynthetic language, this project contributes to the line of research demonstrating that polysynthesis and non-configurationality cannot be defined macro-parametrically, but are rather a consequence of several micro-parameters at play, and that there is configurational structure at the core of such a language.

## GLOSSING CONVENTIONS

1,2,3	1st, 2nd, 3rd person	LNK	linker in numerals
ABS	absolutive	LOC	locative
ADD	additive	MAL	malefactive
ADV	adverbial	MOD	modal future
BEN	benefactive	NEG	negative
CAUS	causative	NML	nominalizer
CNV	converb	OBL	oblique
COM	comitative	PL	plural
COND	conditional	POSS	possessive
DAT	dative	PP	complement of postposition
DIR	directive	PR	possessor
DYN	present tense on dynamic verbs	PRED	predicative copula
ERG	ergative	PST	past tense
HABIT	habitual	Q	question
FACT	factive	RE	refactive
FUT	future	REC	reciprocal
INDEF	indefinite	REFL	reflexive
INS	instrumental	RSN	reason
IO	indirect object	SG	singular
IPF	imperfective	TRANS	translocative
LIM	limitive	WH	wh-agreement

# CHAPTER 1

## SYNTACTIC ERGATIVITY AND SUBJECTHOOD

### 1.1 Introduction

This dissertation explores the syntax of argument alignment by examining the role of subjecthood in a syntactically ergative language. The focus of the dissertation is West Circassian (also known as Adyghe), a Northwest Caucasian language spoken primarily in the Republic of Adyghea, Russia. West Circassian displays polysynthetic morphology with prominent head marking, free word order and pro-drop and is ergative in case marking and verbal indexing. West Circassian displays a number of syntactic ergativity effects that have not received attention in the generative literature. *Syntactic ergativity* is understood here as the phenomenon whereby certain subjecthood diagnostics or, more broadly, diagnostics for structural prominence single out the absolutive argument – i.e. the subject of an intransitive verb or the theme of a transitive verb – as the syntactically most prominent argument in the clause (Dixon 1994; Kazenin 1994; Deal 2016; Polinsky 2017). Previous research (Lander 2009a,b, 2012; Letuchiy 2010) has documented a broad range of phenomena that appear to indicate that the absolutive argument possesses subjecthood properties in the domain of relativization and valency-changing derivations, suggesting that the absolutive argument occupies the subject position in the language. On the other hand, the ergative agent of a transitive verb exhibits a number of standard subjecthood properties which point towards a syntactically accusative structure; this has been used as evidence for the subjecthood of the ergative agent in e.g. Caponigro and Polinsky (2011); Potsdam and Polinsky (2012). The dissertation provides a principled explanation for this disparity in diagnostics for structural prominence: various diagnostics single out different structural positions within the clausal spine, and if these positions may be occupied by distinct nominals, as in a syntactically ergative system, these diagnostics will systematically fail to identify a single argument as the subject.



## 1.2 Main claims: subjecthood and syntactic ergativity

The main claim of the dissertation is supported by the close examination of two domains which display syntactic ergativity effects – the expression of reciprocal relations and constraints on wh-agreement marking in relative clauses, and the comparison of the constructions in question with diagnostics which single out the ergative agent as the subject. Based on these two phenomena, the dissertation argues that West Circassian has a syntactically ergative clause structure, with the absolutive argument occupying the highest A-position in the clausal spine – the specifier of TP. On the other hand, the results of two subjecthood tests which single out the ergative agent – the expression of reflexive relations and obligatory control and raising configurations – are then shown to follow from the fact that these configurations are determined at the level of VoiceP, rather than TP, and thus single out the highest argument in *v*P, rather than the highest argument in the full clause.

The proposed analysis contributes to a number of domains by shedding light on the nature of subjecthood in a syntactically ergative language like West Circassian and the theoretical status of subjecthood for the understanding of domains which have been standardly assumed to be sensitive to an argument's subjecthood status, in addition to providing evidence for a configurational analysis of a language that has many trademark properties of a non-configurational system. In terms of understanding the structural nature of syntactic ergativity, this dissertation supports the idea that syntactic ergativity is derived, i.e. that the absolutive argument moves to a high position in the clausal spine from a position that may be lower than other arguments within the  $\theta$ -domain of a given verb, as has been proposed e.g. by Bittner and Hale (1996); Manning (1996); Baker (1997); Aldridge (2008); Coon et al. (2014); Yuan (2018). By appealing to a number of novel syntactic ergativity diagnostics such as reciprocal binding and conditions on parasitic gap licensing, this dissertation provides compelling evidence that the high position of the absolutive argument must be derived via A-movement, rather than A'-movement. This is in departure from previous proposals, which are based on scope and extraction asymmetries as diagnostics and are thus compatible with

the high absolutive occupying an A'-position.

In regards to the notion of subjecthood, this dissertation falls into a robust line of research which deconstructs subjecthood into a number of structural properties that are dispersed across several positions in the clausal spine, indicating that the term 'subject' bears no theoretical significance within the phrase structure model used in current minimalist work; see e.g. Harley (1995); Bobaljik and Jonas (1996); McCloskey (1997). This is in contrast to the idea put forth e.g. by Anderson (1976) that a subject may be unequivocally defined across language types and all ergative languages are syntactically accusative in structure. By focusing on a syntactically ergative language, this dissertation provides evidence for an even further deconstruction of this notion: in a language like West Circassian, there is no single position, and in most cases, no single nominal within a given clause, which may be identified as the subject. Furthermore, the close investigation of particular subjecthood diagnostics, such as conditions on reflexive binding, show that even a particular diagnostic may not single out a specific syntactic position as the subject: in the case of anaphor binding, the position is contextually defined as the highest nominal within a particular structural domain and may in fact correspond to a number of different syntactic positions.

Returning to the connection between the notion of subjecthood and syntactic ergativity, this dissertation argues that the highest A-position in the clause – i.e. the surface subject position – is occupied by the absolutive argument regardless of its theta-role, rendering a systematic mismatch between the thematic subject within the lower theta-domain and the surface subject within the full clause, which in turns brings about the mixed results for tests of structural prominence.

By analyzing a number of domains where arguments display clear asymmetries and by teasing apart the conditions that account for these asymmetries, this study contributes to a line of research arguing against the macro-parametric approach to polysynthesis and non-configurationality advocated by Hale (1983, 1994); Jelinek (1984); Baker (1996). In line with previous research proposing that non-configurationality and polysynthesis are derived via a number of independent micro-parameters (see e.g. Bruening 2001; Legate 2002; Davis and Matthewson 2009), this dissertation

provides evidence that arguments in West Circassian display asymmetrical syntactic behavior that is familiar from configurational languages. Importantly, a part of the evidence indisputably concerns the behavior of lexical nominal phrases (in the domain of parasitic gap licensing), as opposed to the behavior of cross-reference morphology referring to various arguments on the predicate, thus indicating that lexical nominal phrases occupy argument positions and are not adjoined in the clausal periphery.

Finally, this dissertation sheds light on a number of puzzling morphosyntactic phenomena in West Circassian through close examination of the connection between morphological form and syntactic structure. This study thus provides a window into the morphosyntax of West Circassian and lays the foundation for the study of other syntactic phenomena in the language through the investigation of morphological cues.

The analysis proposed in this thesis is grounded within the Minimalist program advocated by Chomsky (1995b) and assumes that there is a direct mapping between both syntax and morphology/phonology and syntax and semantics, rather than separate grammatical modules corresponding to the various levels of representation. In regards to the morphology-syntax interface, I follow work in Distributed Morphology (Halle and Marantz 1993, 1994) in assuming a syntax-all-the-way-down approach, i.e. that there is no lexicon or separate morphological module, but rather that syntax operates on morphemes which are represented in the syntax as feature bundles and are associated with a phonological form post-syntactically. For a language like West Circassian, which displays complex morphological forms and many trademark properties of a non-configurational language, this approach proves to be a fruitful avenue in investigating the syntax of the language.

### **1.3 West Circassian**

West Circassian, which is also known as Adyghe, belongs to the Northwest Caucasian (West Caucasian, or Abkhaz-Adyghean) family, one of the three indigenous language families spoken in the Caucasus (alongside the Northeast Caucasian, or Nakh-Daghestanian, and South Caucasian,

or Kartvelian, families). It comprises the Circassian group together with the closely related East Circassian language (also known as Kabardian). The Northwest Caucasian family also includes Abkhaz, Abaza, and the extinct language Ubykh (Kumakhov 1981; Chirikba 1996; Hewitt 2004; Daniel and Lander 2011). Like the other languages of the Northwest Caucasian family, West Circassian has a rich consonantal system with a small vowel inventory and is polysynthetic, with agglutinating prefixal and suffixal morphology and ergative alignment in verbal indexing, free word order and pro-drop (see e.g. Arkadiev et al. 2009:18; Lander and Testelelets 2017:949). Together with East Circassian, the language also displays ergative alignment in case marking. West Circassian is primarily spoken in the Republic of Adygea and the neighboring Krasnodar Krai in Russia – two federal constituencies bordering the Black Sea northwest of the Caucasus mountains. Based on the 2010 census, Ethnologue estimates the total number of speakers worldwide to be 568300, and the number of speakers in Russia at around 117500.<sup>1</sup> The language is classified as vulnerable by UNESCO.<sup>2</sup> In the Republic of Adygea, language transmission is active in rural Adyghe settlements, but there is rapid language shift in urban areas to Russian, the dominant language (see e.g. Smeets 1984:56-59 on the analogous situation in Turkey; Lander and Testelelets 2017:948-949).

The groundwork for this thesis has been laid by decades of linguistic study of West Circassian: influential grammatical descriptions include (Jakovkev and Aškhamaf 1941; Rogava and Keraševa 1966; Smeets 1984; Kumakhov 1964, 1971, 1989; Zekokh 2002). A considerable amount of linguistic research has been carried out in the past two decades by a team of researchers at the Russian State University for the Humanities and the Higher School of Economics (Gerasimov and Lander 2008; Testelelets 2009a; Korotkova and Lander 2010; Lander and Letuchiy 2010; Letuchiy 2010; Arkadiev and Letuchiy 2011; Lander 2012; Nikolaeva 2012; Letuchiy 2015; Lander and Testelelets 2017, among others); this work – while primarily conducted in a functionalist framework – has largely laid the groundwork for this project. Papers written in the generative tradition on West Circassian include Caponigro and Polinsky (2011); Potsdam and Polinsky (2012). The best-known

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1. <https://www.ethnologue.com/language/ady>

2. <http://www.unesco.org/languages-atlas/index.php>

dictionaries of West Circassian include Vodoždokova (1960); Tkharakakho (1991); Abregov and Gišev (2006), and there has recently been developed an open access corpus of written West Circassian which comprises primarily texts from contemporary media, 20th century fiction, and religious texts – the Adyghe Language Corpus designed by Timofey Arkhangelskiy, Irina Bagirokova and Yury Lander (available here: <http://adyghe.web-corpora.net/>). Following recent literature on West Circassian, the transcription system is in accordance with the IPA, except for the non-standard symbols in (1).

(1) Non-standard transcription symbols:

c = IPA /t͡s/	š = IPA /ʃ/	ž = IPA /d͡ʒ/
č = IPA /t͡ʃ/	ŝ = IPA /ʃ̺/	C' = palatalization
h = IPA /h/	ž = IPA /ʒ/	Ç = ejective
l = IPA /ɭ/	ẓ̌ = IPA /ʒ̣/	
λ = IPA /ɬ/	ẓ̣̌ = IPA /d͡ʒ̣̣/	

This thesis builds on previously made descriptions and generalizations by bringing in novel data in the domain of anaphor binding, wh-agreement constructions, and control configurations. The data was collected through elicitation with four native speakers of the Temirgoy dialect spoken in the Shovgenovskij district of the Republic of Adygea in Russia, conducted over the course of two trips to the region in 2017 and 2018, comprising a total of 14 weeks in the field. Other sources for data are published grammatical descriptions, scholarly papers, and the Adyghe Language Corpus (abbreviated as AC throughout the thesis). Unless otherwise indicated, all examples in the thesis are in the Temirgoy dialect or the literary standard, which is based on the Temirgoy dialect. The glossing and morphological segmentation in cited examples may be altered from the source for consistency with conventions adopted throughout this thesis.

## 1.4 Summary of chapters

The remainder of the dissertation is structured as follows.

Chapter 2 presents the theoretical implementation of the core proposal: the absolutive argument undergoes A-movement to a position c-commanding other arguments. This syntactically ergative clause structure is derived through conditions on nominal licensing: ergative agents and applied objects are licensed in situ by the heads that introduce them, while the absolutive argument is licensed via movement to the specifier of  $T^0$ . This licensing is implemented in a system of feature-driven minimalism, where nominals carry a licensee feature which must be checked in the course of the derivation, and licensing heads probe for this particular feature, which means that once a nominal is licensed it is no longer an eligible goal for a higher licensing probe. Within this approach, morphological case marking is divorced from nominal licensing and is determined by a simple rule of dependent case assignment within the domain of TP. Additionally, this chapter lays out the basic assumptions about word formation and the syntax of cross-reference morphology employed throughout the thesis.

Chapter 3 presents an analysis of anaphor binding in West Circassian by addressing an apparent disparity between reflexive and reciprocal binding patterns: reflexives appear to provide evidence for a syntactically accusative clause structure, while reciprocals provide evidence for a syntactically ergative clause structure. Through the close examination of the expression of reflexive and reciprocal relations in a variety of contexts, I arrive at the conclusion that while reciprocals are standard anaphors that must be bound in a given A-domain, reflexives fall into a cross-linguistically common class of anaphors which may only be bound by a local, non-derived subject. Based on these empirical facts, I argue that reciprocals provide evidence for the movement of the absolutive argument to Spec,TP, while the choice of antecedent for reflexives is constrained by a specialized  $\text{Voice}_{\text{REFL}}$  head which is merged immediately above the theta-domain, i.e.  $vP$ .

Chapter 4 explores argument asymmetries in the domain of parasitic gap licensing. The chapter argues that parasitic gap dependencies may be diagnosed solely in the morphology – they manifest themselves as multiple wh-agreement configurations in relative clauses. The first part of the chapter presents evidence for a parasitic gap analysis of multiple wh-agreement constructions by demonstrating that multiple wh-agreement constructions display the standard properties associated with parasitic gaps cross-linguistically. The second part of the chapter explores the consequences of a parasitic gap analysis of these constructions: based on constraints on multiple wh-agreement constructions, I conclude that the absolutive argument c-commands other clausemate DPs, and the applied object may undergo optional A-scrambling to Spec,*v*P above the ergative agent.

Chapter 5 focuses on obligatory control configurations, which appear to provide evidence for the subjecthood of the ergative agent. I argue that like reflexive binding, control is mediated via Voice<sup>0</sup> which in turn agrees with the highest nominal in its c-command domain – in the case of a transitive verb, the ergative agent. This derives the fact that control follows a syntactically accusative schema despite the high position of the absolutive argument in the embedded control clause. While the variety of West Circassian that this dissertation focuses on does not display the raising configurations described for the language by Potsdam and Polinsky (2012), I present an extension of the analysis of control which would be able to account for raising also targeting the highest nominal within *v*P – the ergative agent – and not the highest nominal in the full embedded clause, i.e. the absolutive argument in Spec,TP.

Chapter 6 concludes.

## CHAPTER 2

### SYNTACTIC ERGATIVITY AND NOMINAL LICENSING

#### 2.1 Introduction

This chapter lays out the core proposal of this dissertation: West Circassian has a syntactically ergative clause structure wherein the absolutive DP undergoes A-movement to Spec,TP – the surface subject position c-commanding other verbal arguments. I propose a particular implementation of this movement through a system of nominal licensing that is divorced from case assignment: the ergative agent and applied objects are licensed in situ by the heads that introduce them, while the absolutive argument moves to Spec,TP in order to be licensed by  $T^0$ . Licensed nominals become inactive for higher licensing probes – this is implemented as mutual feature checking on the licensing head and the licensed nominal in the spirit of Minimalist Grammars (Stabler 1997, 2010; Keenan and Stabler 2003; Lecomte and Retoré 1999, 2001). This means that the licensing of non-absolutive arguments in situ ensures that these arguments are not eligible goals for the licensing feature on  $T^0$  and thus do not act as interveners in the raising of the absolutive argument to Spec,TP. The two-way morphological case distinction observed in the language is established in a configurational manner after the raising of the absolutive argument, per Marantz (1991); McFadden (2004); Baker (2015); Yuan (2018), among others: the ergative agent and any applied objects, both being c-commanded by another nominal, are assigned dependent oblique case and the absolutive DP, which is not c-commanded by any other argument, is assigned default absolutive case. An interesting aspect of this proposal is that it ties together two approaches to ergative case which are generally taken to be in opposition to each other – the configurational analysis of ergative case as dependent, and the inherent case approach proposed e.g. by Woolford (2006); Legate (2008). This is because while case is determined configurationally, the configuration which is evaluated for case assignment results from the licensing of the ergative agent in situ by transitive  $v^0$  – this means that ergative licensing is established precisely in the same configuration as inherent ergative



case is assumed to be assigned.

Additionally, this chapter presents a working analysis of the morphology-syntax interface, as well as verbal and nominal cross-reference morphology. A precise implementation of the mapping between syntax and morphology is necessary given the polysynthetic and non-configurational nature of West Circassian: it is often the case that the only available cues for diagnosing a particular syntactic phenomenon manifest themselves in the morphology. Following work in Distributed Morphology (Halle and Marantz 1993, 1994), I assume that words are constructed as the result of syntax operating on feature bundles which are subsequently spelled out as morphemes. Following Ershova (2018, 2019), verbal forms are the spellout of a complex syntactic head that is derived via head movement, while nominal forms correspond to a phrasal constituent which is mapped to a single phonological word per rules of syntax-to-prosody mapping. Cross-reference morphology is assumed to be the spellout of  $\phi$ -agreement with  $\text{Agr}^0$  heads which merge immediately above the position where a given nominal is licensed. As demonstrated throughout the remainder of the thesis, this approach to the morphology of the language proves to be a fruitful way of investigating its syntactic structure.

The remainder of this chapter is structured as follows: section 2.2 describes the basic clause structure of West Circassian; section 2.3 presents the analysis of nominal licensing and how it derives the syntactically ergative clause structure; section 2.4 presents an analysis of case assignment; section 2.5 discusses the basic morphological properties of words in West Circassian and word formation strategies; section 2.6 outlines an analysis of cross-reference morphology, and section 2.7 concludes.

## **2.2 Basic clause structure**

This section provides the necessary preamble to the discussion of the core proposal of this thesis by outlining the basic descriptive facts regarding the West Circassian clause structure.

West Circassian is morphologically ergative in case marking and verbal indexing (verbal morphology will be discussed in sections 2.5 and 2.6). In regards to case marking, 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 and any applied objects receive the oblique case marker *-m*. Thus, the external argument of the unergative verb *qešen* ‘dance’ in (2a) and the theme of the transitive verb *fepen* ‘dress’ in (2b) are assigned absolutive case, while the ergative agent in (2b) and the benefactive applied object in (2c) are assigned oblique case.

- (2) a. *mə pšaše-r(ABS) jane pajə Ø-qa-š<sup>w</sup>e*  
           this girl-ABS           3PL.PR+mother for   3ABS-DIR-dance  
           ‘The girl is dancing for her mother.’
- b. *s-jə-pšaše-xe-m(ERG) nəsxape-xe-r(ABS) Ø-a-fepa-Ɂe-x*  
      1SG.PR-POSS-girl-PL-OBL doll-PL-ABS           3ABS-3PL.ERG-dress-PST-PL  
      ‘My daughters dressed the dolls.’
- c. *mə ɟ’ale-r(ABS) bere Ø-jə-ʔahəl-xe-m(IO) telefon-ɟ’e*  
      this boy-ABS           much 3SG.PR-POSS-relative-PL-OBL telephone-INS  
      *Ø-a-fe-tj-e-we*  
      3ABS-3PL.IO-BEN-loc-DYN-hit  
      ‘This boy calls (lit. rings for) his relatives on the telephone a lot.’

The label *oblique* for the case on ergative agents and applied objects is additionally motivated by the fact that this case also appears on possessors (3a) and complements of postpositions (3b).

- (3) a. *pšaše-m Ø-jə-pšešeɁ<sup>w</sup>*  
      girl-OBL 3SG.PR-POSS-female.friend  
      ‘the girl’s friend’
- b. *mə š<sup>w</sup>əzə-m pajə*  
      this woman-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); Lander and Testelelets (2017), *inter alia*, provide a uniform treatment for all instances of this marker. In this paper I follow recent work on West Circassian in glossing both case markers as oblique and model this case marker on both ergative agents and applied objects as the instantiation of the same dependent case; see section 2.4 for details. In order to differentiate between the different uses of oblique case-marked nominals or nominals without overt case marking, here and throughout the thesis I mark the syntactic role of a given nominal (ABS, ERG or IO) in parentheses when this is necessary for expository reasons.

Nouns may appear without overt case marking; the lack of case marking is generally associated with indefiniteness. Thus, the absolutive argument *txəλ* ‘book’ lacks case marking in (4a). Additionally, possessed nominals in the singular, proper names and personal pronouns generally do not inflect overtly for case (Arkadiev et al. 2009:51-52; Arkadiev and Testelelets 2015): this is shown for a personal pronoun in (4a), a possessed nominal in (4b), and proper names in (4c). I assume that all arguments are assigned case regardless of the presence of an overt morphological case marker; for details see 2.4.

- (4) a. **we**            *mə pšaše-m*    **txəλ**            *Ø-Ø-je-p-tə-ɸ*  
**you(ERG)** this girl-OBL    **book(ABS)** 3ABS-3SG.IO-DAT-2SG.ERG-give-PST  
‘You gave this girl a book.’
- b. *mə sabəjə-r*    **ə-šəpχ<sup>w</sup>**                    *Ø-q-ə-š’a-ɸ*  
this child-OBL    **3SG.PR-sister(ERG)** 3ABS-DIR-3SG.ERG-bring-PST  
‘Her sister brought this child.’
- c. **zarjəne**            *Ø-Ø-faj*                    **asje**            *Ø-qe-š<sup>w</sup>e-n-ew*  
**Zarina(ABS)** 3ABS-3SG.IO-want **Asya(ABS)** 3ABS-DIR-dance-MOD-ADV  
‘Zarina wants Asya to dance.’

West Circassian also displays free word order, often without any apparent changes in information structure or prosody (see e.g. Kumakhov and Vamling 2006:72-119; Lander 2012:89-92; Lander and Testelelets 2017:951), and nominal phrases referring to arguments are often omitted. The former point is illustrated in (5): in this sentence the applied object may precede the absolutive external argument (5a), or follow it (5b), with no change in meaning.

- (5) a. [mə ɟ'ale-m](IO)      zaβ<sup>w</sup>ere      [ə-š-xe-r](ABS)      jewex  
          this boy-OBL                   sometimes 3SG.PR-brother-PL-OBL 3ABS.PL+3SG.IO.hit
- b. [ə-š-xe-r](ABS)                   zaβ<sup>w</sup>ere      [mə ɟ'ale-m](IO)      jewex  
          3SG.PR-brother-PL-ABS sometimes this boy-OBL                   3ABS.PL+3SG.IO.hit  
          ‘His brothers sometimes hit this boy.’

The availability of pro-drop can be seen in (6), where the verb indexes four arguments, none of which are overtly expressed, but this utterance is nevertheless understood as a complete sentence.

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

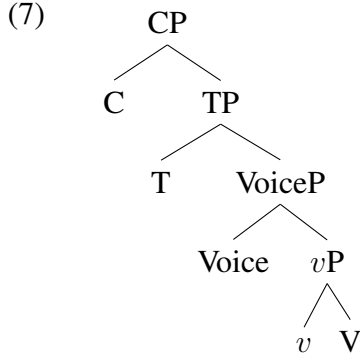
While the order of arguments in a full clause is free, the language is prevalently left-branching: case markers are suffixal; the language has postpositions rather than prepositions; embedded clauses tend to be verb-final, and relative clauses appear to the left of their nominal external head.

The following section presents the core proposal of this dissertation: the nominal that is assigned absolutive case and triggers absolutive cross-reference morphology undergoes movement to Spec,TP – a position c-commanding other verbal arguments.

### 2.3 The core proposal: nominal licensing and syntactic ergativity

This section outlines the core proposal of this thesis: in the West Circassian clause, the absolutive argument, i.e. the theme of a transitive verb and the external argument of an intransitive verb, uniformly undergoes A-movement to Spec,TP – a position c-commanding all other verbal arguments. Evidence for this structure comes from reciprocal binding facts presented in chapter 3 and conditions on parasitic gap licensing presented in chapter 4. This is implemented through a licensing requirement on nominals, which may be thought of as an abstract case requirement.

The minimal functional structure I am assuming for the West Circassian clause is in (7), with additional projections (such as Mood<sup>0</sup>, Neg<sup>0</sup> or Appl<sup>0</sup>) present when relevant.



$C^0$  is phonologically null in most cases and is active in  $A'$ -movement and clausal embedding.  $T^0$  hosts primarily suffixal tense morphology and is responsible for the licensing of the absolutive argument.  $\text{Voice}^0$  is responsible for licensing reflexives, as discussed in chapter 3, and in facilitating obligatory control, as shown in chapter 5.  $v^0$  introduces eventive semantics and licenses the external argument when one is present;  $V^0$  corresponds to the lexical root. For the sake of simplicity, I only include  $\text{Voice}^0$  in the trees when it actively influences the syntactic derivation, i.e. when discussing conditions of reflexive licensing and establishing co-indexation under obligatory control.

The remainder of this section is organized as follows: subsection 2.3.1 defines the types of features and operations which will be employed throughout the thesis in order to account for the syntactic ergativity facts and subsection 2.3.2 illustrates how this system may be implemented in order to derive the high position of the absolutive argument in the West Circassian clause.

### 2.3.1 *Feature-driven minimalism*

I follow work in Minimalism in positing two main syntactic operations: *Merge*, which forms a novel syntactic object out of two syntactic objects (Chomsky 1995a), and *Agree*, which results in feature-sharing between two syntactic nodes (Chomsky 2000, 2001). Following Heck and Müller (2007); Müller (2010), both of these operations are driven by features on the Probe:  $[\bullet F \bullet]$  for Merge and  $[\ast F \ast]$  or  $[\ast F_x : V \ast]$  for Agree. For the latter type of Agree probe,  $x$  and  $Val$  are sets of values in  $F$  and either set may be empty: if empty,  $x$  is omitted and  $V$  is denoted as an underscore ( $\_\_$ ).

Following Chomsky (2000, 2001), I will assume that both operations are triggered as soon as an element with an active probe feature is merged, and probing proceeds strictly downward into the c-command domain of a given probe.

In order to successfully model the behavior of verbal arguments in a syntactically ergative system, two types of goal features are necessary: standard goal features  $[F]$  or  $[F:V]$  (where  $V$  is the set of values for  $F$ ) and licensee features  $[+F+]$ . The first type of goal feature remains unaltered in the course of the syntactic derivation, while licensee features must be checked and deleted via Merge that is triggered by a matching structure-building feature  $[\bullet F \bullet]$ . This builds on the long-standing intuition dating back to Vergnaud (2008[1977]); Chomsky (1980, 1981) that nominals require to be syntactically licensed in the course of the derivation. A featural implementation of this licensing requirement in the spirit of Minimalist Grammars (Stabler 1997, 2010; Keenan and Stabler 2003; Lecomte and Retoré 1999, 2001, a.o.) is necessary in order to (i) account for the lack of intervention effects for the movement of the absolutive DP to Spec,TP over other arguments, and (ii) constrain the distribution of local subject oriented reflexives in West Circassian (see chapter 3 for details). The types of features are listed in (8).

- (8) a. **Probe features:**
- i. Structure-building:  $\bullet F \bullet$
  - ii. Agree:  $*F*$  and  $*F_X:V*$
- b. **Goal features:**  $F$ ,  $F:V$ , and  $+F+$

Following Georgi and Müller (2010); Müller (2010); Martinović (2015), among others, I assume that probe features are hierarchically ordered, with this ordering represented linearly as the notation in (9a), where the features are ranked from left to right, or geometrically as in (9b), where the features are ranked from top to bottom. The ranking may include both Agree and structure-building features, with their ordering lexically determined for a given probe.

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

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

Agree features trigger the operation Agree, as defined in (10), and structure-building features trigger Merge, which is defined in (11) or Move, which is defined in (12). The definition of Agree is based on the definitions provided by Heck and Müller (2007); Merchant (2011): it differs from the former in limiting the probing domain to c-command, rather than m-command, and differs from the latter in assuming strictly downward Agree, with valuation only possible on the c-commanding probe. The definition of Merge is based on the definition provided in Merchant (to appear), with the addition of licensee feature checking. Following Chomsky (1995b, 2000), *et seq*, I treat Move as a special case of Merge where the merged constituent originates in the c-command domain of the probe. Agree (\*F\*), structure-building (•F•) and licensee (+F+) features must be checked and deleted in the course of the derivation in order for the structure to converge.

(10) **AGREE**

For any two syntactic objects  $\alpha$  and  $\beta$ , such that:

- a. the head of  $\alpha$  bears the visible Agree feature \*F\*,  $\beta$  includes the matching goal feature F or licensee feature +F+ and  $\alpha$  c-commands  $\beta$ , and there is no  $\gamma$  bearing F or +F+ such that  $\gamma$  c-commands  $\beta$  and is c-commanded by  $\alpha$ ,  
**the Agree feature on  $\alpha$  is checked and deleted, and, if present, the licensee feature +F+ on  $\beta$  is checked and deleted;** or
- b. the head of  $\alpha$  bears the visible Agree feature \*F<sub>x</sub>:V\*,  $\beta$  includes the matching goal feature F:Y such that  $x \subset Y$  and  $\alpha$  c-commands  $\beta$ , and there is no  $\gamma$  bearing F:W such that  $\gamma$  c-commands  $\beta$  and is c-commanded by  $\alpha$  and  $x \subset W$ ,  
**the Agree feature on  $\alpha$  is checked and valued as F:Z, where  $Z = V \cup Y$ .**

(11) **MERGE**

For any two syntactic objects  $\alpha$  and  $\beta$ , such that the head of  $\alpha$  is the feature set  $\mathcal{F}$  which includes the visible structure-building feature •F•, and  $\beta$  is the feature set  $\mathcal{G}$  which includes

the matching goal feature  $F$  or licensee feature  $+F+$ :

**Merge** $(\alpha, \beta) = \{\alpha', \{\alpha'', \beta'\}\}$ ,

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

(12) **MOVE**

**Move** $(\alpha, \beta)$  is **Merge** $(\alpha, \beta)$ , where  $\alpha$  c-commands  $\beta$  and there is no  $\gamma$  bearing  $F$  or  $+F+$  such that  $\gamma$  c-commands  $\beta$  and is c-commanded by  $\alpha$ .

Agree features of the type  $[*F*]$ , which are simply checked and deleted as a result of Agree are not specified with particular values (such as the feature involved in nominal licensing –  $[K]$ ). This type of feature is necessary in order to correctly constrain the use of transitive  $v_{TR}$  – this will be discussed in the following subsection. An alternative would be to model this type of checking as trivially null valuation per the definition in (10b), where the probe is simply valued as  $[K:\emptyset]$ . I choose to model this as feature deletion instead in order to avoid populating features in a converged derivation which do not correlate with any morphosyntactic or semantic content. The use of the subscript  $x$  in the second type of Agree feature, which requires feature valuation, is a way of modeling relativized probing, where an agreement probe requires a goal that carries a particular value for the Agree feature involved. Relativized probing has been previously proposed to account for e.g. Person-Case Constraint effects (Nevins 2007) and case discrimination (Bobaljik 2008; Preminger 2014; Deal 2016, 2017). The feature set  $V$  in the second type of Agree feature allows for the possibility of a probe having a partially pre-valued Agree feature. I will appeal to relativized probing and partially valued Agree features in chapter 5 to account for the choice of controlled argument in obligatory control constructions.



The conditions on  $\alpha'$  and  $\alpha''$  in (11a)-(11b) are an implementation of the practice of representing probe features only on the head and not the label (as assumed e.g. by Heck and Müller 2007; Müller 2010, among others).

In order for a probe feature to trigger Agree or Merge, it must be visible to the derivation, per Martinović's (2015:67) Feature Visibility Condition (13).

**(13) Feature Visibility Condition:**

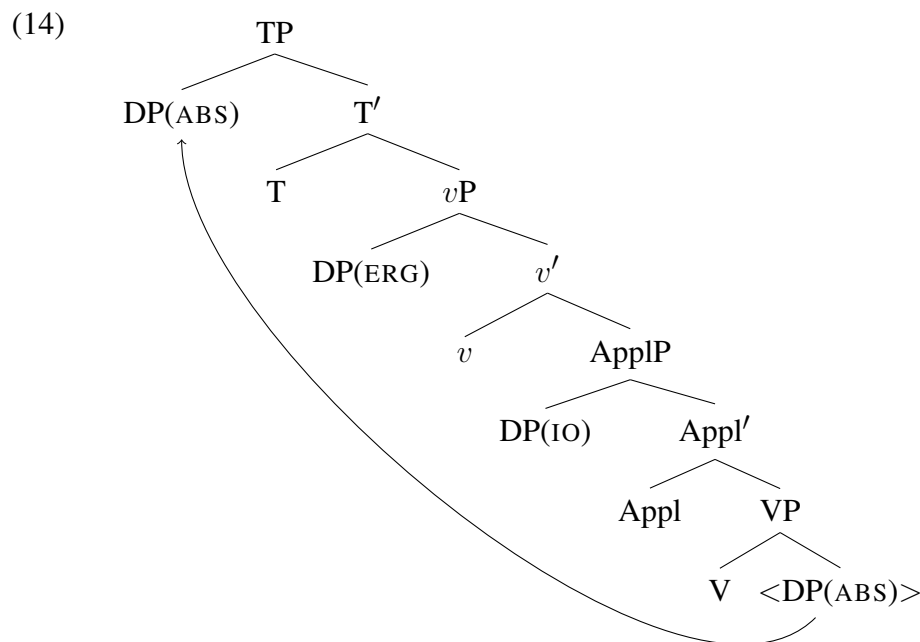
A feature F on a head X is visible if F is the highest feature in the hierarchy.

The following subsection illustrates how the feature system presented in this subsection derives the syntactically ergative clause structure in West Circassian.

### *2.3.2 Implementation: syntactic ergativity as licensing*

The feature system outlined in the previous subsection provides a principled explanation for the movement of the absolutive argument to a Spec,TP over intervening arguments, as schematically shown for a three-place transitive predicate in (14).

The core proposal of this thesis is that in West Circassian the absolutive case-marked nominal uniformly undergoes movement to Spec,TP – an A-position c-commanding both the ergative agent and any applied objects. This is true for all types of absolutive case-marked nominals: themes of transitive and unaccusative verbs and external arguments of unergative verbs. This analysis builds on the long-standing intuition that ergative and applicative arguments are assigned case or licensed in their base-generated positions, rendering them inactive for further case or licensing related operations; cf. accounts of ergative and applicative case as inherent (Woolford 2006; Legate 2008; Pylkkänen 2008).



Assuming the feature system outlined in the previous subsection, this movement can be implemented in the following way: building on the intuition that nominals must be syntactically licensed in the course of the derivation, in addition to the category feature [D], all DPs bear the licensee feature [+K+] (15). The role of this feature is the same as the  $-k$  or  $\bar{k}$  features used in Minimalist Grammars, which are likewise used to model a case-like licensing requirement for nominals (Lecomte and Retoré 1999; Keenan and Stabler 2003; Stabler and Keenan 2003). For ergative agents and applied objects, this feature is checked in their base position by the heads that select for these arguments:  $v_{\text{TR}}$  and  $\text{Appl}^0$ . Absolute arguments, on the other hand, are not licensed in their base-generated position, but must instead be licensed by  $T^0$ .

(15) All DPs (additional features may be present):

- a. Category: D
- b. Licensee: +K+

The verbal functional projections responsible for nominal licensing are  $v_{\text{TR}}$ ,  $\text{Appl}^0$ , and  $T^0$ . This is very similar to accounts of ergative case and case on applied objects as inherent, i.e. as-

signed by  $v^0$  and  $\text{Appl}^0$  correspondingly (see e.g. Woolford 2006; Legate 2008 on the former; Pyllkkänen 2008 on the latter). Under inherent case accounts, the inherent case-marked nominal is often taken to be inactive for case-related syntactic operations, allowing a lower argument to undergo A-movement to a higher position despite the inherent case-marked nominal being in its path of movement (cf. McGinnis’s (1998a) inert case; Legate’s (2008) discussion of eligibility for absolutive case assignment to a theme over an ergative external argument, and Kalin and van Urk 2015 for a similar idea regarding  $\phi$ -agreement). The heads that license case on ergative arguments and applied objects in those accounts coincide with the heads that license these arguments under the current analysis. However, this does not necessarily entail that licensing is the result of case assignment, as was proposed e.g. by Chomsky (1980, 1981); see section 2.4 for discussion of case assignment. Setting aside features involved in the building of the clausal spine (for instance, the feature which licenses Merge of  $v^0$  and  $V^0$ ), the features of  $v_{\text{TR}}$ ,  $\text{Appl}^0$ , and  $T^0$  are shown in (16).  $\text{Appl}^0$  and  $T^0$  simply license a nominal in their specifier, while  $v_{\text{TR}}$  also carries the Agree feature  $[\ast K\ast]$  which agrees with the absolutive theme before the ergative agent can be licensed. This is to ensure that only a transitive  $v^0$  licenses an argument – unergative  $v_{\text{UNERG}}$  carries the structure-building feature  $[\bullet D \bullet]$ , which simply introduces, but does not license a nominal (17a), and unaccusative  $v_{\text{UNACC}}$  does not introduce an external argument at all (17b). The classification of  $v^0$  heads into these three types is necessary in order to account for the fact that subjects of both unergative and unaccusative verbs are uniformly absolutive, rather than ergative, and thus must undergo movement to Spec,TP. The presence of the  $[\ast K\ast]$  feature on  $v_{\text{TR}}$  ensures that an external argument is licensed as the ergative agent in Spec, $v$ P only if there is an unlicensed (absolutive) theme in its c-command domain.

- (16) a. Transitive  $v^0$  ( $v_{\text{TR}}$ ):  $[\ast K\ast \gg \bullet K \bullet]$

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

- b.  $\text{Appl}^0$ :  $\bullet K \bullet$

Merges and licenses an applied object.

- Licenses a moved argument – the absolutive DP.

Licenses a moved argument – the absolutive DP.

- Merges an external argument, but does not license it.

Merges an external argument, but does not license it.

- Does not select for an external argument.

Does not select for an external argument.

Since both the ergative agent and any applied objects are licensed in-situ and the absolutive DP remains unlicensed until the merging of  $T^0$ , the absolutive DP is the only nominal in the c-command domain of  $T^0$  that can satisfy the  $[\bullet K \bullet]$  feature on  $T^0$ . This ensures that the absolutive argument always undergoes movement to Spec,TP, and that other verbal arguments do not act as interveners in this movement.

A few sample derivations are presented below. Let us consider the derivation of the sentence in (18), which contains the three-place predicate *jetən* ‘give’ with a first person plural ergative agent, a second person singular applied object, which is not expressed as an overt pronoun, but is cross-referenced in the predicate, and an absolutive theme.

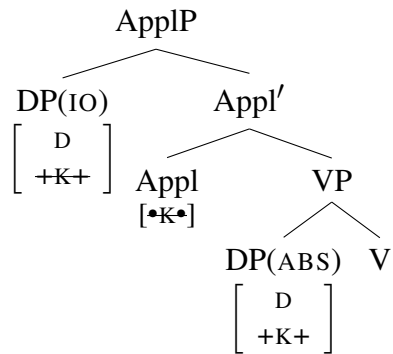
- (18) te(ERG)    pro(IO)    mə txələ-r(ABS)    Ø-qə-w-e-t-tə-ž'ə-ɸ  
we                      this book-ABS       3ABS-DIR-2SG.IO-DAT-1PL.ERG-give-RE-PST  
'We gave this book to you.'

The derivation is illustrated step by step in (19) – for simplicity, I am only including the fea-

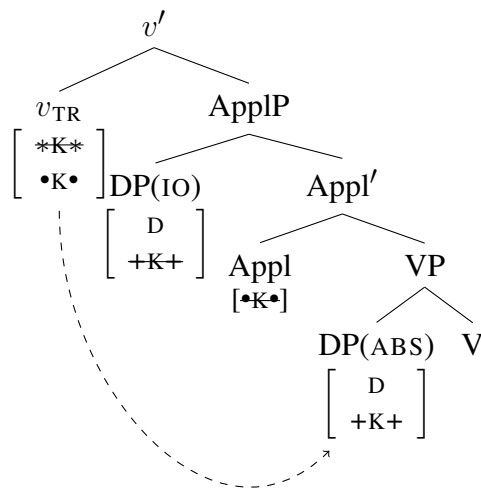
tures that are relevant for nominal licensing in the derivation and omit features that are actually responsible for determining the phonological form at spellout.

(19) Three-place predicate (ERG-IO-ABS):

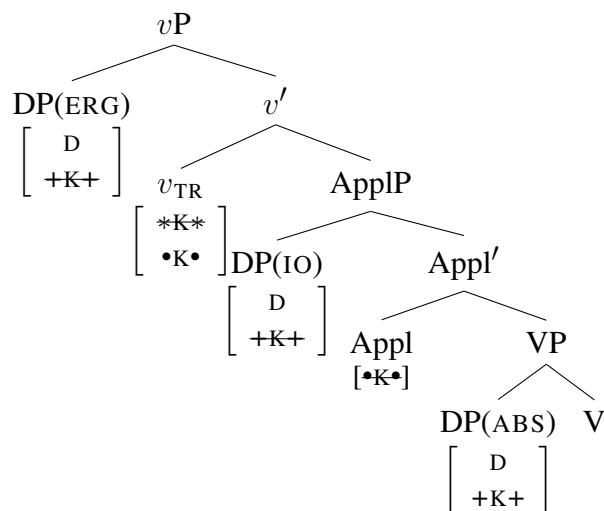
a.  $\text{Appl}^0$  selects for VP and merges  $\text{DP}(\text{IO})$  in its specifier:



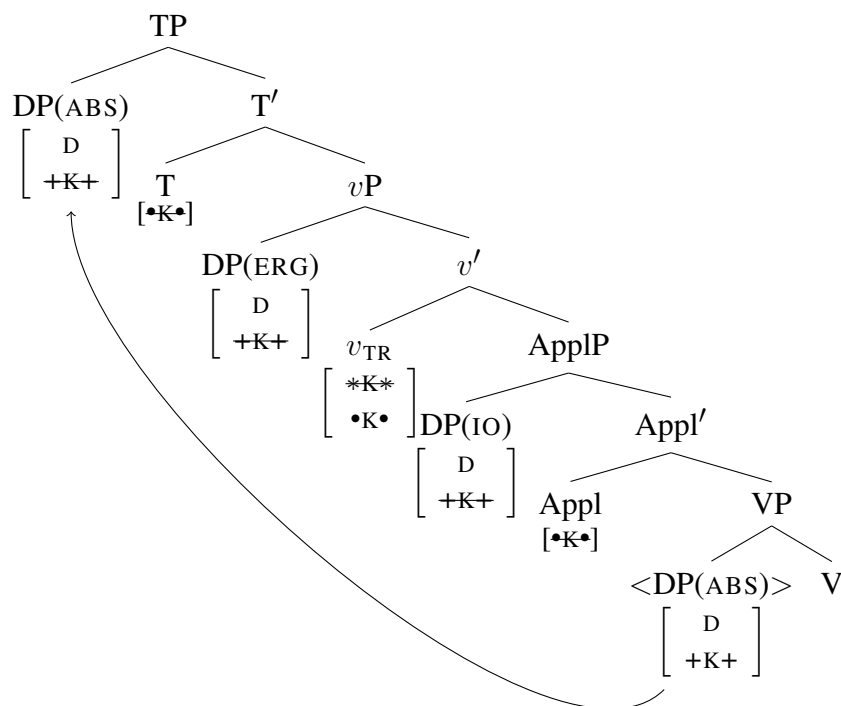
b.  $v_{\text{TR}}$  selects for  $\text{ApplP}$  and agrees with  $\text{DP}(\text{ABS})$ :



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



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



As can be seen in (19d), the derivation results in a structure wherein the absolutive theme occupies an A-position in Spec,TP, c-commanding both the ergative agent and the absolutive theme. The movement of the absolutive DP over the ergative agent and applied object is made possible by the fact that nominal licensing involves the checking and deletion of a licensee feature on a given nominal. In (19d) this means that both the ergative agent and the applied object – being licensed

by the same heads that introduce them – no longer carry a licensee feature and are thus no longer eligible goals for the higher licensing probe in  $T^0$ . As discussed above, this is essentially a feature-based implementation of the intuition that inherent case-marked nominals do not act as interveners for A-movement of a lower argument.

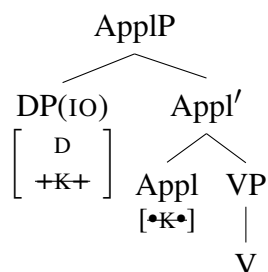
Let us now consider the derivation of an unergative verb with an applied object, as e.g. in (20).

- (20) *sabjəj-xe-r*(ABS)    *psəçet-me*(IO)    *Ø-ja-plə-x*  
 child-PL-ABS        duck-PL.OBL    3ABS-3PL.IO+DAT-look-PL  
 ‘The children are looking at the ducks.’

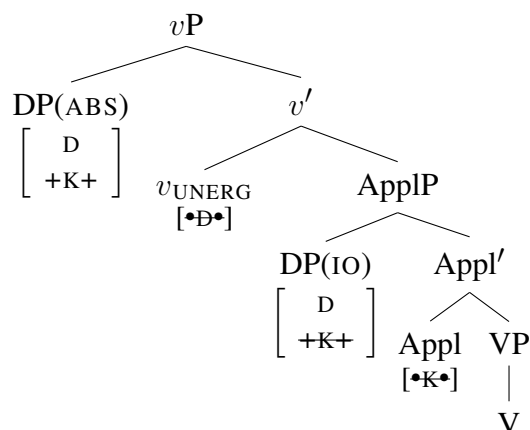
The derivation is illustrated step by step in (21).

- (21) Unergative verb with applied object (ABS-IO):

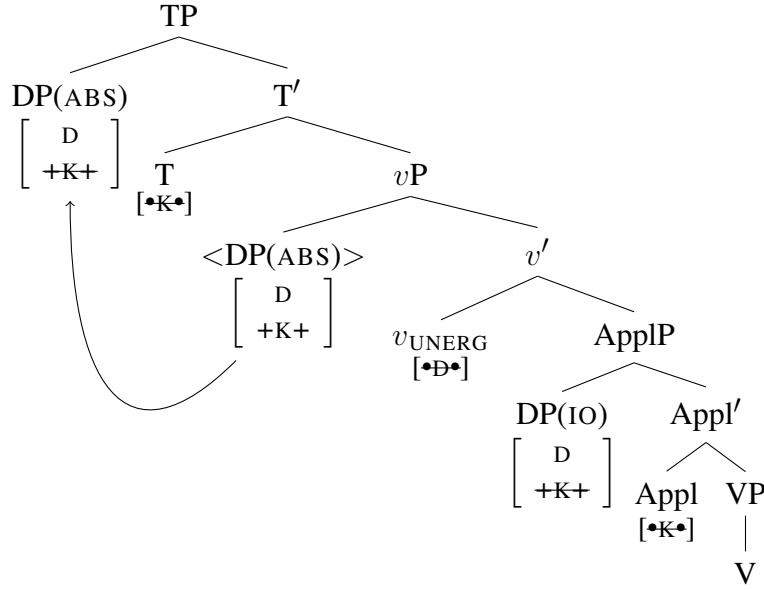
- a.  $\text{Appl}^0$  selects for VP and merges DP(IO) in its specifier:



- b.  $v_{\text{UNERG}}$  selects for ApplP; merges with, but does not license, DP(ABS):



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



As a result of this derivation, the absolutive argument once again undergoes movement to Spec,TP, as can be seen in (21c).

Thus, the high position of the absolutive argument can be derived as a consequence of a licensing requirement on nominals. Ergative agents and applied objects are licensed in-situ by the heads that introduce them, while the absolutive argument undergoes movement to Spec,TP in order to be licensed by  $T^0$ . The licensing-based analysis proposed here builds on the idea that ergative and applied object DPs are licensed in-situ by the heads that introduce these arguments, which is very similar to accounts which propose that these nominals are assigned inherent case. The absolutive argument, on the other hand, cannot be licensed by the head that assigns its theta-role, and must be licensed by a higher head –  $T^0$ . This is made possible by modeling nominal licensing as mutual checking of a licensing feature on the probe and a licensee feature on the goal. Since the ergative agent and applied object are licensed in situ, they no longer carry a licensee feature and thus do not act as interveners in the licensing relation between the embedded absolutive theme and  $T^0$ . Within this system, arguments that are licensed in situ behave as inherent case-marked nominals in regards to locality conditions on movement: they are no longer considered eligible goals for a higher licensing – or, within an inherent case account, case-assigning – probe.



The following section outlines how a theory of dependent case assignment may be combined with theory of nominal licensing adopted in this section to correctly model the distribution of case marking on verbal arguments.

## 2.4 Case assignment

This section briefly addresses the question of how morphological case is determined on verbal arguments. Recall that West Circassian is uniformly ergative in case marking: absolutive arguments are marked with the case suffix *-r*, while ergative agents and applied objects are marked with the oblique case marker *-m*. In line with recent work on the relation between nominal licensing and morphological case (Sigurðsson 2012; Halpert 2015; Levin 2015; Sheehan and Van der Wal 2018; Kalin to appear, among others), the nominal licensing mechanism proposed in the previous section is not directly related to case marking, even though there are systematic correlations between the position a nominal is licensed in and the case it receives. Given the feature-based system devised in this thesis, extending it to account for morphological case would require positing additional mechanisms of feature transmission, such that case assignment would be parasitic either (i) on nominal licensing, i.e. on the checking of  $[+K+]$  on a given nominal, or (ii) on  $\phi$ -agreement, i.e. on the copying of  $\phi$ -features from a given nominal to the  $\text{Agr}^0$  head it agrees with. For this reason, I choose to model case assignment using the apparatus of dependent case as formulated by Marantz (1991); McFadden (2004); Baker and Vinokurova (2010); Baker (2014, 2015); Deal (to appear): in particular, given that absolutive argument uniformly undergoes movement to a position c-commanding other arguments, I follow Yuan (2018) in proposing that the case on the ergative agent, as well as on applied objects, is the dependent case, while the absolutive case on the nominal in Spec,TP is default case. It is important to keep in mind, however, that there are several alternatives to this account which would hinge on assigning inherent case to nominals which are licensed in-situ and abstract case to the absolutive argument, which is the only nominal that is licensed in a derived position. The necessary rule to account for the case marking on verbal arguments in West

Circassian is presented in (22).

(22) **West Circassian dependent case rule:**

Within the case domain of TP, if  $DP_1$  is c-commanded by another  $DP_2$ , assign OBLIQUE case to  $DP_1$ .

Otherwise,  $DP_1$  is ABSOLUTIVE.

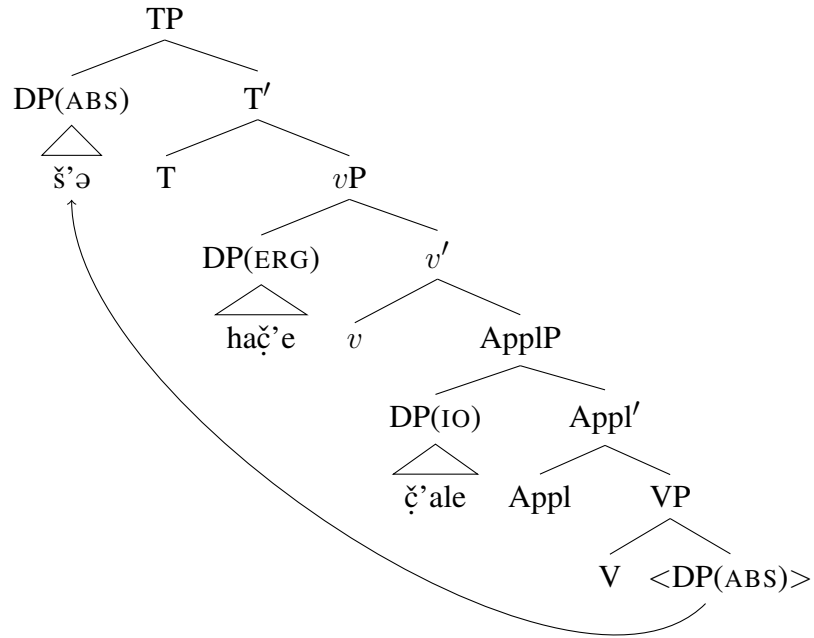
An appealing aspect of this analysis is in the simplicity of the rule in (22): given this rule, nothing else has to be said about case assignment in the verbal domain. It correctly predicts that the argument of a one-place predicate, unergative or unaccusative, would receive default (absolutive) case, and that applied objects and ergative agents carry the same morphological case marker.

For example, if we take a sentence with a three-place predicate like *jetən* ‘give’, the theme is absolutive marked and the ergative agent and dative applied objects receive oblique case marking (23).

- (23) hač’e-m(ERG)    č’ale-m(IO)    š’ə-r(ABS)    Ø-Ø-r-jə-tə-Ɂ  
guest-OBL    boy-OBL    horse-ABS    3ABS-3SG.IO-DAT-3SG.ERG-give-PST  
‘The guest gave the horse to the boy.’ (Arkadiev et al. 2009:54)

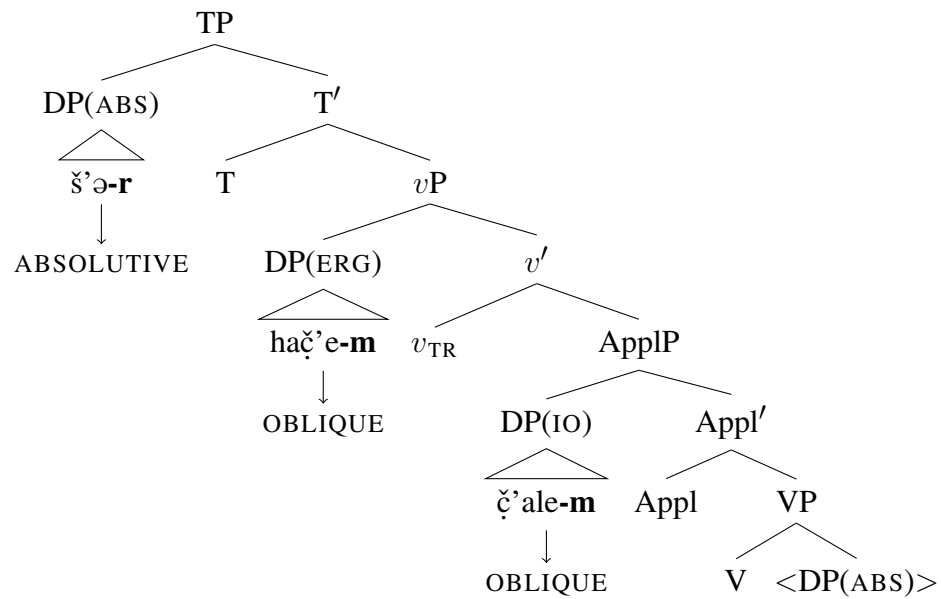
The structure for the sentence in (23) is shown in (24): the ergative agent and applied object are licensed in situ in Spec,*v*P and Spec,ApplP respectively, and the absolutive theme raises to Spec,TP and is licensed in this derived position.

(24)



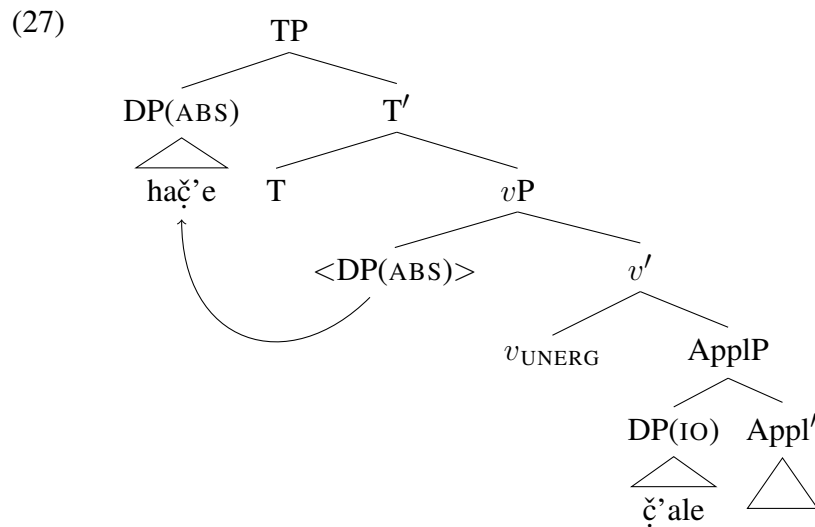
Per the dependent case rule in (22), the ergative DP and the applied object DP are assigned oblique case and correspondingly marked with the suffix *-m*, and the absolutive DP is assigned default absolutive case and correspondingly marked with the suffix *-r* (25).

(25)



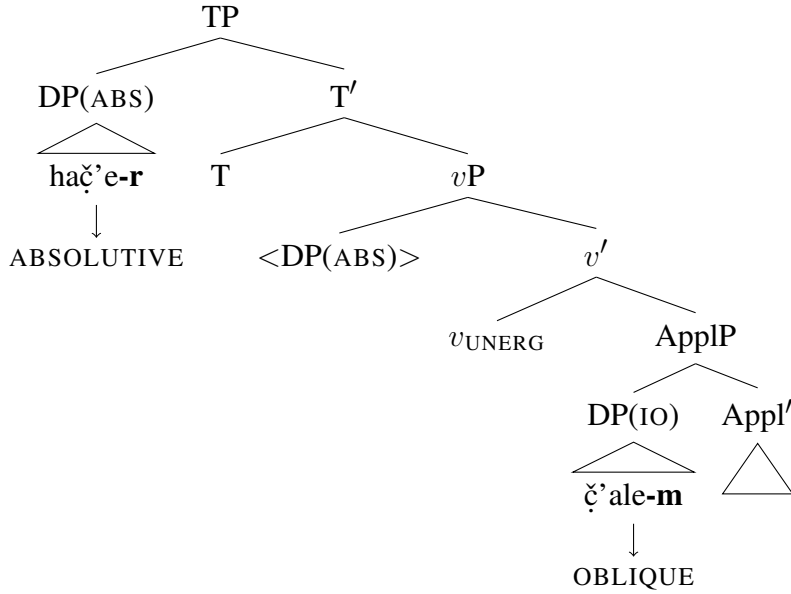
If a sentence involves an unergative verb with an applied object, the rule in (22) is once again sufficient in accounting for the observed case pattern, despite the fact that in this case the absolutive DP originates as the external argument c-commanding the applied object, rather than as the theme in VP as in (24). Thus, the structure for (26) is in (27): the absolutive DP is introduced in Spec,*v*P and raises to Spec,TP for licensing, and the applied object is licensed in situ in Spec,ApplP.

- (26) hač'e-r(ABS)    č'ale-m(IO)    Ø-Ø-j-e-ž'e  
 guest-ABS        boy-OBL        3ABS-3SG.IO-DAT-DYN-call  
 'The guest is calling for the boy.' (Arkadiev et al. 2009:54)



Once the TP is built, the structure is evaluated for dependent case assignment. In this case, only the applied object in Spec,ApplP is c-commanded by another DP and thus receives oblique case. As in the previous example, the absolutive DP – being the highest nominal in TP – is assigned default case (28).

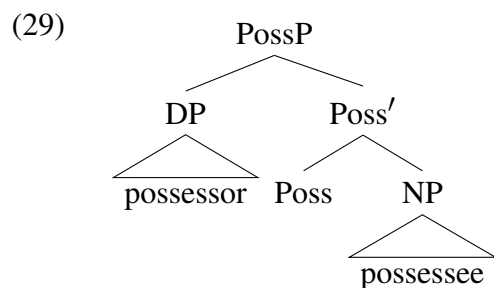
(28)



It is important to note, however, that the simplicity of the dependent case assignment rule in (22) relies on the necessary complexities of conditions on nominal licensing discussed in section 2.3. Since all absolutive arguments undergo raising to Spec,TP regardless of their base-generated position, it is necessary to differentiate between a transitive  $v_{TR}$ , which *licenses* the external argument it introduces (the ergative agent), and unergative  $v_{UNERG}$ , which introduces, but *does not license*, the external argument (the absolutive DP). In this thesis, I do this by making  $v^0$  sensitive to the presence of an additional argument within its c-command domain (the absolutive theme of a transitive verb). In the absence of such an argument, the external argument is not licensed and thus raises to Spec,TP, where it is eventually assigned default absolutive case. Another important aspect of this analysis is that it combines structural properties of an inherent case theory with a dependent case approach. In particular, the distribution of arguments in West Circassian is such that dependent case is assigned to nominals that are licensed in situ in specifiers of functional projections ( $v^0$  and  $Appl^0$ ). In terms of distribution this corresponds exactly with the positions where inherent case is expected to be assigned (Woolford 2006; Legate 2008; Pylkkänen 2008). One of the advantages of the rule of dependent case assignment proposed in (22) over an inherent case account or a dependent case rule which would appeal to a smaller case domain such as  $vP$  is the fact that it provides a straightforward account for the fact that ergative agents and applied objects are marked

with the same (oblique) case. Under an inherent case approach, one would have to stipulate that the phonological forms of the case values assigned by  $v_{TR}$  and  $Appl^0$  happen to be homophonous; rendering a case syncretism. Under a dependent case account which appeals to  $vP$  as the relevant case domain, one would be confronted with a set of contradictory conditions for the assignment of oblique case: an ergative agent is not c-commanded by any other DP within  $vP$ , while an applied object is usually c-commanded either by an ergative agent or an absolutive external argument of an unergative verb.

In regards to case assignment in the nominal domain, recall that possessors within DPs are assigned oblique case like ergative and applied object arguments. I leave the question of how this case is determined for future research, but given that a possessor generally c-commands the possessed nominal as in (29), there are two main possibilities per Baker (2015:163-181): (i) oblique case is default within the case domain of DP; (ii) dependent case assignment is reversed in the nominal domain and the DP that c-commands another DP is assigned dependent case, rather than vice versa.



On a final note, the absence of overt case marking on a given nominal does not indicate the absence of default or dependent case: as discussed in section 2.2, the lack of case marking is generally associated with indefiniteness. Based on this fact, I assume that the case suffix itself is the spellout of a definite  $D^0$  that is valued for the corresponding case. In the lack of overt case, then, this determiner is simply null, but the nominal is nevertheless assigned absolutive or oblique case that is not overtly expounded.

With this model of nominal licensing and case assignment in place, the following section discusses the basics of morphological structure and word formation in West Circassian which will be relevant to the main claims of this thesis.

## 2.5 Morphosyntax and word formation

West Circassian is generally characterized as a polysynthetic language, with prevalent head marking in both the verbal and nominal domains (see Kumakhov 1964; Kumakhov and Vamling 2009; Testelefs 2009a; Korotkova and Lander 2010; Lander and Letuchiy 2010; Lander 2017; Lander and Testelefs 2017; Ershova 2018, 2019, *inter alia*). Thus, a verbal form includes cross-reference morphology referring to all participants of the event it denotes; for example, the predicate in (30) 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 *be-*. The markers referring to the applied objects appear alongside applicative prefixes marking the semantic role of the corresponding applied object. The applicative markers may vary based on the theta-role of the applied object (e.g. benefactive *fe-*, comitative *de-*, locative *š'ə-*, etc.).

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

The morphemes in a West Circassian word follow a particular order and are organized into zones as shown in Table 2.1.<sup>1</sup> The argument structure zone (A) includes any personal cross-reference markers and corresponding applicative prefixes marking the particular semantic role of the applied object (e.g. benefactive *fe-*, comitative *de-*, locative *š'ə-*, etc.), as well as the directive prefix *qə-* which, apart from some lexicalized uses, expresses directionality towards the speaker or

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1. For a recent description of the templatic nature of West Circassian morphology and possible violations in the nominal domain see Lander (2017); for a general overview of the West Circassian morphology see Arkadiev et al. (2009).

inversion in accordance with the person hierarchy  $1 > 2 > 3$  (Arkadiev et al. 2009:43, Arkadiev 2018a). The pre-stem zone (B) includes the dynamic prefix *e-/me-* which marks present tense on dynamic predicates<sup>2</sup>, the optative prefix *were-* and prefixal negation *mə-*. Zone (C) contains solely the causative morpheme *be-*, of which there could potentially be more than one instance (for discussion of such forms see Lander and Letuchiy 2010). The stem (D) contains the lexical root and any incorporated lexical stems, followed by suffixes expressing an array of temporal, aspectual and modal information. Finally, endings (E) include the plural suffix and a variety of subordinating morphemes such as case. The last zone is set apart from the rest of the template in that it does not participate in a productive edge-sensitive vowel alternation, which will be outlined in more detail in section 2.6.

Argument structure zone	Pre-stem zone	Causative marker(s)	Stem		Endings
(A)	(B)	(C)	(D)		(E)
Verbs: ABS, ERG, IO Nouns: POSS	NEG, DYN, jussive	CAUS	incorporated stems + root	TAM-related suffixes	number, case, etc.

Table 2.1: Morphological template (adapted from Lander 2017:79)

Nominal forms are built in accordance with the same template: personal markers in zone (A) may include a personal prefix cross-referencing the possessor; in cases of alienable possession this prefix is followed by the possessive marker *jə-*. The pre-stem zone (B) may contain the negative prefix *mə-*. Since zone (C) is occupied solely by causative morphology, it does not generally occur in nominal constructions. The stem (D) may contain the lexical root denoting the semantic head of the construction, adjectival and nominal modifiers, as well as derivational suffixes. Endings in zone (E) include the plural suffix *-xe*, case morphology and markers of coordination. For example, the nominal complex in (31) includes an incorporated nominal root *ɓ<sup>w</sup>əneɓ<sup>w</sup>ə* ‘neighbor’, a personal marker referring to the possessor, which, in this case, is followed by the prefix *jə-* marking alienable

2. The latter form only appears if there are no overt prefixes preceding it; the former allomorph appears everywhere else (Arkadiev et al. 2009:45-46).



possession, as well as suffixes marking plural number, absolutive case, and the additive coordinator *-jə*.

- (31) [t- jə-]<sub>A</sub> [B<sup>w</sup>əneB<sup>w</sup>ə- č'ale]<sub>D</sub> [-xe -r -jə]<sub>E</sub>  
 1SG.PR- POSS- neighbor- boy -PL -ABS -ADD  
 ‘and our neighbor boys’

I follow Ershova (2018, 2019) in distinguishing between mechanisms of word formation in the nominal and verbal domain: nominal phrases are spelled out as a single word due to a rule of syntax to prosody mapping which maps the DP phase to a phonological word, while verbs are concatenated via head displacement, which I model here as syntactic head movement per Travis (1984); Baker (1988).<sup>3</sup> The main motivation for this division of labor is the availability of productive noun incorporation in the nominal and not the verbal domain, as well as the order of morphemes in verbal nominalizations; see Ershova (2019) for detailed discussion.

The question of nominal word formation will not play an important role in this thesis, so I set aside the discussion of the details of this process. It is important to note that in both the verbal and nominal domain, the morphology is generally organized based on semantic and syntactic scope, with the only obvious exception being the argument structure zone, which will be discussed in the following section.<sup>4</sup>

For example, in the prefixal domain negation and the present tense prefix that surfaces on dynamic verbs appear farther from the verbal root than the causative marker: an example of negation preceding the causative prefix is presented in (32) and the dynamic present tense prefix preceding this same causative morpheme can be seen in (33).<sup>5</sup>

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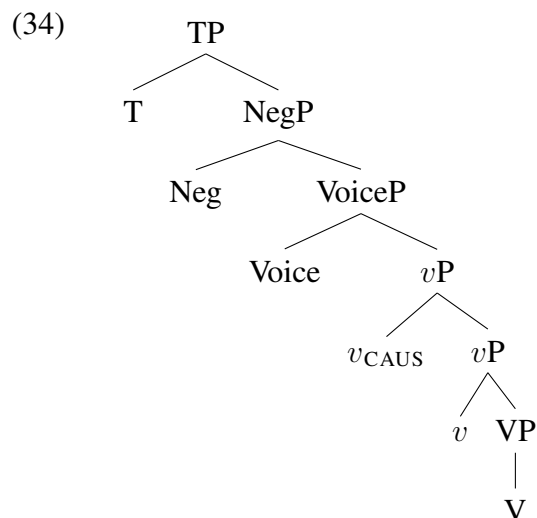
3. As indicated in Ershova (2019), the data is compatible with alternative accounts of head displacements, including Mirror Theory (Adger et al. 2009), Generalized Head Movement (Arregi and Pietraszko 2018), and Lowering at PF (Embick and Noyer 2001).

4. For discussion of scopal interactions and morpheme ordering in the suffixal domain see Korotkova and Lander (2010).

5. The vowel within the causative prefix *be-* varies in accordance with a regular vowel alternation.

- (32) zə- Ø- š'- jə- mə- **re-** ɞ<sup>w</sup>əpš' -ew  
 REFL.ABS- 3SG.IO- LOC- 3SG.ERG- NEG- CAUS- forget -ADV  
 'not to let oneself forget'
- (33) Ø- Ø- je- s- e- **ɞa-** ž'e  
 3ABS- 3SG.IO- DAT- 1SG.ERG- DYN- CAUS- begin  
 'I am beginning it'

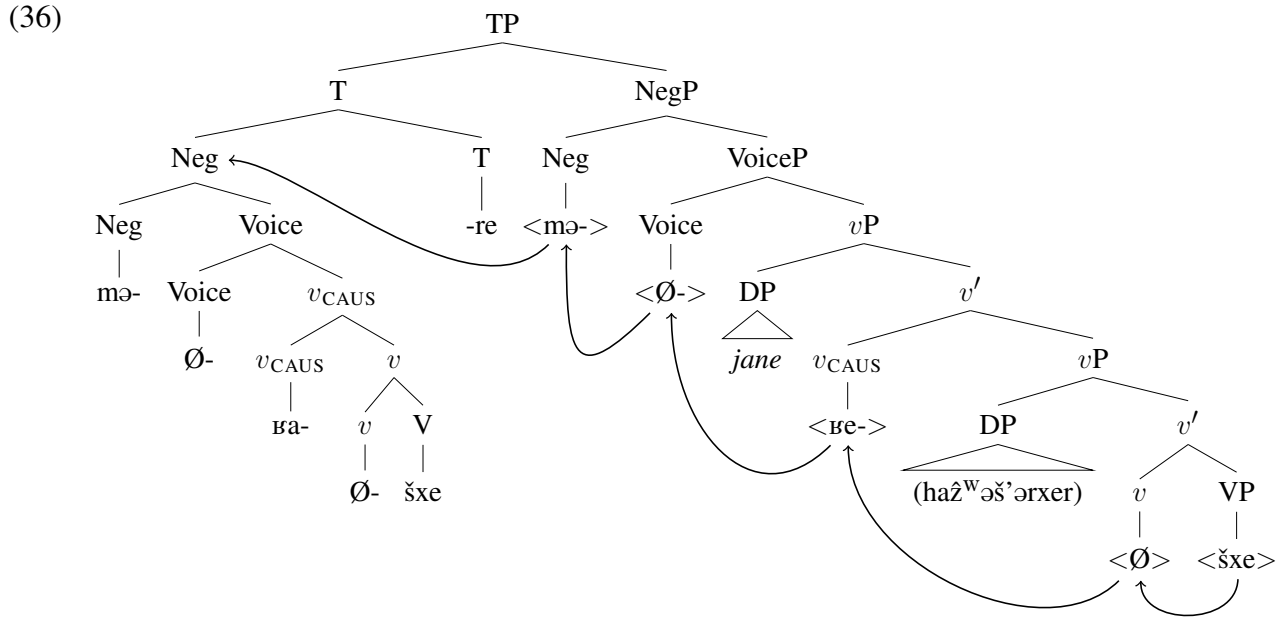
The relative order of the present tense marker and negation cannot be determined, because they do not co-occur: the present tense prefix only occurs in non-negated dynamic matrix verbs. I will assume, however, that prefixal negation appears below  $T^0$ , because it is preserved in low nominalizations; see Ershova (2019) for details. The low syntactic position of prefixal negation correlates with it having narrow semantic scope; it contrasts with suffixal negation, which surfaces on the right edge of the verbal form and takes scope over the full assertion (Lander and Sumbatova 2007). Assuming that the causative morpheme is the spellout of  $v_{CAUS}$  which selects for a  $vP$  and given the order of prefixes in (32) and (33), it is reasonable to posit the functional hierarchy in (34), where  $\text{Voice}^0$  and the lower  $v^0$  do not receive overt exponence.



The surface order of morphemes in (32)-(33) is derived via head movement from the lexical verb to the highest functional head within the extended verbal projection. Below I illustrate in (36) how the bolded verbal form in (35) is derived via head movement: the lexical verb *šxe* 'eat'

undergoes head movement to the causative head, which then head-moves to Voice<sup>0</sup> and the negative projection, which subsequently moves to the present tense head, thus creating a single complex head.

- (35) Ø-jane      Ø-    ə-      mə-    ɣa-    šxe -re    haʒ<sup>w</sup>ə-š'ər-xe-m  
 3SG.PR-mother 3ABS- 3SG.ERG- NEG- CAUS- eat -DYN puppy-cub-PL-OBL  
 'the puppies whom their mother doesn't feed'



Here and throughout the thesis I draw the trees as right-branching, with all verbal functional projections appearing to the left of their complements. This is done largely for expository reasons and consistency – this should not be understood as a meaningful claim about the underlying structure of the West Circassian clause, especially given that data from the position of incorporated elements in nominalizations suggests that syntactic phrases are generally linearized as head-final, with the verb following its arguments (Ershova 2019). In line with work within Distributed Morphology (Halle and Marantz 1993), I assume that there is no direct connection between the syntactic status or position of a particular node and its status as a prefix or suffix. Instead, I follow Noyer (1997); Wojdak (2008); Harley (2010, 2013); Arregi and Nevins (2012), a.o., in assuming that there may be affix- or category-specific linearization requirements on spellout, which determine whether a

particular affix will be spelled out as a suffix or prefix.

Throughout the thesis I will appeal to head movement as the mechanism that derives the surface forms of predicates. The following section discusses the nature of  $\phi$ -agreement in West Circassian and how it may be modeled and implemented within the head movement analysis presented in this section.

## 2.6 The syntax of $\phi$ -agreement

This dissertation does not argue for a particular analysis of cross-reference morphology in West Circassian. However, given that many of the generalizations in the thesis rely on the order and nature of these markers, I assume a working model of this morphology that is consistent with the descriptive facts about the language. In particular, I analyze prefixal personal markers as exponents of  $\phi$ -agreement with dedicated  $\text{Agr}^0$  heads.

Verbal 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, which is then followed by any cross-reference morphology referring to applied objects, and the marker cross-referencing the ergative agent appears closest to the verbal root, as can be seen in Table 2.2.

<b>Absolutive-</b>	<b>Directive-</b>	<b>IO+Applicative-</b>	<b>Ergative-</b>
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Table 2.2: Organization of the argument structure zone (A)

This ordering can be seen most clearly in the presence of the directive prefix *qə-/qe-*, which in these examples is used to mark the directedness of the action.<sup>6</sup> 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 (37a) or

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6. The prefix *qə-/qe-* has a number of uses, including marking directionality towards the speaker or inversion in accordance with the personal hierarchy  $1 > 2 > 3$  (Arkadiev et al. 2009:43; Arkadiev 2017, 2018a,b).

applicative indirect object (37b) surface to the right of the directive prefix, while the first person marker referring to the theme of the transitive verb (37c) or the subject of an intransitive verb (37d) appears to the left of the directive prefix. It can be additionally noted that the first person marker referring to the applied object in (37b) appears to the left of the benefactive prefix *f(e)-*, which is then followed by a third person prefix, while in (37a) this same first person prefix marks the ergative agent and thus appears directly adjacent to the verbal root.

- (37) a. Ø- [qə-] [Ø- fe-] s- š'a -B  
 3SG.ABS- DIR- 3SG.IO- BEN- **1SG.ERG-** bring -PST  
 'I (transitive subject) brought him/her to him/her'
- b. Ø- [qə-] [s- f-] jə- š'a -B  
 3SG.ABS- DIR- **1SG.IO-** BEN- 3SG.ERG- bring -PST  
 'S/he brought him/her to me (indirect object)'
- c. sə- [q-] jə- š'a -B  
**1SG.ABS-** DIR- 3SG.ERG- bring -PST  
 'S/he brought me (direct object)'
- d. sə- [qe-] k<sup>w</sup>a -B  
**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-*.<sup>7</sup> An example of an inalienably possessed noun is in (38) and of a noun marked with the alienable possessive marker *jə-* is in (39).

- (38) s-šəpχ<sup>w</sup>ə-xe-r  
**1SG.PR-**sister-PL-ABS  
 'my sisters'
- (39) t-jə-B<sup>w</sup>əneB<sup>w</sup>ə-xe-m  
**1PL.PR-POSS-**neighbor-PL-OBL  
 'our neighbors'

Throughout the thesis I will assume that the cross-reference morphology on verbs and possessed nouns is the spellout of designated Agr<sup>0</sup> heads which merge immediately above the position

7. See Gorbunova (2009) on alienable vs. inalienable possession in West Circassian.

where a given argument is licensed and agrees with that argument via Agree. This means that there are three types of Agr<sup>0</sup> heads in the verbal domain (40), and one type in the nominal domain (41).

(40) Verbal agreement heads:

- a. Agr<sub>ABS</sub> selects for TP.
- b. Agr<sub>ERG</sub> selects for transitive *v*P.
- c. Agr<sub>IO</sub> selects for ApplP.

(41) Nominal agreement head:

Agr<sub>POSS</sub> selects for PossP.

All the Agr<sup>0</sup> heads uniformly carry the following agreement feature: [ $\ast\Phi$ :\_\_\*]. Schematically, the result of agreement in this feature with a goal that carries the matching feature [ $\Phi$ :X] will result in the checking and valuation of the corresponding feature on Agr<sup>0</sup> as [ $\Phi$ :X]. Verbal Agr<sup>0</sup> heads are concatenated with the other heads in the verbal extended domain into a complex head, as outlined in the previous section. The possessor Agr<sup>0</sup> head is pronounced as an affix on the nominal it modifies because the full DP is pronounced as a single phonological word due to rules of syntax to prosody mapping (Ershova 2019).

Additionally, the following morphological rules must be applied at spellout (the numbering is crucial since the application of rule #1 feeds the application of rule #2 – this will be illustrated in (49) below):

(42) Morphological rules:

- a. **Rule #1:** Dissimilation of ergatives (for transitive causee)

[Agr<sub>ERG</sub>-*v*] → [Agr<sub>IO</sub>-Appl<sub>DAT</sub>] / [Agr<sub>ERG</sub>-*v*]-\_\_

- b. **Rule #2:** Linearization rule (applicative metathesis)

[Agr<sub>ERG</sub>-*v*]-[Agr<sub>IO</sub>-Appl] → [Agr<sub>IO</sub>-Appl]-[Agr<sub>ERG</sub>-*v*]

Finally, the following phonological rules will be relevant for understanding how the surface

forms are derived (Arkadiev et al. 2009:26-30):

(43) **Phonological rules:**

- a. **Dissimilative e~a alternation** (as formulated in Lander 2017:80):

If the two final syllables immediately preceding the right border of the stem both contain the vowel /e/ in its underlying form, the penultimate vowel is changed into /a/.<sup>8</sup>

$e \rightarrow a / \_Ce]_{STEM}$

- b. **Vowel syncope:** Vowels are deleted pre-vocalically and before a glide.

$V \rightarrow \emptyset / \_[-consonantal]$

- c. **Final vowel deletion:** In polysyllabic words, final /ə/ and, more rarely, /e/ may be optionally deleted.

$[-low] \rightarrow \emptyset / \_ \#$

- d. **Rhotacization:** the glide /j/ rhotacizes if followed by /j/.

$j \rightarrow r / \_j$

- e. **Voicing assimilation:** Voiceless consonants become voiced at a morpheme boundary, if followed by a voiced consonant.

$[-voice] \rightarrow [+voice] / \_+[+voice]$

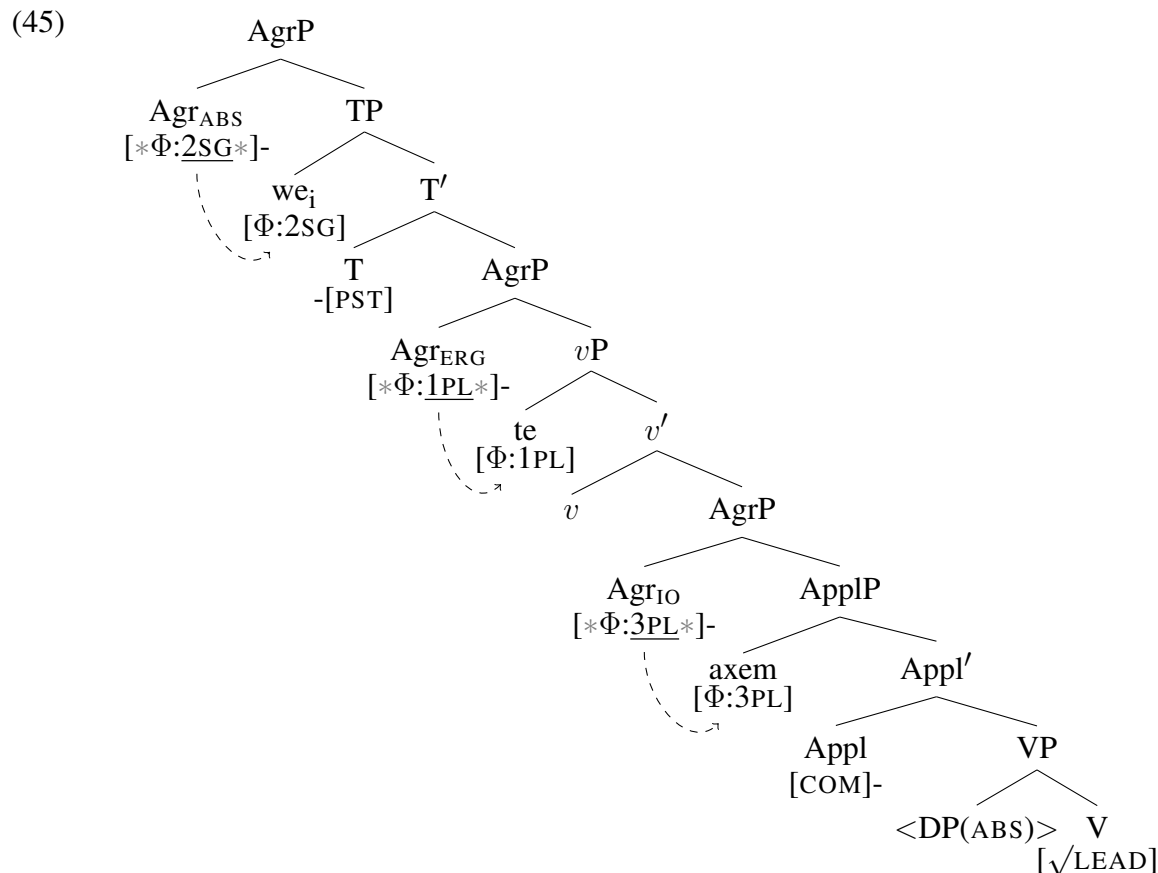
A few sample derivations illustrating the syntax of the  $Agr^0$  heads, and the morphological rules in (42a)-(42b).

The structure of the sentence involving a three-place predicate with an ergative agent, absolutive theme and comitative applied object in (44) is presented in (45). There are three  $Agr^0$  heads:  $Agr_{IO}$  above ApplP agrees with the applied object in Spec,ApplP;  $Agr_{ERG}$  above  $vP$  agrees with the ergative agent in Spec, $vP$ , and  $Agr_{ABS}$  above TP agrees with the absolutive theme in Spec,TP.

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8. A number of morphemes, e.g. the dynamic prefix *e-* and the optative prefix *ere-*, do not participate in the alternation and block its occurrence on the preceding syllable, despite forming the proper phonological environment; see Arkadiev and Testelets (2009:127-129) for discussion of such cases.

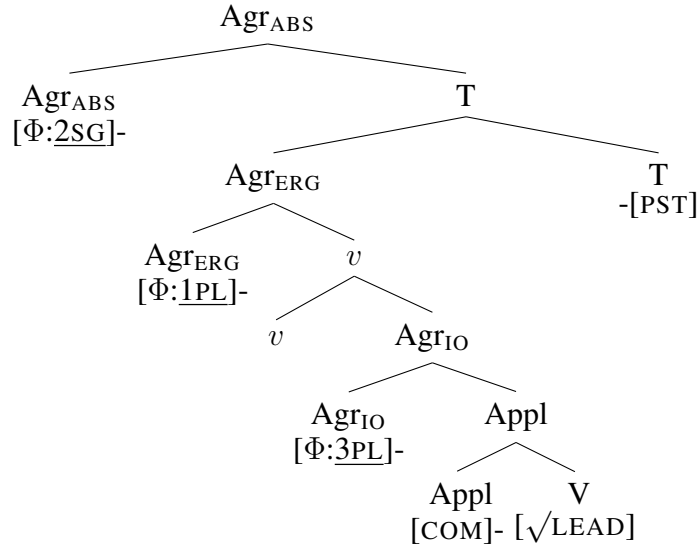
- (44) te      a-xe-m      we      w-      a-      de-      t-      š'a    -b  
 we      that-PL-OBL    you      2SG.ABS- 3PL.IO- COM- 1PL.ERG- lead -PST  
 'we led you with them' (Rogava and Keraševa 1966:162)



As discussed in the previous section, the verbal heads are concatenated via head movement, rendering the complex head in (46a). This structure is then linearized into the string in (46b). As a result of the metathesis rule in (42b), Agr<sub>IO</sub> and the applicative prefix are moved to the left of Agr<sub>ERG</sub> (46c). Metathesis is followed by vocabulary insertion, rendering the string in (46d), which is spelled out as the form in (46e) after vowel syncope in the absolutive prefix, the vowel in the penultimate syllable undergoing the e~a alternation, and final vowel deletion in the past tense morpheme.

- (46) a. Result of head movement:





b. Result of linearization:

[Agr<sub>ABS</sub>;2SG]- [Agr<sub>ERG</sub>;1PL]- [*v*;Ø]- [Agr<sub>IO</sub>;3PL]- [Appl;COM]- [√/LEAD] -[T;PST]

c. Metathesis per Rule #2:

[Agr<sub>ABS</sub>;2SG]- [Agr<sub>IO</sub>;3PL]- [Appl;COM]- [Agr<sub>ERG</sub>;1PL]- [*v*;Ø]- [√/LEAD] -[T;PST]

d. Vocabulary insertion:

→ wə- a- de- t- š'e -be

e. Phonology:

→ w-a-de-t-š'a-b

Let us now consider a case where the morphological rule #1 in (42a) applies – the formation of synthetic causatives. Synthetic causatives are formed via the use of the morpheme *be-*, which uniformly appears adjacent to the verbal root (Letuchiy 2009b, 2015). I will assume here that this morpheme is the spellout of a causative *v*<sub>CAUS</sub>.

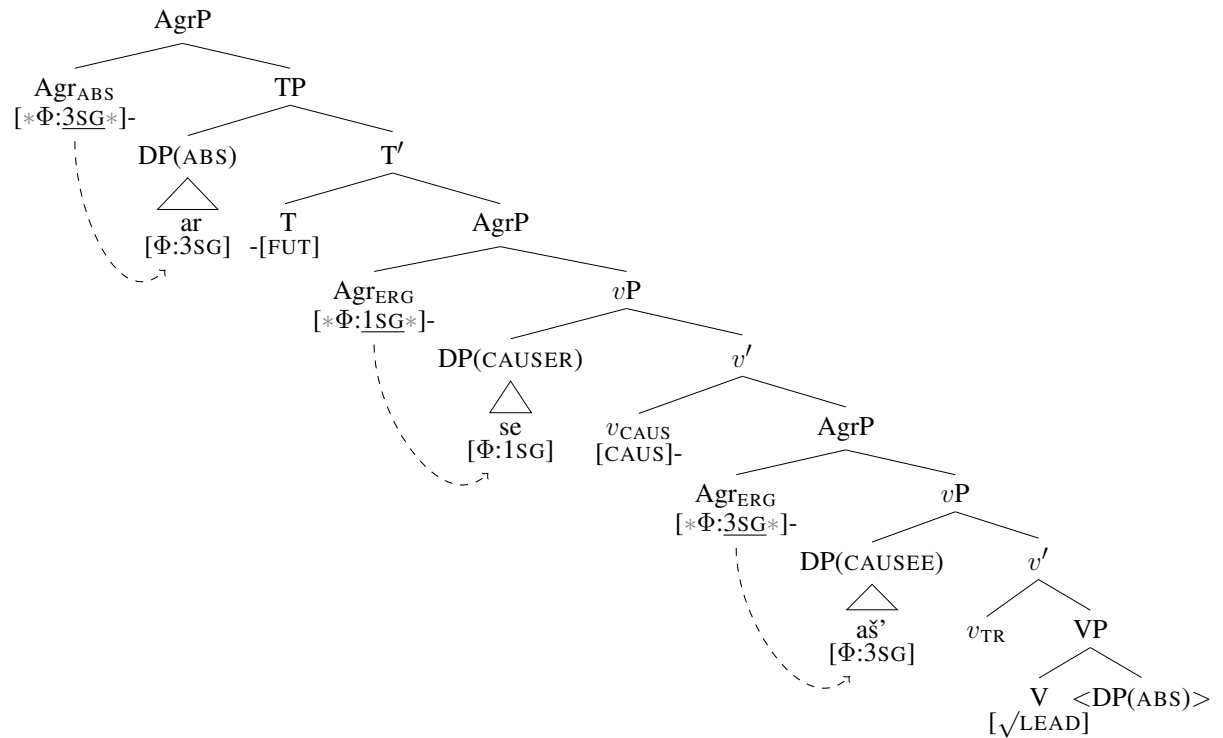
Causativization involves the introduction of an ergative causer. If the base verb is already transitive with an ergative agent, agreement with that ergative agent then surfaces as agreement with a dative applied object. This is illustrated in (47): the verb *š'en* 'lead' is transitive – in (47a) it takes a first person ergative agent and a third person absolutive theme. If this verb is causativized, an ergative causer is introduced, and the former ergative agent (the causee) triggers

dative applied object agreement: in (47b) the causer is first person singular and the causee is third person singular. I label both the causer and the causee as ergative because both arguments are introduced and licensed by a transitive  $v^0$ :  $v_{\text{CAUS}}$  in the case of the causer and  $v_{\text{TR}}$  in the case of the causee. Agreement with both arguments is exponed by a separate  $\text{Agr}_{\text{ERG}}$  that selects for the corresponding  $v\text{P}$ , and the latter  $\text{Agr}_{\text{ERG}}$  – the one that tracks agreement with the causee – is spelled out as a dative agreement marker.

- (47) a. se(ERG) a-r(ABS) Ø- s- š'e -š't  
 I that-ABS 3ABS- 1SG.ERG- lead -FUT  
 'I will lead him/her.'
- b. se(ERG) a-š'(ERG) a-r(ABS) Ø- Ø- je- z- be- š'e -š't  
 I that-OBL that-OBL 3ABS- 3SG.IO- DAT- 1SG.ERG- CAUS- lead -FUT  
 'I will make her lead her.' (Rogava and Keraševa 1966:258)

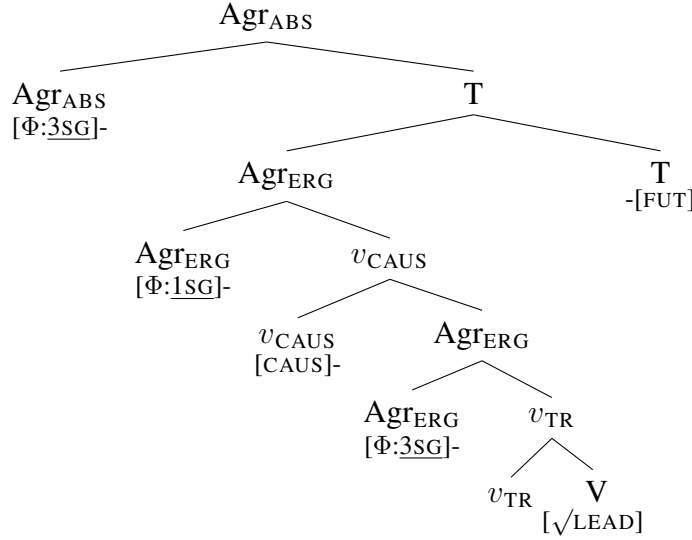
The structure for the causative form in (47a) is presented in (48). The causative head  $v_{\text{CAUS}}$  selects for transitive  $v\text{P}$ . As with the three-place predicate in (45), the structure contains three  $\text{Agr}^0$  heads, but in this case there are two ergative agreement heads: one above  $v_{\text{CAUS}}$  and one above  $v_{\text{TR}}$ .

(48)



The verbal heads are concatenated via head movement, rendering the complex head in (49a). This structure is then linearized into the string in (49b), with a sequence of two Agr<sub>ERG</sub> heads. In accordance with the morphological rule in (42a) the morpheme sequence Agr<sub>ERG</sub>+*v*<sub>TR</sub>, which is linearized to the right of the structurally higher ergative agreement head, undergoes dissimilation to a dative applicative head with applied object agreement (Agr<sub>IO</sub>+Appl<sub>DAT</sub>) (49c). Following this dissimilation, the morpheme sequence Agr<sub>IO</sub>+Appl undergoes metathesis with Agr<sub>ERG</sub>+*v*<sub>CAUS</sub>, per the morphological rule in (42b), rendering the string in (49d). This string is then spelled out as the form in (49e). After the regular phonological rule triggers voicing of the ergative agreement prefix (s→z), we can see the final phonological form in (49f).

(49) a. Result of head movement:



b. Result of linearization:

[Agr\_ABS;3SG]- [Agr\_ERG;1SG]- [v\_CAUS;CAUS]- [Agr\_ERG;3SG]- [v\_TR;Ø]- [V;√LEAD] -[T;FUT]

c. Result of dissimilation of ergatives:

[Agr\_ABS;3SG]- [Agr\_ERG;1SG]- [v\_CAUS;CAUS]- [Agr\_IO;3SG]- [Appl;DAT]- [V;√LEAD] -[T;FUT]

d. Result of applicative metathesis:

[Agr\_ABS;3SG]- [Agr\_IO;3SG]- [Appl;DAT]- [Agr\_ERG;1SG]- [v\_CAUS;CAUS]- [V;√LEAD] -[T;FUT]

e. Result of vocabulary insertion:

Ø- Ø- je- s- ʁe- š'e -š't

f. Application of phonological rules:

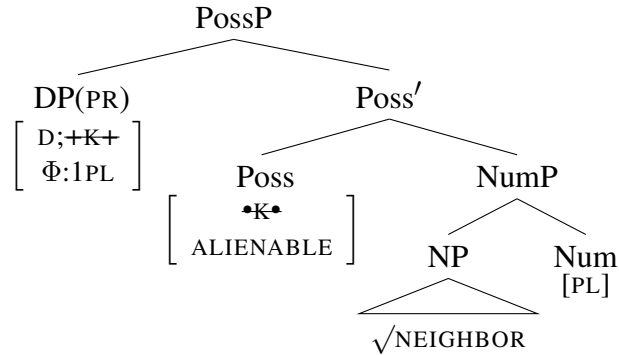
Ø-Ø-je-z-ʁe-š'e-š't

Agreement in the nominal domain is established in a similar manner. I assume that possessors are licensed as specifiers of Poss<sup>0</sup>, which carries the structure-building feature [**•K•**]. Agr\_POSS selects for PossP and, like other Agr<sup>0</sup> heads, carries the Agree feature [**\*Φ:\***]. I further assume that Poss<sup>0</sup> is specified for alienable versus inalienable possession, and is spelled out as *jə-* in the former case and as *Ø-* in the latter case.<sup>9</sup> Thus, we can see the derivation for (39), which involves

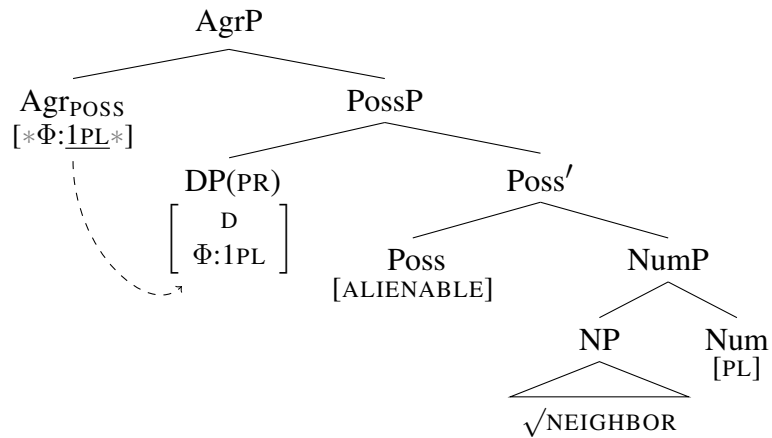
9. This is an obvious simplification, but I leave the question of whether constructions involving alienable and inalienable possessors are structurally distinct for future research.

a DP containing an alienably possessed nominal, in (50).

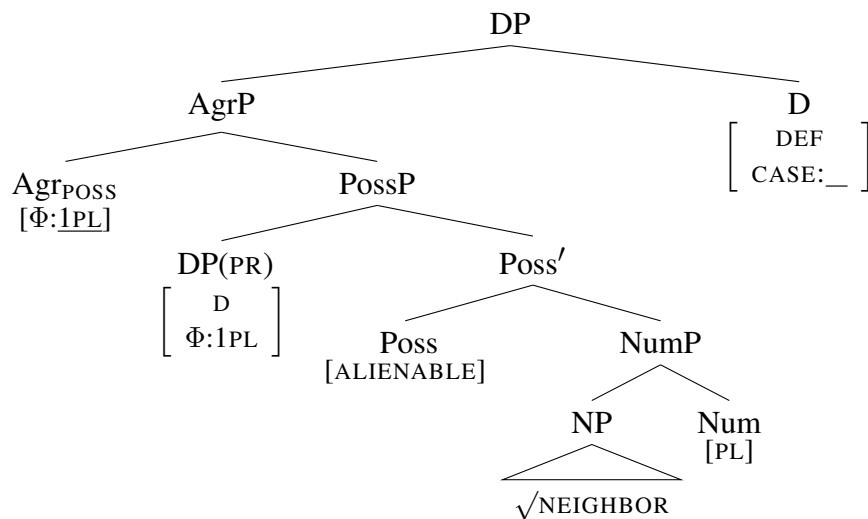
- (50) a.  $\text{Poss}^0$  selects for NumP, introduces and licenses the possessor DP.



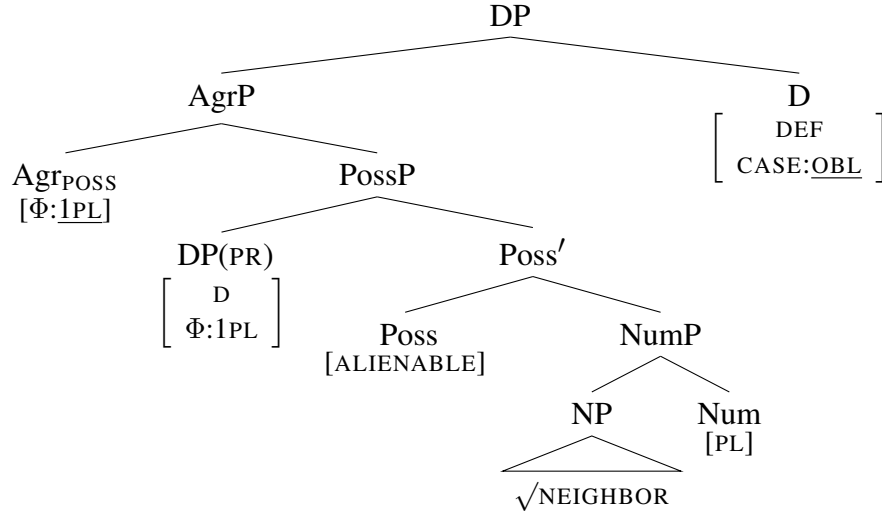
- b.  $\text{Agr}_{\text{POSS}}$  selects for PossP and agrees with DP(PR).



- c.  $\text{D}^0$  selects for AgrP, forming the full DP.



- d. Case is valued on  $\text{D}^0$  as OBL per rules of dependent case assignment after the full clause is constructed.



The full DP is mapped to a single phonological word, rendering the string in (51a), resulting in the correct surface form after vocabulary insertion (51b).

(51) a. Result of linearization:

[Agr<sub>POSS</sub>;1PL]- [POSS;ALIENABLE]- [√NEIGHBOR] -[Num;PL] -[D;DEF;OBL]

b. Result of vocabulary insertion:

t- jə- Ɂ<sup>w</sup>əneɁ<sup>w</sup>ə-xe -m

To conclude this section, modeling agreement by employing designated Agr<sup>0</sup> projections immediately above the positions where arguments are licensed in conjunction with a number of morphological rules adequately derives the surface patterns observed in West Circassian verbal forms. I will employ the analysis of  $\phi$ -agreement proposed in this section throughout the thesis. Given that Agr<sup>0</sup> heads are merged immediately above the position where a given nominal is licensed, the position of their phonological exponent is correctly predicted to systematically correlate with the syntactic position of the nominal a given Agr<sup>0</sup> head is indexing.

## 2.7 Conclusion

This chapter lays out the core proposal of this dissertation: syntactic ergativity effects in West Circassian to be discussed in the following chapters are the consequence of the absolutive argument undergoing A-movement to Spec,TP – the surface subject position of the clause. This movement is implemented as a way of satisfying a licensing requirement on nominals and a structural requirement of certain functional heads to license a nominal in its specifier. This account divorces nominal licensing from morphological case realization in a way that brings together intuitions of two opposing approaches to ergative case as inherent or structural/dependent. Within the system proposed here, the ergative agent has the property of an inherent case-marked nominal in being rendered inactive for further A-movement through licensing in situ by the head that assigns its theta-role, but receives its morphological case value configurationally, as a nominal that is c-commanded by another nominal (the raised absolutive theme) within the domain of TP. The union of an inherent and dependent case approach allows us to successfully model (i) the lack of intervention effects in the movement of the absolutive argument over the ergative agent and applied object, and (ii) the fact that ergative agents and applied objects are marked with the same morphological case. The presented analysis provides a principled way of deriving a syntactically ergative clause structure without violating standard conditions on the locality of movement: arguments that are licensed in situ are not eligible goals for a higher licensing head. This provides a potential avenue of explanation for other languages where similar movement of the absolutive argument is believed to take place, e.g. Mayan Coon et al. (2014) and Inuit Yuan (2018).

This chapter also presents an analysis of the morphology-syntax interface and how it may be used to diagnose syntax through the morphology of the language. By positing that cross-reference morphology is the spellout of several designated Agr<sup>0</sup> projections which are merged immediately above a given nominals and supplying a number of productive and easily predictable morphosyntactic rules, we are able to establish a direct relation between a given morphological form and the syntactic structure that produces this form in the syntax. This proves to be a powerful tool for the

investigation of the syntax of West Circassian, a language where most syntactic cues are veiled in the morphology.



## CHAPTER 3

### SYNTACTIC ERGATIVITY IN ANAPHOR BINDING

#### 3.1 Introduction

This chapter presents an analysis of anaphor binding in West Circassian. The primary strategy of expressing reflexive and reciprocal binding in West Circassian is via the use of special morphology which appears in place of the cross-reference prefix indexing the bound participant. Puzzlingly, reflexives and reciprocals appear to display opposite directionality of binding in transitive (ergative-absolutive) verbs: while the reflexive morpheme appears in place of the absolutive cross-reference marker (52a), the reciprocal morpheme replaces the ergative personal marker instead (52b).

- (52)      **Theme(ABS)-    Agent(ERG)-**
- |    |                  |                 |                             |      |                   |                      |
|----|------------------|-----------------|-----------------------------|------|-------------------|----------------------|
| a. | <b>zə-</b>       | t-              | $\lambda e_B^W \varnothing$ | -B   | <b>ABS → REFL</b> |                      |
|    | <b>REFL.ABS-</b> | 1PL.ERG-        | see                         | -PST |                   | ‘We saw ourselves.’  |
|    |                  |                 |                             |      |                   |                      |
| b. | te-              | <b>zere-</b>    | $\lambda e_B^W \varnothing$ | -B   | <b>ERG → REC</b>  |                      |
|    | 1PL.ABS-         | <b>REC.ERG-</b> | see                         | -PST |                   | ‘We saw each other.’ |

If restated in terms of argument alignment, reflexive binding appears to follow a syntactically accusative pattern, with an ergative antecedent c-commanding an absolutive reflexive anaphor, while reciprocals display a syntactically ergative pattern, with the absolutive antecedent c-commanding the reciprocal pronoun in the ergative position.

The main claim of this chapter is that this mismatch in directionality is a result of West Circassian being syntactically ergative: the absolutive DP undergoes A-movement to Spec,TP – a position c-commanding the ergative agent. This clause structure is confirmed by the directionality of reciprocal binding. Importantly, both reflexives and reciprocals are standard anaphors that must be bound by a c-commanding argument in the A-domain, i.e. TP. West Circassian reflexives, however, fall into a cross-linguistically common class of local subject oriented anaphors, the licensing

conditions of which reduce the set of possible antecedents to the highest argument in the  $\theta$ -domain. The mismatch in directionality between reflexives and reciprocals is then reduced to a difference in licensing conditions.

The distribution of reflexive and reciprocal morphology in West Circassian has been described in detail by Rogava and Keraševa (1966:271-279); Arkadiev et al. (2009:63-67), and Letuchiy (2010:339-344). This chapter builds on previous work by bringing in negative data supporting previously made generalizations and novel data which (i) confirms the syntactic status of reflexive and reciprocal morphology as the morphological reflex of a syntactically active bound pronoun and (ii) establishes the structural conditions on reflexive and reciprocal binding and their connection to the full clause structure, by examining contexts involving more than two verbal arguments.

In analyzing both reflexives and reciprocals as standard anaphors I depart from previous approaches to the mismatch in (52): in particular, Letuchiy (2010) proposes that reciprocals are true anaphors that are bound by a structural subject, while the antecedent for reflexives is determined semantically based on a thematic hierarchy. I follow Letuchiy (2010) in treating reciprocal binding as a diagnostic for syntactic ergativity, but argue that reflexives are likewise subject to structural constraints on binding that cannot be captured by appealing to a thematic hierarchy alone. My treatment of *zere-* in (52b) as the morphological reflex of a reciprocal pronoun in the ergative position is in accordance with descriptions provided by Arkadiev et al. (2009:64) and Letuchiy (2010:340) and in contrast to Lander and Letuchiy (2010:270) and Lander (2012:133-134), who propose that reciprocal formation from a transitive predicate involves demotion of an ergative agent to an applied object position and subsequent binding of that applied object by the absolutive theme.

The proposed analysis has implications both for the understanding of the nature of subjecthood in a syntactically ergative language like West Circassian and the role of subjecthood in defining the distribution of local subject oriented anaphors. In terms of understanding syntactic ergativity, this analysis provides support for the idea that syntactic ergativity is derived, i.e. that the absolutive moves to a high clausal position from a position that may be lower than other arguments in the

$\theta$ -domain, as has been proposed e.g. by Bittner and Hale (1996); Manning (1996); Baker (1997); Aldridge (2008); Coon et al. (2014); Yuan (2018). In departure from previous proposals, however, I use the reciprocal binding data to argue that the high position of the absolutive argument must be derived via A-movement, rather than A'-movement. While some authors explicitly or implicitly assume that the absolutive undergoes A-movement (e.g. Aldridge 2008), the diagnostics involved in identifying the high position are compatible with an A'-movement analysis.

In regards to anaphor binding, West Circassian provides novel evidence that local subject orientation is due to conditions on locality of movement, as argued e.g. by Ahn (2015), and not subjecthood per se. As a syntactically ergative language, West Circassian sheds light on the nature of local subject orientation, confirming an implicit prediction of Ahn's (2015) analysis that the antecedent of the reflexive need not be the surface subject, as long as it meets the necessary locality conditions for binding.

In terms of a broader research agenda, the analysis proposed here falls into a robust line of research showing that subjecthood properties – i.e. properties associated with structural prominence – are distributed across several positions within the clausal spine, indicating that the term 'subject' bears no theoretical significance within this framework; see e.g. Harley (1995); Bobaljik and Jonas (1996); McCloskey (1997). In a language with a nominative-accusative clause structure, the positions displaying subjecthood properties are generally occupied by the same nominal. In a syntactically ergative language like West Circassian, these positions are systematically occupied by distinct arguments (i.e. the absolutive argument in Spec,TP and the ergative argument in Spec,vP), rendering conflicting diagnostics of structural prominence, such as the difference in reflexive and reciprocal binding patterns. Furthermore, conditions on reflexive binding in West Circassian show that even a particular subjecthood property, such as the possibility of serving as an antecedent for a reflexive, may not be tied to a fixed syntactic position: for example, an applied object may display subjecthood properties if it happens to be the highest nominal within the  $\theta$ -domain, but will no longer display those properties if it is c-commanded by an ergative agent.

The remainder of the chapter is structured as follows: section 3.2 outlines the morphosyntactic properties of reflexive and reciprocal markers and argues that they expone agreement with a syntactically active anaphoric pronoun; section 3.3 argues that reciprocal binding patterns provide evidence for a syntactically ergative clause structure; section 3.4 discusses locality conditions on reflexive binding, and section 3.5 concludes.

## **3.2 Reflexive and reciprocal agreement**

This section outlines the basic distributional properties of reflexive and reciprocal marking in West Circassian. The main empirical generalization regarding these morphemes is that they are exponents of agreement with a syntactically active bound pronoun, which means that their morphological position may be used to diagnose the syntactic position of the corresponding anaphor. In this respect, the expression of anaphor binding in West Circassian is in stark contrast, on the one hand, with the use of de-transitivizing operators with reflexive semantics in e.g. Hebrew (Reinhart and Siloni 2005) and with reciprocal semantics in e.g. Passamaquoddy, Japanese and Chichewa (Bruening 2004), and on the other hand, with free-standing reflexive or reciprocal pronouns which do not trigger any change in verbal morphology, as e.g. in English. The treatment of reflexive and reciprocal markers as agreement with a syntactically active bound pronoun is justified by the following pieces of evidence:

1. The morphological position of the reflexive/reciprocal marker changes to reflect the syntactic position of the bound argument.
2. The use of reflexive/reciprocal morphology does not involve valency reduction, meaning that (i) the case frame of the corresponding predicate does not change and (ii) the corresponding anaphor may in fact be expressed overtly.

The remainder of this section is structured as follows: subsection 3.2.1 provides information on allomorphy and morphophonological alternations that these markers are subject to; subsec-

tion 3.2.2 demonstrates that the position of the reflexive and reciprocal morphology varies based on the syntactic position of the bound pronoun, and subsection 3.2.3 provides evidence that the use of this morphology does not involve valency reduction.

### 3.2.1 Allomorphy and morphophonology

This subsection outlines the various forms of the reflexive and reciprocal marker that may be observed in the data. It is important to establish the set of possible forms for these morphemes to be able to make the correct generalizations regarding their distribution, especially given that the two markers are phonologically very similar – one such case where the reflexive morpheme has previously been misanalyzed as an allomorph of the reciprocal prefix is illustrated in (60)-(61).

The vowel /ə/ in the reflexive marker *zə-* undergoes the following regular morphophonological alternations:

1. The vowel /ə/ is dropped prevocally and immediately preceding a glide (Arkadiev et al. 2009:27-28):

(53) /ə/ → Ø / \_\_ [-consonantal]

This is illustrated in the wordforms in (54):

- (54) a. *sə-            z-            e-            že -ž'ə*    {*sə+zə+je+e+že+ž'ə*}  
           1SG.ABS- **REFL.IO**- DAT- call -RE  
           ‘I call myself [Zara]’
- b. *z-            a-            fe-            s-            thač'ə -ɸ*    {*zə+a+fe+s+thač'ə+ɸe*}  
           **REFL.ABS**- 3PL.IO- BEN- 1SG.ERG- wash -PST  
           ‘I washed myself for them.’
- c. *z-            jə-            wəč'ə -ž'ə -ɸ*    {*zə+jə+wəč'ə+ž'ə+ɸe*}  
           **REFL.ABS**- 3SG.ERG- kill -RE -PST  
           ‘S/he killed himself/herself.’

2. The vowel /ə/ is optionally dropped if the reflexive morpheme is preceded by an open syllable (e.g. an absolutive agreement prefix) and followed by an applicative prefix.<sup>1</sup> For example, the reflexive morpheme surfaces as *z-* in the following example:

- (55) *sə-            z-            fe-    g<sup>w</sup>əbžə -ž'ə            {sə+zə+fe+g<sup>w</sup>əbžə+ž'ə}*  
 1SG.ABS- **REFL.IO**- BEN- angry -RE  
 'I am angry at myself.'

The optionality of this rule is evident from the availability of the analogous form where the vowel is pronounced:

- (56) *wə-            zə-            fe-    g<sup>w</sup>əbžə -ž' -a*  
 2SG.ABS- **REFL.ABS**- BEN- angry -RE -Q  
 'Are you angry at yourself?'

3. The vowel /ə/ undergoes the following assimilation rule which is triggered by the dynamic prefix *e-*: /ə/ surfaces as /e/ in present tense forms of dynamic verbs, if immediately followed by ergative cross-reference morphology and the dynamic prefix *e-*:

- (57) *ʂ<sup>w</sup>ə    ze-            s-            e-    λeɸ<sup>w</sup>ə -ž'ə            {zə+s+e+λeɸ<sup>w</sup>ə+ž'ə}*  
 good **REFL.ABS**- 1SG.ERG- DYN- see -RE  
 'I love myself.'

The reciprocal marker has two allomorphs: *ze-* (58a), which appears in the applied object position, and *zere-*, which appears in the ergative position (58b), or the applied object position cross-referencing the causee of a transitive verb (58c) (Rogava and Keraševa 1966:271-276; Arkadiev et al. 2009:63-67). The final vowel /e/ in both allomorphs is dropped if immediately followed by a vowel or glide (58c).

- (58) a. *Ø-            ze-            fe-    χ<sup>w</sup>ə            -ɸe -x*  
 3ABS- **REC.IO**- BEN- become -PST -PL  
 'they became [strong] for each other'

1. This rule is mentioned in Rogava and Keraševa (1966:51) for a number of particular prefix combinations (e.g. *zə+de* 'WH.IO+LOC-'), but appears to be more general than described there.

- b. Ø- tje- **zere-** be- fe -ž'ə -be -x  
 3ABS- LOC- **REC.ERG-** CAUS- fall -RE -PST -PL  
 'they made each other fall over'
- c. tə- **zer-** a- be- ša -ʙ {tə+**zere**+a+be+šə+be}  
 1PL.ABS- **REC.IO-** 3PL.ERG- CAUS- know -PST  
 'they introduced us to each other (lit. made us know each other)'

Letuchiy (2010:341) treats some instances of the form *zə-* as a variant of reciprocal agreement, citing the following regular phonological alternation as the source of the vowel change:

- (59) For a number of prefixes, the final vowel /e/ changes to /ə/ when this prefix is followed by a prefix of a particular type (Smeets 1984; Arkadiev and Testelet 2009).

For example, the comitative prefix *de-* is pronounced as *de-* when followed by the ergative agreement prefix (60a) and as *də-* when it is followed by a locative applicative prefix such as *š'ə-* (60b).

- (60) a. Ø- Ø- **de-** t- š'a -ʙ  
 3ABS- 3SG.IO- **COM-** 1PL.ERG- lead -PST  
 'we lead him/her with him/her' (Rogava and Keraševa 1966:157)
- b. sə- qə- **də-** š'ə- w- e- ž'a -ʙ  
 1SG.ABS- DIR- **COM-** LOC- 2SG.IO- DAT- wait -PST  
 'I waited there for you with him/her' (Arkadiev et al. 2009:134)

At first glance, this appears to be a reasonable assumption, especially given that forms containing the morpheme *zə-* may receive a reciprocal interpretation:

- (61) te **zə-** t- λeʙ<sup>w</sup>ə -ʙ  
 we **REFL.ABS-** 1PL.ERG- see -PST  
 'We saw ourselves / each other.'

However, as the glossing and translation suggests, this prefix is in fact reflexive, rather than reciprocal, and reflexives with plural antecedents may be interpreted as reciprocal. As can be

seen in (60a), the morphological environment within which this prefix appears – to the left of an ergative agreement marker – is not expected to trigger the vowel change to /ə/. On the contrary, the reciprocal morpheme often surfaces as *ze-* in environments which are expected to trigger the vowel change in (59). For example, the reciprocal marker is followed by the locative prefix *š'ə-* in (62), which is expected to trigger the vowel change, as shown in (60b), and nevertheless surfaces as *ze-*. In fact, Smeets (1984) lists the reciprocal morpheme as an exception to the rule in (59).

- (62) *tə-            ze-            š'ə-    ɓ<sup>w</sup>əpša -ɓ*  
 1PL.ABS- **REC.IO**- LOC- forget -PST  
 'We forgot about each other.'

From these facts I conclude that the reciprocal morpheme only has two variants (with the possibility of final vowel elision): *ze-* and *zere-*, and the prefix *zə-* is always reflexive. This is important to establish, because we would be otherwise led to a number of incorrect generalizations regarding the distribution of the reciprocal morpheme by expanding its set of possible positions to all the positions available for the reflexive prefix *zə-*; see also subsection 3.4.5 for discussion of a case where this distinction is important.

### 3.2.2 *The morphological position changes to reflect bound argument*

This subsection provides data illustrating that the position of the reflexive/reciprocal marker appears precisely in the morphological position where agreement with the bound argument is expected to appear.

1. Unergative verb with an applied object (ABS>IO). In order to express reflexive or reciprocal co-indexation between the absolutive argument of an unergative predicate and an applied object, the reflexive or reciprocal marker appears in the applied object position (63) – this is evident from the linear position of the corresponding markers: they are preceded by the absolutive agreement prefix and immediately followed by the benefactive applicative prefix. This position is fixed – the marker cannot appear in the absolutive position instead (64).



- (63) a. wə-      zə-      f-      je-      že      -ž'ə -B  
 2SG.ABS- **REFL.IO**- BEN- DAT- read -RE -PST  
 'You studied for yourself.' IO→REFL
- b. te    λešə    tə-      ze-      fe-      χ<sup>w</sup>ə      -B  
 we    strong 1PL.ABS- **REC.IO**- BEN- become -PST  
 'We became strong for each other.' IO→REC
- (64) a. \*zə-      p-      f-      je-      že      -ž'ə -B  
**REFL.ABS**- 2SG.IO- BEN- DAT- read -RE -PST  
 Intended: 'You studied for yourself.' \*ABS→REFL
- b. \*te    λešə    ze-      t-      fe-      χ<sup>w</sup>ə      -B  
 we    strong **REC.ABS**- 1PL.IO- BEN- become -PST  
 Intended: 'We became strong for each other.' \*ABS→REC

The morphological position of the reflexive or reciprocal marker thus corresponds to the position of the agreement prefix triggered by the lower (i.e. bound) co-indexed argument – the applied object.

2. Transitive three-place predicate with applied object (ERG>IO). In order to express reflexive or reciprocal binding between an ergative agent of a transitive verb and an applied object, the reflexive or reciprocal morpheme appears in the applied object position. As in the previous examples, this is evident from the linear position of the marker in question: in (65a) the reflexive marker appears between the directive prefix and the dative applicative morpheme and in (65b) the reciprocal marker immediately precedes the benefactive prefix; crucially, in both cases the ergative marker tracking agreement with the antecedent of the anaphor remains intact.<sup>2</sup>

- (65) a. Ø-    qə-    z-      e-    t-      tə    -ž'ə -B  
 3ABS- DIR- **REC.IO**- DAT- 1PL.ERG- give -RE -PST  
 'We gave it to ourselves.' IO→REFL
- b. te(ERG)    wəne-xe-r    Ø-    ze-      fe-    t-      šə -B  
 we      house-PL-ABS 3ABS- **REC.IO**- BEN- 1PL.ERG- do -PST

2. In (65b) the reciprocal marker is also preceded by a null absolutive agreement marker – while not overtly expressed, its presence is evident from the argument structure of the predicate and the case marking on the DP *wənexer* 'houses'.

Given that the applied object is structurally lower than the ergative agent and thus expected to be bound by the ergative agent, and not vice versa, the natural conclusion based on the data in (65) is that the reflexive and reciprocal marker is tracking agreement with the bound anaphor in the applied object position.

**3. Transitive predicate (ERG-ABS).** In order to express co-indexation between an ergative agent and an absolutive theme of a transitive predicate, the reflexive marker appears in the absolutive position: in (66a) this is evident from the fact that it precedes all other verbal morphology, such as agreement with the applied object. Reciprocal morphology, on the other hand, appears in place of ergative agreement: in (66b) this can be discerned from the fact that this prefix appears between the applicative morpheme and the causative prefix.

(66) **REFL: ERG > ABS | REC: ABS > ERG**

- a. **zə-**      **ŝ<sup>w</sup>-**      **e-**      **s-**      **š'e -n**      **s-λeč'ə-š't**  
**REFL.ABS-** 2PL.IO- DAT- 1SG.ERG- sell -MOD 1SG.ERG-can-FUT  
 ‘I could sell myself to you (there’s nothing else).’ (A salesperson joking about their store running out of goods.) ABS→REFL
- b. **Ø-**      **Ø-**      **š'ə-**      **zere-**      **be-**      **čefə -x**  
 3ABS- 3SG.IO- LOC- **REC.ERG-** CAUS- rejoice -PL  
 ‘They enjoyed themselves with each other (lit. made each other rejoice) [at the weddings].’ (AC)<sup>3</sup> ERG→REC

Recall that this is precisely the context in which reflexives and reciprocals behave in the opposite manner: the reflexive morpheme appears to track agreement with the theme of the transitive verb, while the reciprocal morpheme appears to expone agreement with the ergative agent. More evidence for this approach (rather than assuming, for example, that the form containing the reciprocal marker in (66b) is simply intransitive) will be provided in the following section. The important

3. Adyghe corpus: [http://adyghe.web-corpora.net/index\\_en.html](http://adyghe.web-corpora.net/index_en.html)

thing to note at this point is that both the reflexive and reciprocal morphemes appear in different positions within the verbal form based on the particular argument configuration involved, and in most cases it is clear that these morphemes appear precisely where agreement with the structurally lower of the two co-indexed arguments would have otherwise appeared.

### 3.2.3 No valency reduction

This subsection argues that the reflexive and reciprocal morphemes are not de-transitivizing operators that trigger valency reduction. The argumentation is based on the following evidence: (i) if a lexical DP denoting the co-indexed argument is present, it must carry the case of the antecedent, and (ii) the anaphor may be overtly expressed.

## Case marking

If the antecedent DP is expressed overtly alongside a reflexive- or reciprocal-marked predicate, it must obligatorily carry the case of the co-indexed argument that triggers full  $\phi$ -agreement. This is illustrated for different argument structure combinations below.

The lexical DP referring to the co-indexed participant that is used alongside a reflexive- or reciprocal-marked unergative predicate must be marked with absolutive case corresponding to the absolutive external argument, rather than the oblique applied object: this is shown for a reflexive-marked unergative verb in (67a) and for a reciprocal-marked unergative verb in (67b).

- (67) a. sabəj-xe-**r/\*m**(ABS) *refl*(IO) ʙʷənʒe-m  
 child-PL-ABS/\*OBL mirror-OBL  
 Ø- Ø- ʃ'ə- z- e- pλə -ʒ'ə -x  
 3ABS- 3SG.IO- LOC- **REFL.IO**- DYN- look -RE -PL  
 'The children are looking at themselves in the mirror.' **REFL**
- b. sabəj-xe-**r/\*m**(ABS) *rec*(IO) Ø- z- e- pλə -ʒ'ə -x  
 child-PL-ABS/\*OBL 3ABS- **REC.IO**- DAT- look -RE -PL  
 'The children are looking at each other.' **REC**

$$(68) \text{ REFL: ERG} > \text{ABS} \mid \text{REC: ABS} > \text{ERG:}$$

- (69) a. (...) a-xe-**me**(ERG)      zanč'-ew      *rec*(IO)      zewəže(ABS)  
that-PL-**PL.OBL**      direct-ADV           all

Ø-    **ze-**        r-        a-        ʔ<sup>w</sup>ete -ž'ə -š'tə -*be*  
 3ABS- **REC.IO**- DAT- 3PL.ERG- tell    -RE -IPF -PST

‘They certainly told the whole truth to each other.’ (R&K1966:274)

**REC**

- b. λə-žə-**m(ERG)**                      Ø-jə-paʔ<sup>w</sup>e(ABS)                      *refl*(IO)  
 man-old-**OBL**                              3SG.PR-POSS-hat  
 Ø-    **zə-**              š'-    jə-              λa        -*ʁ*  
 3ABS- **REFL.IO**- LOC- 3SG.ERG- put.on -PST

‘The old man put his hat on himself.’ (R&K1966:267)

**REFL**

It is also important to note that the reciprocal allomorph *zere-* is used outside of contexts where the absolutive theme is co-indexed with an ergative agent as in (68b). The allomorph *zere-* is also used to mark agreement with the causee of a transitive verb in a synthetic causative construction. This is illustrated below.

The causative prefix *ʁe-* introduces an ergative argument denoting the causer – if the base verb is transitive as in (70a), the formerly ergative causee triggers agreement in the applied object slot (70b).<sup>4</sup>

- (70) a. č'ale-m(ERG)    ʁ<sup>w</sup>əč'ə-r(ABS)    Ø-    j-              e-        wəfe  
 boy-OBL              metal-ABS              3ABS- 3SG.ERG- DYN- bend  
 ‘The boy is bending metal.’

- b. pšaše-m(ERG)              č'ale-m(OBL)              ʁ<sup>w</sup>əč'ə-r(ABS)              Ø-    Ø-  
 girl-OBL                      boy-OBL                      metal-ABS                      3ABS- 3SG.IO-  
 r-    j-              e-    **ʁe-**        wəfe  
 DAT- 3SG.ERG- DYN- **CAUS-** bend

‘The girl is forcing the boy to bend metal.’ (Letuchiy 2009a:377)

If the reciprocal morpheme is tracking agreement with a transitive causee, it is spelled out as *zere-*. Thus, in (71) the causee is co-indexed with the absolutive theme of the base verb, and the reciprocal morpheme appears in the position of the applied object – to the right of absolutive agreement and to the left of the ergative personal marker.

4. For details on the syntactic and semantic properties of the causative prefix see Letuchiy (2009a, 2015).

- (71) š̌ʷə tə-        **zere-**    b-        be-    λeβʷə -β  
 good 1PL.ABS- **REC.IO-** 2SG.ERG- CAUS- see    -PST  
 ‘You helped us love each other (lit. see good in each other)’

Thus, the morpheme *zere-* is not limited to marking reciprocal co-indexation between an ergative agent and an absolutive theme: it is also used to mark agreement with the dative causee in a transitive causative construction.

To summarize this subsection, the use of reflexive and reciprocal morphology does not trigger any changes to the argument structure or case-assigning properties of the predicate in question: this is evident from the case-marking that appears on the antecedent DP.

## Overt anaphor pronouns

Another piece of evidence that the use of reflexive and reciprocal morphology does not involve any valency reduction comes from the fact that an overt anaphoric pronoun may appear in the presence of the corresponding marker. While speakers prefer to omit the pronoun and do not always approve its use in the presence of reflexive and reciprocal morphology, it is occasionally accepted as possible in these constructions. Thus, the reflexive pronoun in the applied object position is expressed overtly as *jež* ‘self’ alongside the oblique-marked DP referring to the antecedent in (72).<sup>5</sup>

- (72) š̌ʷakʷe-m(ERG)                      **jež**’(IO)                      tovarə-r  
 salesperson-OBL                      **self**                      product-ABS  
 Ø-    **ze-**                      r-    jə-                      š̌ʷe -ž̌ʷə -β  
 3ABS- **REFL.IO-** DAT- 3SG.ERG- sell -RE -PST  
 ‘The salesperson sold the product to herself.’

**REFL**

Likewise, reciprocal agreement may be accompanied by the fixed expression *zə-m zə-r* ‘one-ABS one-OBL’ alongside the overt absolutive-marked antecedent DP, as illustrated in (73).

5. The pronoun *jež* ‘self’ has a broad distribution outside of its anaphoric use – in other contexts it triggers regular third person agreement rather than reflexive agreement; see the following subsection for more details.

- (73) ɕəf-xe-r(ABS) [ zə-m zə-r ](ERG) Ø- zere- wəç'ə -ž'ə  
 person-PL-ABS one-OBL one-ABS 3ABS- REC.ERG- kill -RE

'People kill each other.'

REC

It is important to note that the order of case markers within the expression *zəm zər* does not correlate with the argument structure of the predicate involved. Thus, the same fixed expression is used with a reciprocal-marked unergative verb with a bound applied object (74).

- (74) [ zə-m zə-r ](IO) š<sup>w</sup>ə- qə- ze- de- š<sup>w</sup>e -ž'ə -š't -a  
 one-OBL one-ABS 2PL.ABS- DIR- REC.IO- COM- dance -RE -FUT -Q

'Will you(pl) dance with each other?'

To conclude this subsection, the reflexive and reciprocal morphology on the predicate may be accompanied by an overt anaphor pronoun, indicating that this morphology does not involve de-transitivization of the predicate it attaches to.

### 3.2.4 Free-standing reflexive expressions are not anaphors

This subsection briefly addresses the question of free-standing expressions that have been labeled as reflexive in previous work on West Circassian. While a full analysis of these expressions is outside the scope of this dissertation, this section aims to show that they are not in fact anaphors, meaning that they need not be bound within a particular domain. This in turn indicates that they may not be used as evidence for or against a particular clause structure. The two expressions I will discuss here are the emphatic pronoun *jež'* and the expression *ə-šha* (literally 'his/her head').

Rogava and Keraševa (1966:87-88) label the pronoun *jež'* as reflexive, but translate it with the Russian word *sam* 'by oneself', which is an emphatic nominal modifier, rather than an anaphoric pronoun. In accordance with its grammatical label, this pronoun is often used with a reflexive interpretation, especially in contexts which are not possible for the agreement-triggering reflexive pronoun. This pronoun is however used in many contexts outside of reflexive co-indexation and may refer to a contextually salient referent with no antecedent present in the clause structure (75).

- (75) mafe-re **jež'** lež'ak<sup>w</sup>e Ø- Ø- š'ə- ʔa -ɸ  
 day-MULT **self** worker 3ABS- 3SG.IO- LOC- be -PST  
 'During the day he himself worked.' (Rogava and Keraševa 1966:88)

From this I conclude that *jež'* is not a true reflexive pronoun – it does not need to be bound within any syntactically identifiable domain.

The second reflexive expression is the lexicalized use of the possessed nominal *ə-šha* 'his/her head' with a meaning that can roughly be translated as 'himself/herself'. Lander and Testelefs (2017:964) classify this expression as a subject oriented reflexive pronoun. However, just like *jež'*, this expression does not require an overt antecedent – it may refer to a contextually salient individual that is explicitly referred to in the clause containing this expression, as in (76).

- (76) a-šha Ø-jə-nasəp s- j- e- ɸe- g<sup>w</sup>əmeč'ə  
 3PL.PR-head 3ABS-POSS-happiness 1SG.ABS- 3SG.ERG- DYN- CAUS- worry  
 'Their (own) happiness concerns me.'

In summary, given the distributional properties of *ə-šha* and *jež'*, neither of these expressions qualifies as a true anaphor, meaning that their behavior cannot be used as evidence for or against a particular clause structure.

### 3.2.5 Summary: reflexive and reciprocal agreement

To conclude this section, the morphosyntactic behavior of reflexive and reciprocal marking is most readily accounted for if the corresponding markers are treated as exponents of agreement with a syntactically active anaphoric pronoun: they do not trigger any change in the argument structure of case assigning properties of the predicate in question, and the morphological position of these markers correlates directly with the syntactic position of the bound anaphor. In this sense, these morphemes are in contrast with de-transitivizing reflexive/reciprocal morphology in e.g. Hebrew (Reinhart and Siloni 2005) or Passamaquoddy (Bruening 2004). Moving forward, this means that the morphological position of the reflexive and reciprocal markers within the verbal form can be



used to diagnose the syntactic position of the corresponding anaphor. The following subsection illustrates how reflexive and reciprocal agreement are established within the feature-based system proposed in chapter 2.

### 3.2.6 *The syntax of reflexive and reciprocal agreement*

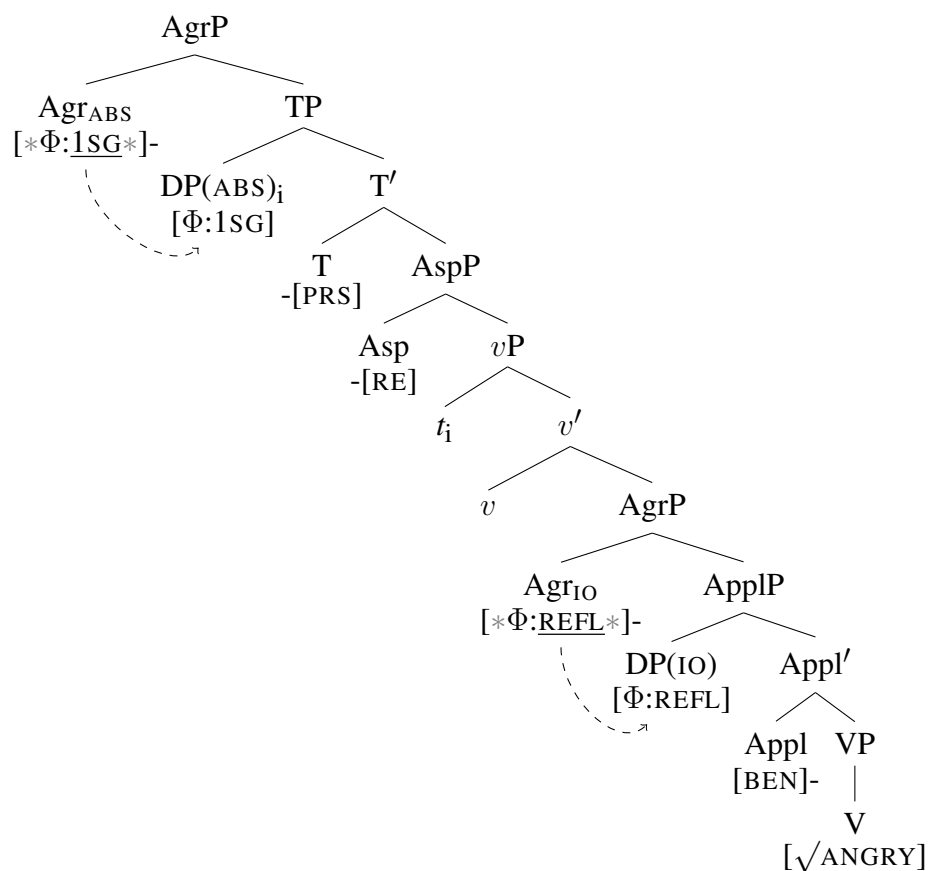
In terms of the syntax, the reflexive and reciprocal morphology is derived in the same way regular  $\phi$ -agreement is established. I assume here that reflexives and reciprocals carry a designated  $\phi$ -feature specified as [REFL] or [REC] – they may be specified for other  $\phi$ -features, but rules of vocabulary insertion are insensitive to them.<sup>6</sup> For example, the agreement relations for the clause in (77) are shown in (78): the full clause structure is built, with the applied object merged and licensed in Spec,ApplP and the absolutive external argument initially merged in Spec,*v*P and subsequently raised to Spec,TP. There are two Agr<sup>0</sup> heads in the clause: Agr<sub>IO</sub> above ApplP and Agr<sub>ABS</sub> above TP. These two heads agree with the closest DP within their c-command domain: the applicative argument and the absolutive DP respectively. I assume that the reflexive morpheme -ž’ə is introduced as an aspectual head between *v*P and TP.

- (77) sə-            z-            fe-    g<sup>w</sup>əbžə -ž’ə  
          1 SG.ABS- REFL.IO- BEN- angry   -RE  
          ‘I am angry at myself.’

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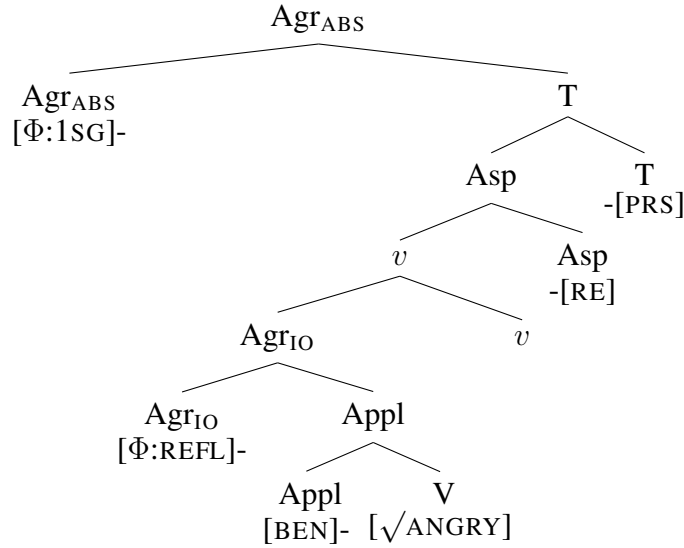
6. This may be a consequence of the well-known Anaphor Agreement Effect – cross-linguistically anaphors appear to never trigger regular  $\phi$ -agreement (see e.g. Rizzi 1990; Woolford 1999). I leave the pursuit of this connection for future research.

(78)



The verbal heads are concatenated via head movement, rendering the complex syntactic node in (79a), which is linearized as the string in (79b). After vocabulary insertion, this renders the string in (79c), which corresponds to the surface form after the deletion of /ə/ in the reflexive prefix (79d).

(79) a. Result of head movement:



b. Linearization:

[Agr\_ABS;1SG]- [v;Ø]- [Agr\_IO;REFL]- [Appl;BEN]- [V;√/ANGRY] -[Asp;RE] -[T;PRS]

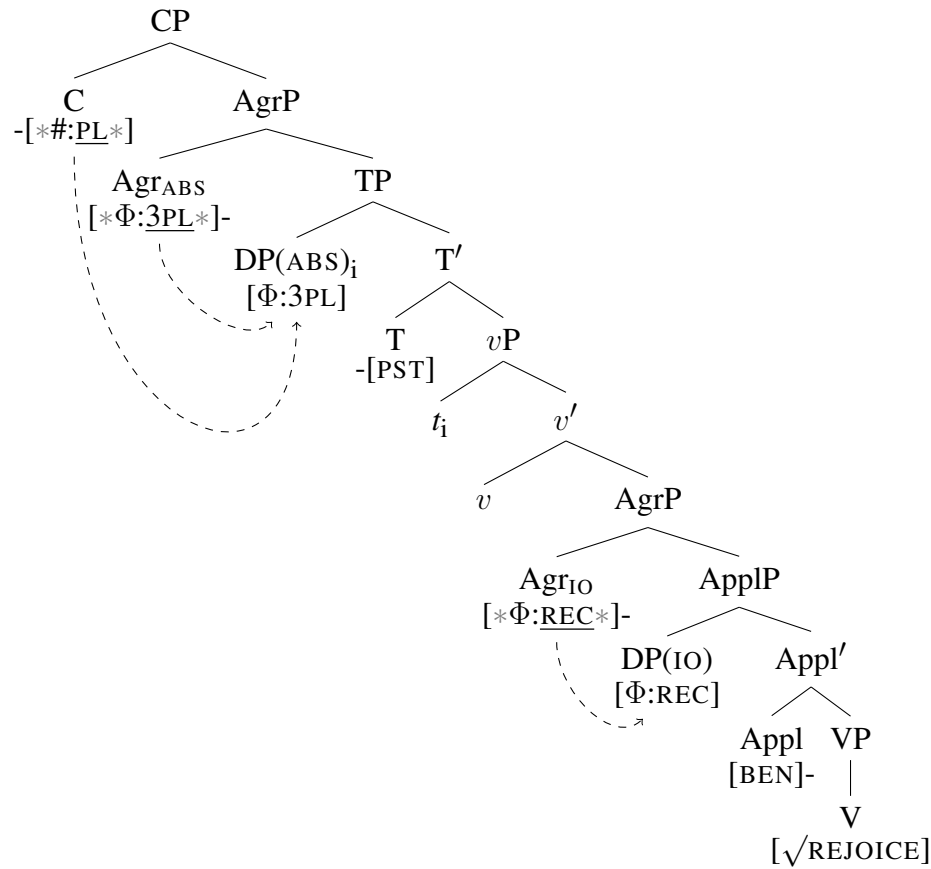
c. Vocabulary insertion: sə- zə- fe- g<sup>w</sup>əbž'ə -ž'ə

d. Phonology: sə-z-fe-g<sup>w</sup>əbž'ə-ž'ə

A verbal form containing the reciprocal morpheme is derived in the same way. For example, the derivation of the form in (80) is illustrated in (81), which is largely analogous to the structure in (78). As in the previous example, the clause contains two Agr<sup>0</sup> heads: one above ApplP and one above TP. These heads agree with the absolutive external argument in Spec,TP and the applied object in Spec,ApplP respectively. Additionally, C<sup>0</sup> agrees with the absolutive argument in number.

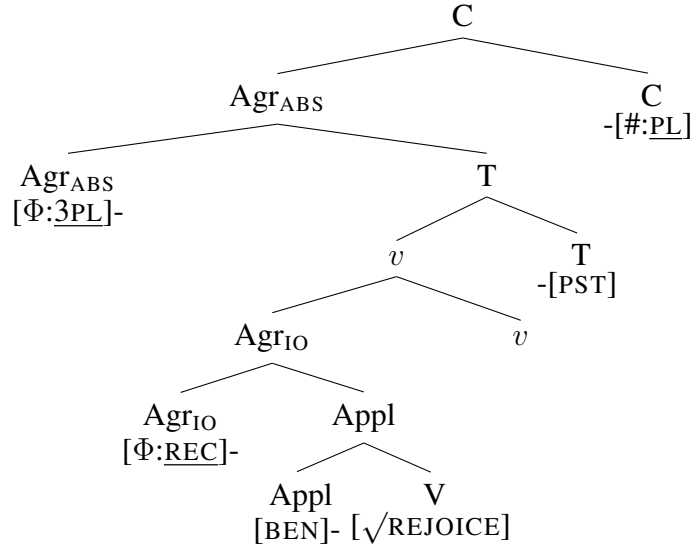
- (80) Ø-    **ze-**    fe-    g<sup>w</sup>əṣa -be -x  
 3ABS- **REC.IO**- BEN- rejoice -PST -PL  
 'They congratulated each other.'

(81)



The verbal projections are concatenated via head movement, rendering the complex head in (82a), which is then linearized as the string in (82b). After vocabulary insertion this results in the string in (82c), which in turn is converted to the surface string via regular phonological alternations (82d).

(82) a. Result of head movement:



b. Linearization:

[Agr<sub>ABS</sub>;3PL]- [v;Ø]- [Agr<sub>IO</sub>;REC]- [Appl;BEN]- [V;√/REJOICE] -[T;PST] -[C;PL]

c. Vocabulary insertion: Ø- ze- fe- g<sup>wəʃe</sup> -be -xe

d. Phonology: Ø-ze-fe-g<sup>wəʃa</sup>-be-x

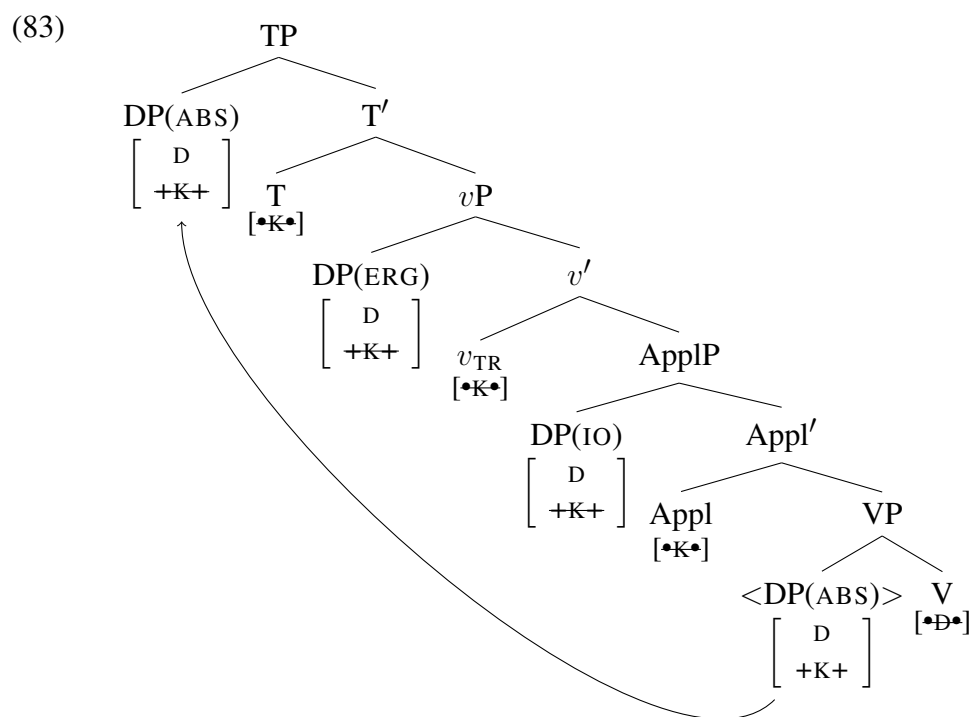
To summarize, reciprocal and reflexive marking is the exponence of agreement between an anaphor and the corresponding Agr<sup>0</sup> head.<sup>7</sup> Given that the morphological position of agreement morphology correlates directly with the syntactic position of the corresponding argument, this means that the morphological position of reflexive and reciprocal morphology may be used to diagnose the syntactic position of the anaphor it refers to. Agr<sup>0</sup> heads will be omitted throughout the remainder of the chapter for simplicity.

### 3.3 Reciprocals and syntactic ergativity

Now that we have established that the morphological position of the reflexive and reciprocal morphology can be used to diagnose the syntactic position of the bound anaphor, this section demonstrates that the behavior of reciprocal pronouns provides evidence for a syntactically ergative clause

7. The agreement analysis of these markers provides an explanation for an otherwise puzzling morpheme ordering in reciprocal causative constructions – see Appendix 3.A for details.

structure, wherein the absolutive DP undergoes A-movement to a position c-commanding both the ergative agent and any applied objects – Spec,TP. The proposed structure of a transitive three-place predicate is represented in (83): the absolutive theme is base-generated as the complement of the lexical verb ( $V^0$ ) and subsequently raises to Spec,TP, while the ergative and applied object DPs remain in situ. As discussed in chapter 2, this configuration is achieved in the following way: all DPs bear the licensee feature [+K+], which can be thought of as an abstract case requirement. Transitive  $v^0$  and Appl<sup>0</sup> select for and simultaneously license the ergative agent and applied object in their specifiers via the feature [ $\bullet K \bullet$ ], while the lexical verb and unergative  $v^0$  simply select for a DP via the feature [ $\bullet D \bullet$ ] without licensing it.  $T^0$  in turn bears the licensing [ $\bullet K \bullet$ ] feature which triggers movement of the absolutive DP to Spec,TP and checks its licensee feature.



The argumentation will proceed as follows: first, I will show that outside of co-indexation relations involving absolutive themes, the bound reciprocal appears within the c-command domain of its antecedent, given basic assumptions about the correspondence between theta-roles and the order

### 3.3.1 Reciprocal binding is subject to c-command

This subsection illustrates that outside of configurations involving absolute themes, reciprocal binding patterns adhere to standard assumptions about the relative structural height of various verbal arguments.

(84) a. (...) a-xe-me(ERG)                      zanč'-ew                      zewəže(ABS)  
                    that-PL-PL.OBL                      direct-ADV                      all  
                    Ø-                      ze-                      r-                      a-                      ʔ<sup>w</sup>ete -ž'ə -š'tə -re  
                    3ABS- REC.IO- DAT- 3PL.ERG- tell -RE -IPF -PST

**ERG > IO**

In order to express reciprocal co-indexation between the absolutive external argument and applied object of an unergative verb, the reciprocal marker once again replaces the agreement with the applied object (85a). Once again, this is expected given standard assumptions about the relative positions of external arguments and applied objects: the reciprocal pronoun in the applied object position is bound by the structurally higher absolutive external argument (85b).

- (85) a. te λešə tə-      **ze-**      fe- χ<sup>wə</sup>ə -B  
           we strong 1PL.ABS- **REC.IO-** BEN- become -PST  
           ‘We became strong for each other.’ ABS(S) > IO
- b. [<sub>TP</sub> DP<sub>i</sub>(ABS) ... [<sub>vP</sub> <DP<sub>i</sub>(ABS)> [<sub>ApplP</sub> **REC<sub>i</sub>**(IO) ...

To summarize, reciprocals behave as standard anaphors: they are bound by a c-commanding antecedent. If this logic is extended to configurations involving absolutive themes, it is clear that the absolutive argument uniformly c-commands other verbal arguments for the purposes of reciprocal binding.

### 3.3.2 *Binding by high absolutive*

Turning back to configurations involving co-indexation between an absolutive theme and another verbal participant, it is evident that the reciprocal pronoun appears in the non-absolutive position, while its antecedent appears in the position of the absolutive argument. This indicates that the absolutive theme undergoes A-movement to a position c-commanding other verbal arguments – Spec,TP.

Thus, in order to express reciprocal co-indexation between an absolutive theme and an ergative agent, the reciprocal marker replaces agreement with the ergative argument, while the absolutive agreement marker indexes the antecedent (86a); the inverse configuration, with the reciprocal marker appearing in place of the agreement with the absolutive theme, is ungrammatical (86b). Given that reciprocal binding is generally established via c-command, we are forced to conclude that the absolutive theme in this construction c-commands the ergative agent – this structural configuration is achieved via the movement of the absolutive theme from within VP to Spec,TP, as shown in (86c).

- (86) a. **Theme(ABS)- Agent(ERG)-**  
           te-                    **zere-**                    λeB<sup>wə</sup>ə -B  
           1PL.ABS-            **REC.ERG-**            see        -PST



- b. \* **ze-**            t-            λeB<sup>W</sup>ə -B  
**REC.ABS-** 1PL.ERG- see    -PST

‘We saw each other’

**ABS > ERG | \*ERG > ABS**

- c. [<sub>TP</sub> DP<sub>i</sub>(ABS) ... [<sub>vP</sub> **REC**<sub>i</sub>(ERG) ... [<sub>VP</sub> DP<sub>i</sub>(ABS) ...

Likewise, in order to co-index an absolutive theme and an applied object of a transitive verb, the reciprocal marker replaces agreement with the applied object (87a), and not the absolutive theme (87b). This is expected if we assume that the absolutive theme raises to Spec,TP – a position c-commanding the applied object in Spec,AppIP; this is illustrated in (87c).

- (87) a. **Theme(ABS)- IO-                      Agent(ERG)-**  
tə-                      **ze-**            f-            jə-                      š’a    -B  
1PL.ABS-              **REC.IO-** BEN- 3SG.ERG-            bring -PST

- b. \* **ze-**            t-            f-            jə-                      š’a    -B  
**REC.ABS-** 1PL.IO- BEN- 3SG.ERG- bring -PST  
‘S/he brought us together (lit. to each other).’

- c. [<sub>TP</sub> DP<sub>i</sub>(ABS) ... [<sub>vP</sub> ... [<sub>AppIP</sub> **REC**<sub>i</sub>(IO) ... [<sub>VP</sub> DP<sub>i</sub>(ABS) ...

### 3.3.3 Summary: reciprocals and syntactic ergativity

To summarize this section, reciprocals are subject to general conditions on binding – they must be bound by a higher argument within the A-domain, i.e. TP. The distributional properties of reciprocal anaphors indicate that the absolutive DP uniformly binds reciprocals in the position of other verbal arguments, but not vice versa. Reciprocal binding patterns thus provide evidence for a syntactically ergative clause structure: the absolutive DP, while generated in various positions within *vP*, uniformly raises to Spec,TP – a position c-commanding other verbal arguments.

This evidence contributes to the discussion of structural sources of syntactic ergativity: while there have been many proposals for analyzing languages displaying syntactic ergativity effects

as containing a high position for the absolutive argument within the clause (see e.g. Bittner and Hale 1996; Coon et al. 2014), the types of diagnostics these accounts are based on are generally compatible with the absolutive DP undergoing A'-movement to its high position, rather than A-movement. In order to capture the reciprocal binding facts, however, the high position of the absolutive argument must be derived via A-movement, since A'-movement is not expected to have an effect on binding.

### 3.4 Locality conditions on reflexive binding

Given that reciprocal binding patterns provide evidence for a syntactically ergative clause structure, we are now faced with a puzzle: if the absolutive argument occupies the highest A-position in TP, why do reflexives behave as if the ergative DP c-commands the absolutive DP, and not vice versa. This question is especially important given that reflexive binding patterns have been previously used as evidence for subjecthood of the ergative DP (Caponigro and Polinsky 2011; Lander and Testelefs 2017).

The basic contrast between reflexives and reciprocals is illustrated in (88). In a baseline transitive verbal form, the theme triggers absolutive agreement as the leftmost personal prefix, and the agent triggers ergative agreement, which appears to the right of the absolutive agreement (88a). If the absolutive theme and ergative agent of a transitive verb are co-indexed, the reciprocal marker appears in place of agreement with the ergative argument (88b), while the reflexive marker appears in place of agreement with the absolutive argument (88c).

(88)	<b>Theme(ABS)-</b>	<b>Agent(ERG)-</b>			
a.	š <sup>wə</sup> - 2PL.ABS-	t- 1PL.ERG-	λeβ <sup>wə</sup> -β see -PST	<b>Baseline ERG-ABS</b>	'We saw you(pl).'
b.	zə- <b>REFL.ABS-</b>	t- 1PL.ERG-	λeβ <sup>wə</sup> -β see -PST	<b>ABS→REFL</b>	'We saw ourselves.'
c.	te- 1PL.ABS-	<b>zere-</b> <b>REC.ERG-</b>	λeβ <sup>wə</sup> -β see -PST	<b>ERG→REC</b>	'We saw each other.'

As a solution to this puzzle I argue that reflexives, like reciprocals, are general anaphors that must be bound by a higher nominal in the A-domain, i.e. TP. Unlike reciprocals, however, reflexives fall into a cross-linguistically common class of anaphors that are subject to an additional licensing condition which reduces the set of possible antecedents to the highest nominal in the  $\theta$ -domain, i.e. *vP* – in previous literature, this type of anaphor has been called *local subject oriented reflexives* (Ahn 2015). Following Ahn (2015), I model local subject orientation as licensing by a specialized reflexive Voice<sub>REFL</sub>.

This account explains the puzzling mismatch between reflexives and reciprocals: reflexives do not follow a syntactically ergative pattern, because the high absolutive position does not systematically correspond to the highest position within the  $\theta$ -domain. In fact, when the highest position within *vP* happens to be the base-generated position of the high absolutive DP, reflexive and reciprocals behave in a uniform way. As a syntactically ergative language, West Circassian expands the typology of local subject oriented reflexives by presenting novel evidence for Ahn’s (2015) locality-driven account of local subject orientation. This analysis reduces local subject orientation to conditions on locality of movement, without reference to subjecthood. This proves to be the correct approach in light of the fact that in West Circassian the antecedent of a local subject oriented anaphor need not be the surface subject or the external argument, as long as it conforms to the relevant locality constraints.

The remainder of this section is structured as follows: subsection 3.4.1 provides typological background on local subject oriented anaphors and the basics of Ahn’s (2015) analysis; subsection 3.4.2 outlines the evidence for West Circassian reflexives being local subject oriented; subsection 3.4.3 provides the analysis of local subject orientation; and subsection 3.4.5 provides additional justification for the proposed analysis by testing two additional predictions.

### 3.4.1 Local subject orientation and Voice<sub>REFL</sub>

Local subject oriented reflexives are cross-linguistically common: some examples include *se/si* in French and Italian (Rizzi 1986; Labelle 2008; Sportiche 2014, a.o.) and the use of a reflexive pronoun alongside the verbal suffix *-koL* in Kannada (Lidz 1996, 2001); see also Ahn (2015) and references therein. The defining property of this type of pronoun is that it may only be bound by a deep subject: non-subjects or derived subjects are not eligible antecedents. This is illustrated for French in the following examples, which are adapted from Sportiche (2014:104-107). The sentence in (89a) illustrates that the reflexive clitic *se* may be bound by a deep subject. On the other hand, it can be seen in (89b) that a non-subject argument such as a direct object cannot bind *se*, and (89c)-(89d) show that a derived subject such as the theme of a passive verb in (89c) and the raised subject in (89d) likewise cannot serve as an antecedent for the reflexive.

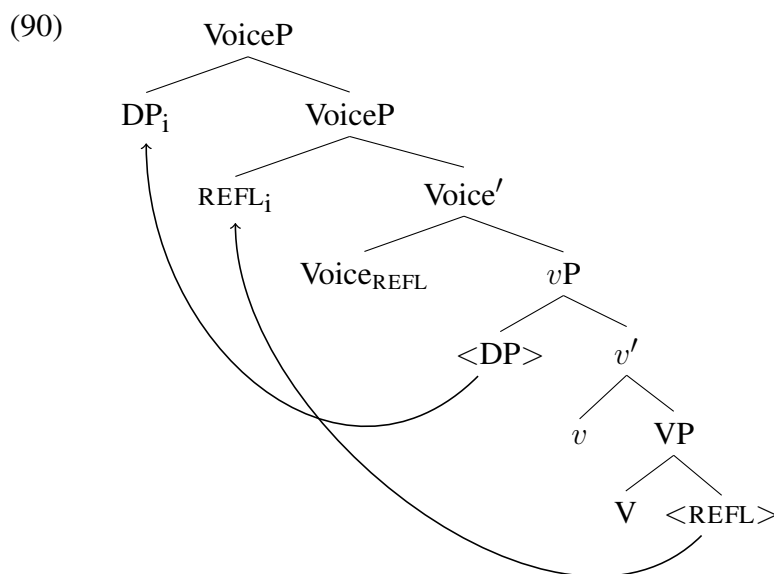
- (89) a. Jean<sub>i</sub> **se<sub>i</sub>** présente Pierre  
 Jean **to-himself** introduces Pierre  
 ‘Jean introduces Pierre to himself.’
- b. \* Jean **se<sub>i</sub>** présente les enfants<sub>i</sub>  
 Jean **to-themselves** introduces the children  
 Intended: ‘Jean introduces the children to themselves.’
- c. \* Pierre<sub>i</sub> **se<sub>i</sub>** sera présenté (par Jean)  
 Pierre **to-himself** will-be introduced by Jean  
 Intended: ‘Pierre will be introduced to himself by Jean.’
- d. \* Jean<sub>i</sub> **se<sub>i</sub>** semble déprimé  
 Jean **to-himself** seems depressed  
 Intended: ‘Jean seems to himself to be depressed.’

Building on Ahn (2015), I propose that local subject oriented reflexives must be licensed by a specialized reflexive Voice<sup>0</sup> – Voice<sub>REFL</sub> (cf. Sportiche’s (2014) projection HS). Syntactically, Voice<sub>REFL</sub> selects for *v*P and attracts two arguments to its specifier: (i) the highest DP in *v*P<sup>8</sup> and

8. In this respect I depart from Ahn’s (2015) analysis, where the highest DP in *v*P moves to Spec,PredP immediately above VoiceP. While Ahn’s original analysis is fully compatible with the data presented here, I have chosen to make

(ii) the reflexive pronoun. Semantically, Voice<sub>REFL</sub> imposes co-identity on the two arguments in its specifiers. Within this approach, local subject orientation is ensured by the fact that the first nominal attracted to Spec, VoiceP must be the highest nominal within *v*P due to standard locality conditions on movement – any lower nominal is not eligible to move to Spec, VoiceP and thus not eligible to serve as an antecedent for the reflexive pronoun.

The syntactic structure of a sentence with Voice<sub>REFL</sub> is schematically illustrated in (90): Voice<sub>REFL</sub> selects for *v*P, and two arguments undergo movement to Spec, VoiceP – the highest argument within *v*P (the antecedent) and the reflexive pronoun. I assume that the reflexive pronoun occupies the lower of the two specifiers due to tucking in (Richards 1997), but nothing within the account hinges on this assumption.



Under this account, reflexives do not follow a syntactically ergative pattern because they must be locally licensed by Voice<sub>REFL</sub>, which merges above *v*P prior to the raising of the absolutive DP to Spec, TP – due to the derived nature of the high absolutive, it is thus not an eligible antecedent for reflexive binding. Additionally, this analysis makes no reference to subjecthood, correctly predicting that any nominal that is the highest DP in *v*P can function as an antecedent.

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this departure due to the absence of evidence for an additional functional projection above VoiceP.

### 3.4.2 *West Circassian reflexives are local subject oriented*

This subsection presents the evidence that West Circassian reflexives are local subject oriented, i.e. may only be bound by the highest nominal within *vP*. The evidence concerns two configurations involving potential antecedents for reflexives: first, I demonstrate that a DP that is *not* the highest nominal within *vP* *may not* serve as an antecedent for a reflexive, and second, I show that a DP that is not a canonical external argument but is nevertheless the highest DP in *vP* *may* serve as an antecedent. Both cases are contrasted with the behavior of reciprocals in analogous structural configurations. Finally, I show that, in accordance with the local subject oriented nature of reflexives, they align with reciprocals in distribution in two cases: (i) in configurations where the antecedent is the highest DP within *vP*, and the bound pronoun is not absolutive case-marked; and (ii) when the highest DP within *vP* is absolutive case-marked, i.e. proceeds to raise to the surface subject position.

A summary of the distribution of reflexive and reciprocal pronouns is presented in Table 3.1: the environments in which reflexives and reciprocals display a mismatch in distribution are bold-faced and enclosed within the box, while the environments within which they behave in a uniform fashion appear outside of the box.

PREDICATE TYPE	BINDING DIRECTIONALITY	
	REFLEXIVES	RECIPROCALLS
3-place transitive	ERG>IO	ERG>IO
Transitive w/demoted agent Unergative w/applied object	<b>*IO&gt;ABS/*ABS&gt;IO</b>	<b>ABS&gt;IO</b>
	<b>ERG&gt;ABS</b>	<b>ABS&gt;ERG</b>
	<b>IO&gt;ABS</b>	<b>ABS&gt;IO</b>
	ABS>IO	ABS>IO

Table 3.1: Reflexive versus reciprocal distribution

The first generalization regarding the distribution of reflexives is that a nominal that is not the highest argument within *v*P cannot serve as an antecedent of a reflexive. Thus, if one of the arguments of a three-place transitive predicate is a reflexive pronoun, that pronoun may only be bound by the ergative agent, and not by the absolutive theme or applied object. This is illustrated in general terms in (91).

a. [<sub>VP</sub> DP(ERG) ... [<sub>ApplP</sub> DP(IO) ... [<sub>VP</sub> **REFL**(ABS) ...  
✓antecedent \*antecedent

b. [<sub>VP</sub> DP(ERG) ... [<sub>ApplP</sub> **REFL**(IO) ... [<sub>VP</sub> DP(ABS) ...  
✓antecedent \*antecedent

(92)	<b>Theme-</b>	<b>IO-</b>	<b>Agent-</b>	
	<b>z<sub>i</sub>/*j-</b>	a <sub>j</sub> -	fe-	thač'ə -ʁ
	<b>REFL.ABS-</b>	3PL.IO-	BEN-	wash -PST
	a. 'I washed myself for them.'			<b>ERG &gt; ABS</b>
	b. * 'I washed them for themselves.'			<b>*IO &gt; ABS</b>

- (93) **Theme- IO- Agent-**  
 Ø<sub>j</sub>-      **zə<sub>i</sub>/\*j-**      fe-      s<sub>i</sub>-      thač'ə    -be    -x  
 3ABS-      **REFL.IO-**    BEN-      1SG.ERG-    wash    -PST    -PL  
 a. 'I washed them for myself.'      **ERG > IO**  
 b. \* 'I washed them for themselves.'      **\*ABS > IO**

Reflexives behave in this respect in stark contrast with reciprocals, which may be used to mark co-indexation between two non-subject arguments: as a general anaphor, a reciprocal may be bound by any c-commanding DP within TP – in a configuration involving a transitive three-place predicate, this includes both the ergative agent and the absolutive theme in Spec,TP (94).

- (94) Reciprocal binding possibilities for a three-place predicate:  
 [TP DP(ABS) ... [<sub>v</sub>P DP(ERG) ... [<sub>Appl</sub>P **REC**(IO) ... [<sub>VP</sub> <DP(ABS)> ...  
       ✓antecedent      ✓antecedent

This can be seen in the following examples. In (69a), repeated below in (95), the reciprocal marker in the applied object position is used to express co-indexation between the ergative agent and the applied object – in this respect reciprocals display the same behavior as reflexives. In (96) we see that a reciprocal in the applied object position may be bound in the absolutive theme of the transitive verb, rather than by the ergative agent – this is in contrast with the ungrammatical interpretation of the reflexive co-indexation in (93b).

- (95) (...) a-xe-me(ERG)      zanč'-ew      zewəže(ABS)  
           that-PL-PL.OBL      direct-ADV      all  
 Ø-      **ze-**      r-      a-      ʔ<sup>w</sup>ete -ž'ə -š'tə -be  
 3ABS- **REC.IO-** DAT- 3PL.ERG- tell    -RE -IPF -PST

'They certainly told the whole truth to each other.' (R&K1966:274)

**ERG > IO**

- (96) **Theme- IO- Agent-**  
 tə-      **ze-**      f-      jə-      š'a    -B  
 1PL.ABS- **REC.IO-** BEN- 3SG.ERG- bring -PST

'S/he brought us together (lit. to each other)'

**ABS > IO**

To summarize this subsection, reflexives may not be bound by an argument that is not the highest nominal within *v*P. They contrast with reciprocals in this respect – a reciprocal pronoun



## Highest non-external argument can bind a reflexive

(97) Reflexive binding with demoted agent: IO > ABS  
 $[_{vP} [_{AppIP} DP(IO) \dots [_{VP} \mathbf{REFL}(ABS) \dots$   
✓antecedent

10. A plausible alternative to this account is to merge  $\text{App}^{10}$  above  $v\text{P}$  – in that case it would saturate the external argument of  $v^0$  in analogy to a passive voice head and select for an applied argument in  $\text{Spec,AppIP}$ . The challenge this alternative would face is correctly limiting the selectional properties of  $\text{Voice}_{\text{REFL}}$  in order to allow for it to merge above an  $\text{AppIP}$  that is used for agent demotion, but not an  $\text{AppIP}$  that introduces a regular applied object.

- (98) a. č'ale-xe-m bukva-xe-r Ø- a- λeɸ<sup>w</sup>ə -xe -r -ep  
 boy-PL-OBL letter-PL-ABS 3ABS- **3PL.ERG-** see -PL(ABS) -DYN -NEG  
 'The boys do not see the letters.' Baseline
- b. č'ale-xe-m bukva-xe-r Ø- a- fe- λeɸ<sup>w</sup>ə -xe -r -ep  
 boy-PL-OBL letter-PL-ABS 3ABS- **3PL.IO- BEN-** see -PL(ABS) -DYN -NEG  
 'The boys cannot see the letters.' (Letuchiy 2010:335) Potential:ERG→IO

Importantly, the applied object in the potential construction may bind a reflexive pronoun in the theme position, analogous to an ergative agent (92a) and in contrast with applied objects of transitive three-place predicates (92b). This is illustrated in (99): the reflexive pronoun appears in the position of the absolutive theme and triggers the corresponding verbal agreement, while the antecedent appears in the benefactive applied object position.

- (99) zə- s- fe- λeɸ<sup>w</sup>ə -š't -ep  
**REFL.ABS-** 1SG.IO- BEN- see -FUT -NEG  
 'I won't be able to see myself.' REFL: IO(ERG) > ABS

The fact that the applied object in a potential construction may serve as an antecedent for a reflexive indicates that the licensing conditions on reflexive binding do not make reference to subjecthood or a particular structural position, such as Spec,*v*P. Instead, reflexives may only be bound by the highest nominal within *v*P – in most cases, that nominal is introduced as an external argument, but that is not a necessary condition for binding.

In this respect reflexives are again set in stark contrast with reciprocals: in the same potential construction, reciprocal co-indexation is expressed via the use of a reciprocal pronoun in the applied object position, rather than the position of the absolutive theme. Given the structure in (100), this is readily predicted: the absolutive theme moves to Spec,TP c-commanding the applied object and is thus an eligible antecedent for a reciprocal in that position.

- (100) Reciprocal binding with demoted agent: ABS > IO  
 [TP DP(ABS) ... [<sub>v</sub>P [<sub>AppIP</sub> **REC**(IO) ... [<sub>VP</sub> <DP(ABS)> ...  
 ↑  
 ✓antecedent

This is illustrated in (101): the reciprocal marker replaces agreement with the applied object, with the antecedent appearing in the position of the absolutive theme.

- (101) a-xe-r      Ø-      **ze-**      fe-      λeB<sup>W</sup>ə -xe      -r      -ep  
that-PL-ABS 3ABS- **REC.IO**- BEN- see      -PL(ABS) -DYN -NEG

‘They hate each other (lit. cannot see each other)’

**REC: ABS > IO(ERG)**

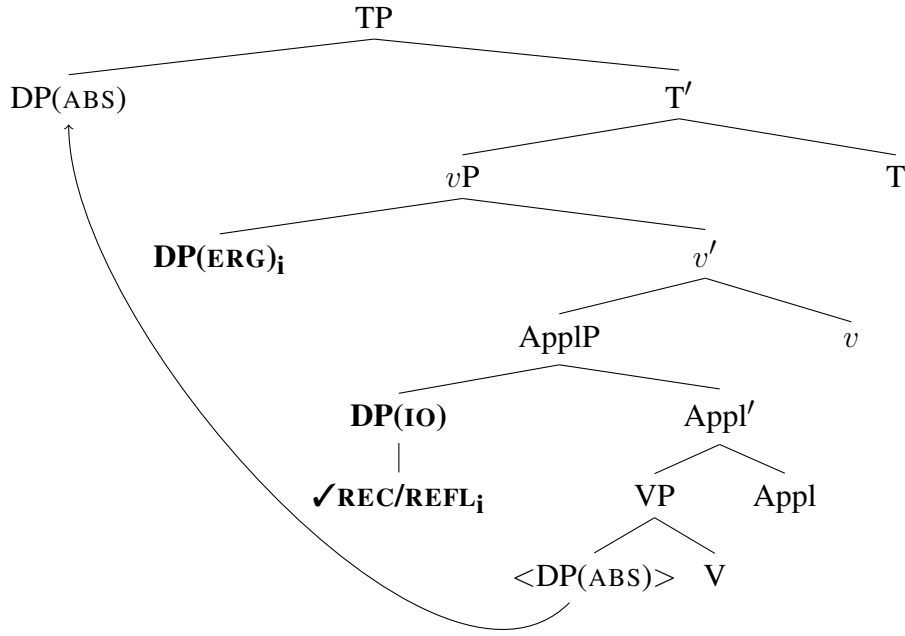
The example in (101) additionally shows that the mismatch in directionality between reciprocal and reflexive pronouns is not limited to forms involving the reciprocal allomorph *zere-*, which is used to mark reciprocal agreement with an ergative agent or a causee of a transitive verb. This provides additional support for the fact that *ze-* and *zere-* are simply allomorphs of the same agreement marker.

In summary, reflexives must be bound by the highest nominal in *vP*, but that nominal need not be the external argument.

## Where reflexives and reciprocals align

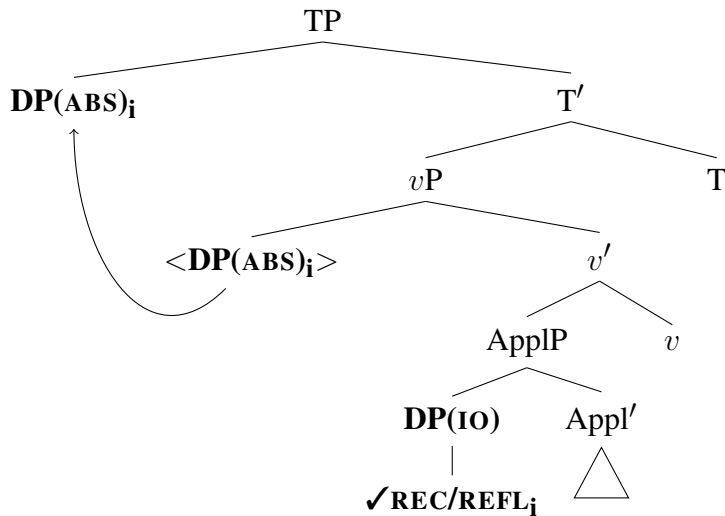
The last generalization regarding the distribution of reflexives concerns contexts in which reflexives and reciprocals behave in the same way. There are two configurations within which these two anaphors do not show any differences in behavior: (i) co-indexation of an ergative agent with an applied object and (ii) co-indexation of an absolutive external argument of an unergative predicate and an applied object. The reason for why these configurations are encoded in the same way for both reflexives and reciprocals is apparent from the clausal structure and the distributional properties of these anaphors. Thus, if we consider the first context in (102), where an ergative agent binds an applied object, we observe that the ergative agent qualifies as an antecedent for both a reciprocal and a reflexive in the applied object position: (i) it c-commands the applied object and (ii) it is the highest nominal within *vP*.

- (102) Co-indexation of an ergative agent and applied object: ERG > IO



Likewise, if we consider the second context in (103), where the absolutive subject of an unergative verb binds an applied object, once again we observe that the absolutive external argument is an eligible antecedent both for reciprocal and reflexive binding: (i) it c-commands the applied object, both from its base-generated position in Spec,*v*P and derived position in Spec,TP, and (ii) it is the highest nominal in *v*P.

(103) Co-indexation of absolutive external argument and applied object of an unergative verb:



(104) a. (...) a-xe-me(ERG)                      zanč̣'-ew                      zewəžze(ABS)  
that-PL-PL.OBL                      direct-ADV                      all  
Ø-        ze-                  r-        a-                  ʔ<sup>w</sup>ete -ž'ə -š'tə -be  
3ABS- **REC.IO**- DAT- 3PL.ERG- tell        -RE -IPF -PST  
  
'They certainly told the whole truth to each other.' (R&K1966:274)     **REC: ERG > IO**

b. λə-žə-m(ERG)                      Ø-jə-paʔ<sup>w</sup>e(ABS)                      refl(IO)  
man-old-OBL                      3SG.PR-POSS-hat  
Ø-        zə-                  š'-        jə-                  λa        -ɐ  
3ABS- **REFL.IO**- LOC- 3SG.ERG- put.on -PST  
  
'The old man put his hat on himself.' (R&K1966:267)     **REFL: ERG > IO**

(105) a. **ABS(S)- IO-**  
 wə- zə- f- je- ʒe -ʒ'ə -ɸ  
 2SG.ABS- **REFL.IO-** BEN- DAT- read -RE -PST  
 'You study for yourself.' **REFL:ABS>IO**

b. **ABS(S)- IO-**  
 da š<sup>w</sup>ə- ʒ'ə- ze- tje- k<sup>w</sup>əwe -ʒ'ə -re -r  
 what 2PL.ABS- RSN- **REC.IO-** LOC- yell -RE -DYN -ABS  
 'Why are you yelling at each other?' **REC:ABS>IO**

(106) a. \***ABS(S)- IO-**  
 zə- p- f- je- ʒe -ʒ'ə -ɸ  
**REFL.ABS-** 2SG.IO- BEN- DAT- read -RE -PST  
 Intended: 'You study for yourself.' **REFL:\*IO>ABS**

- b. \*        **ABS(S)-**        **IO-**  
           da    **ze-**        č'ə-    š<sup>w</sup>ə-    tje-    k<sup>w</sup>əwe -ž'ə -re    -r  
           what **REC.ABS-** RSN- 2PL.IO- LOC- yell    -RE -DYN -ABS

Intended: 'Why are you yelling at each other?'

**REC:\*IO>ABS**

Summary: reflexives are local subject oriented

To summarize this subsection, reflexives are local subject oriented – they may only be bound by the highest nominal in *vP*, while reciprocals are not local subject oriented and may be bound by any *c*-commanding DP in TP.

Given the derived nature of the high absolutive position and the fact that reflexives can only be bound by a non-derived deep subject within *vP*, reflexive binding patterns cannot be used as evidence against structural syntactic ergativity (cf. Caponigro and Polinsky 2011:79; Lander and Testelefs 2017:963). In contrast, the distribution of reciprocals provides support for a syntactically ergative clause structure – the absolutive DP undergoes A-movement to the surface subject position. The apparently contradictory behavior of reflexives and reciprocals is then due to differences in licensing conditions: reciprocals must be bound by a higher nominal in the A-domain (TP), while reflexives are licensed by Voice<sub>REFL</sub>, which limits possible antecedents to the highest nominal in the  $\theta$ -domain (*vP*).

Local subject oriented anaphors in a syntactically ergative language like West Circassian provide a fruitful testing ground for teasing out the licensing conditions that give rise to local subject orientation. For example, previous literature on local subject oriented anaphors has noted the generalization that the antecedent of such a reflexive must be both the deep and surface subject, i.e. reflexives may not be bound by a deep subject that is subsequently demoted to a non-subject position, such as a by-phrase in a passive construction (see e.g. discussion in Sportiche 2014 and Ahn 2015:200-217). As a syntactically ergative language, West Circassian shows that this cannot be a true requirement for reflexive licensing, and the antecedent of a local subject oriented anaphor need not be the surface subject, as e.g. the ergative agent of a transitive verb or applied object

in a demoted agent construction. In this respect West Circassian presents novel evidence in favor of Ahn's (2015) locality-based analysis of local subject orientation, which ultimately makes no reference to subjecthood and rules out non-surface subject antecedents based on other aspects of the constructions in question, such as the complementary distribution of passive and reflexive voice. Furthermore, West Circassian provides evidence that the choice of antecedent for a local subject oriented anaphor is not constrained to a particular syntactic position, such as Spec,*v*P – a nominal in a different position may be an eligible antecedent as long as it conforms to the locality conditions on binding, thus further deconstructing the notion of subjecthood.

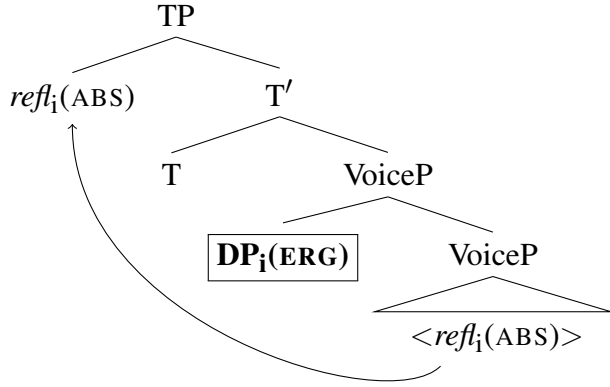
One question which warrants closer investigation, but which I do not address here concerns Conditions B/C of Binding Theory (see e.g. Chomsky 1980, 1981), which are listed in (107).

- (107) a. *Principle B*: A pronoun must be free in its binding domain.  
 b. *Principle C*: An R-expression must be free.

While subsequent work on anaphora has largely disposed of the conditions in (107) as constraints that operate within the grammar (see Büring 2005 for a comprehensive overview), they remain a robust empirical generalization: non-reflexive pronouns and referential expressions may not be c-commanded by a co-indexed nominal.

The behavior of reflexive and reciprocal anaphors in West Circassian present a puzzle regarding this generalization. In particular, after reflexive binding is established between e.g. an ergative agent and an absolutive theme, the bound reflexive pronoun must undergo A-movement to Spec,TP c-commanding the ergative, as shown in (108) – the presence of this movement is evident from the leftmost linear position of the reflexive morpheme within the verbal form. Given that the sentence corresponding to this structure, wherein an ergative agent binds a reflexive theme, is perfectly grammatical, it is unclear why the movement of the reflexive over its antecedent fails to trigger a Condition B/C violation. I leave this question for future research.

- (108) A bound reflexive undergoes A-movement over its antecedent:



For simplicity the trees in this subsection do not include VoiceP, which – I will argue in the following subsection – is responsible for reflexive licensing.

### 3.4.3 *Voice<sub>REFL</sub> in West Circassian*

This section presents an analysis of reflexive binding that aims to capture the local subject oriented nature of this type of anaphor. In particular, I follow Ahn (2015) in arguing that reflexive binding is mediated by a specialized reflexive *Voice<sub>REFL</sub>*. The choice of Ahn’s (2015) approach over other analyses of local subject orientation is motivated by the fact that it accounts for the full range of properties this anaphor displays in West Circassian. In particular, a successful analysis must account for the fact that reflexive morphology tracks agreement with a syntactically active bound pronoun, and is not (i) a type of *Voice*<sup>0</sup> with no corresponding anaphor in the structure (see Labelle 2008 on French; Reinhart and Siloni 2005 on Hebrew) or (ii) the spellout of the external argument, with the structurally lower argument raising to subject position (Pesetsky 1995 on French). Additionally, the analysis must allow for the productive use of local subject oriented reflexives with verbs of all semantic types, meaning that the reflexive pronoun cannot be analyzed as an identity function, as proposed by Schäfer (2008) for Russian *-sja*, nor can it be restricted to intrinsically transitive verbs, as proposed for *se* by Sportiche (2014). The presented analysis differs from Sportiche’s (2014) proposal in several other respects, largely due to the fact that West Circassian reflexives do not display the same distributional properties as *se*: the French reflexive



clitic has a much broader range of uses, many of which arguably do not involve reflexive binding, such as the formation of middles, anticausatives, and passives.

Syntactically  $\text{Voice}_{\text{REFL}}$  selects for  $vP$  and attracts two arguments to its specifier: the highest DP in  $vP$  and the reflexive pronoun. The interaction of  $\text{Voice}_{\text{REFL}}$  with these arguments ensures (i) local subject orientation and (ii) the presence of a syntactically active anaphor in the structure. Semantically,  $\text{Voice}_{\text{REFL}}$  imposes co-identity on the two arguments.

The featural composition of  $\text{Voice}_{\text{REFL}}$  and the reflexive pronoun are presented in (109) and (110) respectively.  $\text{Voice}_{\text{REFL}}$  carries the corresponding category feature and three hierarchically ranked structure building features, which trigger (i) selection of  $vP$  as its complement; (ii) movement of highest DP in its c-command domain to its specifier, and (iii) movement of the reflexive pronoun to its specifier (109). The reflexive pronoun carries two category features: D as a DP, and the reflexive-specific licensee feature  $+\text{REFL}+$ .<sup>11</sup>

(109)  $\text{Voice}_{\text{REFL}}: \bullet v \bullet \gg \bullet D \bullet \gg \bullet \text{REFL} \bullet$

(110) Reflexive pronoun:

- a. Category: D
- b. Licensee:  $+\text{REFL}+$

I adapt Ahn’s (2015) semantic denotation of  $\text{Voice}_{\text{REFL}}$ :  $\text{Voice}_{\text{REFL}}$  takes three arguments – the proposition denoted by  $vP$  and the two arguments that raise to occupy its specifiers, and imposes co-identity on the two arguments (111).

(111)  $\llbracket \text{Voice}_{\text{REFL}} \rrbracket = \lambda P_{\langle st \rangle} \lambda x_e \lambda y_e \lambda e_s. \text{IDENT}(x, y) \& P(e)$  (adapted from Ahn 2015:223)

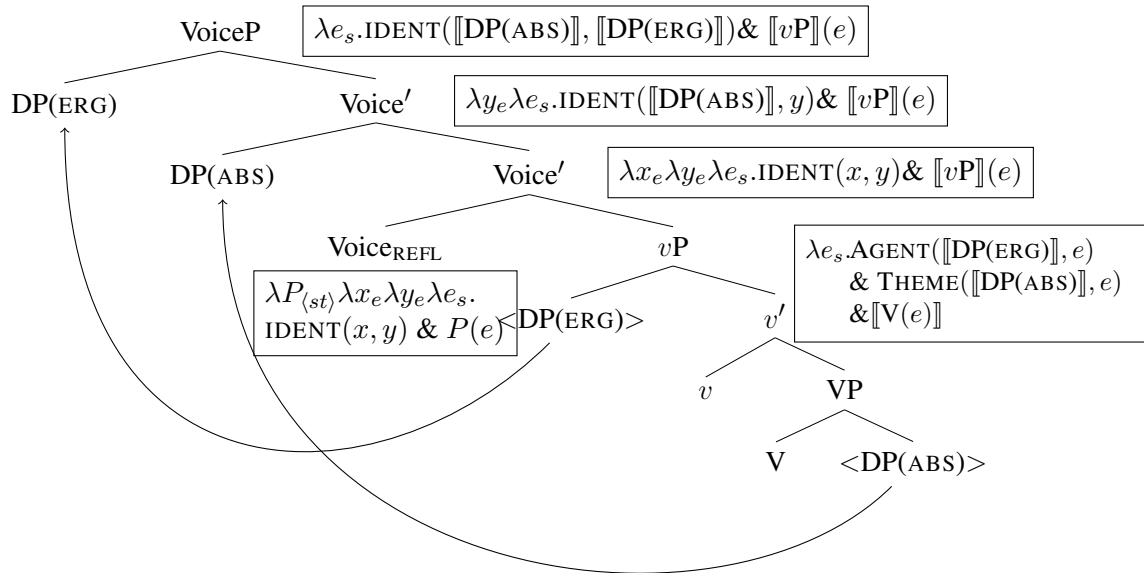
Within this approach, the reflexive pronoun is treated as a regular pronoun: “an index (...) and a contextually-specified assignment function” (Ahn 2015:227), and the function IDENT constrains

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11. As discussed in chapter 2, all DPs also carry the licensee feature  $+\text{K}+$  which is akin to an abstract case requirement; it is omitted throughout this section for simplicity.

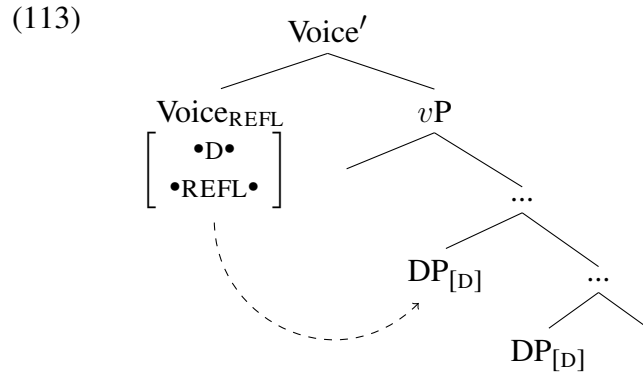
the assignment function to force co-identity between the reflexive and its antecedent. A example semantic derivation for a verb with an ergative agent and an absolutive theme is presented in (112).

(112) Semantic derivation for a transitive two-place predicate (ERG>ABS):



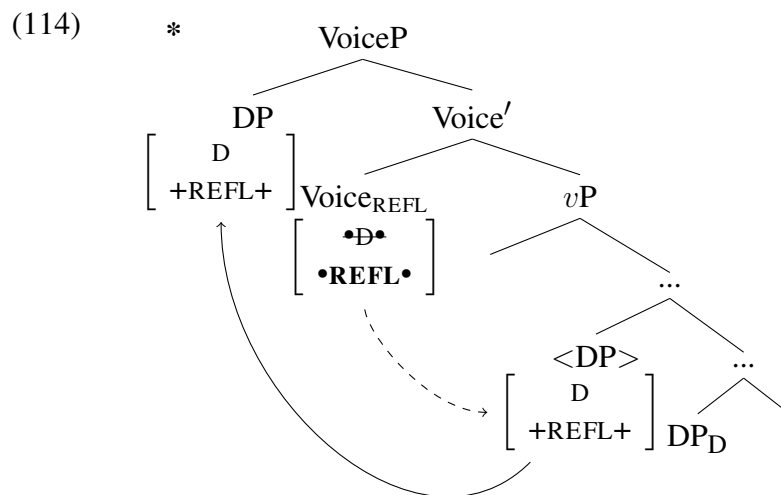
Given the semantic properties of this movement, the configuration in (112) does not trigger a violation of Lethal Ambiguity (McGinnis 1998b, 2004), wherein the movement of two co-indexed nominals to the specifier of the same head is expected to be ungrammatical due to the two nominals being equidistant binders for the same movement trace. In particular, because both the co-indexed antecedent and the reflexive pronoun move to saturate an argument of **Voice<sub>REFL</sub>**, neither of them binds a trace in its base generated position.

Given the syntactic features of **Voice<sub>REFL</sub>**, local subject orientation of reflexives is derived via feature ordering and general conditions on locality of movement. In particular, once **Voice<sub>REFL</sub>** merges with **vP** and checks the corresponding selectional feature, it probes with the next structure-building feature – **•D•**, which picks out the first DP within its c-command domain (113). This ensures that no nominal besides the highest DP in the c-command domain of **Voice<sub>REFL</sub>** would ever be an eligible antecedent for the reflexive.



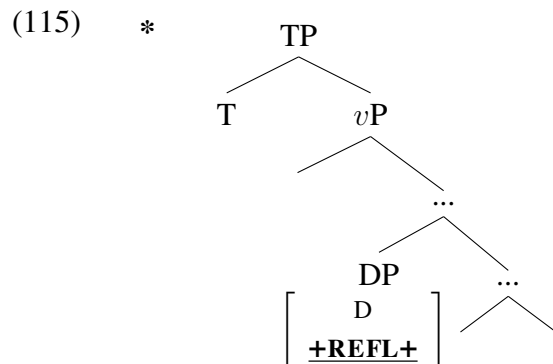
As seen in (113), subject orientation is thus reduced to locality conditions on movement, correctly predicting that any nominal that occupies the highest position within the c-command domain of  $\text{Voice}_{\text{REFL}}$  can function as a reflexive antecedent.

The ordered feature set on  $\text{Voice}_{\text{REFL}}$  also accounts for the fact that the antecedent must c-command the reflexive pronoun prior to movement to  $\text{Spec}, \text{VoiceP}$ , ruling out the ungrammatical configuration within which the reflexive pronoun c-commands its antecedent in its base-generated position. If the reflexive pronoun happens to be merged higher than its antecedent, it would check the  $\bullet\text{D}\bullet$  feature on  $\text{Voice}_{\text{REFL}}$ , and, unless there is another reflexive pronoun lower in the structure, the  $\bullet\text{REFL}\bullet$  feature will remain unchecked, rendering ungrammaticality (114).



The licensee feature  $+\text{REFL}+$  on the reflexive pronoun ensures that this reflexive pronoun is not

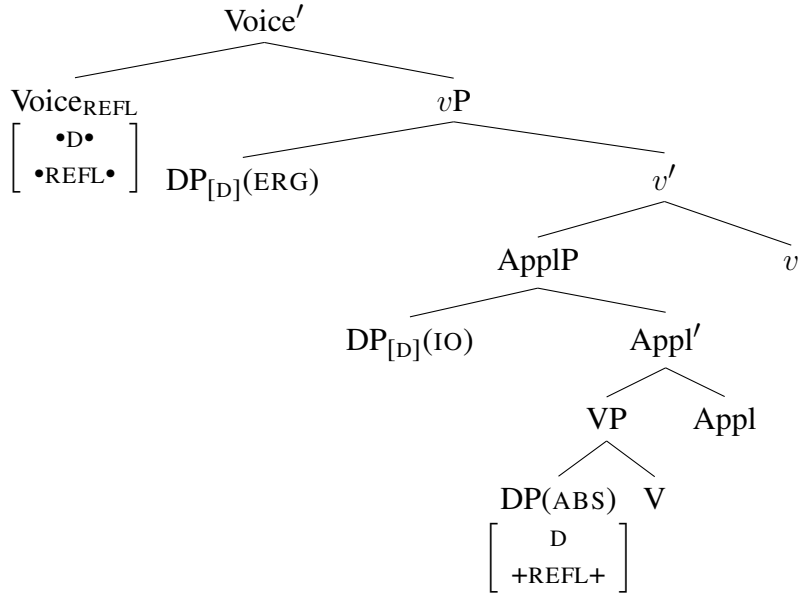
used as a general anaphor without local subject orientation: just as the •REFL• feature on Voice<sub>REFL</sub> must be checked via movement of a reflexive to Spec,VoiceP, the licensee feature on the reflexive pronoun must be checked within that same structure-building operation – a structure containing the reflexive pronoun, but no Voice<sub>REFL</sub> is thus ungrammatical, as shown in (115).



Both the reflexive pronoun and its antecedent also carry +K+ licensee features that are omitted in the trees throughout this section for simplicity. The checking of these features does not interact with the syntax of reflexive Voice<sup>0</sup> – this will be discussed in more detail in subsection 3.4.6.

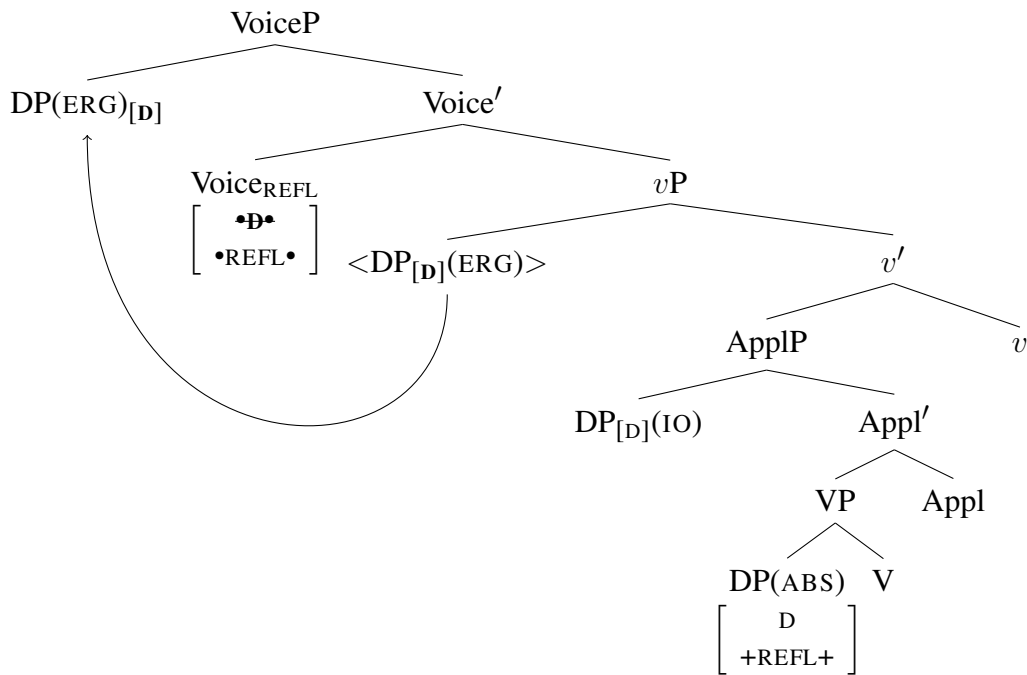
A few sample derivations are presented below. Let us first consider the derivation of a three-place predicate with a reflexive pronoun in the absolutive theme position as in (92). First, Voice<sub>REFL</sub> selects for vP, which contains an ergative agent in Spec,vP, applied object in Spec,ApplP, and the reflexive pronoun as the complement of the lexical verb (116).

(116) Voice<sub>REFL</sub> selects for vP:



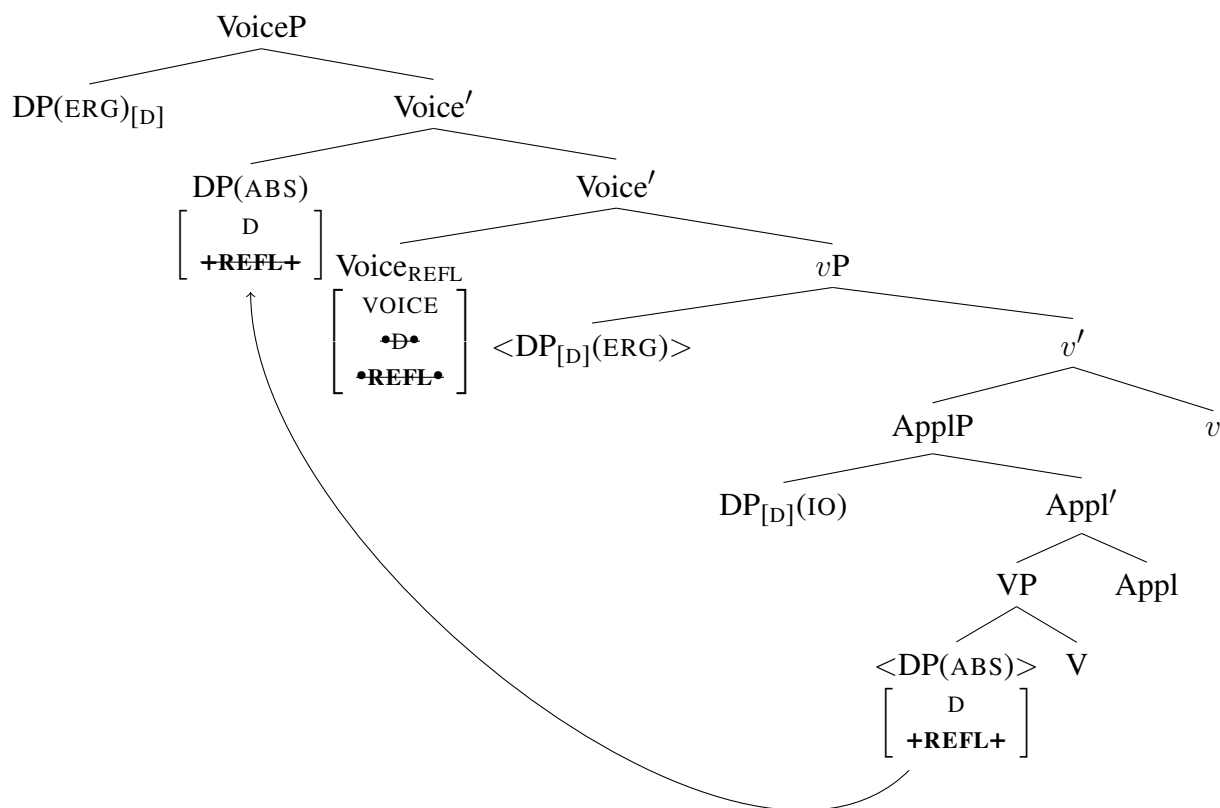
$\text{Voice}_{\text{REFL}}$  then probes with  $\bullet\text{D}\bullet$  and attracts the highest DP within its c-command domain to its specifier – this accounts for why only the ergative DP within this configuration may function as an antecedent to the reflexive, and not the applied object, which remains in situ (117).

(117)  $\text{DP}(\text{ERG})$  moves to Spec, VoiceP:



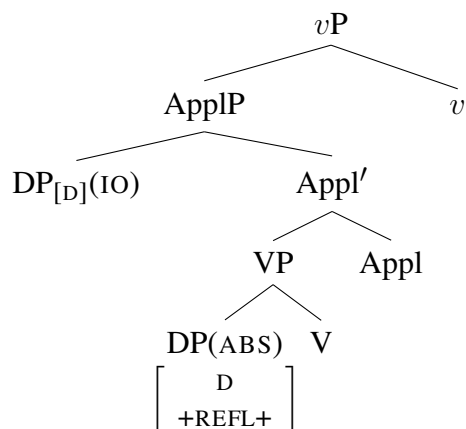
Once the  $\bullet D \bullet$  feature is checked off on  $\text{Voice}_{\text{REFL}}$ , it probes with the  $\bullet \text{REFL} \bullet$  feature and attracts the reflexive pronoun ( $\text{DP}(\text{ABS})$ ) to its specifier (118). I assume that the reflexive pronoun merges below its antecedent via tucking in (Richards 1997), but nothing hinges on this assumption. The merging of the reflexive pronoun checks both  $\bullet \text{REFL} \bullet$  on  $\text{Voice}_{\text{REFL}}$  and  $+\text{REFL}+$  on the reflexive pronoun.

(118) The absolutive theme (the reflexive pronoun) moves Spec, VoiceP:



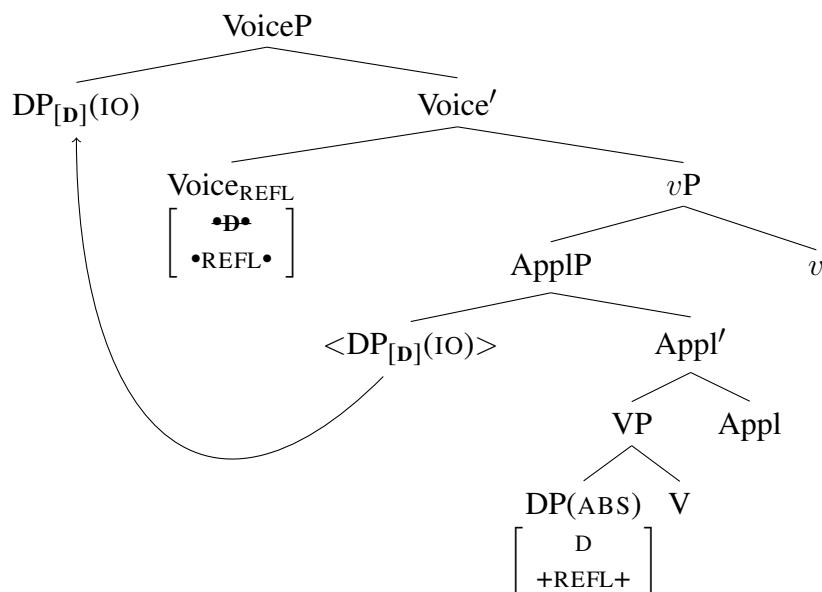
Let us now consider the derivation involving reflexive binding between a demoted agent in the applied object position and an absolutive theme, as in (99). The internal structure of  $v\text{P}$  differs in this case from a three-place transitive verb in the absence of an external argument in  $\text{Spec}, v\text{P}$  (119).

(119) Structure of  $vP$  in potential construction:



As in the case of the three-place transitive predicate,  $\text{Voice}_{\text{REFL}}$  selects for  $vP$  and attracts the highest DP in its c-command domain to its specifier via the  $\bullet D \bullet$  feature (120). In this case, since there is no external argument in  $\text{Spec}, vP$ , the applied object moves to  $\text{Spec}, \text{VoiceP}$  instead, correctly predicting that it may serve as an antecedent in this construction.

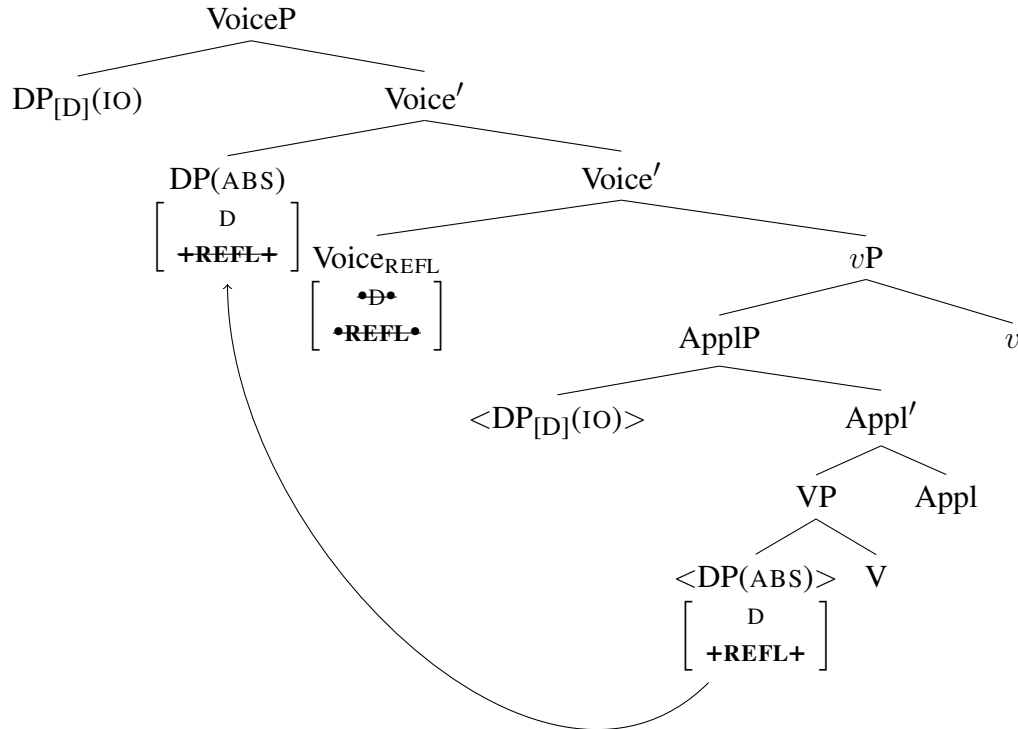
(120) Applied object moves to  $\text{Spec}, \text{VoiceP}$ :



The final step in the derivation involves the movement of the reflexive pronoun to  $\text{Spec}, \text{VoiceP}$  – it merges below the applied object via tucking in (121). This movement checks both  $\bullet \text{REFL} \bullet$  on

Voice<sub>REFL</sub> and +REFL+ on the reflexive pronoun.

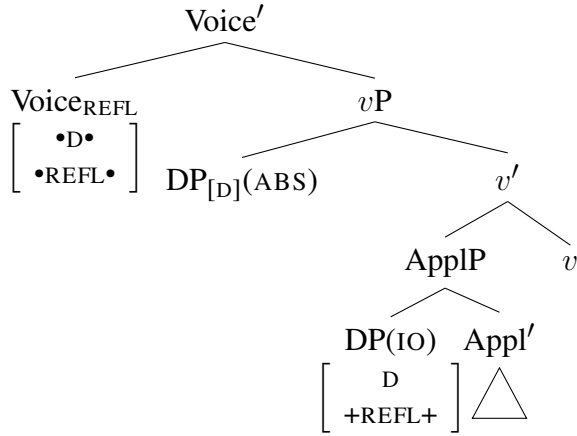
(121) Absolutive theme (the reflexive pronoun) moves to Spec, VoiceP:



Finally, let us consider the derivation for reflexive co-indexation between the absolutive subject of an unergative verb and the applied object, as in (105a). As in the previous examples, Voice<sub>REFL</sub> selects for vP, which in this case contains the absolutive subject in Spec, vP and an applied object in Spec, ApplP (122).

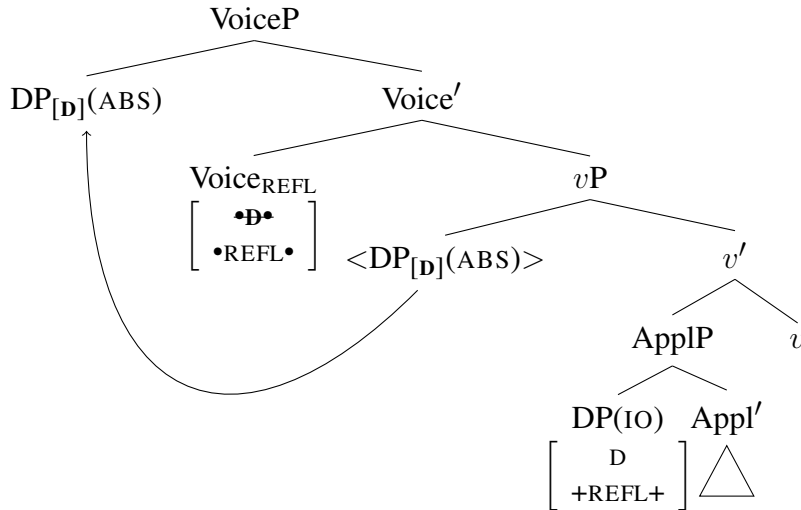
(122) Voice<sub>REFL</sub> selects for unergative vP:





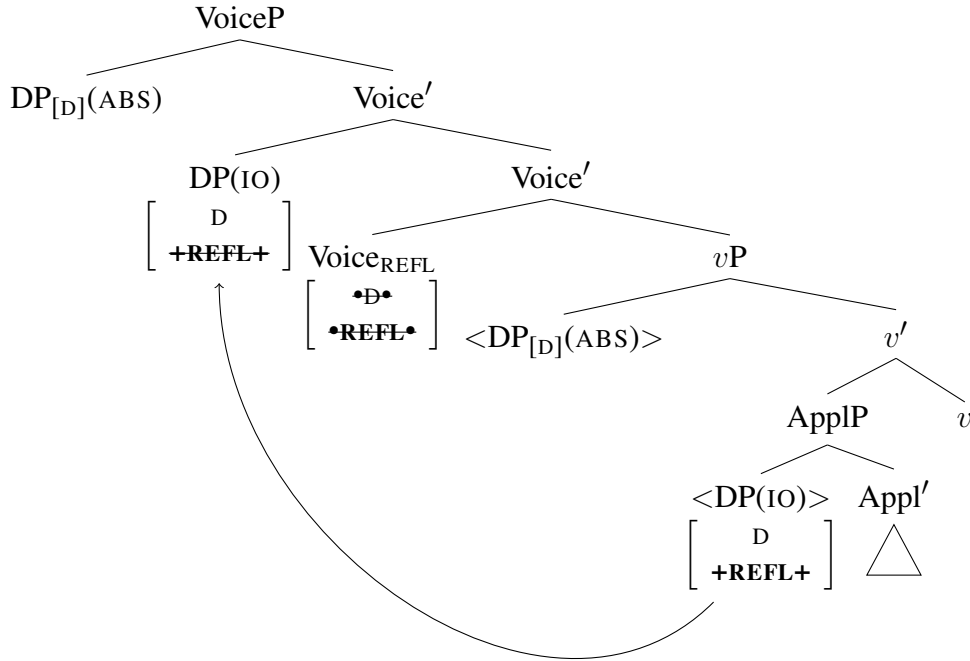
Voice<sub>REFL</sub> then probes with •D• and attracts the highest DP in its c-command domain – the absolutive external argument in Spec, vP – to its specifier (123).

(123) Absolutive external argument moves to Spec, VoiceP:



The final step involves the movement of the reflexive pronoun from Spec, ApplP to Spec, VoiceP in order to satisfy the •REFL• feature on Voice<sub>REFL</sub> and the +REFL+ feature on the reflexive pronoun (124).

(124) Applied object (the reflexive pronoun) moves to Spec, VoiceP and tucks in:



To conclude this subsection, local subject orientation is derived from the syntactic properties of  $\text{Voice}_{\text{REFL}}$  and general constraints on the locality of movement, which restrict the set of possible antecedents for reflexive pronouns to the highest DP within the c-command domain of  $\text{Voice}_{\text{REFL}}$ , i.e. the highest DP in  $v\text{P}$ .

#### 3.4.4 Interim conclusion: locality conditions on reflexive binding

To conclude this section, reflexives differ in distribution from reciprocals in two cases: (i) reciprocals may be bound by a DP that is not the highest nominal in  $v\text{P}$ , such as the applied object of a transitive three-place predicate, and reflexives cannot; (ii) if the highest DP in  $v\text{P}$  – the deep subject – does not coincide with the surface subject in Spec,TP, reflexives are bound by the deep subject, while reciprocals are bound by the surface subject. This difference in distribution is conditioned by the specialized reflexive  $\text{Voice}_{\text{REFL}}$ , which merges immediately above  $v\text{P}$  and reduces the set of possible antecedents of reflexives to the highest DP in  $v\text{P}$ .

The analysis of reflexive binding via Voice<sub>REFL</sub> reduces subject orientation to locality conditions on movement, thus predicting that reflexives must be bound by the highest nominal in *v*P, but that nominal need not be the surface subject, or, in fact, the deep subject in any meaningful way. The following subsection presents two cases that further confirm this analysis: reflexive binding patterns (i) between themes of unaccusative verbs and applied objects and (ii) in constructions involving synthetic causatives.

### 3.4.5 *Further predictions of locality-based reflexive binding*

This subsection presents two cases that confirm a prediction of the Voice<sub>REFL</sub> analysis of reflexive binding. The predictions are the following:

**Prediction #1:** An argument that is the highest in *v*P that is not thematically higher in any way may serve as an antecedent to a reflexive pronoun.

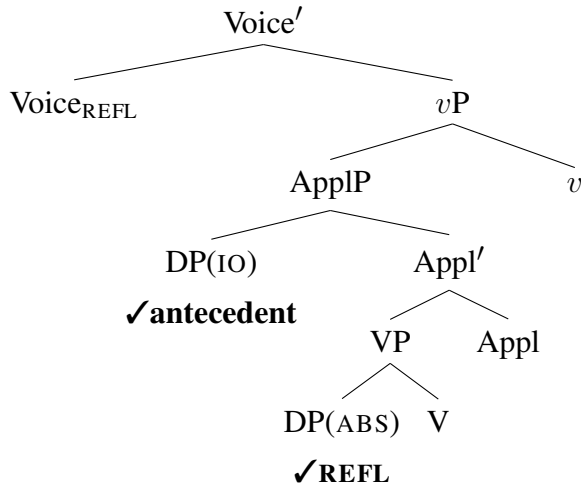
**Prediction #2:** If a construction involves recursive embedding of several *v*P's, the highest argument within either *v*P may serve as an antecedent for a reflexive.

The first prediction is confirmed by the behavior of reflexives in constructions involving unaccusative verbs with an applied object, and the second prediction is confirmed by the behavior of synthetic causative constructions.

#### Prediction #1: Unaccusative verbs with applied objects

The presented analysis of reflexive binding predicts that if an unaccusative verb is combined with an applied object, the applied object would be an eligible antecedent for a reflexive pronoun in the absolutive theme position. This should be possible given that Voice<sub>REFL</sub> selects for *v*P before the theme raises to a derived subject position, leaving the applied object to be the highest argument within *v*P (125).

(125) Prediction #1: Voice<sub>REFL</sub> selects for unaccusative verb with applied object:



Testing this prediction is complicated by the fact that unaccusative verbs do not productively combine with applicative arguments, and if speakers do allow the use of an applicative, they generally disallow a structure where the applied object is co-indexed with the absolutive theme. Given these complications, the only construction that may be used to test this prediction involves a small set of so-called ‘inverse’ predicates (Rogava and Keraševa 1966:98; Smeets 1992:122-123; Arkadiev et al. 2009:64-65), some of which are transparently decomposable into an unaccusative verb stem and a locative applicative prefix.<sup>12</sup> These predicates take two arguments: an absolutive theme and an applied object denoting an experiencer or possessor, and have been labeled inverse, in particular, for their non-canonical behavior in regards to reflexive binding. If the two arguments of such a verb are co-indexed, the reflexive marker may appear either in the position of the absolutive theme or in the position of the applied object. This is illustrated in (126) for the verb *jəʔen* ‘have’, which can be transparently decomposed into the locative prefix *jə-* and the unaccusative verbal root *ʔe* ‘be’. The non-reflexive use of this verb is shown in (126a): the first person theme triggers absolutive agreement, while the possessor triggers applied object agreement. In (126b) we see the reflexive agreement marker appearing in the absolutive position with the the antecedent triggering applied object agreement, while in (126c) we see that the inverse configuration wherein

12. To my knowledge, only two predicates of the four-five verbs that have been labeled as ‘inverse’ combine productively with reflexive morphology: *jəʔen* ‘have’ and *ʃʔəʔapʃen* ‘forget’.

the reflexive marker appears in the applied object position and the antecedent triggers absolutive agreement is likewise grammatical.

(126) A transparent example: *jə- 'LOC' + ?e 'be' = jə-?e 'have'*

a. **Theme- IO-**

sə- w- jə- ?  
1SG.ABS- 2SG.IO- LOC- be  
'You have me.'

b. **zə- s- jə- ?e -ž' zepət**  
**REFL.ABS- 1SG.IO- LOC- be -RE always**

c. **sə- z- jə- ?e -ž' zepət**  
**1SG.ABS- REFL.IO- LOC- be -RE always**

'I always have myself'

**ABS>IO|IO>ABS**

Another verb that behaves in this manner is *š'ə-<sup>B</sup>əpšēn* 'forget', which is composed of the locative prefix *š'ə-* and the root *ə-<sup>B</sup>pšē*, which is not used in the absence of this prefix. This can be observed in (127). The form in (127a) demonstrates how this verb is used in the absence of reflexive morphology: the first person stimulus or theme triggers absolutive agreement, while the experiencer triggers locative applied object agreement. In (127b) the reflexive marker appears in the absolutive position, while in (127c) the same marker appears in the applied object position instead.

(127) A lexicalized example: *š'ə- 'LOC' + ə-<sup>B</sup>pšē '??' = š'ə-ə-<sup>B</sup>pšē 'forget'*

a. **Theme- IO-**

sə- p- š'ə- ə-<sup>B</sup>pšə -ə  
SG.ABS- 2SG.IO- LOC- forget -PST  
'You forgot about me.'

b. **zə- s- š'ə- ə-<sup>B</sup>pšē -ž'ə -ə**  
**REFL.ABS- 1SG.IO- LOC- forget -RE -PST**

c. **sə- z- š'ə- ə-<sup>B</sup>pšē -ž'ə -ə**  
**1SG.ABS- REFL.IO- LOC- forget -RE -PST**

'I forgot about myself (e.g. when serving food).'

**ABS>IO|IO>ABS**

The distribution of the reflexive pronoun with inverse verbs, i.e. unaccusative verbs with an applied object, is schematically represented in (128). I assume that the grammaticality of both binding configurations (IO > ABS and ABS > IO) is due to the availability of two structures for these types of verbs. In particular, in addition to a baseline structure, wherein an unaccusative verb with an absolutive theme combines with an applicative head that introduces an applied object (128a), these verbs have been reinterpreted as unergative due to the general incompatibility of unaccusative predicates with applicative semantics – in this case, the absolutive theme is in fact reinterpreted as an external argument in Spec,*v*P which c-commands the applied object (128b).

(128) Two structures available for ‘inverse’ verbs (unaccusatives with applied object):

- a. The applied object binds the absolutive theme:

[<sub>v</sub>P [<sub>App</sub>IP DP(IO) ... [<sub>VP</sub> **REFL**(ABS) ... IO > ABS  
✓antecedent

- b. The absolutive external argument binds the applied object:

[<sub>v</sub>P DP(ABS) ... [<sub>App</sub>IP **REFL**(IO) ... [<sub>VP</sub> ... ABS > IO  
✓antecedent

Crucially, reciprocals once again do not behave in the same way as reflexives: a reciprocal pronoun may only appear in the applied object position with the absolutive theme acting as the antecedent (129a), and the inverse configuration wherein the reciprocal pronoun appears in the absolutive theme position is ungrammatical (129b).

(129) a. tə-            ze-            š’ə-    Ɂ<sup>w</sup>əpše -ž’ə -Ɂ  
1PL.ABS- **REC.IO**- LOC- forget -RE -PST

b. \*ze-            t-            š’ə-    Ɂ<sup>w</sup>əpše -ž’ə -Ɂ  
**REC.ABS**- 1PL.IO- LOC- forget -RE -PST

‘You(pl) forgot about each other.’ **ABS > IO | \*IO > ABS**

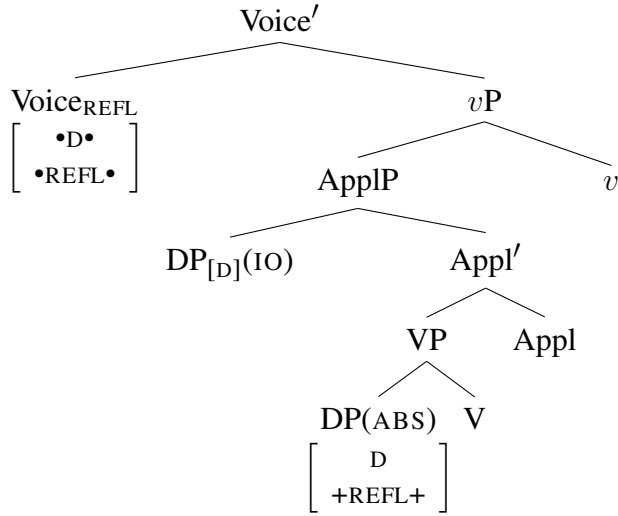
The data in (129) contradicts the generalization made by (Arkadiev et al. 2009:64-65) and (Letuchiy 2010:342) that reciprocals, like reflexives, may appear either in the applied object position or the absolutive position in configurations with inverse predicates. The examples provided by

The reason reciprocals diverge in this case from reflexives is that the absolutive theme, regardless of its base generated position, undergoes A-movement to Spec,TP, from which it may serve as an antecedent for a reciprocal pronoun in the applied object position (130a), but crucially cannot be itself bound by the applied object (130b).

a. [TP DP(ABS) ... [<sub>vP</sub> [<sub>AppIP</sub> **REC**(IO) ... [<sub>VP</sub> <DP(ABS)> ... **ABS** > **IO**  
✓antecedent

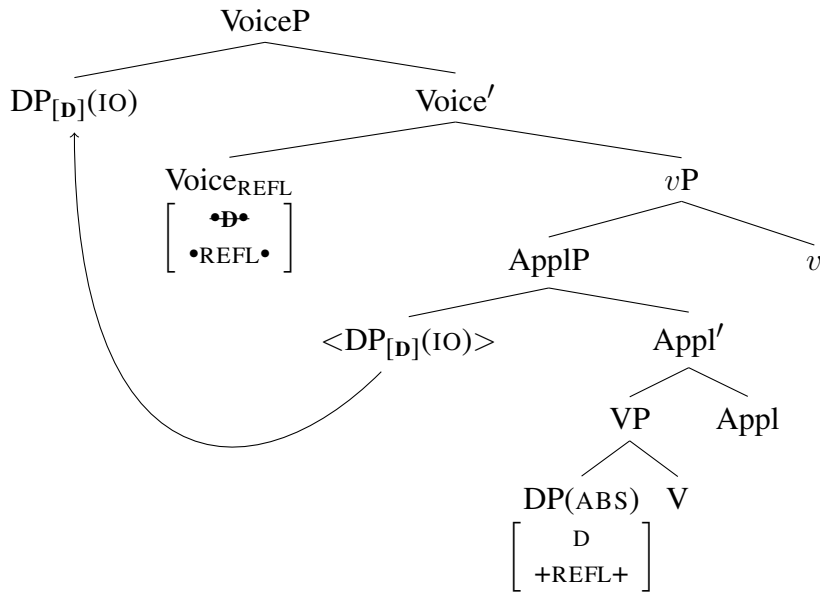
b. [TP **REC**(ABS) ... [<sub>vP</sub> [<sub>AppIP</sub> DP(IO) ... [<sub>VP</sub> <**REC**(ABS)> ... **\*IO** > **ABS**  
\*antecedent

(131) Voice<sub>REFL</sub> selects for unaccusative *v*P:



Next, the highest DP in the c-command domain of Voice<sub>REFL</sub>, which is the applied object, undergoes movement to Spec,VoiceP to satisfy the •D• feature on Voice<sub>REFL</sub> (132).

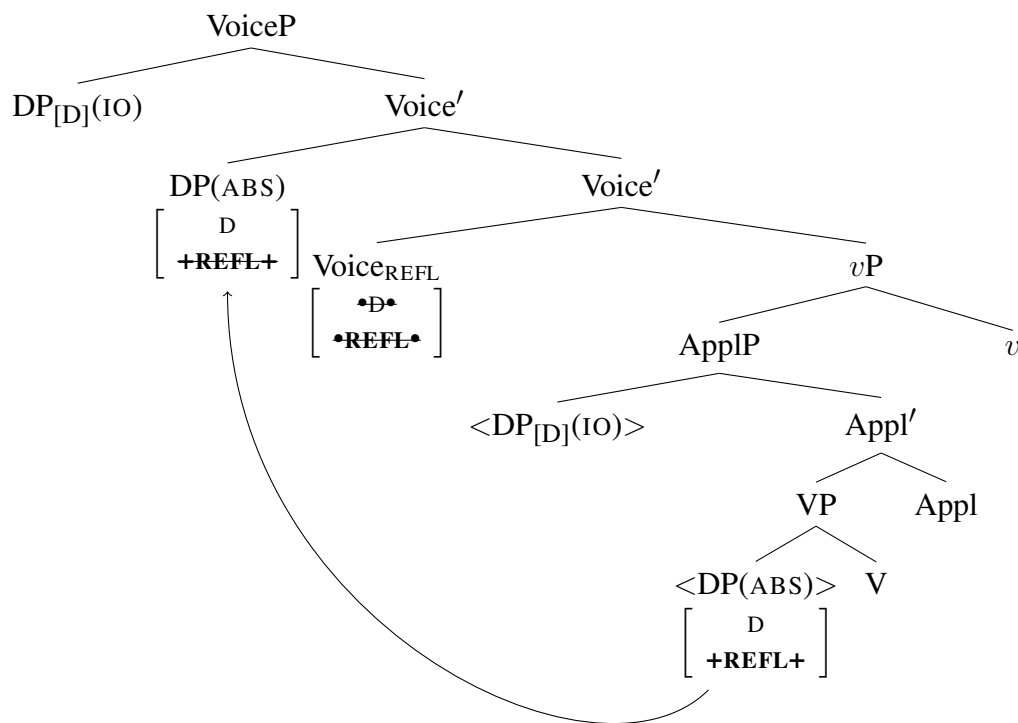
(132) The applied object moves to Spec,VoiceP:



Voice<sub>REFL</sub> then probes for the reflexive pronoun in the absolutive theme position, which raises to Spec,VoiceP and tucks in immediately below the applied object (133). This movement checks both •REFL• on Voice<sub>REFL</sub> and +REFL+ on the reflexive pronoun.



(133) The absolutive theme (the reflexive pronoun) moves to Spec, VoiceP:



In summary, the locality-based account of reflexive binding correctly predicts that an applied object of an unaccusative verb may function as an antecedent to a reflexive in the position of the absolutive theme, as long as that applied object is the highest nominal within *vP*.

## Prediction #2: Synthetic causatives

The second prediction concerns the behavior of reflexives in constructions involving recursive embedding of several *vP*'s. In particular, given the selectional properties of *VoiceREFL*, one might expect the highest DP of a *vP* that is in turn embedded within a larger *vP* to be an eligible antecedent for a reflexive pronoun. This prediction is confirmed by the behavior of reflexives in constructions involving a synthetic causative: in this case, both the embedded external argument (the causee) and the higher external argument (the causer) may be an antecedent to a reflexive pronoun in the absolutive theme position (134).

(134) Reflexive binding possibilities in causative construction:

[<sub>v</sub>P1 DP-Causer(ERG) ... [<sub>v</sub>P2 DP-Causee(IO) ... [<sub>VP</sub> **REFL**(ABS) ...  
✓antecedent ✓antecedent

Synthetic causatives are formed via the use of the morpheme *ʁe-*, which uniformly appears adjacent to the verbal root (Letuchiy 2009b, 2015). If a transitive verb with an ergative agent and absolutive theme is causativized, the causer is introduced as an ergative agent, and the agent of the base verb triggers dative applied object agreement. For example, the transitive verb *ʁeʁʷən* ‘see’ in its base form takes an absolutive theme and ergative agent; if these two arguments are co-indexed, the reflexive pronoun appears in the position of the absolutive theme (135a); if this verb is causativized, the former agent is expressed as an applied object and the introduced causer triggers ergative agreement (135b).<sup>13</sup> Crucially, in this case the reflexive pronoun in the absolutive theme position may be interpreted as co-referent either with the ergative causer, or the applied object causee – this is in stark contrast with non-causative three-place predicates as in (92), for which the applied object may not serve as an antecedent to a reflexive.

(135) a.  $\text{\textcircled{S}}^{\text{W}\text{\textcircled{A}}} \text{ ze- s- e- } \lambda e \text{\textcircled{B}}^{\text{W}\text{\textcircled{A}}} \text{-}\check{Z}'\text{\textcircled{A}}$   
good **REFL.ABS-** 1SG.ERG- DYN- see -RE

‘I love (lit. see good in) myself.’ **Baseline: ERG > ABS**

b.  $\text{\textcircled{S}}^{\text{W}\text{\textcircled{A}}} \text{ z\text{\textcircled{A}}- s- e- b- } \text{\textcircled{B}}e- \lambda e \text{\textcircled{B}}^{\text{W}\text{\textcircled{A}}} \text{-}\text{\textcircled{B}}$   
good **REFL.ABS-** 1SG.IO- DAT- 2SG.ERG- CAUS- see -PST

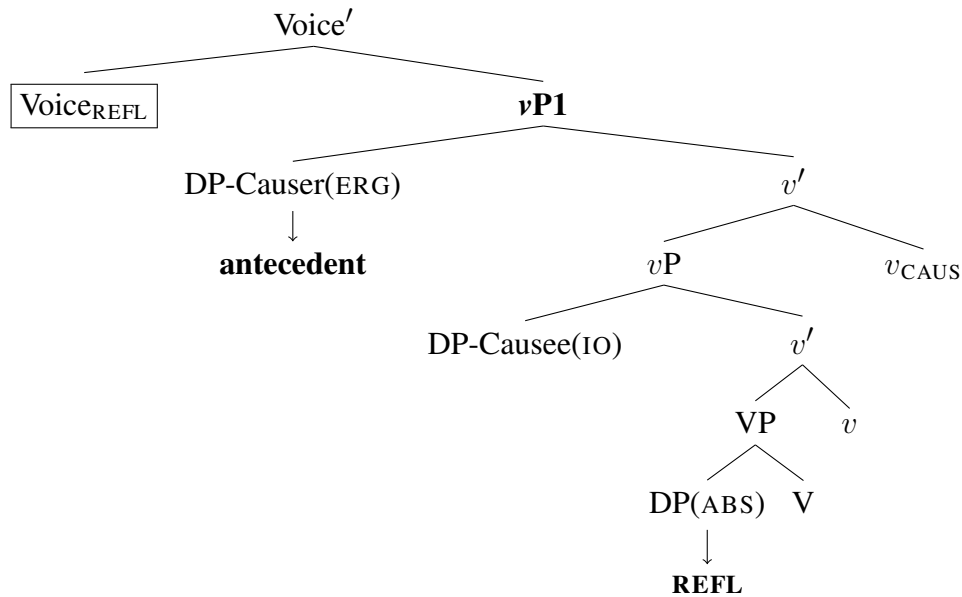
‘You<sub>i</sub> made me<sub>j</sub> love myself<sub>j</sub>/yourself<sub>i</sub>.’ **CAUS: ERG > ABS | IO > ABS**

The availability of the two interpretations in (135b) is directly predicted by the selectional properties of *Voice<sub>REFL</sub>*: *Voice<sub>REFL</sub>* may select either the embedded, or the higher *v*P, and the choice of antecedent depends on the position of *Voice<sub>REFL</sub>*.

13. As discussed in chapter 2, I assume that the dative applied object agreement triggered by the causee does directly correspond to an applied object structure with an applicative head – instead, the causee is assigned ergative inherent case by *v*<sup>0</sup>, and the agreement with the lower of two ergative arguments is contextually spelled out as agreement with a dative applied object.

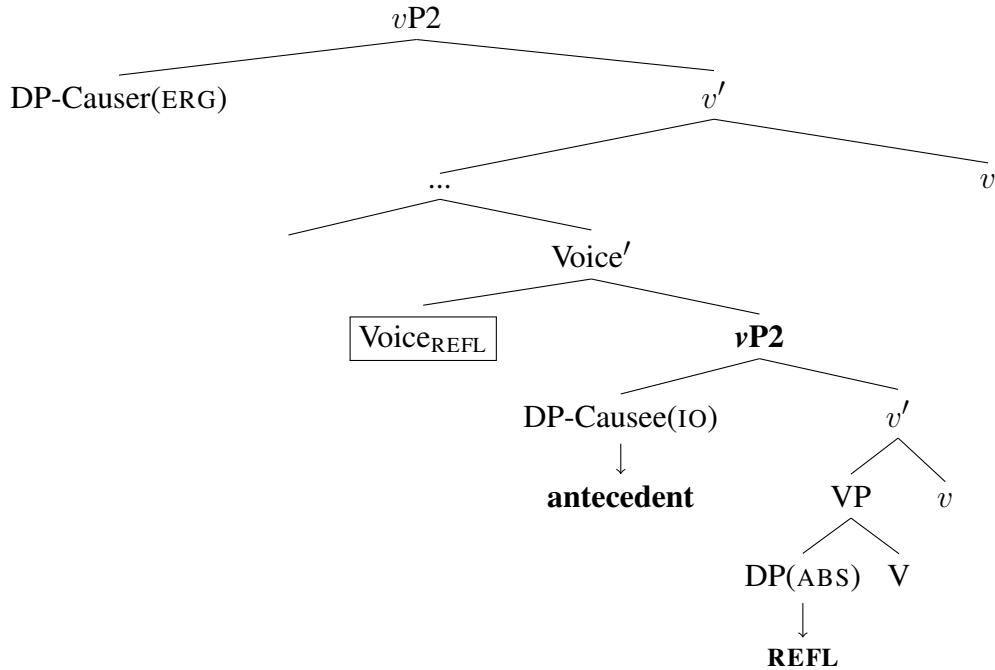
Thus, in order to derive the interpretation within which the ergative causer is co-indexed with the reflexive pronoun,  $\text{Voice}_{\text{REFL}}$  must merge above the higher  $v\text{P}$ , attracting the highest DP within its c-command domain – the causer (136).

(136)  $\text{Voice}_{\text{REFL}}$  selects for causative (higher)  $v\text{P}$ :



In order to derive the second interpretation wherein the causee is interpreted as co-indexed with the reflexive pronoun,  $\text{Voice}_{\text{REFL}}$  selects for the lower, embedded  $v\text{P}$  – in this case, the causee is the highest DP within the c-command domain of  $\text{Voice}_{\text{REFL}}$ , thus being the only eligible antecedent for the reflexive pronoun, while the causer is merged above  $\text{VoiceP}$  and is thus not a possible antecedent (137).

(137)  $\text{Voice}_{\text{REFL}}$  selects for base (lower)  $v\text{P}$ :

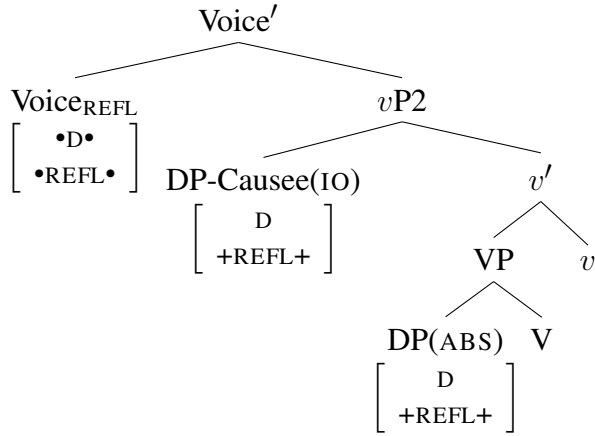


Given the availability of the structures in (136) and (137), one might expect the possibility of including two  $\text{Voice}_{\text{REFL}}$  heads within a synthetic causative construction. This prediction is confirmed by the grammaticality of examples such as the following:

- (138) Ø-jane      **zə-**      **ze-**      r-      jə-      be-      zeč'ə      -fe      (...)  
 3SG.PR-mother **REFL.ABS-** **REFL.IO-** DAT- 3SG.ERG- CAUS- turn.away -LIM  
 'while his/her mother turned away (lit. made herself turn herself away)'

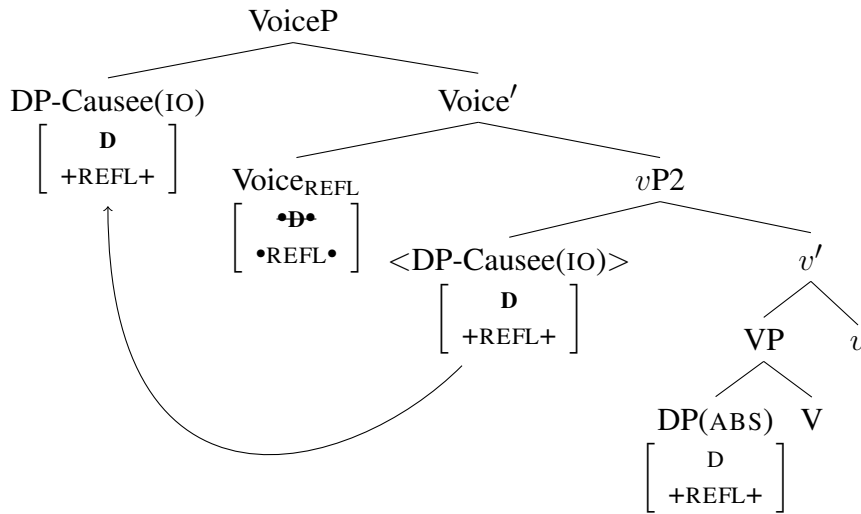
In this case, two reflexive pronouns appear within the same verbal form: one in the absolutive theme position and one in the position of the causee. This is readily predicted by the possibility of several  $\text{Voice}_{\text{REFL}}$  projections, one immediately above the embedded  $v\text{P}$ , and one above the higher causative  $v\text{P}$ . The derivation of (138) proceeds as follows. First  $\text{Voice}_{\text{REFL}}$  selects for the lower, base  $v\text{P}$  (139).

- (139)  $\text{Voice}_{\text{REFL}}$  selects for lower (base)  $v\text{P}$ :



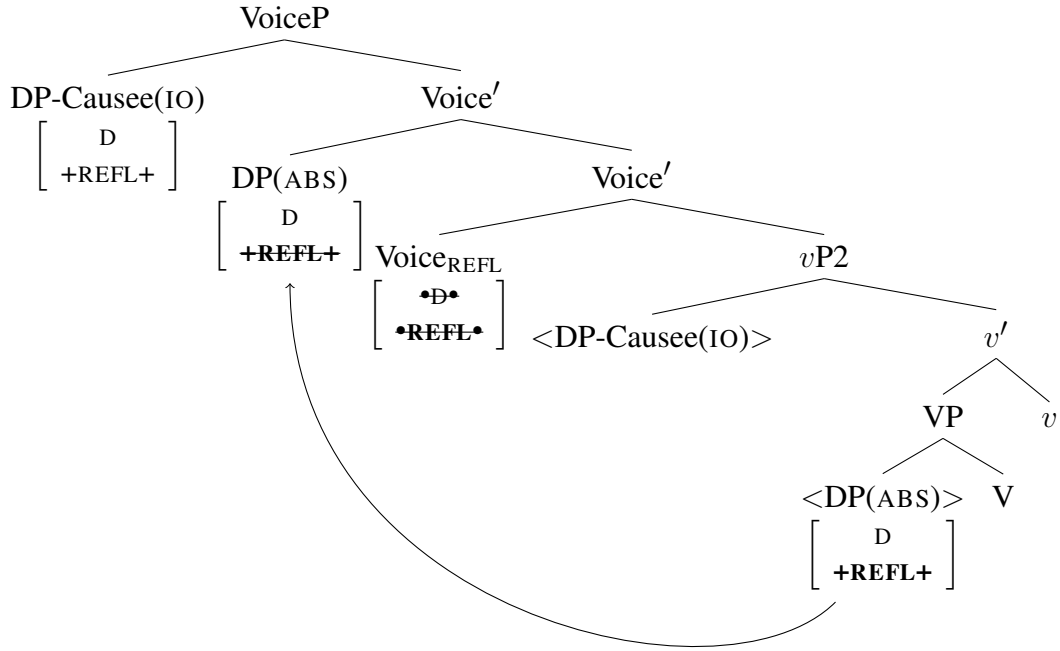
The next step involves the movement of the reflexive pronoun in Spec,*v*P to Spec,VoiceP in order to satisfy •D• on Voice<sub>REFL</sub> (140). Since this movement does not involve the structure-building •REFL• feature, the licensee feature +REFL+ on the causee remains unchecked.

(140) The causee moves to Spec,VoiceP:



Next, the reflexive pronoun moves from the absolutive theme position to Spec,VoiceP and tucks in below the causee – this movement checks •REFL• on Voice<sub>REFL</sub> and +REFL+ on the reflexive pronoun (141).

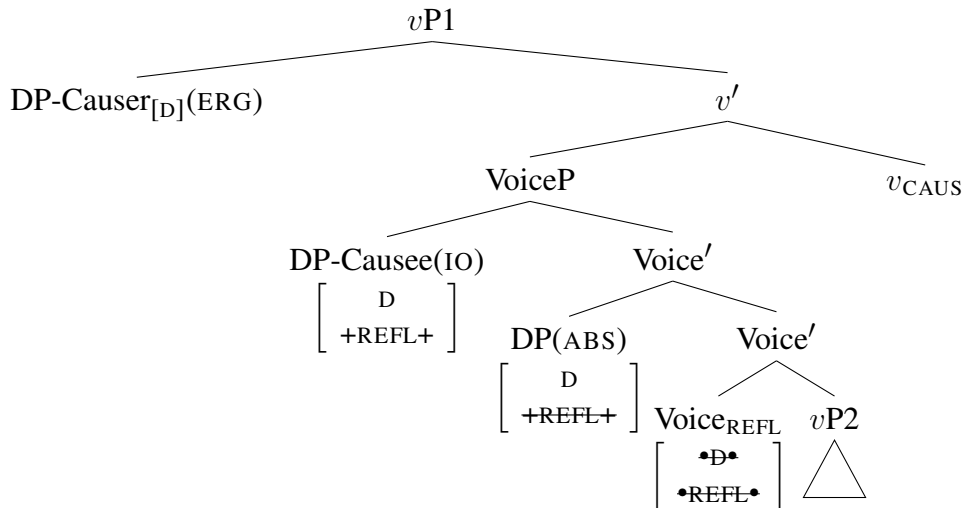
(141) The reflexive pronoun moves to Spec,VoiceP:



The VoiceP in (141) cannot be directly selected for by  $T^0$  – in that case, the licensee feature on the causee will remain unchecked, rendering the construction ungrammatical. This ensures that every reflexive pronoun in the structure is licensed by  $\text{Voice}_{\text{REFL}}$ .

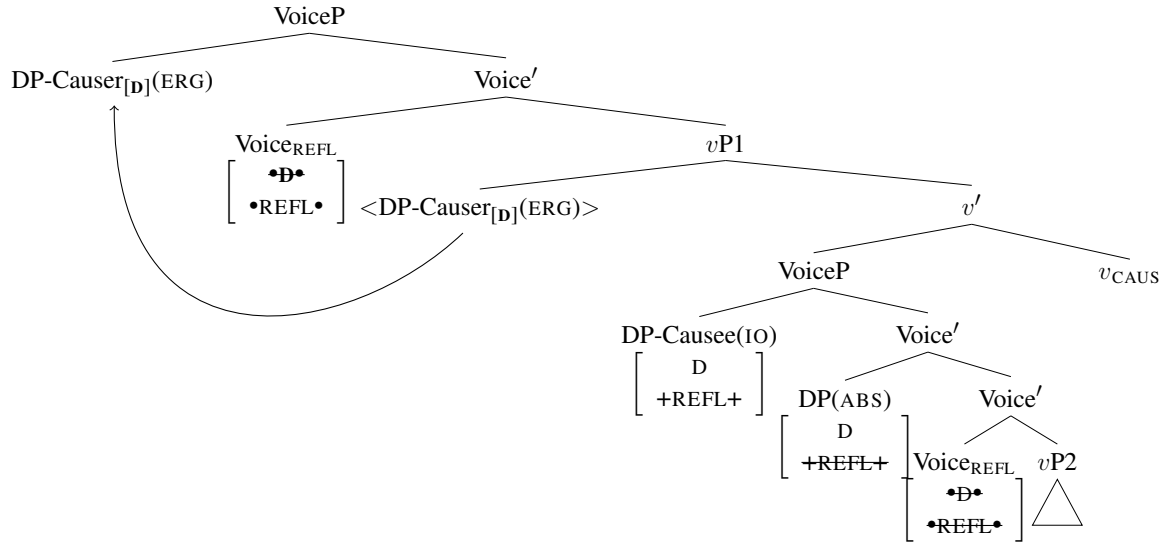
The next step involves the merging of the causative  $v_{\text{CAUS}}$  and the ergative causer (142).

(142) The causative  $v_{\text{CAUS}}$  and causer are merged above VoiceP:



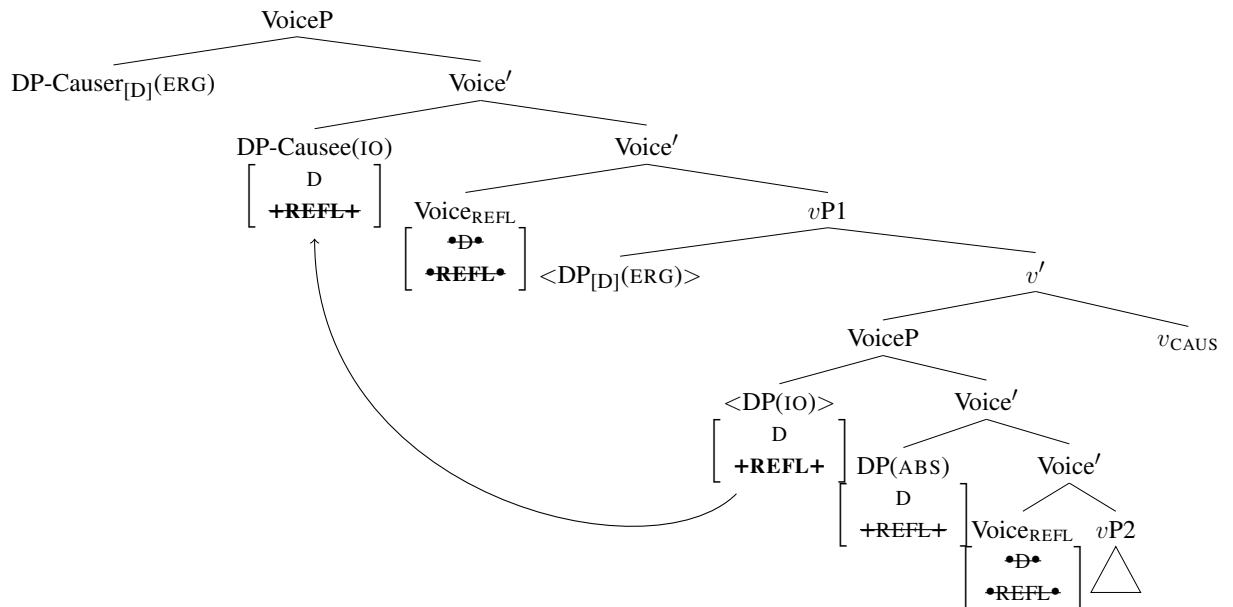
This  $vP$  may now be selected by a second  $\text{Voice}_{\text{REFL}}$ , which attracts the highest nominal in its c-command domain – the ergative causer – to its specifier (143).

(143) The causer moves to Spec, VoiceP:



Finally, the causee moves from the lower Spec, VoiceP to the higher Spec, VoiceP to check  $\bullet\text{REFL}\bullet$  on the higher  $\text{Voice}_{\text{REFL}}$  and  $+\text{REFL}+$  on the reflexive pronoun (144).

(144) The causee (the reflexive pronoun) moves to Spec, VoiceP:



In summary, the syntactic properties of  $\text{Voice}_{\text{REFL}}$  correctly predict that the highest nominal within an embedded  $vP$  – i.e. an argument that cannot be considered a surface or deep subject – may serve as an antecedent to a reflexive pronoun.

### 3.4.6 *Final conclusion: locality conditions on reflexive binding*

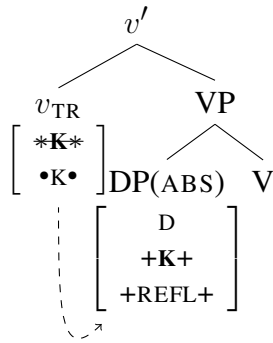
To conclude this section, reflexives are licensed by  $\text{Voice}_{\text{REFL}}$ , which selects for  $vP$  and attracts the highest nominal within its c-command domain and the reflexive to its specifiers. This analysis reduces local subject orientation to locality constraints on movement, dispensing of any reference to subjecthood as a syntactic primitive. This approach is confirmed by a number of configurations in West Circassian: as a syntactically ergative language, it displays a systematic mismatch between surface subjects (= absolutive arguments) and deep subjects such as the ergative agent – reflexive binding patterns in this case display no sensitivity to surface subjecthood. Furthermore, a locality-based account of local subject orientation confirms that reflexives may be bound by *any* nominal that happens to be the highest DP within  $vP$  – demoted agents, applied objects of unaccusative verbs, and causees of synthetic causatives. West Circassian thus presents novel evidence that subjecthood does not play a role in anaphor binding.

The movement operations and locality conditions imposed on reflexive binding do not directly interact with general nominal licensing, which ensures that the absolutive DP moves to Spec,TP, while ergative agents and applied objects remain in situ. This is because  $T^0$  and  $v^0$ , on the one hand, and  $\text{Voice}^0$ , on the other hand, probe with different features:  $T^0$  and  $v^0$  with  $\bullet K \bullet$ , and  $\text{Voice}_{\text{REFL}}$  with  $\bullet D \bullet$ . I have omitted K-features throughout the derivations in this chapter for ease of readability, but if we include these features in the numeration, we will see that this has no impact on the syntax of reflexive co-indexing or on nominal licensing generally.

Let us consider the full derivation of a transitive verb with a reflexive absolutive theme. First, the transitive  $v_{\text{TR}}$  selects for VP and agrees with the complement of the lexical verb, thus checking  $\ast K \ast$ (145).

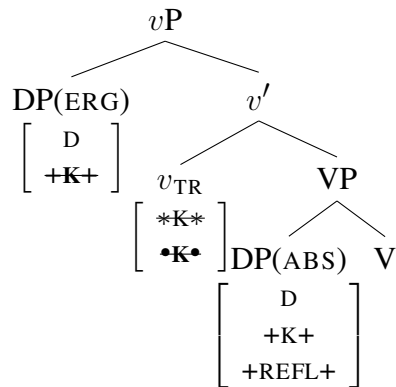


(145)  $v_{TR}$  merges with VP and agrees with the absolutive theme:



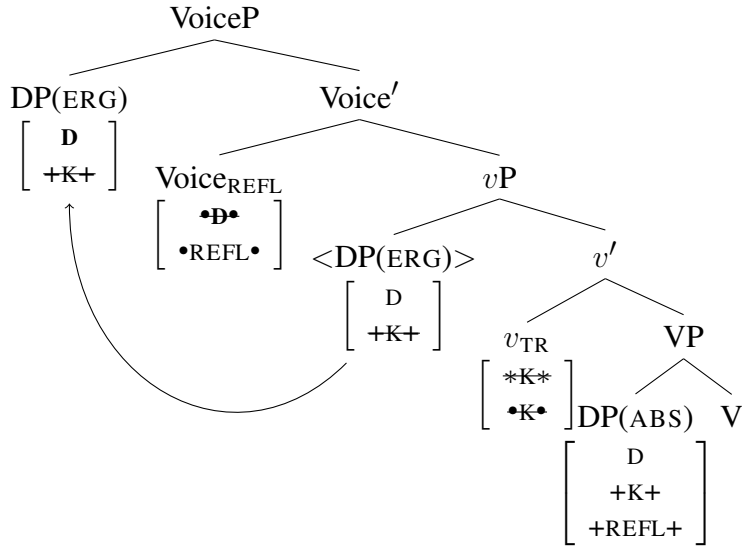
Next, the ergative agent merges as a specifier to  $v_{TR}$ , checking both +K+ on the nominal and •K• on  $v_{TR}$  (146).

(146) Ergative agent merges in Spec, $vP$ :



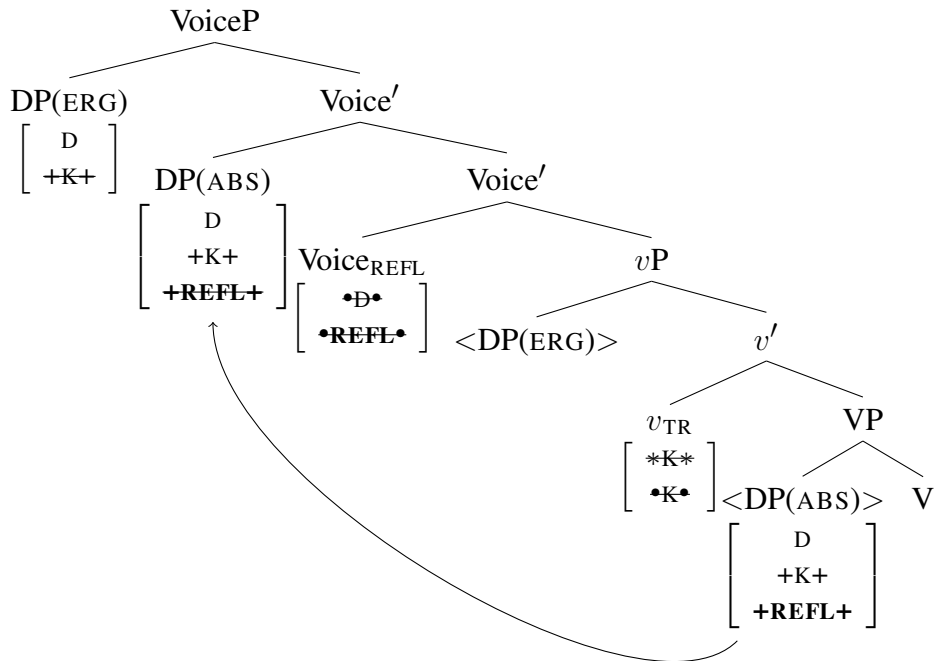
The  $vP$  is then selected by Voice<sub>REFL</sub>, which attracts the ergative DP to Spec,VoiceP via the •D• feature (147).

(147) The ergative agent moves to Spec,VoiceP:



The next step involves the movement of the reflexive pronoun to Spec, VoiceP in order to check +REFL+ on the pronoun and •REFL• on Voice<sub>REFL</sub> (148).

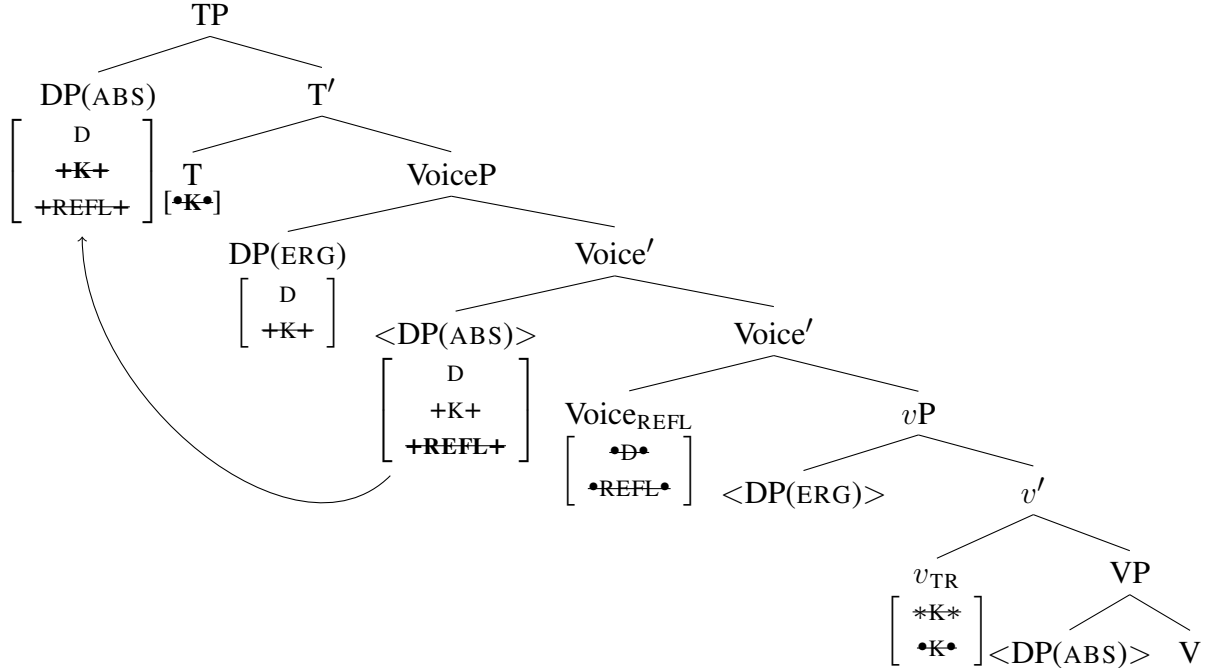
(148) The reflexive pronoun (the absolutive theme) moves to Spec, VoiceP:



Finally, in order to form the full TP, T<sup>0</sup> merges above VoiceP and attracts the absolutive re-

flexive pronoun to its specifier via  $\bullet K \bullet$ , checking the corresponding feature on  $T^0$  and  $+K+$  on the absolutive argument (149).

(149) The absolutive theme moves to Spec,TP:



Thus, the intermediate movements of the antecedent and the reflexive pronoun do not interact in any way with the general rules of nominal licensing within TP, because the structure-building operations triggered by  $T^0/v^0$  and Voice<sub>REFL</sub> are crucially sensitive to different features: D and REFL in the case of Voice<sub>REFL</sub> and K in the case of  $T^0$  and  $v^0$ .

### 3.5 Conclusion

To conclude this chapter, the behavior of anaphors in West Circassian provides support for the long-standing idea that subjecthood properties may be dispersed across multiple syntactic positions (Harley 1995; Bobaljik and Jonas 1996; McCloskey 1997). In syntactically accusative languages, these positions are generally occupied by the same nominal, which can thus be unilaterally identified as the subject. In contrast, in a syntactically ergative language like West Circassian,

these positions are systematically occupied by distinct nominals, rendering conflicting results for subjecthood diagnostics, such as the directionality of anaphor binding.<sup>14</sup> Given that subjecthood properties fail to converge on a single position or nominal, the notion ‘subject’ becomes theoretically vacuous within this framework, and the various subjecthood properties can be derived from independent structural factors, such as c-command and locality conditions on syntactic operations.

The proposed analysis confirms the idea that syntactic ergativity is derived: the absolutive argument is merged low and subsequently undergoes movement to a higher position. Unlike previous proposals for a high absolutive (Bittner and Hale 1996; Aldridge 2008; Coon et al. 2014), which rely on diagnostics such as scope and extraction asymmetries and are thus compatible with an A'-movement analysis of the high absolutive, this chapter provides a particularly strong case for syntactic ergativity being derived via A-movement: the high position of the absolutive DP is interpreted as an A-position for the purposes of reciprocal binding.

In regards to the theory of subject orientation in anaphor binding, West Circassian presents novel evidence that local subject orientation of reflexives is due to constraints on locality of movement. This means that subjecthood does not play a role in defining conditions on anaphor binding. As a syntactically ergative language, West Circassian provides evidence that the antecedent of a local subject oriented anaphor need not be the surface subject: for example, the ergative agent is an eligible antecedent, despite the fact that the absolutive DP occupies the surface subject position. This provides support for a locality-based theory of local subject orientation, such as Ahn (2015), which rules out non-surface subject antecedents in nominative-accusative languages via independent mechanisms that do not directly appeal to the notion of subjecthood. Furthermore, the West Circassian data show that the antecedent of a local subject oriented anaphor does not need to be a canonical deep subject either – as long as locality conditions are met, any nominal within *vP*, e.g. an applied object, may serve as an antecedent.

Additionally, the presented analysis provides a promising trajectory for approaching conflict-

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14. See Guilfoyle et al. (1992) for a similar proposal for Austronesian languages.

ing subjecthood diagnostics in other languages: it may be the case that under closer scrutiny other diagnostics of structural prominence are subject to additional constraints that interfere with their applicability at the clausal level. In regards to anaphor binding, there may be a number of reasons why syntactic ergativity is so rarely observed in this domain: for example, in Mayan (Coon et al. 2014) and Inuit (Yuan 2018) languages, reflexive pronouns are not subject to the same case licensing conditions as regular nominals. However, given that West Circassian reciprocals do behave in a syntactically ergative fashion, we may expect to find languages with a similar pattern. Just as in West Circassian, such a pattern may be simply obscured by the syntactic or morphological properties of the language in question.

### Appendix 3.A Causer-causee reciprocal metathesis

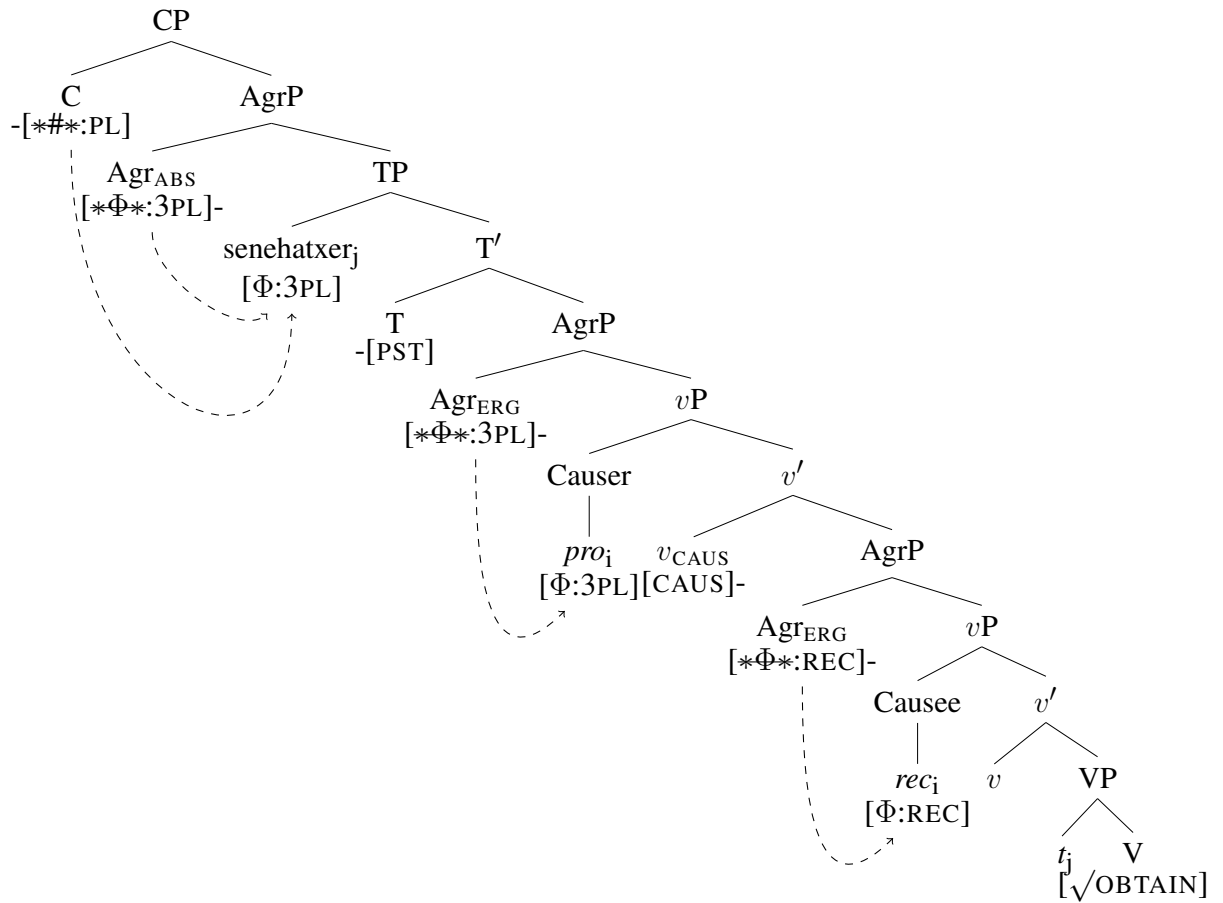
The agreement analysis of reciprocal marking provides an explanation for an otherwise puzzling morpheme ordering in causative constructions. In particular, if the causee is co-referent with the causer, the reciprocal marker surfaces as *zere-*. Interestingly, in this case this marker may appear either in the applied object position as in (150a), or in what appears to correspond to the ergative position immediately adjacent to the root, while the agreement referring to the antecedent surfaces in the applied object position (150b).

- (150) a. *senehat-xe-r*      *Ø-*      ***zer-***      *a-*      *be-*      *ɬ<sup>w</sup>etə -be -x*  
 profession-PL-ABS 3ABS- **REC.IO-** 3PL.ERG- CAUS- obtain -PST -PL  
 ‘They let/helped each other obtain professions.’ (AC)
- b. *ɬ<sup>w</sup>efʂak<sup>w</sup>e-xe-m*      *čəg<sup>w</sup>ə-r*      *Ø-*      *ja-*      ***zer-***      *e-*      *be-*      *pχə*  
 worker-PL-OBL      field-ABS 3ABS- 3PL.IO+DAT- **REC.ERG-** DYN- CAUS- sow  
 ‘The workers are forcing each other to sow the field.’ (Letuchiy 2009b:395)

If taken at face value, the morpheme order in (150b) is surprising: under any assumptions about the clause structure, the ergative causer should serve as the antecedent for the applied object causee and not vice versa. This can be readily accounted for, however, by a spellout rule that is sensitive

to this particular combination of  $\phi$ -features. As discussed in chapter 2, causative constructions formed on the basis of a transitive verb involve the recursive merging of two transitive  $v^0$  heads, both of which license a DP in their specifier. Each  $vP$  is in turn c-commanded by  $\text{Agr}_{\text{ERG}}$ . The lower of the two  $\text{Agr}_{\text{ERG}}$  – the one tracking agreement with the causee – is spelled out as applied object agreement with a dative applicative marker per the dissimilation rule which bans two ergative agreement markers within the same verbal form. If the lower  $\text{Agr}_{\text{ERG}}$  is specified as reciprocal, however, the dissimilation rule applies only partially – as with a regular ergative agent, the reciprocal marker in this case surfaces as *zere-*, but in order to derive the surface affix order, I assume that the lower  $v^0$  undergoes dissimilation to a dative  $\text{Appl}^0$  (although this is generally not visible in the surface string). For example, the verbal form in (150a) is derived in this way: the lower  $\text{Agr}_{\text{ERG}}$  is valued for the  $\phi$ -feature [REC] and the higher  $\text{Agr}_{\text{ERG}}$  is valued for the  $\phi$ -features [3PL] (151).

(151)



After head movement, this results in the string in (152a), with a sequence of two [Agr<sub>ERG-v</sub>] in a row. Per the dissimilation rule, the lower  $v^0$  is converted to a dative applicative morpheme (152b), which then undergoes regular dative metathesis with the higher Agr<sub>ERG+v</sub> (152c). After vocabulary insertion (152d) and regular phonological processes – deletion of prevocalic and word-final vowels – in (152e), this results in the surface form observed in (150a).

(152) a. Result of head movement:

[Agr<sub>ABS</sub>;3PL]- [Agr<sub>ERG</sub>;3PL]- [ $v_{CAUS}$ ;CAUS]- [**Agr<sub>ERG</sub>**;REC]- [ $v$ ;Ø]- [V;√/OBTAIN]  
-[T;PST] -[C;PL]

b. Dissimilation:

→ [Agr<sub>ABS</sub>;3PL]- [Agr<sub>ERG</sub>;3PL]- [ $v_{CAUS}$ ;CAUS]- [**Agr<sub>ERG</sub>**;REC]- [**Appl**;DAT]- [V;√/OBTAIN]  
-[T;PST] -[C;PL]

c. Dative metathesis:

→ [Agr<sub>ABS</sub>;3PL]- [Agr<sub>ERG</sub>;3PL]- [**Agr<sub>ERG</sub>**;REC]- [**Appl**;DAT]- [ $v_{CAUS}$ ;CAUS]- [V;√/OBTAIN]  
-[T;PST] -[C;PL]

d. Vocabulary insertion:

→ Ø- zere- e- a- ʁe- ʁ<sup>w</sup>etə -ʁe -xe

e. Phonology:

→ Ø-zer-a-ʁe-ʁ<sup>w</sup>etə-ʁe-x

The order of agreement morphemes after vocabulary insertion and prior to dative metathesis corresponds exactly to the order observed in (150b): the structurally higher 3PL ergative agreement marker referring to the causer precedes the reciprocal ergative agreement marker referring to the causee. I propose the morpheme order in (150b) is derived via the employment of an optional metathesis rule that is specific to this context. In particular, if we follow Rezac (2004); Kennedy (2014); Grosz (2015); Arregi and Hanink (2018) in allowing projections to agree in the value of the referential index and assume that it is part of the  $\phi$ -feature bundle,<sup>15</sup> we can posit the following

15. This is independently necessary for the analysis of obligatory control in chapter 5.

rule for metathesis, where  $i$  stands for a particular index value:  $\text{Agr}_{\text{ERG}}$  valued for the  $\phi$ -feature REC and an index that matches the index of  $\text{Agr}_{\text{ERG}}$  to the left of it optionally undergoes metathesis with  $v_{\text{CAUS}}$  (153). Given the ban on two ergative agreement markers in the same wordform, the left ergative agreement marker is converted to a dative applied object prefix (154). As a result, agreement with the causer is spelled out to the left of agreement with the structurally lower causee; this account also explains why agreement with the causer surfaces as agreement with a dative applied object (155).

(153) Causer-causee reciprocal metathesis:

$[\text{Agr}_{\text{ERG};i}] - [v_{\text{CAUS}}] - [\text{Agr}_{\text{ERG}};\text{REC};i] - [v;\emptyset] -$   
 $\rightarrow [\text{Agr}_{\text{ERG};i}] - [\text{Agr}_{\text{ERG}};\text{REC};i] - [v_{\text{CAUS}}] - [v;\emptyset] -$

(154) Dissimilation:

$\rightarrow [\text{Agr}_{\text{IO};3\text{SG};i}] - [\text{Appl};\text{DAT}] - [\text{Agr}_{\text{ERG}};\text{REC};i] - [v_{\text{CAUS}}] - [v;\emptyset] -$

(155) Vocabulary insertion:

$\rightarrow \text{a- je- zere- } \text{æ-}$

Phonology:  $\rightarrow \text{ja-zere-æ-...}$



## CHAPTER 4

### SYNTACTIC ERGATIVITY IN WH-AGREEMENT PATTERNS

#### 4.1 Introduction

This chapter approaches the connection between subjecthood and structural prominence from a somewhat unusual angle – by exploring the role of structural prominence in parasitic gap constructions. A well-known property of parasitic gaps is that they may not be c-commanded by the licensing gap (the anti-c-command condition; Engdahl 1983). In English, this restriction manifests itself first and foremost in the contrast between subject and non-subject gaps: while an object gap can successfully license a parasitic gap within the adjunct in (156a), if that same argument is promoted to surface subject position via passivization as in (156b), it can no longer license a parasitic gap within the adjunct. This has been attributed to the fact that the object in (156a) does not c-command the parasitic gap, but does c-command it in (156b).

- (156) a. Which articles did John file \_\_ without reading \_\_<sub>PG</sub>? (Engdahl 1983:5)  
b. \* Which articles \_\_ got filed by John without him reading \_\_<sub>PG</sub>? (Engdahl 1983:20)

Thus, if extended to West Circassian, the examination of restrictions on parasitic gap configurations may shed light on the relative structural prominence of different verbal arguments. The main hurdle in applying such a diagnostic to the West Circassian clause lies in identifying parasitic gap contexts. Since West Circassian displays prominent pro-drop, it is not readily clear how to distinguish between a null pronoun and a gap construction. In this chapter I argue that parasitic gaps in West Circassian can be diagnosed based solely on morphological cues. Relativization, which is the only type of wh-movement in the language, manifests itself first and foremost in the morphological make-up 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 Circas-

sian is that they may contain more than one reflex of wh-agreement if the relativized participant is co-referent to another argument in the relative clause, rendering what will be labeled throughout the chapter as a *multiple wh-agreement* configuration.

This chapter argues that multiple wh-agreement is 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: (i) one of the wh-markers is dependent on the other and cannot appear in its absence; (ii) the additional wh-marker shows selective island sensitivity; (iii) the additional wh-marker cannot refer to a PP-trace; (iv) 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 support for a high absolutive analysis of the West Circassian clause structure, with the absolutive DP occupying the surface subject position in Spec,TP, which c-commands all other verbal participants, including the ergative agent. Additionally, possible patterns of multiple wh-agreement, as well as the optionality of multiple wh-agreement in certain configurations, allows us to diagnose optional A-scrambling of the applied object to Spec,vP – a position c-commanding the ergative external argument.

This analysis crucially relies on the direct mapping from the verbal morphology to the syntactic structure adopted in chapter 2: the morphological position of  $\phi$ -agreement within a given wordform directly reflects the syntactic position of the nominal that is cross-referenced by that agreement marker. Furthermore, the form of the  $\phi$ -agreement directly reflects the feature-content of the nominal it indexes: for example, agreement with elements carrying a wh-feature will be uniformly expounded as wh-agreement, rather than regular  $\phi$ -agreement.

In singling out the absolutive argument as occupying the highest A-position in the clause, this analysis connects with the analysis of reciprocal binding presented in the previous chapter: together, these two build a strong case for the presence of structural syntactic ergativity in the lan-

guage. This chapter thus makes an important contribution to the literature on syntactic ergativity by using a previously untested structural diagnostic for c-command relations between the ergative and absolutive participants. Just like the anaphor binding facts in chapter 3, this diagnostic confirms that the high position of the absolutive is derived via A-movement, rather than A' movement; this is in departure with previous proposals for a high absolutive (Bittner and Hale 1996; Manning 1996; Aldridge 2008; Coon et al. 2014, among others), which rely on syntactic diagnostics that are compatible with the absolutive occupying a high A'-position. This chapter also sheds light on the syntactic status of lexical noun phrases within a polysynthetic language: unlike anaphor binding patterns discussed in chapter 3, which are diagnosed primarily in the verbal morphology, restrictions on parasitic gap licensing apply to lexical DPs, indicating that the absolutive DP asymmetrically c-commands the ergative and applied object DPs. This means that even though West Circassian displays many of the trademark properties of a polysynthetic language, it is not non-configurational in the sense proposed by Jelinek (1984); Hale (1994); Baker (1996): lexical DPs are not adjoined or dislocated, but are asymmetrically organized in argument positions.

Additionally, the proposed analysis explains in a familiar light a construction that otherwise appears to be very unusual and typologically exceedingly rare, with similar patterns 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). Finally, this paper presents a novel way of using parasitic gaps as a diagnostic for the A- versus A'-nature of scrambling: while the ability to license parasitic gaps is taken as a diagnostic for A'-scrambling, the ability of parasitic gaps to appear productively within DPs makes non-trivial predictions for the interaction of A-scrambling and parasitic gap licensing within a scrambled DP.

The remainder of the chapter is structured as follows: section 4.2 provides the necessary background on relative clause formation; section 4.3 outlines the evidence for a parasitic gap analysis of multiple wh-agreement constructions; section 4.4 argues for the high position of the absolutive DP based on restrictions on parasitic gaps and the anti-c-command condition; section 4.5 applies the parasitic gap analysis to diagnose A-scrambling of the applied object; section 4.6 discusses

cross-clausal parasitic gap dependencies, and section 4.7 concludes.

## 4.2 Background on 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 will argue that relativization in West Circassian involves the movement of a relative operator to Spec,CP. In externally headed relative clauses, the operator is phonologically null, in relative clauses that have been labeled in the literature as internally headed (Lander 2009a, 2012) the relative operator is spelled out as the internal head.

### 4.2.1 General structure

Relativization of non-absolutive participants in West Circassian involves the use of a special relativizing morpheme  $zə^{-1}$  in place of the regular cross-reference morphology referring to the relativized participant (Lander 2009a, 2012; Caponigro and Polinsky 2011). This is illustrated in (157): in (157a) the ergative agent triggers third person ergative personal marking ( $ə-$ ) on the predicate heading the clause; if that participant is relativized, as in (157b), the corresponding cross-reference morphology is replaced with the prefix  $zə-$ . The noun phrase corresponding to the relativized participant surfaces with adverbial marking at the left edge of the relative clause – I will assume that this is in fact the overt spellout of the relative operator.

- (157) a. **mə**      **č'ale-m<sub>i</sub>(ERG)**       $ə$ -š(IO)      velosjəped(ABS)  
          **this**    **boy-OBL**            3SG.PR-brother      bicycle  
          Ø-      Ø-      r-      jə-      tə    -B  
          3ABS- 3SG.IO- DAT- **3SG.ERG-** give -PST

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1. In accordance with regular morphophonological rules (Arkadiev et al. 2009:27-29), the prefix  $zə-$  surfaces as  $z-$  prevocally or before the glide /j/; additionally, the allomorph  $ze-$  is used to mark a dative applied object.

‘This boy gave a bicycle to his brother.’

- b. marə      [č’al-ew<sub>i</sub>      t<sub>i</sub>(ERG)      ə-š(IO)      velosjəped(ABS)  
 here      **boy-ADV**      3SG.PR-brother      bicycle  
 Ø-    Ø-      je-    zə-      tə    -be] -r  
 3ABS- 3SG.IO- DAT- **WH.ERG-** give -PST -ABS  
 ‘Here is the boy that gave a bicycle to his brother.’

The same pattern arises if an applied object is relativized. Thus, the applied object in (158a) 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 zə- (158b).

- (158) a. mə č’ele-čək<sup>w</sup>ə-m(IO) Ø-jane(ABS)    Ø-    Ø-    f-    e-    g<sup>w</sup>əbž -zepət  
 this boy-small-OBL      3SG.PR-mother    3ABS- **3SG.IO-** BEN- DYN- angry -HABIT  
 ‘His mother is always angry at this boy.’  
 b. marə [č’ele-čək<sup>w</sup>-ew<sub>i</sub>    t<sub>i</sub>(IO)    Ø-jane      Ø-    zə-    fe-    g<sup>w</sup>əbž  
 this **boy-small-ADV**      3SG.PR-mother    3ABS- **WH.IO-** BEN- angry  
 -zepətə -re] -r  
 -HABIT -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 zə-: for example, agreement with the relativized possessor of the absolutive argument in (159) is replaced with zə-, which surfaces as z- due to the following glide.

- (159) marə    [RC    š<sup>w</sup>əz-ew<sub>i</sub>    [DP t<sub>i</sub>(PR)    z-jə-pšaše ]      dax-ew  
 here      woman-ADV      **WH.PR-POSS-girl**    good-ADV  
 Ø-qa-š<sup>w</sup>e-re]      -r  
 3ABS-DIR-dance-DYN -ABS  
 ‘Here is the woman whose daughter dances well.’

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 external argument of the unergative verb *jeceqen* ‘bite’ in (160a) triggers null absolutive cross-reference marking on the predicate; if this argument is relativized, the cross-reference morphology on the predicate does not change (160b).

- (160) a. **ha-r** Ø-jə-xozjajən Ø- Ø- je- ceqa -ɸ  
**dog-ABS** 3SG.PR-POSS-owner **3ABS-** 3SG.IO- DAT- bite -PST  
 ‘The dog bit its owner.’
- b. se sə-Ø-š’e-š’əne [ha-w<sub>i</sub> t<sub>i</sub>(ABS) Ø-jə-xozjajən  
 I 1SG.ABS-3SG.IO-LOC-fear **dog-ADV** 3SG.PR-owner  
 Ø- Ø- je- ceqa -ɸe] -m  
**WH.ABS-** 3SG.IO- DAT- bite -PST -OBL  
 ‘I fear the dog that bit its owner.’

An absolutive theme is likewise relativized without any overt morphology. For example, the absolutive theme of the transitive verb *š’en* ‘bring’ triggers null third person agreement on the predicate (161a); if this argument is relativized, the personal prefixes on the verb do not change (161b).

- (161) a. **a bzəlfəɸe-r**(ABS) ə-q<sup>w</sup>e(ERG) Ø- q- ə- š’a -ɸ  
 this woman-ABS 3SG.PR-son **3ABS-** DIR- 3SG.ERG- lead -PST  
 ‘This woman was brought by her son (lit. her son brought this woman)’
- b. marə [RC Op<sub>i</sub> t<sub>i</sub>(ABS) ə-q<sup>w</sup>e(ERG) Ø- q- ə- š’a -ɸe ]  
 here 3SG.PR-son **WH.ABS-** DIR- 3SG.ERG- bring -PST  
 bzəlfəɸe-r  
 woman-ABS  
 ‘Here is the woman whom her son brought.’

Following O’Herin’s (2002) analysis of a similar construction in Abaza (Northwest Caucasian) and Caponigro and Polinsky (2011), I assume that the morpheme *zə-* is the reflex of wh-agreement with the relativized participant. The lack of overt relativizing morphology when the absolutive participant is extracted is then treated as morphological allomorphy and is glossed as wh-agreement like *zə-*, as in (160b). This approach is in contrast with the accounts presented in Lander (2009a,b,

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 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. (157)-(160) are examples of the latter type. The former type can be seen in (161b) and (162) below:

- 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 (162), the predicate heading the relative clause displays wh-agreement with the relativized participant regardless of the position of the nominal head.

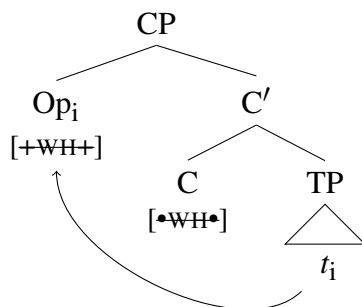
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relativized participant.

- (163) [RC Op<sub>i</sub> aslan t<sub>i</sub>(IO) Ø- zə- fae -zepətə] -m ə-š-xe-r  
 Aslan 3ABS- WH.IO- want -HABIT -OBL 3SG.PR-brother-PL-ABS  
 Ø-Ø-faj-ep  
 3ABS-3SG.IO-want-NEG  
 ‘[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 movement is triggered by a [ $\bullet$ WH $\bullet$ ] feature on C<sup>0</sup> and a matching [+WH+] feature on the relative operator, as shown in (164). The [+WH+] licensee feature is separate from the  $\phi$ -feature that triggers wh-agreement, but obligatorily accompanies it: the obligatory co-occurrence of these two features ensures that only elements that undergo wh-movement trigger wh-agreement and vice versa. 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 spellout of this operator.

- (164) General structure of a West Circassian relative clause:



There are several reasons to believe that both externally and internally headed relative clauses involve the movement of a relative operator to Spec, CP.

Firstly, both types of clauses display wh-agreement with the relativized argument. This is in stark contrast with wh-in-situ questions, wherein the wh-word remains in its base position,



and there is no overt wh-agreement. There are two strategies of forming wh-questions in West Circassian (Sumbatova 2009): the first is a pseudo-cleft construction, with the wh-word acting as a focused predicate, and a headless relative clause appearing as the absolutive argument. In this case the headless relative clause displays overt wh-agreement, as expected (165a). 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 (165b).

- (165) a. **səd(-a)** [<sub>RC</sub> Op<sub>i</sub> mə ɟ'ale-r t<sub>i</sub>(IO) Ø- **z-** e- pλə -ɸe] -r  
           what-Q           this boy-ABS           3ABS- **WH.IO-** DAT- watch -PST -ABS  
           ‘What did this boy watch?’
- b. mə ɟ'ale-r **səd** Ø- Ø- je- pλə -ɸ (-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 be easily explained if we are to 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.

Secondly, Lander (2012:242-262) demonstrates in detail that the adverbially marked nominal in these constructions does not display properties of a prototypical internal head and appears “outside the domain of relativization” Lander (2012:249). One such property concerns quantifier scope: if the internal head is accompanied by a quantifier, that quantifier is interpreted as taking wide, rather than narrow scope. Thus, the sentence in (166) contains an adverbially-marked internal head with a quantifier *pepč* ‘each’; as can be seen from the interpretation in (166a), this quantifier is interpreted as taking wide scope over the matrix clause, and an interpretation wherein this quantifier takes narrow scope over the embedded clause is unavailable (166b).

- (166) [RC **g<sup>w</sup>əbatə-pepč-ew<sub>i</sub>** ha-r(ABS) t<sub>i</sub>(IO) Ø- **zə-** xe- ceqa -bə -xe] -m  
**gubat-each-ADV** dog-ABS 3ABS- **WH.IO-** LOC- bite -PST -PL -OBL  
 paje swem-jə-pŕ Ø-s-tə-bə  
 for ruble-LNK-ten 3ABS-1SG.ERG-give-PST
- a. 'I paid ten rubles for each gubat<sup>2</sup> the dog bit into.' ✓wide scope
- b. \* 'I paid ten rubles for the gubats, each of which the dog bit into.' (Bzhedug; Lander 2012:259) \*narrow scope

This indicates that the adverbially marked nominal cannot be interpreted in the base position of the relativized argument. This can be contrasted with quantifiers in embedded contexts that do not involve relative clauses: in this case, the quantifier may take wide scope (167a), but, crucially, the narrow scope associated with its base position is also available (167b).

- (167) [CP č'elejeɣaʒe-r(ABS) **sabəj-pepč(IO)** mə-zaf-ew  
 teacher-ABS **child-each** NEG-fair-ADV  
 Ø-Ø-je-çaç-ew ] Ø-jane-Ø-jate-xe-m Ø-a-ɽ<sup>w</sup>e  
 3ABS-3SG.IO-DAT-scold-ADV 3SG.PR-mother-3SG.PR-father-PL-OBL 3ABS-3PL.ERG-say  
 Ø-s-ŕ<sup>w</sup>e-ŕə  
 3ABS-1SG.IO-MAL-do
- a. 'I think that every child<sub>i</sub>'s parents say that the teacher scolds him/her<sub>i</sub> unfairly.' ✓wide scope
- b. 'I think that his/her<sub>j</sub> parents say that the teacher scolds every child<sub>i</sub> unfairly.' ✓narrow scope

While I do not aim to present a semantic analysis of quantifier raising in West Circassian, it is clear that the adverbially marked nominal in (166) may not be interpreted in the position of the applied object, as it is in (167). Following Lander (2012), I take this as evidence that this nominal does not occupy the base position of the relativized argument. Instead, it undergoes obligatory movement to a position that is outside the quantificational domain of the embedded clause – Spec,CP.

Additionally, the internal head may not carry the case marker that is assigned to the corresponding argument within the relative clause – instead, as can be seen in the examples above, it must

2. Traditional Adyghe pastry, usually with a cheese filling.

carry the adverbial case marker. Finally, as shown in the following subsection, internally headed relative clauses may host multiple wh-agreement configurations, which I argue in section 4.4 to involve a parasitic gap dependency that is licensed by wh-movement. Based on this evidence, I analyze the internal head as the overt spellout of the relative operator.

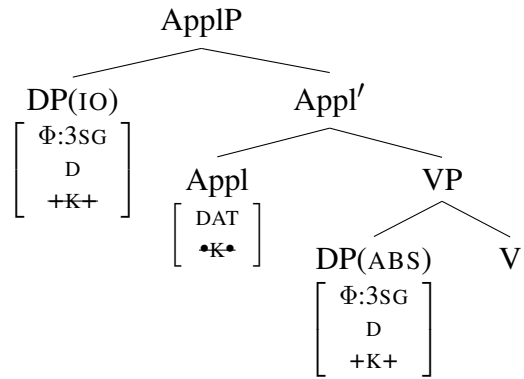
In terms of the system developed in this thesis, *wh*-agreement is established in the same way as regular  $\phi$ -agreement: the morpheme  $z\varnothing$  is the exponent of one of the  $\text{Agr}^0$  heads present in the clausal spine, and its position within the verbal or nominal form is a direct function of the syntactic position of the *wh*-marked element. Analogous to the reflexive and reciprocal features (REFL and REC) discussed in the previous chapter, I follow O’Herin (2002); Caponigro and Polinsky (2011) in treating the WH-feature as a type of  $\phi$ -feature. As with anaphor agreement,  $\text{Agr}^0$  copies the full set of  $\phi$ -features from the corresponding *wh*-element, but vocabulary insertion is only sensitive to the WH-feature, rendering uniformly spellout as  $z\varnothing$ - or  $\varnothing$ -.<sup>3</sup> Additionally, an element bearing the  $\phi$ -feature [WH] carries the licensee feature [+WH+], which ensures that *wh*-marked elements undergo obligatory movement.

For example, the derivation in (157b), repeated below in (168) proceeds as shown in (169).

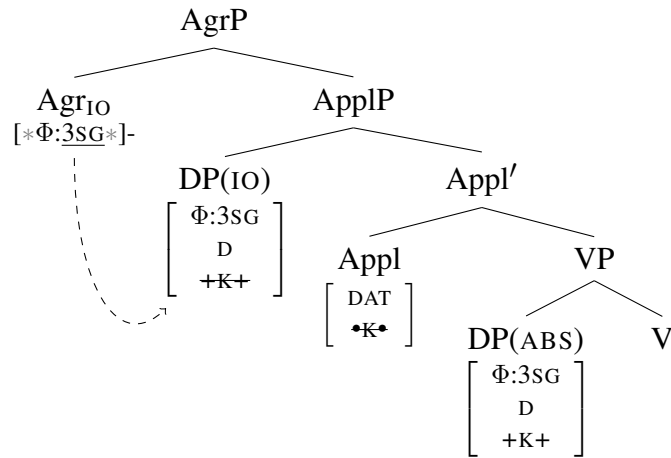
- (168) marə            [čʰal-ewi            t<sub>1</sub>(ERG)            ə-š(IO)            velosjəped(ABS)  
 here            boy-ADV            3SG.PR-brother            bicycle  
 Ø-    Ø-            je-    zə-            tə    -ke] -r  
 3ABS- 3SG.IO- DAT- WH.ERG- give -PST -ABS  
 ‘Here is the boy that gave a bicycle to his brother.’

- (169) a. Appl<sup>0</sup> selects for VP with an internal argument and merges DP(IO) in its specifier:

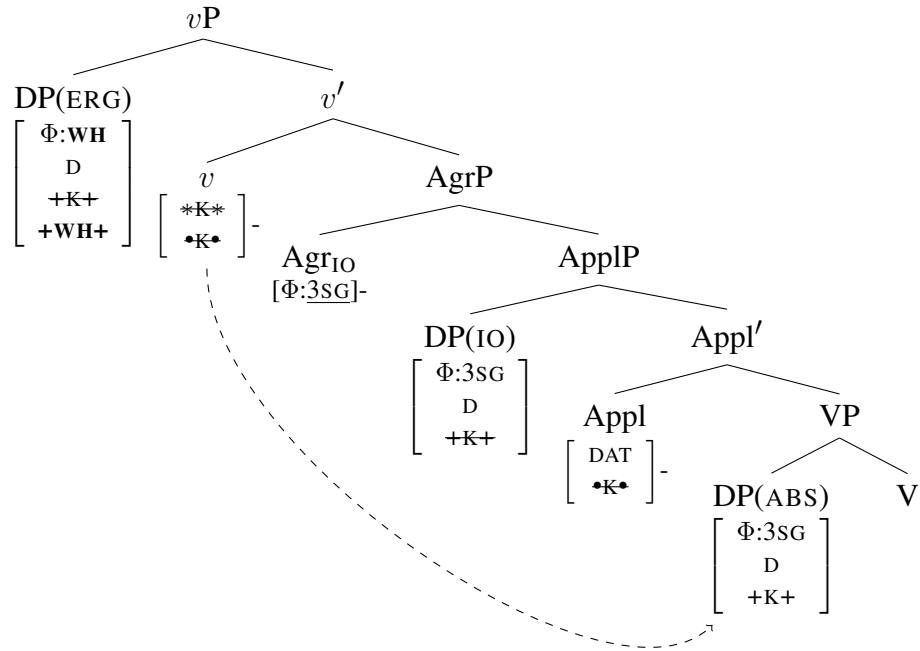
3. This may be due to wh-agreement being a case of anti-agreement, as has been proposed by Baier (2018), wherein the presence of a WH-feature triggers morphological impoverishment. It is particularly interesting to explore the connection between wh-agreement and anaphor-agreement, given that the exponence of reflexive agreement is homophonous with the wh-marker *zə*, and a robust property of anaphors cross-linguistically is their inability to trigger regular  $\phi$ -agreement (the Anaphor Agreement Effect; see e.g. Rizzi 1990; Woolford 1999). For example, Lander and Daniel (in press) account for this connection by analyzing the marker *zə* as a resumptive pronoun. I leave the question of whether their account is adaptable to the wh-agreement analysis proposed here for future research.



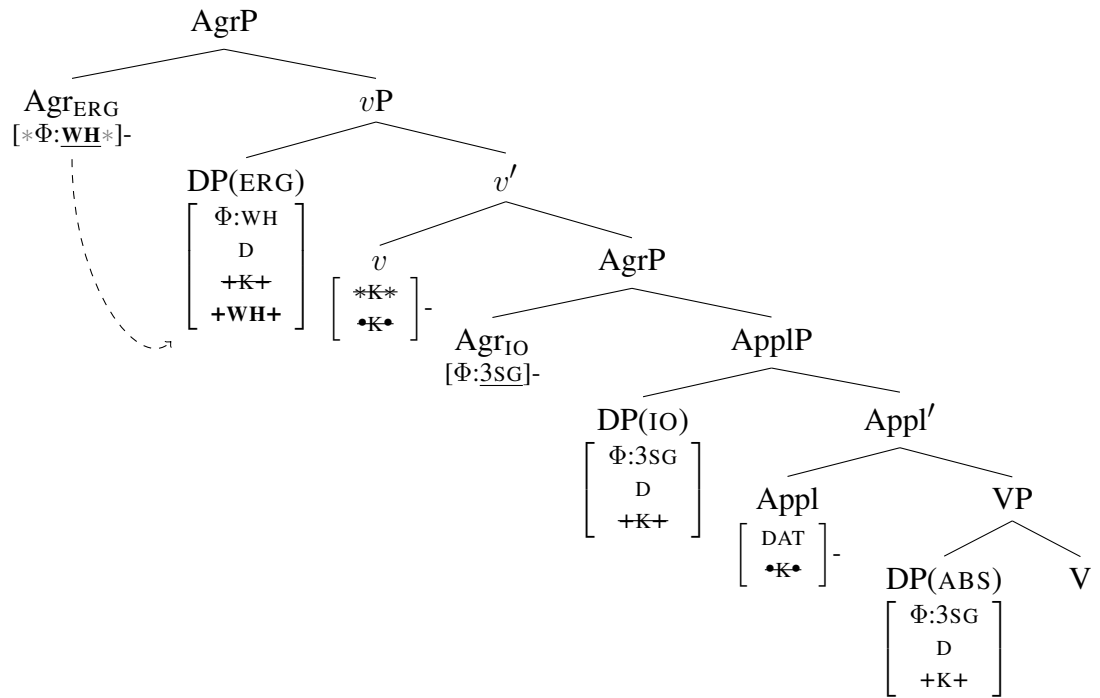
- b. Agr<sub>IO</sub> merges above ApplP and agrees with the applied object:



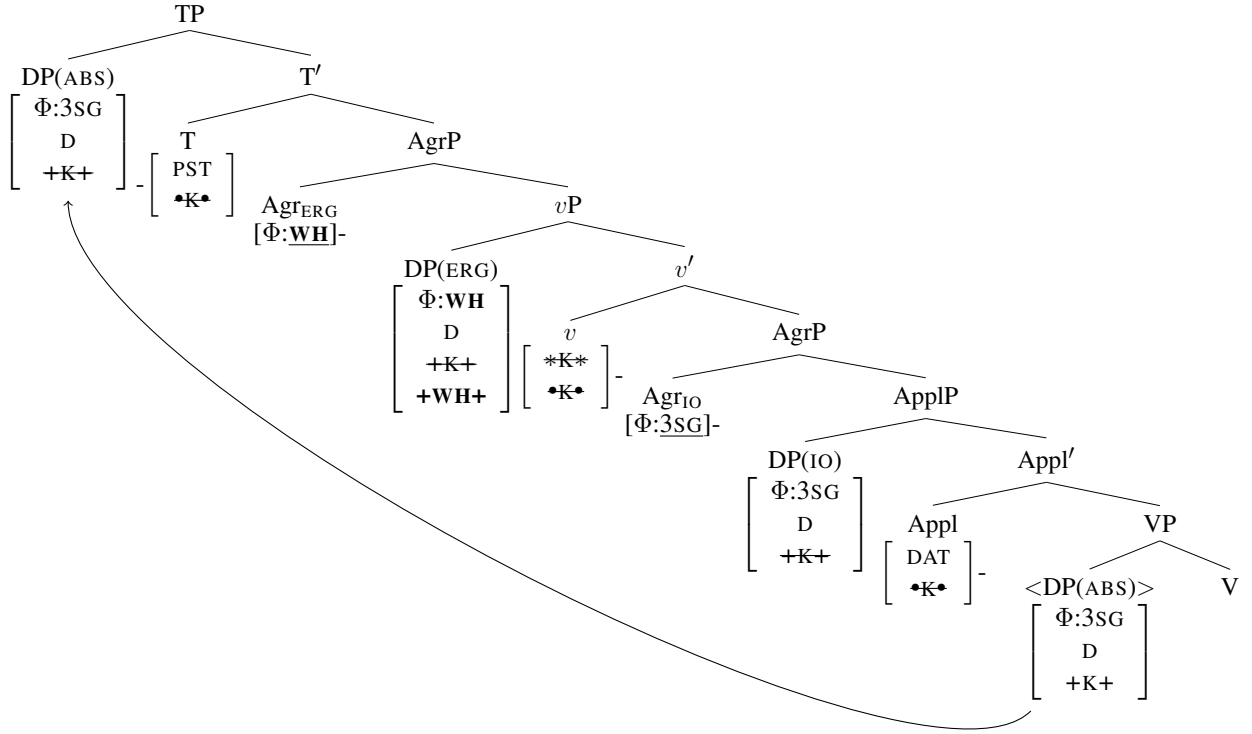
- c. Transitive  $v^0$  selects for AgrP, agrees with the absolutive theme, and licenses the ergative agent, which carries a WH-feature:



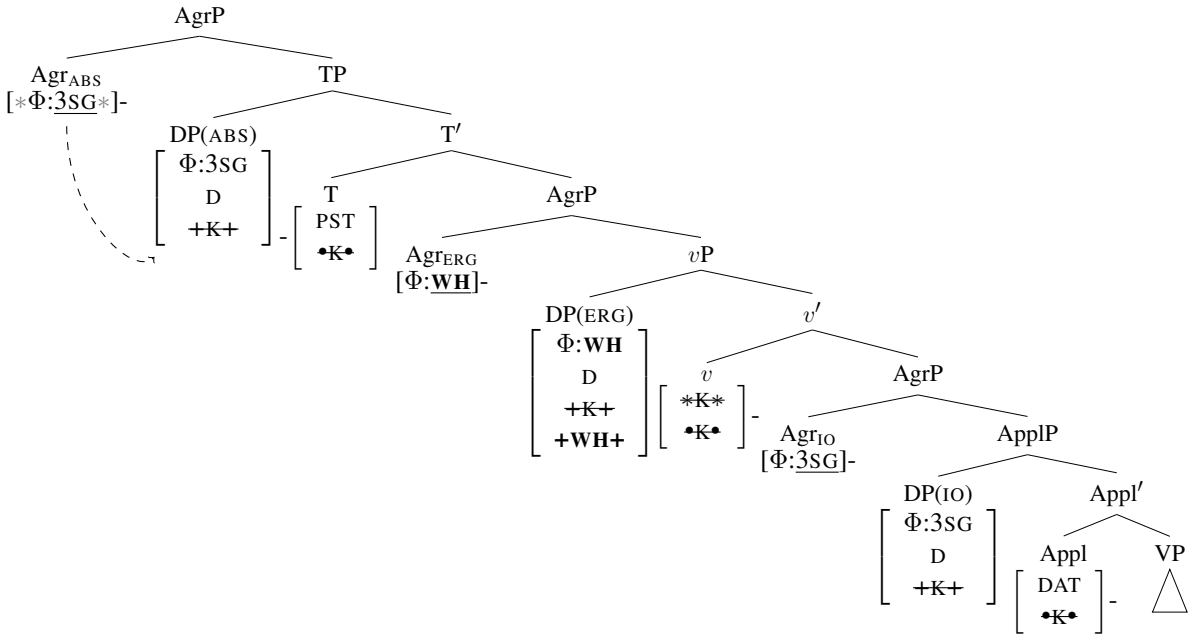
d. Agr<sub>ERG</sub> merges above vP and agrees with the ergative agent in the WH-feature:



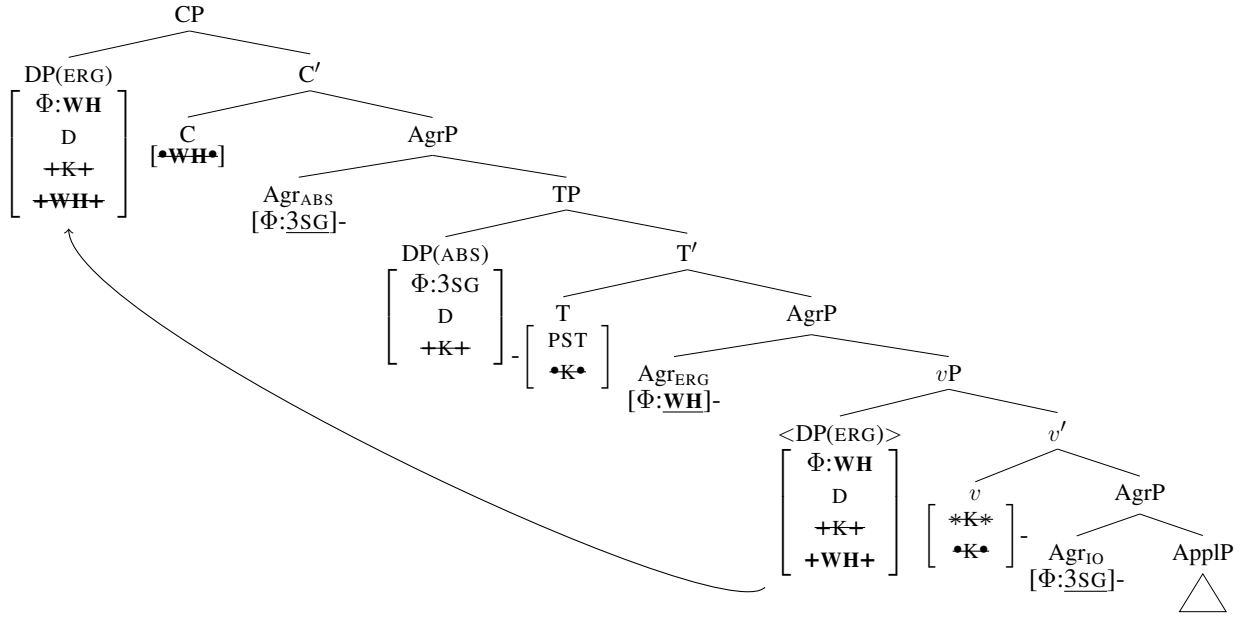
e. T<sup>0</sup> selects for AgrP and attracts the absolutive DP to its specifier via •K•:



f. Agr<sub>ABS</sub> merges above TP and agrees with the absolutive DP:

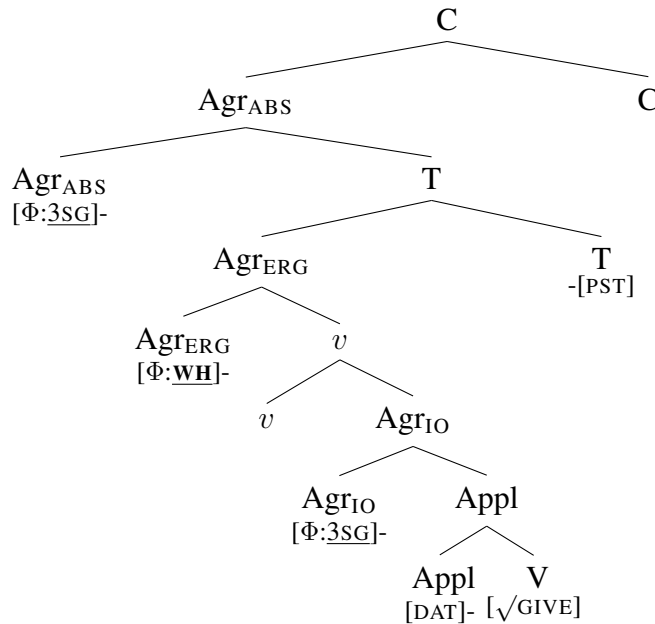


g. The ergative agent moves to Spec,CP to check •WH• on C<sup>0</sup>:



As with any other verbal form, the verb is concatenated via head movement, resulting in the complex head in (170a), which is then linearized into the string of morphemes in (170b). After metathesis of the ergative and applicative morphology (170c), vocabulary insertion renders the surface form (170d) with wh-agreement appearing in the position of the ergative  $\phi$ -agreement.

(170) a. Result of head movement:



b. Result of linearization:

[Agr<sub>ABS</sub>;3SG]- [Agr<sub>ERG</sub>;WH]- [*v*;Ø]- [Agr<sub>IO</sub>;3SG]- [Appl;DAT]- [V;√GIVE] -[T;PST]

c. Applicative metathesis:

→ [Agr<sub>ABS</sub>;3SG]- [**Agr<sub>IO</sub>;3SG**]- [**Appl;DAT**]- [Agr<sub>ERG</sub>;WH]- [*v*;Ø]- [V;√GIVE] -[T;PST]

d. Vocabulary insertion:

Ø- Ø- **je-** **zə-** tə -**ɬe**

A single relative clause may contain several wh-agreement markers. The following subsection outlines the basic properties of this construction.

#### 4.2.2 Multiple wh-agreement

West Circassian relative clauses may contain more than one instance of wh-agreement, if the relativized participant is co-referent with another argument in the clause, resulting in patterns of multiple wh-agreement. For example, the relative clause in (171a) 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 co-referent with the relativized indirect object. In (171b), on the other hand, the third person possessor agreement is replaced with the wh-agreement marker *zə-*; in this case, the possessor is obligatorily interpreted as co-referent with the relativized indirect object.

- (171) a. marə [RC č'al-ew<sub>i</sub> t<sub>i</sub>(IO) [DP *pro*<sub>i/j</sub>(PR) ə-š](ERG) velosiped  
 here boy-ADV 3SG.PR-brother bicycle  
 Ø- qə- **ze-** r- jə- tə -**ɬe**] -r  
 3ABS- DIR- **WH.IO-** DAT- 3SG.ERG- give -PST -ABS  
 'Here is the boy<sub>i</sub> to whom his<sub>i/j</sub> brother gave a bicycle.'

- b. marə [RC č'al-ew<sub>i</sub> t<sub>i</sub>(IO) [DP *pro*<sub>i/\*j</sub>(PR) **zə-**š](ERG) velosiped  
 here boy-ADV **WH.PR**-brother bicycle  
 Ø- qə- **ze-** r- jə- tə -**ɬe**] -r  
 3ABS- DIR- **WH.IO-** DAT- 3SG.ERG- give -PST -ABS  
 'Here is the boy<sub>i</sub> to whom his<sub>i/\*j</sub> brother gave a bicycle.'



The additional wh-agreement may appear in all types of relative clauses: internally headed, as in (171b), as well as externally headed and headless relative clauses, as illustrated in (177) and (180) in the following section, providing an additional piece of evidence that these three constructions are structurally identical.

Such patterns of multiple wh-agreement may appear intra-clausally – between a relativized participant and a co-referent pronoun embedded within another DP, as in (171b), as well as cross-clausally, with the additional wh-agreement marker surfacing within an embedded clause.<sup>4</sup> An example of cross-clausal wh-agreement is shown below: the baseline finite construction is in (172a): the ergative DP in the matrix clause is interpreted as co-referent 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 co-referent pronoun in the ergative position, or this agreement may be replaced with an additional instance of wh-agreement (172b).

- (172) a. mə ɕ'ale-m<sub>i</sub>(ERG) varenje Ø- j- e- šxə [CP *pro*<sub>i</sub>(ERG)  
           this boy-OBL jam 3ABS- 3SG.ERG- DYN- eat  
           swəpə-r Ø- ə- mə- wəx -ze]  
           soup-ABS 3ABS- 3SG.ERG- NEG- finish -CNV  
           ‘This boy is eating jam without finishing the soup.’
- b. marə [RC ɕ'al-ew<sub>i</sub> t<sub>i</sub>(ERG) varenje Ø- zə- šxə -re -r  
           here boy-ADV jam 3ABS- **WH.ERG**- eat -DYN -ABS  
           [CP *pro*<sub>i</sub>(ERG) s<sup>w</sup>əpə-r Ø- ə / zə- mə- wəx -ze] ]  
                                   soup-ABS 3ABS- **3SG/WH.ERG**- NEG- finish -CNV  
           ‘Here is the boy who is eating jam without finishing the soup.’

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 co-referent argument (Lander

4. Lander (2009a, 2012) argues that cross-clausal cases of multiple wh-agreement are structurally distinct from intra-clausal cases. The analysis proposed here dispenses of the necessity to treat these two cases as separate phenomena and accounts for the differences between the two types of constructions by appealing to general structural restrictions on multiple wh-agreement; for more discussion see subsection 4.3.5.

2012:322-327). Thus, while it is possible to mark only the ergative participant in (171a) with wh-agreement, the inverse pattern is not possible: the co-referent possessor of the indirect object may not be marked with wh-agreement if the ergative participant triggers regular third person agreement (173).<sup>5</sup>

- (173) \* marə [RC č'al-ew<sub>i</sub> pro<sub>i</sub>(IO) [DP t<sub>i</sub> zə-š](ERG) velosiped Ø-  
 here boy-ADV WH.PR-brother bicycle 3ABS-  
 Ø- r- jə- tə -be] -r  
 3SG.IO- 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 which connects directly to the additional nature of one of the wh-markers. In particular, I argue that multiple wh-agreement 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.

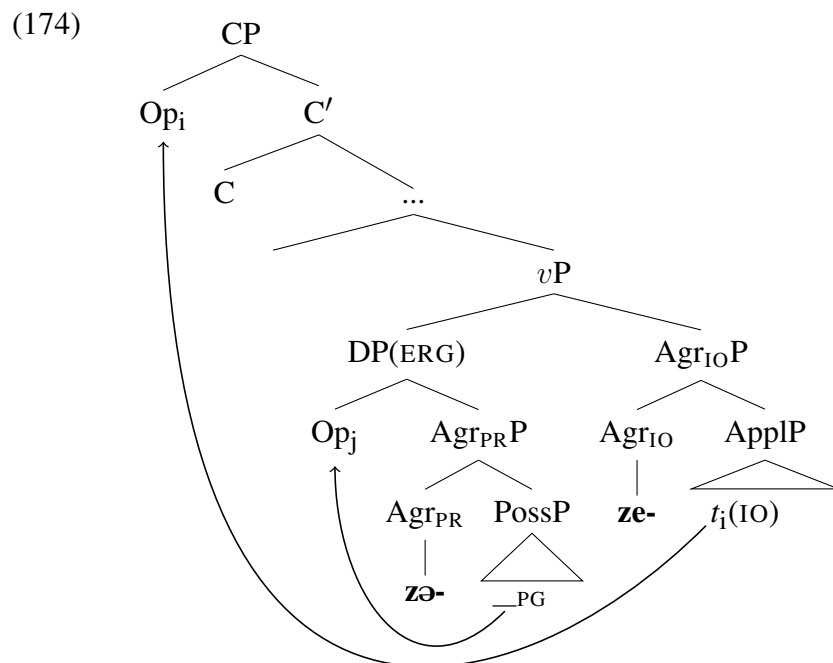
### 4.3 Multiple wh-agreement as a parasitic gap dependency

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), *inter alia*, that parasitic gap constructions involve local operator movement to the edge of the constituent hosting the gap. Both the parasitic and the licensing gaps 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 (171b) and (172b) are presented schematically in (174) and (175)

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5. While some types of possessors may be relativized directly, the possessor of an indirect object, as in (173), may not. This is why the sentence is simply ungrammatical, as opposed to having an interpretation wherein the possessor is not co-referent with the ergative agent.

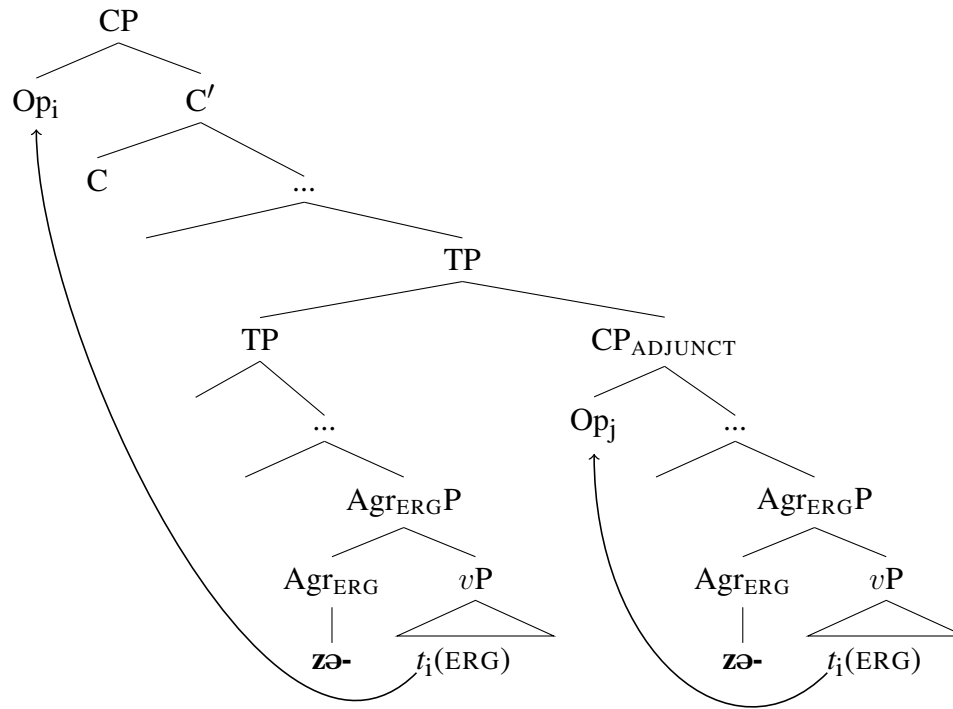
below. In (174) the relativization of the applied object licenses a parasitic gap within the ergative DP; the parasitic gap configuration is built via wh-movement of a null operator from Spec,PossP to the edge of the corresponding DP.<sup>6</sup> The wh-feature on the applied object triggers local wh-agreement with Agr<sub>IO</sub> c-commanding ApplP, while the wh-agreement surfacing within the ergative DP is the exponent of agreement between Agr<sub>PR</sub> above PossP and the possessor parasitic gap.



In (175) the parasitic gap is analogously licensed within an adjunct to TP. The ergative agent triggers wh-agreement on Agr<sub>ERG</sub> above *v*P, while the wh-agreement within the adjunct is locally triggered on the embedded Agr<sub>ERG</sub> by the parasitic gap.

6. See chapter 2 for details regarding the syntax of possessors and possessor agreement.

(175)



The argumentation for this structure proceeds as follows:

- The additional wh-agreement is parasitic on the primary wh-agreement: it either 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 co-reference 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, and not 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  $\phi$ -agreement with a pronoun.

### 4.3.1 *Multiple wh-agreement is parasitic*

This subsection 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 co-referent argument in a potential licensing position. Islands for extraction that allow parasitic gaps include non-absolutive DPs and adjunct clauses; non-island contexts which allow for parasitic gaps are absolutive DPs and complement clauses.

#### Islands

As was shown in (171b), a possessor that is co-referent 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 non-absolutive arguments.<sup>7</sup> In such cases the corresponding non-absolutive DP must be relativized to form a pseudo-cleft construction, with that relativized DP acting as the absolutive subject. The possessor is then extracted out of that absolutive DP. Illustrations of how possessors of various non-absolutive arguments are relativized are provided 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 (176a): the DP *mwe š<sup>w</sup>əzəm* ‘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 (176b) we can see that direct relativization of the possessor, with wh-agreement replacing possessor agreement on the possessed nominal and no

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7. 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 non-absolutive DP. The majority of my consultants uniformly ban extraction of possessors from non-absolutive DPs.

(176) a. [DP [**mwe** **š<sup>w</sup>əzə-m**](PR)                      ə-q<sup>w</sup>e](IO)                      č'elejeɓaʒe-r                      Ø-  
                   **this woman-OBL**                      **3SG.PR-son**                      teacher-ABS                      3ABS-  
                   Ø-                      je-                      ɕeɕa -ɓ  
                   **3SG.IO- DAT- scold -PST**  
                   ‘The teacher scolded this woman’s son.’

- Expected: 'Here is the woman whose son the teacher scolded.'

- ‘Here is the woman whose son the teacher scolded.’ (lit. ‘Here is the woman whose son is the one the teacher scolded.’)

(177) [RC Op<sub>i</sub> [DP *pro*<sub>i</sub>/\_\_\_<sub>PG</sub>(PR) ə/zə-ʃ](IO) t<sub>1</sub>(ERG) konfet Ø-  
 3SG/WH.PR-brother candy 3ABS-  
 Ø- je- zə- tə -be] p̣ṣạʃe-m sə-Ø-ʃ'ə-tɣ<sup>w</sup>ə-ɸ  
 3SG.IO- DAT- WH.ERG- give -PST girl-OBL 1SG.ABS-3SG.IO-LOC-praise-PST  
 'I praised the girl<sub>i</sub> that gave candy to her<sub>i</sub> brother.'

2. Possessor of the ergative agent. Analogous to 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 (178a), 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 (178b).

- (178) a. \* mwarə [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-λ](ERG) wəne-xe-r  
 here woman-ADV WH.PR-POSS-man house-PL-ABS  
 Ø- ə- šə -re] -r  
 3ABS- 3SG.ERG- do -DYN -abs

Expected: ‘Here is the woman whose husband builds houses.’

- b. mwarə [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-λ]<sub>j</sub>(ABS) [RC Op<sub>j</sub> t<sub>j</sub>(ERG)  
 here woman-ADV WH.PR-POSS-man  
 wəne-xe-r Ø- zə- šə -re] ] -r  
 house-PL-ABS 3ABS- WH.ERG- 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 (171b), 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 non-absolutive argument is extracted, as in (176c) and (178b), superficially resembles multiple wh-agreement constructions as in (177). However, there are several important differences that suggest that this construction is distinct and involves recursive relativization, rather than a parasitic gap dependency.

Firstly, the wh-agreement in (176c) and (178b) 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 co-referent argument.

Secondly, the pseudo-cleft analysis of the constructions in (176c) and (178b) 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*.<sup>8</sup> This prediction is illustrated in (179) for the analogous pseudo-cleft construction when it is used as a matrix clause: the plural DP *sq<sup>w</sup>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 predication copula *arə*, which is absent in the relative clause.<sup>9</sup>

- (179) *s-q<sup>w</sup>e-xe-r*                      *arə*                      [<sub>RC</sub> Op<sub>i</sub> *t<sub>i</sub>*(ERG)    *zeç'e laʁe-xe-r*                      Ø-  
 1SG.PR-son-PL-ABS                      PRED                      all                      dish-PL-ABS    3ABS-  
*zə- q<sup>w</sup>əta -ʁe]* -xe -r  
 WH.ERG- break -PST -PL -ABS  
 ‘My sons are the ones who broke all the dishes.’

In a multiple wh-agreement construction, on the other hand, the DP containing the wh-agreeing possessor is expected to carry the case assigned to it by the predicate heading the relative clause. Thus, in (180) the wh-agreement triggered by the possessor of the indirect object is parasitic on the wh-agreement with the ergative agent of the predicate *šefən* ‘buy’.

- (180) *xet-a*                      [<sub>RC</sub> Op<sub>i</sub> *bere t<sub>i</sub>*(ERG)    *šəʁən*                      [<sub>DP</sub> \_\_<sub>PG</sub> *z-jə-sabəj-xe-m*](IO)  
 who-Q                      often                      clothing                      WH.PR-POSS-child-PL-OBL  
 Ø-    a-                      fe-    *zə-*                      mə-    *šefə -re]*    -r  
 3ABS- 3PL.IO- BEN- WH.ERG- NEG- buy -DYN -ABS  
 ‘Who<sub>i</sub> rarely buys clothes for their<sub>i</sub> children?’

Turning back to relativization of possessors of non-absolutive arguments, the picture with case marking is surprisingly blurry. Most speakers do not have a clear judgment regarding the case marking: some speakers allow for absolutive case marking on the plural possessed noun, and some – for oblique marking, but both strategies are judged only marginally acceptable. Thus, the only grammatical way of expressing the meaning in (181), with the relativization of a possessor from

8. Thank you to Yury Lander for suggesting this diagnostic and accurately predicting its outcome based on his own previously collected data.

9. For details on the behavior of the predicative copula *arə* and pseudo-clefts as a way of marking information structure see Sumbatova (2009).



the ergative DP, and in (182), where the possessor of an applied object is relativized, is to omit plural marking – and, correspondingly, case marking as well – on the possessed nominal;<sup>10</sup> both absolutive and oblique case marking are judged only marginally possible or completely ungrammatical.

- (181) marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č'ale / ??z-jə-č'ale-xe-r  
 here woman-ADV WH.PR-POSS-boy / WH.PR-POSS-boy-PL-ABS  
 / ??z-jə-č'ale-xe-m ]<sub>j</sub> [RC Op<sub>j</sub> t<sub>j</sub>(ERG) dax-ew wered  
 / WH.PR-POSS-boy-PL-OBL pretty-ADV song  
 Ø- qe- zə- ?<sup>w</sup>e -re] ] -r  
 3ABS- DIR- WH.ERG- say -DYN -ABS  
 'Here is the woman whose children sing well.'

- (182) mə bzəlfəbe-r arə [RC Op<sub>i</sub> [DP t<sub>i</sub>(PR) z-je-č'ale /  
 this woman-ABS PRED WH.PR-POSS-boy  
 \*z-jə-č'ale-xe-r / \*z-jə-č'ale-xe-m ]<sub>j</sub> [RC Op<sub>j</sub> t<sub>j</sub>(IO) velosiped  
 WH.PR-POSS-boy-PL-ABS WH.PR-POSS-boy-PL-OBL bicycle  
 Ø- z- e- s- tə -be ] -r  
 3ABS- WH.IO- DAT- 1SG.ERG- give -PST -ABS  
 'Here is the woman to whose children I gave a bicycle.'

This can be contrasted with a structure that involves the relativization of a possessor of an absolutive argument – in this case, absolutive case marking on the possessed noun is perfectly acceptable, and oblique marking is impossible: this is true both for themes of transitive verbs (183) and external arguments of intransitive verbs (184).

- (183) mə bzəlfəbe-r arə [RC Op<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č'ale-xe-r/\*m](ABS)  
 this woman-ABS PRED WH.PR-POSS-boy-PL-ABS/\*OBL  
 bedzerə-m Ø-Ø-š'ə-s-λeβ<sup>w</sup>ə-xe] -r  
 market-OBL 3ABS-3SG.IO-LOC-1SG.ERG-see-PL -ABS  
 'This woman is whose sons I saw at the marketplace.'

- (184) xet-a [RC Op<sub>i</sub> [DP t<sub>i</sub>(PR) z-jə-č'ale-xe-r/\*me ] dax-ew  
 who-Q WH.PR-POSS-boy-PL-ABS/\*PL.OBL beautiful-ADV  
 Ø- qa- š<sup>w</sup>e -re] -r  
 3ABS- DIR- dance -DYN -ABS

10. Unmarked nominals in West Circassian are unspecified for number and may be interpreted both as plural or singular, based on the context (Kumakhov 1971; Arkadiev and Testelets 2015).

‘Whose sons dance well?’

The contrast between the case marking possibilities for the possessor of an oblique DP in (181)-(182) and the possessor of an absolutive DP in (183)-(184) precludes a unified analysis for possessor extraction across various types of participants, such as both constructions involving wh-agreement with the possessed nominal on the predicate, with the absolutive argument triggering regular null wh-agreement.

The fact that oblique case is not readily available in this construction suggests that this construction is distinct from multiple wh-agreement constructions like (180). The unavailability of absolutive case, however, is puzzling, if this is a simple pseudo-cleft construction. A possible explanation for the unavailability of overt case marking in (181) may lie in syncretism effects (Pul-lum and Zwicky 1986; Bjorkman 2016, *inter alia*): 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 due to a DP that is marked with oblique case moving to an absolutive case position, schematically represented in (185).

(185) [DP-OBL]-ABS [CP ... DP-OBL ]



A detailed analysis of how this syncretism effect arises is outside the scope of this thesis; for the purposes of discussion here it suffices to say that in order for a possessor to be extracted from a non-absolutive DP, that DP must be moved to an absolutive case position.

There are several approaches to the selective islandhood of DPs based on case marking or structural position, but none of them are directly applicable to the case at hand. There has been a long-standing observation that extraction out of subjects that originate as complements is more acceptable than extraction out of external arguments (see e.g. Chomsky 2008; Haegeman et al. 2014), however, as can be observed in the examples in (183)-(184), the accessibility of the possessor for relativization does not depend on the theta-role of the nominal it appears in: in (183) the possessed

nominal is an internal argument, while in (184) it is an external argument – the only thing that unites the two constructions is that the nominal is ultimately assigned absolutive case.

Another approach has been proposed by Branen (2018), who argues that extraction of nonarguments (which includes possessors) from within a DP requires that DP to enter a  $\phi$ -agreement relationship with a higher head, thus “unlocking” the DP phase for extraction. He extends this approach to ergative-absolutive systems by arguing that languages that disallow extraction out of non-absolutive DPs, such as Tsez and Tzotzil, do so because these languages only exhibit  $\phi$ -agreement with the absolutive participant. While straightforward for a language like Tsez, this requires additional assumptions for Tzotzil, which does display ergative verbal indexing. Branen assumes that this indexing is the result of clitic-doubling, rather than an agreement relation, but it remains unclear what type of relation must be established between the head attracting the clitic and the DP from which that clitic moves. This approach is likewise not easily applicable to the West Circassian data: as has been shown throughout this thesis, all verbal participants trigger overt verbal indexing, and even if the prefixal morphology may be analyzed as clitic doubling, rather than proper  $\phi$ -agreement, the most straightforward way of modeling this clitic doubling would still involve feature matching between the clitic and its host (e.g. Arregi and Nevins (2012:57) posit a finiteness feature on clitics that must be checked by +Fin on  $T^0$  or  $C^0$ ), thus requiring the grammar to systematically differentiate between Agree in  $\phi$ -features and Agree in other features.

Finally, Bošković (in press) provides an account of the islandhood of inherently case-marked DPs that connects it to the general islandhood of moved elements, which he models in terms of Chomsky’s (2013) labeling algorithm: inherent case assignment involves the movement of the corresponding DP to a higher projection, thus freezing that DP for further extraction out of it. This approach is again not transferable to the West Circassian data: as has been argued in chapter 3 and will be argued in the remainder of this chapter, the absolutive DP, which is not an island for extraction, uniformly moves to Spec,TP, while the non-absolutive DPs generally remain in-situ. Thus, the islandhood of non-absolutive DPs cannot be explained by the movement of the corresponding constituents.

In summary, it is not clear why non-absolutive DPs are islands for extraction, but the important point is that additional wh-agreement may nevertheless appear within them even though direct relativization out of them is not possible.

**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 co-referent with the participant triggering that wh-agreement is relativized. This is illustrated in the examples below. In (186a) the indirect object of the matrix clause is relativized, while the co-referent<sup>11</sup> applied object in the adjunct clause is expressed as a regular pronoun triggering third person agreement on the embedded predicate; alternatively, the embedded indirect object may also trigger wh-agreement (186b). However, if no participant is relativized from the matrix clause, the indirect object cannot be relativized directly from within the embedded clause – this is illustrated in (186c).

- (186) a. xet-a [RC Op<sub>j</sub> aslan<sub>i</sub> mafe-m rjene [CP pro<sub>i</sub>(ABS)  
 who-Q Aslan day-OBL whole  
 pro<sub>j</sub>(IO) Ø- Ø- je- mə- w -ew] t<sub>j</sub>(IO) Ø- zə- de-  
 3ABS- 3SG.IO- DAT- NEG- hit -ADV 3ABS- WH.IO- COM-  
 ʒeg<sup>wə</sup> -re] -r  
 play -DYN -ABS  
 ‘Who does Aslan play with \_\_ all day without hitting him?’
- b. xet-a [RC Op<sub>j</sub> aslan<sub>i</sub> mafe-m rjene  
 who-Q Aslan day-OBL whole  
 [CP pro<sub>i</sub>(ABS) t<sub>j</sub>(IO) Ø- z- e- mə- w -ew] t<sub>j</sub>(IO)  
 3ABS- WH.IO- DAT- NEG- hit -ADV  
 Ø- zə- de- ʒeg<sup>wə</sup> -re] -r  
 3ABS- WH.IO- COM- play -DYN -ABS  
 ‘Who does Aslan play with \_\_ all day without hitting \_\_?’
- c. \* xet-a [RC Op<sub>j</sub> aslan<sub>i</sub> mafe-m rjene  
 who-Q Aslan day-OBL whole

11. This co-reference is not obligatory – the indirect object of the embedded clause could in principle refer to a contextually provided antecedent; in isolation, however, the interpretation is strongly biased towards a co-reference reading, just as it is in English, cf. the English translation of (186a).

Intended: ‘Who does Aslan play (with him/her) all day without hitting \_\_?’

## Non-islands

(187) a. xet-a [RC Op<sub>i</sub> t<sub>i</sub>(IO) Ø- z- jə- č'ase -r [CP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(IO)  
 who-Q 3ABS- **WH.IO**- LOC- like -ABS  
 podarke-xe-r Ø- Ø / **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. for them to give gifts to him/her)?'

- b. \* xet-a [RC Op<sub>i</sub> *pro*<sub>i</sub>(IO) Ø- Ø- jə- č'ase -r [CP *t*<sub>i</sub>(IO)  
 who-Q 3ABS- **3SG.IO**- LOC- like -ABS  
 podarke-xe-r Ø- **ze-** r- a- tə -n -ew ] ]  
 gift-PL-ABS 3ABS- **WH.IO**- DAT- 3PL.ERG- give -MOD -ADV  
 Expected: 'Who likes to be given gifts?'

5. Possessor of an absolutive DP. As we saw in (159) 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 co-referent 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 (188).

- (188) [RC Op<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) ə / zə-š](ABS) *t*<sub>i</sub>(IO)  
**3SG/WH.PR**-brother  
 Ø- qə- z- e- wa -be] č'ale-m s-Ø-je-wəšəjə-š'ta-Ɂ  
 3ABS- DIR- **WH.IO**- DAT- hit -PST boy-OBL 1SG.ABS-3SG.IO-dat-console-IPF-PST  
 'I consoled the boy whom<sub>i</sub> his<sub>i</sub> brother hit'

While absolutive DPs are not islands for extraction, the wh-agreement triggered by the possessor in (188) 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 co-referent verbal participant (189).

- (189) \* [RC Op<sub>i</sub> [DP *t*<sub>i</sub> zə-š](ABS) *pro*<sub>i</sub>(IO) Ø- q- Ø- je- wa -be]  
**WH.PR**-brother 3ABS- DIR- **3SG.IO**- DAT- hit -PST  
 č'ale-m s-Ø-je-wəšəjə-š'ta-Ɂ  
 boy-OBL 1SG.ABS-3SG.IO-dat-console-IPF-PST  
 Expected: 'I consoled the boy whose<sub>i</sub> brother hit him<sub>i</sub>'

The generalization regarding the relativization of co-referent arguments is that the verbal participant always acts as the licensing gap, and the co-referent 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 (cf. the perfectly acceptable English translation of (189)).

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

#### 4.3.2 *Parasitic gaps cannot be embedded in an additional island*

It has been long 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 (Kayne 1983; Chomsky 1986; Nissenbaum 2000; Hornstein 2001; Kennedy 2003; Nunes 2004, *inter alia*). 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.

- (190) Who did John visit \_\_  
       **non-island:**       ✓ [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 (191) below. 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 (191) a pronoun that is co-referent to 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 co-referent pronoun may be replaced with a parasitic gap.<sup>12</sup> If, however, the co-referent pronoun is embedded within another temporal adjunct, as in (191b), it may not be replaced by a parasitic gap, because the potential parasitic gap dependency would have to cross two island boundaries.

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12. The single question mark is likely to be due to the fact that this type of direct relativization out of the complement is degraded for many speakers, regardless of the construction in this particular example.

- (191) a. marə [RC bzəlfəɸ-ew<sub>i</sub> [ADJUNCT [COMP *pro*<sub>i</sub> / ?\_\_PG(IO) sə-  
 here woman-ADV 1SG.ABS-  
 Ø / ?z- de- g<sup>w</sup>əš'əʔe -nə -m ] sə-pəλə-fe ] zə-g<sup>w</sup>ere  
 3SG/WH.IO- COM- speak -MOD -OBL 1SG.ABS-attempt-LIM one-INDEF  
 t<sub>i</sub>(IO) Ø- qə- z- fə- tje- wa -ɸe] -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]]'
- b. marə [RC š<sup>w</sup>əz-ew<sub>i</sub> [ADJUNCT [ADJUNCT *pro*<sub>i</sub> / ??\_\_PG(IO)  
 here woman-ADV  
 sə- Ø / ??z- de- g<sup>w</sup>əš'əʔ -ew ] sə- š'e- sə -fe ]  
 1SG.ABS- 3SG/??WH.IO- COM- speak -ADV 1SG.ABS- LOC- sit -LIM  
 zə-g<sup>w</sup>ere t<sub>i</sub>(IO) Ø- qə- z- fə- tje- wa -ɸe] -r  
 one-INDEF 3ABS- DIR- WH.IO- BEN- LOC- hit -PST -ABS  
 'Here is the woman whom someone called [while I was sitting [speaking to her]]'

To conclude this subsection, while the additional wh-agreement in a multiple wh-agreement may appear in syntactic islands, as we saw in subsection 4.3.1, it may not be embedded further into an island within that island. This property of parasitic gaps has been used to argue for a movement analysis of parasitic gap constructions (see e.g. Kayne 1983; Chomsky 1986). There are other indications in West Circassian that parasitic gaps involve a movement structure. Firstly, as discussed in section 4.2, in-situ wh-elements do not trigger wh-agreement, and parasitic gaps in West Circassian do trigger such agreement, and in fact can only be diagnosed by its presence. Secondly, while the additional wh-agreement in a multiple wh-agreement construction may appear within an island for extraction, it may not appear within relative clauses, which involve the movement of an operator to Spec,CP. Thus, the relativized ergative DP in (192) may not license a parasitic gap in the applied object position in the relative clause.

- (192) marə [RC bzəlfəɸ-ew<sub>i</sub> t<sub>i</sub>(ERG) [RC Op<sub>j</sub> t<sub>j</sub>(ABS) *pro*<sub>i</sub> / \*\_\_PG(IO)  
 here woman-ADV  
 Ø- qə- Ø / \*ze- r- a- tə -ɸe] laɸe-xe-r  
 3ABS- DIR- 3SG/WH.IO- DAT- 3PL.ERG- give -PST dish-PL-ABS  
 Ø- zə- thaç'ə -xe -re ] -r  
 3ABS- WH.ERG- wash -PL -DYN -ABS  
 'Here is the woman who is washing the dishes that were given to her yesterday.'



If parasitic gap constructions are derived via operator movement to the specifier of the constituent hosting the gap, this is a logical consequence of a general constraint on wh-movement in the language:  $C^0$  may only host one specifier. I follow Chomsky (1986); Postal (1998); Nissenbaum (2000), a.o., in analyzing this as movement of an operator to the edge of the constituent containing the parasitic gap that is distinct from the operator involved in the creation of the licensing gap. This is primarily based on the fact that alternatives to this account, such as Nunes' (2001; 2004) theory of sideward movement, require additional stipulations regarding the nature of syntactic movement and the restrictions it is subject to, while Nissenbaum (2000) provides convincing evidence that the local operator analysis of parasitic gaps accounts for the full range of distributional properties these constructions display. It is important to note, however, that the main diagnostics that provide evidence for a distinct null operator within the constituent hosting the parasitic gap are not easily applicable in West Circassian.

### Note on *Null Operator* diagnostics

Nissenbaum (2000:29-35) presents several diagnostics that indicate that parasitic gaps in English are locally bound by a null operator at the edge of the adjunct hosting the corresponding parasitic gap, as opposed to the operator at the higher Spec,CP. Unfortunately, these diagnostics are not readily applicable to West Circassian multiple wh-agreement constructions due to independent properties of the language.

1. Asymmetric reconstruction for Condition A: In English, a wh-expression containing a reflexive may only be reconstructed in the position of the licensing gap.

(193) Nissenbaum (2000:30):

- a. Which pictures of himself did John sell before Mary had a chance to look at?
- b. \* Which pictures of himself did Mary sell before John had a chance to look at?

In West Circassian, reflexives (i) generally do not appear in nominals and (ii) do not reflect

the  $\phi$ -features of the antecedent, as reflexives do in English. The only comparable construction that contains a reflexive is a verbal nominalization. There is good evidence that such nominalizations contain a non-obligatory control PRO that locally binds the reflexive (Ershova 2018, 2019), meaning that the reflexive pronoun cannot be used to test for reconstruction. However, verbal nominalizations could be potentially used as the closest available approximation of Nissenbaum's (2000) Condition A test: if PRO in the relativized nominalization is locally controlled by an argument in the same clause, one might predict that in a parasitic gap construction PRO may have only one accessible antecedent – the one provided in the licensing gap position. This expectation is not borne out: in (194) we can see that a nominalization of this type is relativized, with the licensing gap in the absolutive position in the higher clause, and the parasitic gap in the indirect object position in the embedded clause. In this case, the PRO within the nominalization – and, correspondingly, the reflexive marker – may be interpreted as bound by either the higher ergative agent, i.e. in the position of the licensing gap (194a), or the embedded absolutive argument, i.e. in the position of the parasitic gap (194b).

- (194) [RC Op<sub>i</sub> (se<sub>j</sub>(ERG)) t<sub>i</sub>(ABS) §<sup>w</sup>ə Ø- s- λeβ<sup>w</sup>ə -re -r  
(I) good WH.ABS- 1SG.ERG- see -DYN -ABS  
[CP Op<sub>i</sub> s-šə-xe-r<sub>k</sub> \_\_<sub>PG</sub>(IO) Ø- zə- fe- mə- j -ew] ]  
1SG.PR-brother-PL-ABS 3ABS- WH.IO- BEN- NEG- want -ADV  
[DP PRO<sub>j/k</sub> zə-βe-psefə-nə-r]<sub>i</sub>  
REFL-CAUS-rest-NML-ABS  
‘What I love (lit. see good in) \_\_ [despite my brothers not wanting \_\_] is resting (lit. causing oneself to rest)’.
- a. ✓ my brothers don’t want me to rest
- b. ✓ my brothers don’t want themselves to rest

At first glance, the data in (194) provides a challenge to the null operator analysis of parasitic gaps. However, this data cannot in fact be treated as evidence against this analysis because the same two co-reference options are available in the absence of any operator movement or parasitic gaps, as can be seen in (195).

- (195)  $\dot{\text{ş}}^{\text{w}}_{\text{ə}}$  Ø-s-e-le $\text{ʁ}^{\text{w}}$  [DP **PRO**<sub>j</sub> zə- $\text{ʁe}$ -psefə-nə-r]<sub>i</sub>  
 good 3ABS-1SG.ERG-DYN-see REFL-CAUS-rest-NML-ABS  
 [CP s- $\text{šə}$ -xe-r *pro*<sub>i</sub>(IO) Ø-Ø-fe-mə-j-ew]  
 1SG.PR-brother-PL-ABS 3ABS-3SG.IO-BEN-NEG-want-ADV  
 ‘I love resting despite my brothers not wanting that’
- a. ✓ my brothers don’t want me to rest
- b. ✓ my brothers don’t want themselves to rest

Compare this to an altered version of (193a), without wh-movement or parasitic gaps: in (196) the pronoun in the embedded clause does not allow for a sloppy anaphora interpretation of the reflexive *themselves*.

- (196) The workers posted pictures of themselves before the managers had a chance to look at them.
- a. ✓ the managers had a chance to look at pictures of the workers
- b. \* the managers had a chance to look at pictures of themselves

2. Asymmetric reconstruction for Condition C: In English, an R-expression is only reconstructed in the position of the licensing gap for the purposes of Condition C.

- (197) Nissenbaum (2000:33):
- a. \* Which picture of John<sub>i</sub> did he<sub>i</sub> buy without letting Mary look at?
- b. Which picture of John<sub>i</sub> did Mary buy without letting him<sub>i</sub> look at?

Condition C effects are not easily testable in West Circassian; while the expected binding configurations are possible, as shown in (198a), violations of Condition C are commonplace, cf. the ungrammaticality of the literal English translation of (198b), where the possessor of the ergative agent in the complement clause is an R-expression that may be co-referent with the null pronoun appearing in the absolutive position in the matrix clause.<sup>13</sup>

13. See also Testelet (2009b), section 4.6 of this chapter, and chapter 5 for discussion of violations of Condition C in cross-clausal configurations.

- (198) a. [CP [DP *pro*<sub>i/j</sub>](PR) Ø-jə-sabəj-me](ERG) bere laɐe-xe-r(ABS)  
3SG.PR-POSS-child-PL.OBL much dish-PL-ABS  
Ø-a-thač'ə-n-ew] [DP mə bzəlfəɐe-r]<sub>i</sub>(ABS) Ø-Ø-faj  
3ABS-3PL.ERG-wash-MOD-ADV this woman-ABS 3ABS-3SG.IO-want  
'This woman<sub>i</sub> wants her<sub>i/j</sub> children to wash the dishes often.'
- b. [CP [DP [DP mə bzəlfəɐe-m](PR) Ø-jə-sabəj-me](ERG) bere  
this woman-OBL 3SG.PR-POSS-child-PL.OBL much  
laɐe-xe-r(ABS) Ø-a-thač'ə-n-ew] *pro*<sub>i</sub>(ABS) Ø-Ø-faj  
dish-PL-ABS 3ABS-3PL.ERG-wash-MOD-ADV 3ABS-3SG.IO-want  
'(S)he<sub>i/j</sub> wants this woman<sub>i</sub>'s children to wash the dishes often.'

The last diagnostic provided by Nissenbaum (2000) concerns the interaction of variable binding and quantifiers. It is also not easily testable in West Circassian, (i) because ambiguities in quantifier scope is notoriously difficult to elicit from a linguistically untrained speaker, and (ii) quantifiers and bound pronouns, like the R-expressions discussed above, are not subject to the same structural constraints in West Circassian as they are in English; see also discussion in chapter 5.

### 4.3.3 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).<sup>14</sup> The following examples from Postal (1993:736) illustrate this constraint for English: in (199a) a nominal trace successfully licenses a parasitic gap in the adjunct clause, but the equivalent of this sentence with a PP-trace is ungrammatical (199b).

- (199) a. This is a topic<sub>i</sub> you should think about  $t_i$  [before talking about \_\_<sub>PG</sub>].  
 b. \*This is a topic about which<sub>i</sub> you should think  $t_i$  [before talking \_\_<sub>PG</sub>].

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

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 et al. (2001). However, as Culicover (2001:65) notes, the nominal nature of the antecedent of a parasitic gap remains a robust cross-linguistic tendency.

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 (200) the postpositional phrase in the embedded adjunct is cross-referenced on the predicate via the locative prefix *š’(ə)-* and referred to with a null pronoun (indicated as *pro*) in the matrix clause.

- (200) [CP *pšaše-r* [PP *Ø-jə-ɓ<sup>w</sup>əneɓ<sup>w</sup>ə-xe-m* a-dež’ ]<sub>i</sub> Ø- Ø-  
 girl-ABS 3SG.PR-POSS-neighbor-PL-OBL 3PL.PP-at 3ABS- **3SG.IO-**  
*š’- e- čəje -fe* ] se *pro<sub>i</sub>(LOC)* sə- Ø- š’- e- žeg<sup>w</sup>  
**LOC- DYN- sleep -LIM** I 1SG.ABS- **3SG.IO- LOC- DYN- play**  
 ‘While the girl sleeps at her neighbors’, I play there.’

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 (201): the PP *tjəɓ<sup>w</sup>əneɓ<sup>w</sup>əxem adež* ‘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.

- (201) [PP *t-jə-ɓ<sup>w</sup>əneɓ<sup>w</sup>ə-xe-m* a-dež’ ] arə [RC Op<sub>i</sub> t<sub>iLOC</sub>  
 1SG.PP-POSS-neighbor-PL-OBL 3PL.PP-at PRED  
 sə- **z-** še- žeg<sup>w</sup>ə-re -r [CP mə *pšaše-r* *pro<sub>i</sub> / \*\_\_PG(LOC)*  
 1SG.ABS- **WH.IO- LOC- play -DYN -ABS** this girl-ABS  
 Ø- Ø / \***zə-** š’- e- čəje -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 (202), where both the licensing and the parasitic gaps occupy the applied object position that is cross-referenced with the same locative prefix *š’(ə)-* as in (201). However, unlike in

the previous example, the DP wh-trace may successfully license a parasitic gap within the temporal adjunct.

- (202) [RC Op<sub>i</sub> λepqə-r [CP \_\_<sub>PG</sub>(LOC) Ø- zə- š'ə- rehatə -be -w ] t<sub>i</sub>(LOC)  
 tribe-ABS 3ABS- **WH.IO**- LOC- settle -PST -ADV  
 Ø- zə- š'ə- beB<sup>W</sup>a -be] -r a wəne-çəḵ<sup>W</sup>ə-xe-r 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.' (AC)

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 (200)-(201) is an odds with such an analysis: as can be seen in (200), 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 non-nominal parasitic gaps can appear in languages that have proforms corresponding to the syntactic category in question.

#### 4.3.4 *Parasitic gaps are optional*

This subsection 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 illustrative example from English is in (203).

- (203) Here is the paper that John read *t* before filing \_\_<sub>PG</sub> / his mail. (adapted from Engdahl 1983:14)

As we saw in the previous subsections, the majority of multiple wh-agreement constructions alternate freely with constructions that do not involve additional wh-agreement, but have a pronoun in that position instead. For example, we saw in (171a)-(171b) that the co-reference relationship between the relativized indirect object and the possessor of the ergative DP 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  $\phi$ -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.

#### 4.3.5 *Intra- versus cross-clausal parasitic gap constructions*

Lander (2009a, 2012) treats intra- and cross-clausal cases of multiple wh-agreement as two distinct constructions, labeling them respectively as genuine and ‘fake’ multiple relativization. I argue that, given that both types of constructions display the set of 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 intra- and cross-clausal multiple wh-agreement constructions. Firstly, relativization out of some types of embedded clauses involves prolepsis, i.e. the insertion of an additional argument that is co-referent to 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. Secondly, Lander (2009a, 2012) observes that intra-clausal 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 intra-clausal multiple wh-agreement constructions.

Given these differences, Lander concludes that intra-clausal 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  $A'$ -dependency between a relative operator and a wh-trace, this would mean that within an intra-clausal multiple wh-agreement construction a single relative operator binds two wh-traces, akin to some accounts of across-the-board movement (Citko 2005; deVries 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 A'-movement of a local operator within the constituent hosting the parasitic gap.

None of the differences between intra- and cross-clausal multiple wh-agreement constructions warrant a fundamentally different analysis for the wh-agreement markers that appear within these two constructions. Firstly, prolepsis, which appears in cross-clausal contexts, but is not used in intra-clausal multiple wh-agreement constructions, has long been observed to be a standard way of obviating long distance A'-movement (see e.g. Salzmann 2017). Thus, the lack of proleptic constructions in simple clauses, which lack comparable long distance A'-movement configurations, cannot be taken as indicative of a fundamental difference in the wh-agreement constructions involved. And secondly, while the difference in word order restrictions between intra- 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.<sup>15</sup>

An additional argument against this approach is that while it appeals to constraints on multiple wh-agreement (to be discussed in section 4.4) as evidence that these two constructions are distinct, it does not provide an 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.

It is important to note, however, that the analysis presented here does not preclude the possibility of multiple wh-agreement configurations in West Circassian which are not derived via a parasitic gap dependency. For example, in addition to parasitic gap constructions, English displays constructions that involve ATB movement from two conjoined constituents, as well as constructions that display a mixed set of properties, such as the example in (204), where both gaps are obligatory and it is difficult to assess which gap is parasitic on the other (see discussion of con-

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15. It is also worth noting that there is variation in speaker judgment regarding word order in these constructions: my speakers found examples analogous to the ones Lander (2009a) labels as ungrammatical as perfectly acceptable.



structions like this in e.g. Chomsky 1982; Koopman and Sportiche 1982; Culicover 2001).

(204) Who did you give a picture of \_\_ to \_\_? (Culicover 2001)

One example that is likely not a simple parasitic gap configuration is presented by Lander (2009a), who in fact uses it as evidence against a parasitic gap approach to multiple wh-agreement constructions, because neither of the wh-markers is obviously parasitic on the other: in (205) a single verbal form hosts two wh-agreement markers – one for the benefactive applied object and one for the comitative applied object.<sup>16</sup>

(205) sə-            zə-            fə-    zə-            de-    wepč'ate -š'tə -be -r  
 1SG.ABS- **WH.IO**- BEN- **WH.IO**- COM- chop        -IPF -PST -ABS  
 'the one who<sub>i</sub> I chopped for \_\_ together with \_\_' (Lander 2009a:628)

Additionally, some of the cases of cross-clausal multiple wh-agreement discussed by Lander (2009a) are also likely distinct from the parasitic gap construction. In particular, if a participant is relativized out of an embedded clause in the absence of a co-referent participant in the higher clause, the relativized participant often triggers two instances of wh-agreement: one in place of  $\phi$ -agreement with the corresponding participant in the embedded clause, and the other in the slot tracking agreement with the embedded clause itself. As mentioned in beginning of this subsection, there is considerable variation in acceptability judgements regarding relativization out of clausal complements: if a participant is relativized from within the embedded clause, the preferred way of expressing this is by using additional wh-agreement on the matrix predicate as well; some speakers, however, allow the expression of wh-agreement only on the embedded predicate. For example, the sentence in (206a) involves the relativization of the applied object in the clausal complement of the verb *fejen* 'want'. In this case, the embedded predicate is marked with wh-agreement; the matrix predicate is also preferably marked with wh-agreement, and some speakers allow the omission of

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16. Lander (2009a:628) notes that examples like these are judged marginal by most speakers. My consultants completely reject the use of two applicative morphemes referring to the same participant, making a closer examination of this construction impossible.

the wh-marker in the matrix clause. Importantly, while the wh-agreement on the matrix predicate is optional for some speakers, the wh-marker on the embedded predicate is obligatory: the sentence where only the matrix predicate is marked for wh-agreement, as in (206b), is ungrammatical.

- (206) a. marə [RC bzəlfəʁ-ew<sub>i</sub> [CP t<sub>i</sub>(IO) sə- z- de- g<sup>w</sup>əʃ'əʔe -n -ew]  
 here woman-ADV 1SG.ABS- **WH.IO**- COM- speak -MOD -ADV  
 sə- z / % Ø- pələ -ʁe] -r  
 1SG.ABS- **WH/3SG.IO**- try -PST -ABS  
 'Here is the woman who I tried to speak with.'
- b. \* marə [RC bzəlfəʁ-ew<sub>i</sub> [CP pro<sub>i</sub>(IO) sə- Ø- de- g<sup>w</sup>əʃ'əʔe  
 here woman-ADV 1SG.ABS- **3SG.IO**- COM- speak  
 -n -ew] t<sub>i</sub>(IO) sə- z- pələ -ʁe] -r  
 -MOD -ADV 1SG.ABS- **WH.IO**- try -PST -ABS  
 Intended: 'Here is the woman who I tried to speak with.'

Another example of this type is presented in (207) below. In this case the relativized participant is once again the applied object of the clausal complement of the verb *fjež'en* 'begin';<sup>17</sup> correspondingly, the embedded predicate is marked with wh-agreement (207a). All speakers allow for additional wh-marking on the matrix predicate, with some speakers allowing for its omission. As in the previous case, the wh-agreement on the embedded predicate is obligatory – if wh-agreement is only expressed on the matrix predicate, this sentence is deemed ungrammatical (207b).

- (207) a. xet-a [RC Op<sub>i</sub> we [CP t<sub>i</sub>(IO) wə- z- e- χ<sup>w</sup>enə -n -ew]  
 who-Q you 2SG.ABS- **WH.IO**- DAT- scold -MOD -ADV  
 wə- zə / % Ø- f- je- ž'a -ʁe] -r  
 2SG.ABS- **WH/3SG.IO**- BEN- DAT- begin -PST -ABS  
 'Who did you start to scold?'
- b. \* xet-a [RC Op<sub>i</sub> we [CP pro<sub>i</sub>(IO) w- Ø- je- χ<sup>w</sup>enə -n -ew]  
 who-Q you 2SG.ABS- **3SG.IO**- DAT- scold -MOD -ADV  
 wə- zə- f- je- ž'a -ʁe] -r  
 2SG.ABS- **WH.IO**- BEN- DAT- begin -PST -ABS  
 Intended: 'Who did you start to scold?'

17. By positing a CP complement for the verb *fjež'en* 'begin', I depart from the structure proposed for this verb by Potsdam and Polinsky (2012), who analyze it as a raising predicate that takes a TP as its complement. This is because this verb behaves as a control predicate in the dialect under discussion here; for details see chapter 5.

The obvious difference between these examples of multiple wh-agreement from cases that involve parasitic gaps is that there is only one obvious gap – in the embedded clause, and there is no participant in the matrix clause that is co-referent to the relativized argument. Another reason to believe that this construction does not involve a parasitic gap dependency is that in these cases the gap in the matrix clause is optional, while the gap in embedded clause is obligatory, which is in stark contrast with parasitic gap constructions in complex clauses: within a parasitic gap construction, the wh-agreement in the embedded clause is optional, while the wh-agreement in the matrix clause is obligatory.

Lander (2009a:637-639) proposes that constructions like the ones in (206)-(207) involve semantic reinterpretation of the argument structure of the matrix predicate, wherein the complement clause is reinterpreted as an adjunct, with the matrix predicate selecting for a nominal that is co-referent to the relativized participant instead. These cases are then expected to be structurally equivalent to cases involving additional wh-agreement in an adjunct clause. The examples above, however, demonstrate that this is not the case: the wh-agreement is falsely predicted to be optional within the embedded clause, which is reinterpreted as an adjunct under this account. Additionally, it is difficult to come up with plausible semantics that would allow for the predicate *pələn* ‘try’ in (206) to select for the nominal *bzəlfəbe* ‘woman’ as the applied object, or for the predicate *fjež’en* ‘begin’ to select for an individual as its applied object in (207).

Thus, it is evident that multiple wh-agreement that surfaces in cases of relativization of an argument that is embedded within a complement clause cannot be analyzed as a parasitic gap dependency. Instead, this construction must involve either wh-agreement triggered by successive-cyclic movement through the embedded Spec,CP, as has been proposed for Chamorro by Chung (1994, 1998), or a scope-marking construction wherein the matrix and the embedded clause involve two separate cases of relativization, and the complement clause acts as a semantic restriction on the operator in the higher clause, as has been proposed for Hindi by Dayal (1994) and for Passamaquody by Bruening (2004, 2006), among others. I leave the task of determining which of these options is correct to future research.

#### 4.3.6 *Summary: Multiple wh-agreement is a parasitic gap dependency*

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

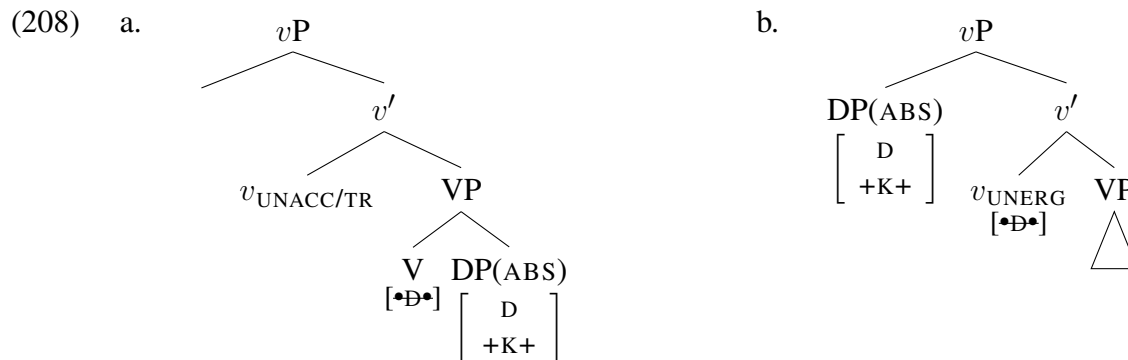
The remainder of the paper explores the possibility of using the parasitic gap analysis of multiple wh-agreement as a diagnostic for syntactic structure. Section 4.4 demonstrates how restrictions on patterns of multiple wh-agreement provide evidence for the high position of the absolutive DP, i.e. for structural syntactic ergativity, while section 4.5 shows how the lack of restrictions on multiple wh-agreement, coupled with their optionality in certain configurations, is a consequence of optional A-scrambling of the applied object to Spec,*v*P.

### 4.4 **The Anti-C-Command Condition and syntactic ergativity**

In the previous section I have 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 developed 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 co-referent to a relativized clausemate absolutive participant may not trigger additional wh-

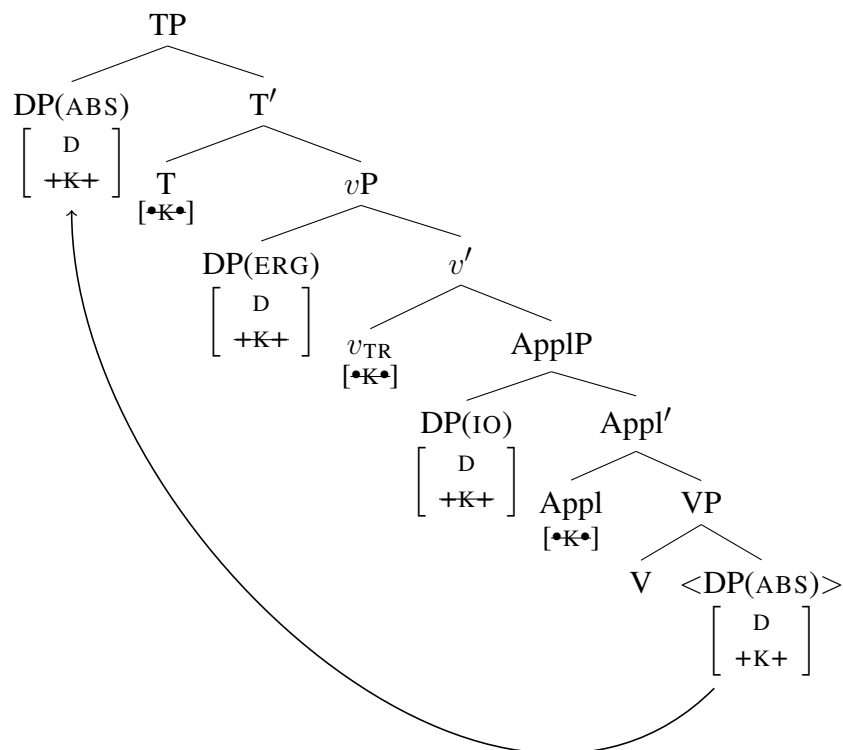
agreement. This restriction can be made sense of in light of general properties of parasitic gaps and in particular – the anti-c-command condition, which states that a licensing gap cannot c-command the parasitic gap (Engdahl 1983). This leads us to conclude that the absolutive DP c-commands other clausemate DPs, including the ergative agent. The behavior of parasitic gaps then provides corroborating evidence for the high absolutive analysis proposed for West Circassian in chapter 3: in this language, syntactic ergativity effects arise due to the high position of the absolutive DP.

The way the anti-c-command condition manifests itself in West Circassian parasitic gap constructions provides support for the clause structure proposed in the previous chapter. In particular, the absolutive DP is merged within  $vP$ , as the complement of  $V^0$  if it is the internal argument (208a) or as the specifier of  $v^0$  if it is the external argument of an unergative verb (208b).



The ergative agent is merged as the specifier of  $v^0$ , and any applied indirect objects are introduced as high applicatives as specifiers of  $Appl^0$ . All DPs carry the licensee feature  $[+K+]$  that must be checked in the course of the derivation. Transitive  $v^0$  and  $Appl^0$  introduce the ergative agent and applied object via the feature  $[•K•]$ , thus licensing those two arguments, while the absolutive DP is introduced via  $[•D•]$ , either on intransitive  $v^0$  or on the lexical verb and thus remains unlicensed until  $T^0$  is merged. The absolutive DP then raises to the specifier of  $T^0$  to check  $[•K•]$  on  $T^0$  and  $[+K+]$  on the DP. This is shown for a three-place transitive predicate in (209).

(209)



The remainder of this section is organized as follows: subsection 4.4.1 presents the data illustrating the restriction imposed on multiple wh-agreement constructions and subsection 4.4.2 connects this restriction to the parasitic gap analysis of multiple wh-agreement.

#### 4.4.1 *The Absolutive Constraint*

Multiple wh-agreement constructions in West Circassian are not always possible, in particular, they are subject to the following constraint, first described by Lander (2009a,b, 2012).<sup>18</sup>

(210) ABSOLUTIVE CONSTRAINT ON MULTIPLE WH-AGREEMENT:

Intra-clausal multiple wh-agreement is ungrammatical if the relativized participant is the

18. Lander (2009b) assumes a connection between the Absolutive Constraint and the subjecthood (i.e. structurally privileged) status of the absolutive DP; however, he does not discuss the exact nature of this connection.

absolutive DP (Lander 2009a,b, 2012).

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

(211) **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 *jece-qen* ‘bite’ is 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 co-referent with the relativized participant; this possessor pronoun, however, may not be replaced with a parasitic gap that would trigger wh-agreement on the possessed noun (212).

- (212) se sə-Ø-š'e-š'əne [RC ha-wi t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*\_\_<sub>PG</sub>(PR)  
 I 1SG.ABS-3SG.IO-LOC-fear dog-ADV  
 Ø / \*z-jə-x<sup>w</sup>ezjajən](IO) Ø- Ø- je- ceqe -ž'ə -be] -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 (213) the absolutive theme of the verb *š'en* ‘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 co-referent with the relativized absolutive participant. This pronoun, however, cannot be replaced with a parasitic gap and, correspondingly, cannot trigger wh-agreement.

- (213) marə [RC pšaš-ew<sub>i</sub> t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane](IO)  
 here girl-ADV 3SG/\***WH.PR**-mother  
 Ø- qə- Ø- fe- s- š'a -be] -r  
**WH.ABS**- DIR- 3SG.IO- BEN- 1SG.ERG- bring -PST -ABS  
 'Here is the girl whom I brought for her mother.'

3. Absolutive internal argument and a possessor of an ergative agent. In (214) the absolutive argument of the causative verb *bešxen* 'feed' is relativized; the null pronoun in the position of the possessor of the ergative agent may in this case be interpreted as co-referent with the relativized participant. As in the previous cases, however, a parasitic gap may not replace this pronoun.

- (214) [RC Op<sub>i</sub> t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane](ERG)  
 3SG/\***WH.PR**-mother  
 Ø- mə- ɣa- šxe-re] haž<sup>w</sup>əš'ər-xe-m sə-g<sup>w</sup> Ø-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 in this subsection 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'əB<sup>w</sup>əpšen* 'forget'. In (215) 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 co-referent with the relativized participant. As in the previous cases, this pronoun cannot then be replaced with a parasitic gap.

- (215) [RC pšešežəj-ew<sub>i</sub> t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane](IO)  
 girl-ADV 3SG/\***WH.PR**-mother  
 Ø- Ø- š'ə- B<sup>w</sup>əpša -be] -m sə-g<sup>w</sup> Ø-j-e-B<sup>w</sup>  
**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. she chews my heart).’

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

#### 4.4.2 *The Anti-C-Command Condition*

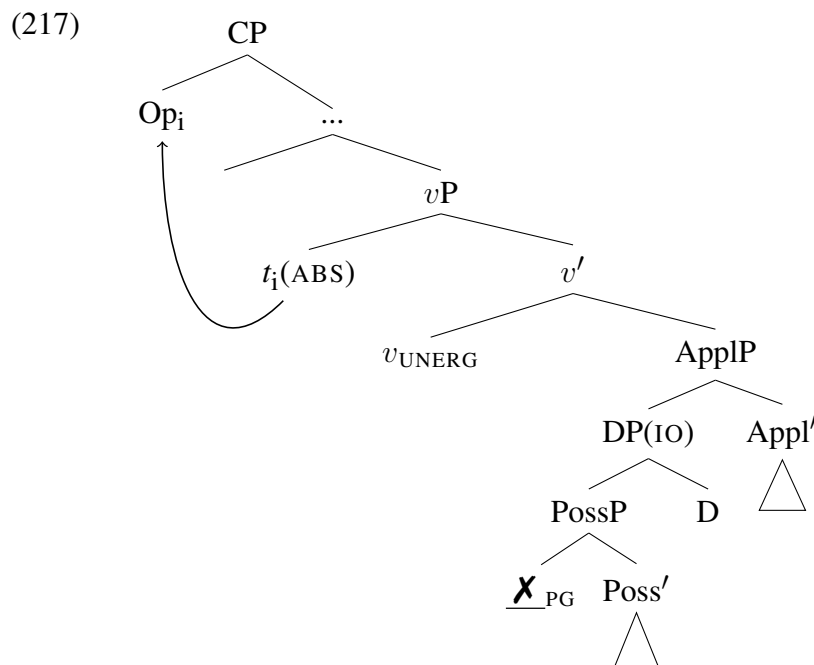
This subsection aims to connect the Absolutive Constraint in (211) with general structural restrictions that parasitic gaps are subject to. A well-known condition on the licensing of parasitic gaps is the anti-c-command condition, which states that the licensing gap may not c-command the parasitic gap (see e.g. Engdahl 1983; Aoun and Clark 1985; Chomsky 1986; Contreras 1987):

(216) ANTI-C-COMMAND CONDITION:

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

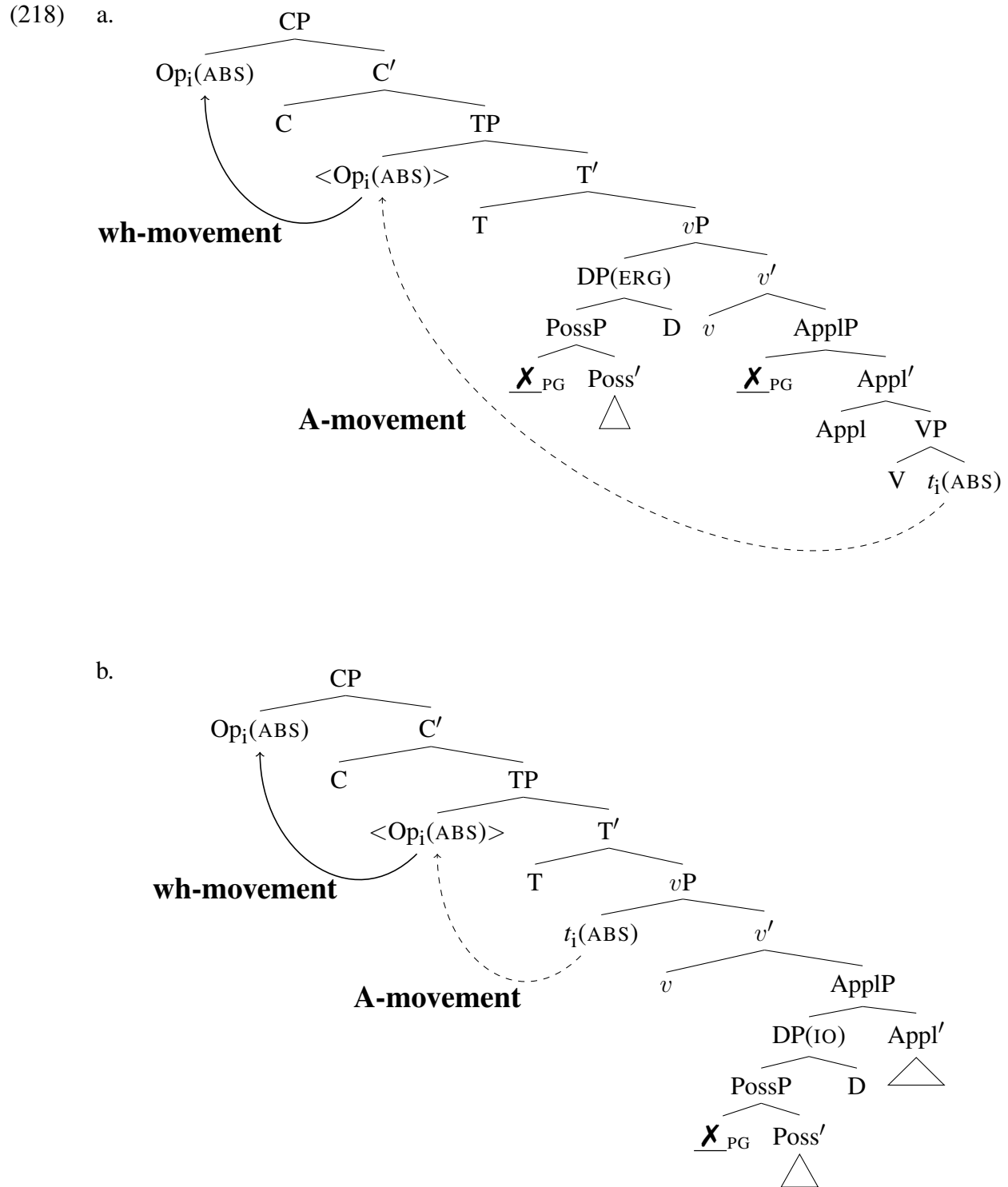
A possible solution to the Absolutive Constraint then is the following: the absolutive trace cannot license a parasitic gap in a clausemate DP because it c-commands that DP and correspondingly the potential site of the parasitic gap. On the other hand, if a parasitic gap can appear within a construction,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

For some of the argument structure configurations listed in the previous section, the assumption that the absolutive trace c-commands the potential parasitic gap site is noncontroversial. For example, the absolutive external argument in (212) would c-command the possessor of the applied object under any theoretical account – this structure is illustrated in (217) below: assuming that the absolutive DP merges as the specifier of *v*P 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.



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

I argued in chapter 3 based on reflexive binding facts that the base generated position of the absolute DP varies according to its theta-role: an absolute theme is introduced as the complement of  $V^0$  and an absolute agent is introduced in  $\text{Spec},vP$ . This means that the c-commanding position of the absolute DP is derived. As in the previous chapter, I propose that this position is  $\text{Spec},TP$ : the absolute DP raises to  $\text{Spec},TP$  to check the licensee feature  $[+\kappa+]$ . Ergative agents and applied objects, on the other hand, are licensed by the heads that introduce them, so neither the ergative, nor the indirect object DP move to a position higher than  $\text{Spec},TP$ . This leads to a configuration wherein the absolute DP c-commands all other verbal arguments. Thus, if the absolute 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. This is illustrated for a transitive verb in (218a) and for an unergative verb with an applied object in (218b).



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. In (219)

we can see that an ergative trace can successfully license a parasitic gap within the absolutive DP.

- (219) marə [RC četəw-ew<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) Ø / **z**-jə-šxən](ABS)  
 here cat-ADV 3SG/**WH.PR**-POSS-food  
*t*<sub>i</sub>(ERG) Ø- **zə**- mə- šxə -re] -r  
 3ABS- **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 (220) or external argument (221), and the applied external argument of an inverse predicate can license a parasitic gap within the absolutive theme (222).

- (220) [RC pšaš-ew<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) Ø / **z**-jə-txəλ](ABS) *t*<sub>i</sub>(IO)  
 girl-ADV 3SG/**WH.PR**-POSS-book  
 Ø- **z**- e- sə- mə- tə -ž’ə -ɸe] -r Ø-qe-s-e-wəha  
 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.’

- (221) marə [RC č’ele-čək<sup>w</sup>-ew<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) Ø / **z**-jane](ABS)  
 here boy-small-ADV 3SG/**WH.PR**-mother  
*t*<sub>i</sub>(IO) Ø- **zə**- fe- g<sup>w</sup>əbž -zepətə -re] -r  
 3ABS- **WH.IO**- BEN- be.angry -HABIT -DYN -ABS  
 ‘Here is the boy at whom his mother is always angry.’

- (222) š<sup>w</sup>ə Ø-s-λeɸ<sup>w</sup>-r-ep [RC Op<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR)  
 good 3ABS-1SG.ERG-see-DYN-NEG  
 Ø / **z**-jə-š’ər-xe-r](ABS) *t*<sub>i</sub>(IO) Ø- **zə**- š’ə- ɸ<sup>w</sup>əpša -ɸe] četəwə-r  
 3SG/**WH.PR**-POSS-cub-PL-ABS 3ABS- **WH.IO**- LOC- forget -PST cat-ABS  
 ‘I don’t like the cat that forgot its kittens.’

To conclude this subsection, an absolutive trace cannot license a parasitic gap within clause-mate 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.

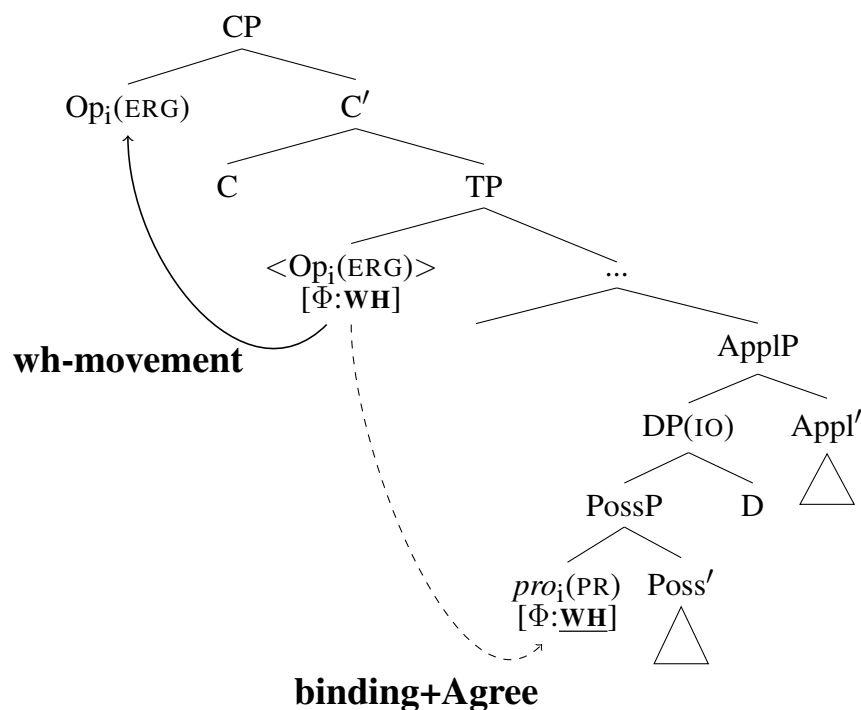
#### 4.4.3 Multiple *wh*-agreement is not pronominal binding

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 wherein a possessor pronoun bears wh-agreement if an argument that is co-referent with that pronoun is relativized. They propose to treat this construction as a case of  $\phi$ -agreement between the wh-trace and a bound pronoun, following a similar proposal by O’Herin (2002) for Abaza.<sup>19</sup> The structure they assume for a multiple wh-agreement construction like (177), repeated below in (223), is shown in (224): 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  $\phi$ -agreement.

- (223) [RC Op<sub>i</sub> [DP *pro*<sub>i</sub>/\_\_\_<sub>PG</sub>(PR) ə/zə-š](IO) t<sub>1</sub>(ERG) konfet  
   **3SG/WH.PR**-brother candy  
 Ø-Ø-je-zə-tə-be] pšaše-m sə-Ø-š'ə-tχ<sup>w</sup>ə-B  
 3ABS-3SG.IO-DAT-**WH.ERG**-give-PST girl-OBL 1SG.ABS-3SG.IO-LOC-praise-PST  
 ‘I praised the girl<sub>i</sub> that gave candy to her<sub>i</sub> brother.’

19. See also Baier and Yuan (2018) for a recent discussion of O’Herin’s (2002) analysis.

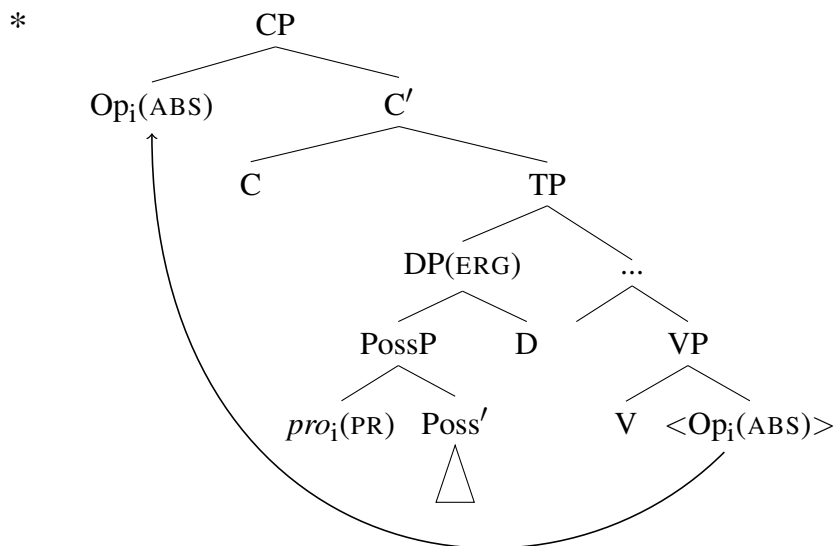
(224)



Within this analysis, the Absolute Constraint is treated as a ban on Weak Crossover configurations. The idea is that additional wh-agreement is banned in cases where the co-referent possessor is not c-commanded by the wh-trace. This claim is crucially based constructions like the one in (214), repeated below in (225). 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 (226).

(225) [RC Op<sub>i</sub>                  t<sub>i</sub>(ABS)                  [DP pro<sub>i</sub>(PR)                  Ø / \*z-jane](ERG)  
     3SG/\*WH.PR-mother  
 Ø-              mə-    ɣa-        šxe -re]     haǯwə́š'ər-xe-m  
**WH.ABS-** NEG- CAUS- eat -DYN   puppy-PL-OBL  
 ‘the puppies whom their mother doesn’t feed’

(226) WCO violation:



This approach faces several empirical challenges. Firstly, as we saw above, the Absolute Constraint applies generally for all absolutive traces regardless of theta-role. For example, the possessor of an applied object cannot trigger wh-agreement if the absolutive external argument is relativized despite this not being a Weak Crossover configuration. Secondly, a binding-based account fails to capture the systematic optionality of multiple wh-agreement constructions: if this is a case of  $\phi$ -agreement, then it is unclear why the transfer of the WH-feature is merely optional. Thirdly, 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 co-referent 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 (233)-(234)) to be discussed in the following section.

In summary, a parasitic gap analysis of multiple wh-agreement provides a principled explanation for the Absolute Constraint: the absolutive trace fails to license parasitic gaps within clausemate DPs due to the anti-c-command condition on parasitic gaps.

## 4.5 Interactions between non-absolutive 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 (i) the ability of an ergative trace to license a parasitic gap within the applied object DP; (ii) the optionality of the parasitic gap within the ergative DP when an applied object is relativized. This means that non-absolutive DPs simultaneously fail to display anti-c-command and Weak Crossover effects.

As discussed in chapter 2, 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 Testelefs 2017:951), suggesting that this may be a non-configurational language, with full DPs appearing in adjoined or dislocated positions, as proposed e.g. by Jelinek (1984); Hale (1994); Baker (1996). Since the directionality of anaphor binding discussed in chapter 3 is diagnosed primarily in the morphology, asymmetries in anaphor binding could be in principle compatible with a non-configurational analysis of the clause structure. However, restrictions on parasitic gap licensing apply to lexical DPs, rather than verbal marking, thus providing evidence for the absolutive DP asymmetrically c-commanding the ergative and applied object DP – a structure that is incompatible with a non-configurational account. This section demonstrates how the application of the same parasitic gap diagnostic as we saw in the previous section fails to determine the relative c-command relations between the ergative and applied object DPs. I proceed to 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 cross-linguistically, e.g. in Hindi (Mahajan 1990, 1994; Dayal 1994), Persian (Karimi 2003, 2005), Japanese (Saito 1992; Grewendorf and Sabel 1999), Georgian (McGinnis 1999), and Tlingit (Cable 2009), among many others.

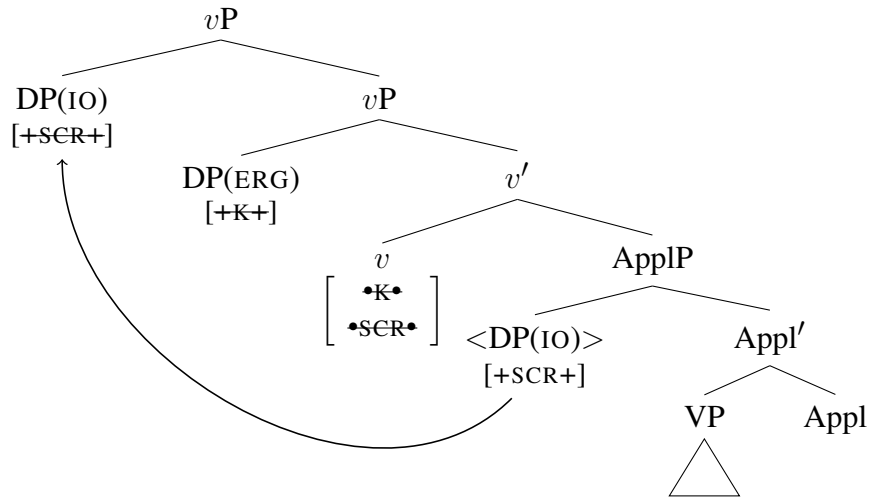


The analysis set forth in the previous subsection predicts that in all cases where a DP c-commands another DP, it should fail to license a parasitic gap within the DP it c-commands. Thus, if we assume that the ergative DP is merged as the specifier of *v*P and an applied object is merged within *v*P 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 is shown in (171b), repeated below in (227a). The inverse configuration, however, is also possible: in (227b), an ergative trace successfully licenses a parasitic gap within the applied object.

- (227) a. marə [RC č'al-ew<sub>i</sub> [DP pro<sub>i</sub> / \_\_<sub>PG</sub>(PR) ə / zə-š ](ERG) t<sub>i</sub>(IO) velosiped  
 here boy-ADV 3SG/WH.PR-brother bicycle  
 Ø- qə- ze- r- jə- tə -be] -r  
 3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS  
 'Here is the boy<sub>i</sub> to whom his<sub>i</sub> brother gave a bicycle.'
- b. marə [RC č'al-ew<sub>i</sub> t<sub>i</sub>(ERG) [DP pro<sub>i</sub> / \_\_<sub>PG</sub>(PR) ə / zə-š ](IO)  
 here boy-ADV 3SG/WH.PR-brother  
 velosjəped Ø- Ø- je- zə- tə -be] -r  
 bicycle 3ABS- 3SG.IO- DAT- WH.ERG- give -PST -ABS  
 'Here is the boy who<sub>i</sub> gave a bicycle to his<sub>i</sub> brother.'

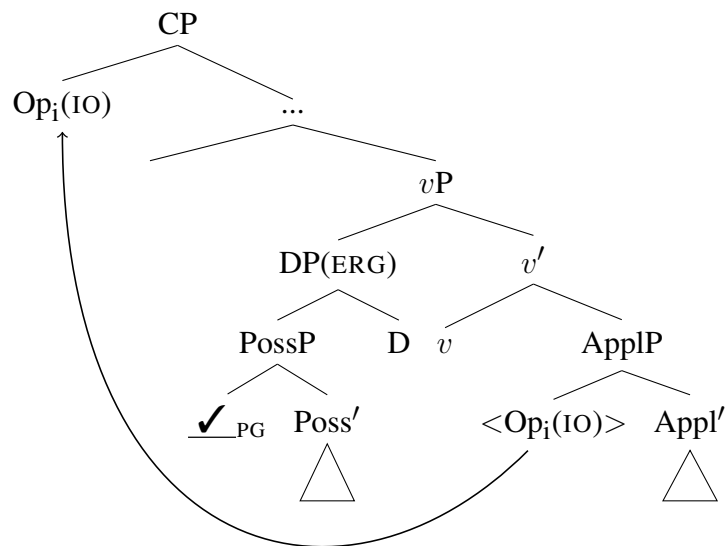
I propose that the lack of any anti-c-command effect between non-absolutive DPs is a consequence of A-scrambling within *v*P. In particular, transitive *v*<sup>0</sup> may optionally carry an additional feature [**•SCR•**], which triggers scrambling of the applied object if it happens to carry a matching [**+SCR+**] feature, thus allowing it to undergo movement to Spec,*v*P – a position that c-commands the ergative agent (228). This feature is ordered after all other Agree and structure-building features on *v*<sup>0</sup>, thus ensuring that the applied object scrambles to Spec,*v*P after the ergative agent is merged. 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.

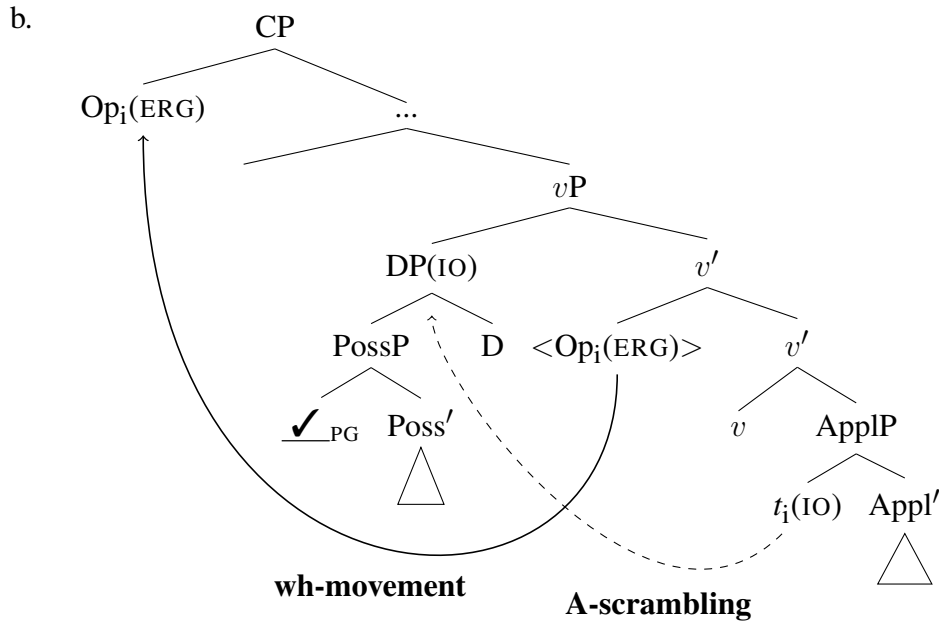
(228)



In regards 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 (229a); 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 – this is illustrated in (229b).

(229) a.





The availability of the structure in (228) 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 which cannot be replaced with a personal pronoun. An example of such a configuration in English is provided in (230). The parasitic gap in (230) 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 coreferent pronoun within the subject DP.

(230) Which student<sub>i</sub> did [your attempt to talk to \_\_/\*him<sub>i</sub>] scare \_\_ to death? (Engdahl 1983:16)

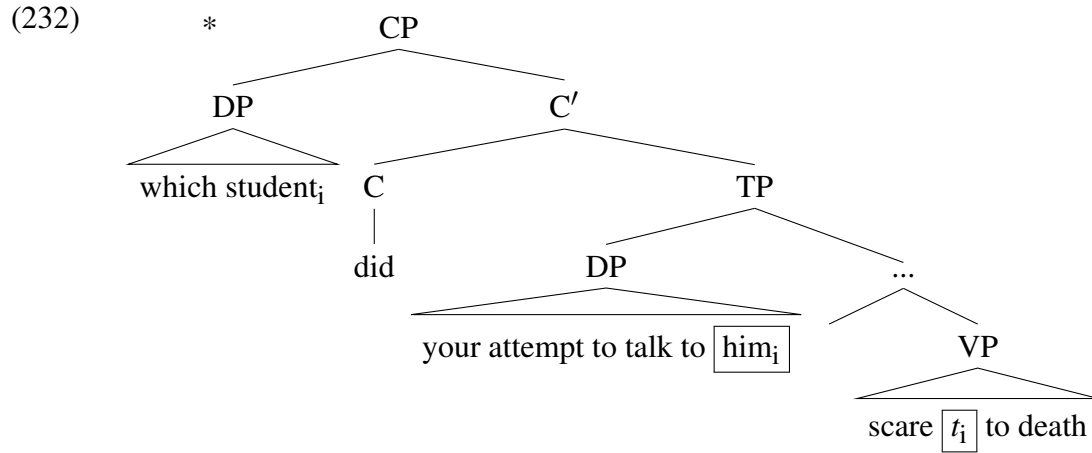
Abstracting away from cases involving resumptive pronouns, the ban on Weak Crossover can be characterized in the following way based on Safir (1984, 2004, 2017):

(231) BAN ON WEAK CROSSOVER:

A moved operator cannot bind an A'-trace and a pronoun at the same time.

In (230) the movement of *which student* over the co-referent pronoun in the subject DP renders

this violation, because the moved wh-phrase then binds both the wh-trace and the pronoun within the subject DP (232).



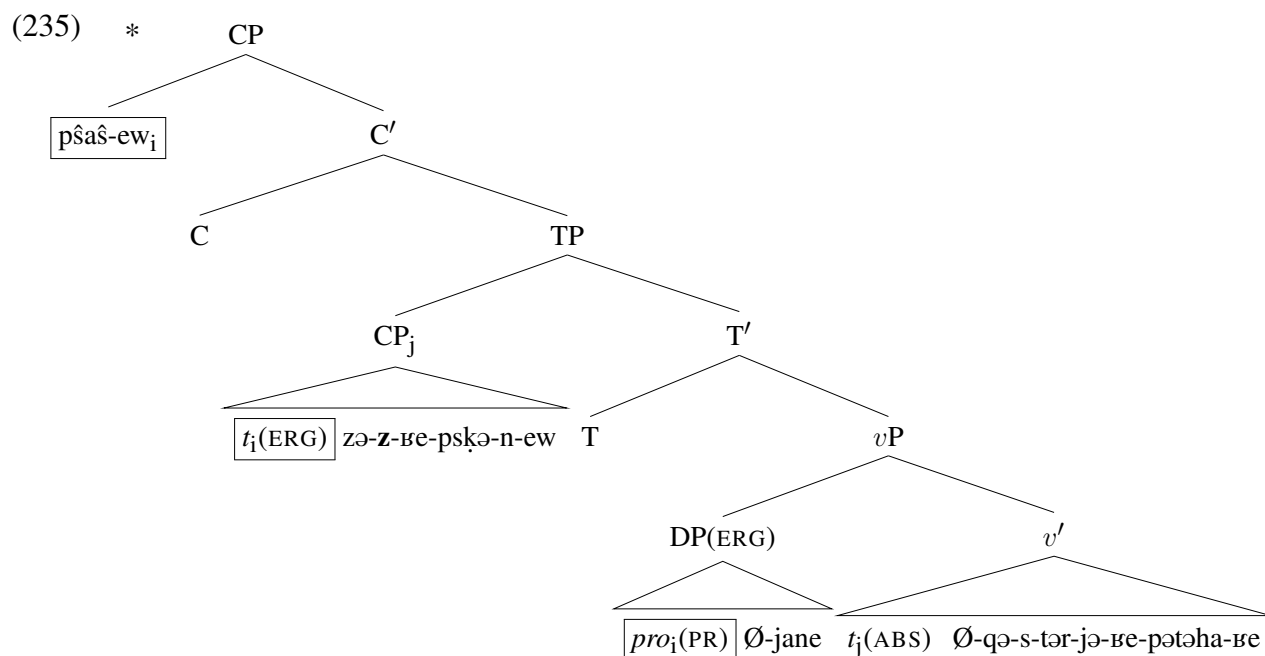
However, no such effect is observed between clausemate DPs in West Circassian. For example, the parasitic gap in (227a) is optional and freely alternates with a null pronoun that triggers regular  $\phi$ -agreement, despite this being a potential Weak Crossover violation. This is especially striking, given that the language does in fact display a Weak Crossover effect in cross-clausal contexts, with an obligatory parasitic gap within the DP that c-commands the wh-trace, as in the English example (230). Thus, if the ergative agent of the complement clause in (233) is relativized, the co-referent possessive pronoun on the ergative DP in the matrix clause must be replaced with a parasitic gap; the same effect is observed in (234), 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.

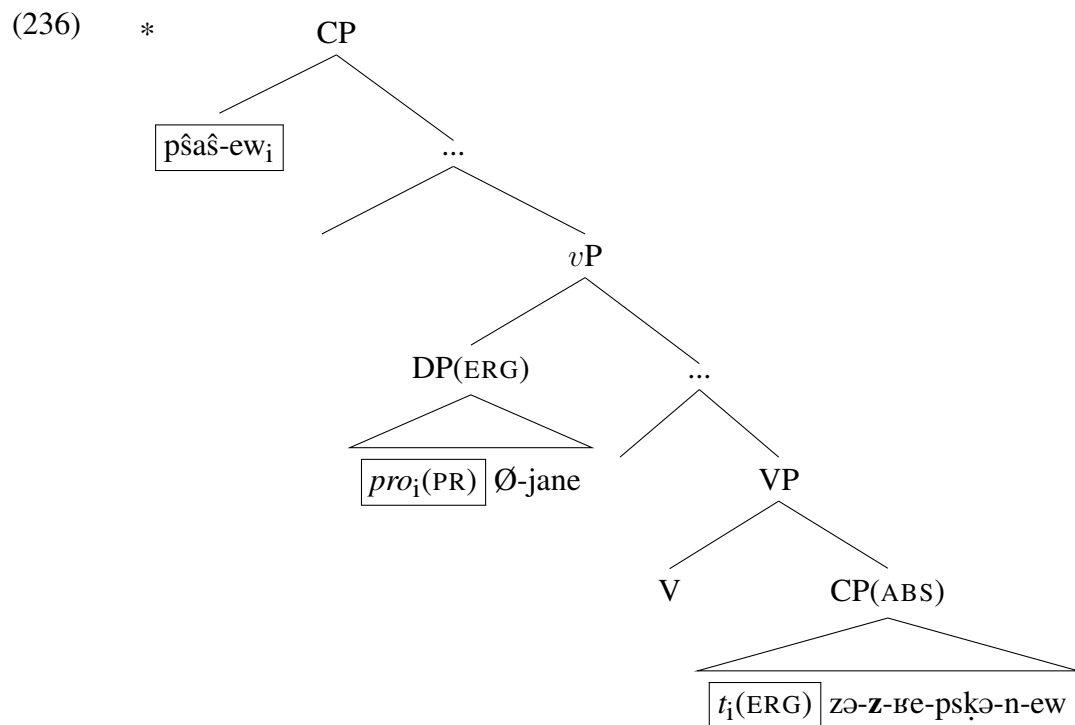
- (233) marə [RC pšaš-ew<sub>i</sub> [CP t<sub>i</sub>(ERG) zə- z- be- pskə -n -ew ]  
 here girl-ADV REFL.ABS- **WH.ERG**- CAUS- bathe -MOD -ADV  
**z / \*Ø**-jane(ERG) Ø-qə-s-tər-jə-be-pətəha-be] -r  
**WH/\*3SG.PR**-mother 3ABS-DIR-1SG.IO-LOC-3SG.ERG-CAUS-enforce-PST -ABS  
 ‘Here is the girl who<sub>i</sub> her<sub>i</sub> mother told me [\_\_ should bathe].’

- (234) marə [RC pšaš-ew<sub>i</sub> [CP č’elejeḡaḡe-r t<sub>i</sub>(IO) Ø- qə- z- e- çeçe  
 here girl-ADV teacher-ABS 3ABS- DIR- **WH.IO**- DAT- scold  
 -n -ew ] **z / \*Ø**-jane(ABS) Ø-fe-mə-je] -r  
 -MOD -ADV **WH/3SG.PR**-mother 3ABS-BEN-NEG-want -ABS

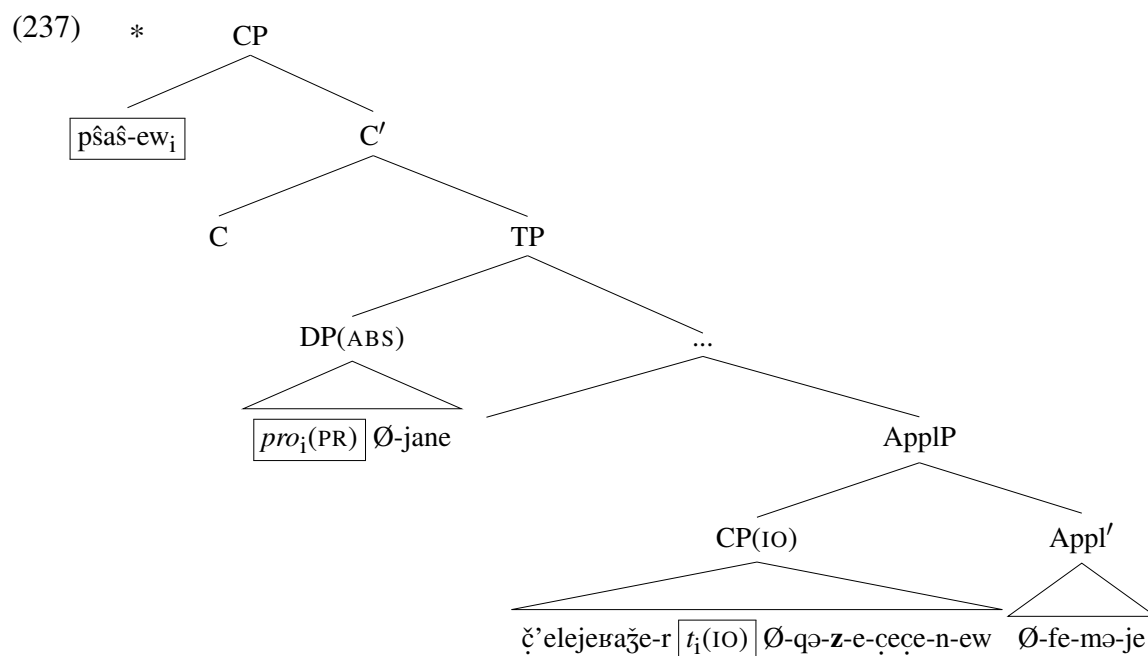
‘Here is the girl whom<sub>i</sub> her<sub>i</sub> mother doesn’t want [the teacher to scold \_\_]’

The parasitic gap in the matrix clause is obligatory regardless of syntactic position of the DP containing the potentially co-indexed pronoun and the embedded clause: in (233) the DP containing the parasitic gap is the ergative agent, while the embedded clause is the absolutive theme, and in (234) the DP in the matrix clause is the absolutive external argument, while the embedded clause occupies the applied object position. Pending a closer investigation, I remain agnostic as to whether the licensing of clausal arguments proceeds in the same way as for nominal arguments (see also discussion in section 4.6). Importantly, whether or not the embedded clause raises to Spec,TP has no effect on the presence of a Weak Crossover violation in (233): the tree in (235) represents the structure of the relative clause if the embedded CP moves to Spec,TP, and (236) illustrates the same structure with the CP remaining in situ within VP. In both cases the moved operator simultaneously binds a pronoun and a wh-trace, rendering a WCO violation.





The structure in (234) likewise renders a WCO violation, as shown in (237): the operator simultaneously binds a pronoun within the absolutive DP in the matrix clause and a wh-trace in the complement clause.

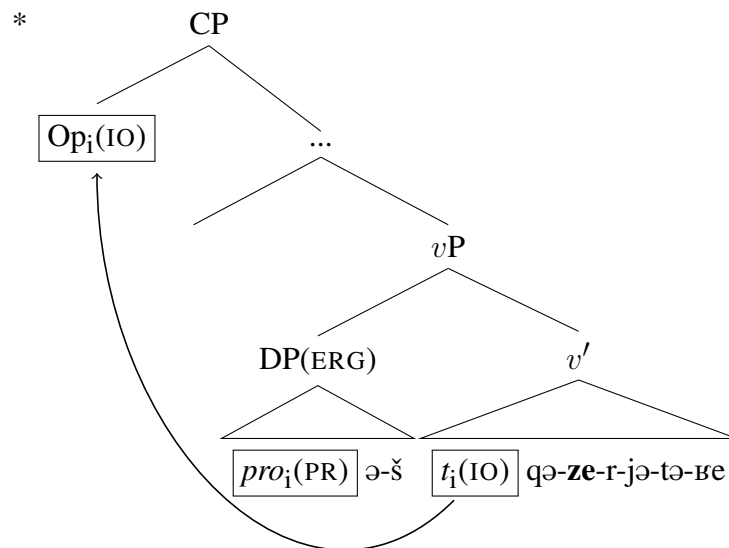


The fact that the language displays Weak Crossover effects cross-clausally, but fails to do

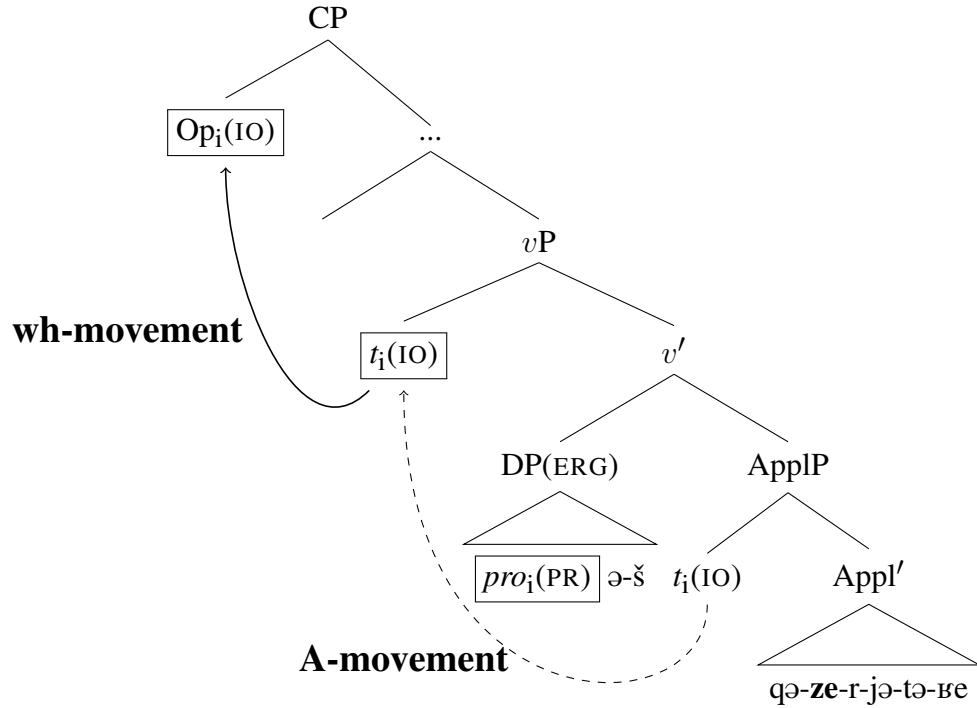
so with clausemate DPs, can be explained via locally constrained A-scrambling within *v*P. For example, the structure in (238a) involves wh-movement of the relative operator from the applied object position; the possessor within the ergative DP may be expressed either as a parasitic gap, or as a regular third person pronoun. In the absence of A-scrambling, the presence of the possessor pronoun within the ergative DP is expected to trigger a WCO violation, as shown in (238b), but does not. The absence of a Weak Crossover violation in this case can be readily explained if the applied object is relativized from its scrambled position, which c-commands the possessor pronoun within the ergative DP (238c).

- (238) a. marə [RC č'al-ew<sub>i</sub> [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) ə / zə-š ](ERG) *t*<sub>i</sub>(IO) velosiped  
 here boy-ADV 3SG/WH.PR-brother bicycle  
 Ø- qə- ze- r- jə- tə -be] -r  
 3ABS- DIR- WH.IO- DAT- 3SG.ERG- give -PST -ABS  
 'Here is the boy<sub>i</sub> to whom his<sub>i</sub> brother gave a bicycle.'

- b. No scrambling – WCO violation:



- c. Post-scrambling – no WCO violation:



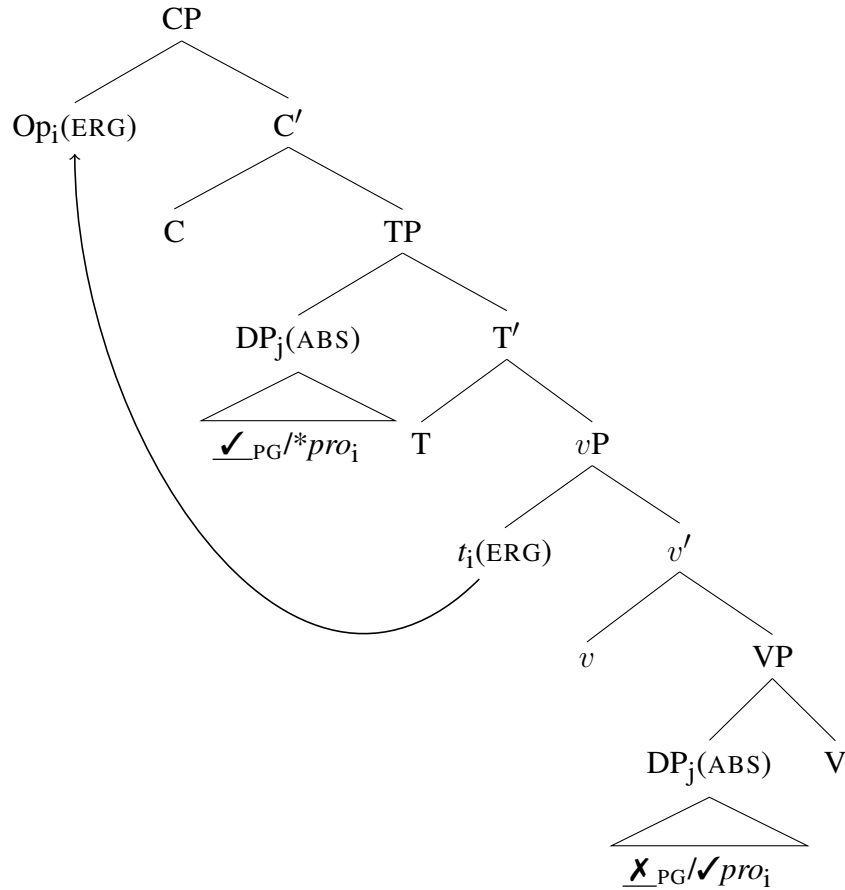
Thus, the Weak Crossover data, together with the lack of anti-c-command effects between the ergative DP and applied object, provide evidence for A-movement of the applied object to Spec, $vP$ . The examples in (233)-(234) pose an additional challenge to the Weak Crossover analysis of the Absolutive Constraint proposed by Caponigro and Polinsky (2011) (discussed in subsection 4.4.3): given that these are unquestionable Weak Crossover configurations, the possessor wh-agreement in the matrix clause is predicted to be ungrammatical under their analysis.

There is, however, an important difference between Weak Crossover and anti-c-command effects: while, as we saw in section 4.4, the absolutive DP shows anti-c-command effects in regards 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 (220)-(222): if an ergative agent or applied object is relativized, the parasitic gap within the absolutive DP does not become obligatory despite the resulting structure displaying 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; Sportiche 2005,



2017 for discussion of reconstruction under A-movement). This leads to two possible structures, which are illustrated in (239): if the absolutive DP is interpreted in Spec,TP the parasitic gap is obligatory, because a possessor pronoun in this position would trigger a Weak Crossover violation; if the absolutive DP is interpreted in its base generated position within VP a parasitic gap cannot be licensed due to the anti-c-command condition, and a pronoun may successfully surface instead.

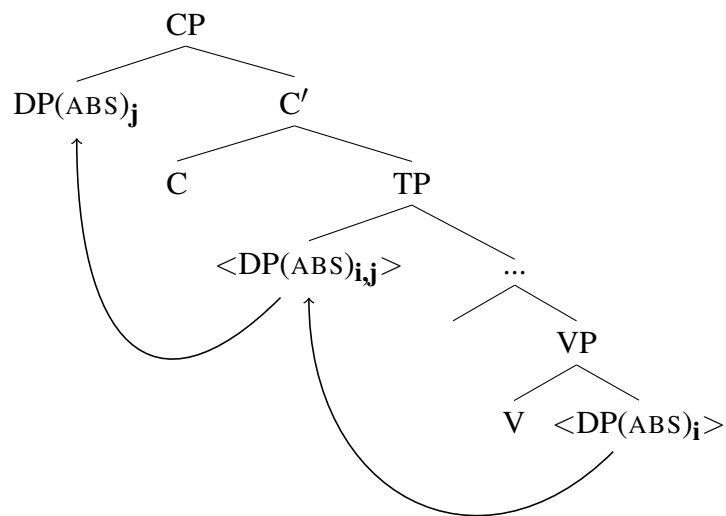
(239)



The reconstruction of the absolutive DP in its base-generated position is only available for constructions that do not involve A'-movement of the absolutive DP itself, because of the way movement chains are interpreted. In particular, if we follow Heim's (1992) approach to trace binding, every movement chain involves a co-indexing relation: the head of the chain bears an outer index, and the base of the chain bears an inner index. For example, if an absolutive theme is relativized, the copy in Spec,TP bears two indices: an outer index which relates it to its copy within VP and an inner index which ensures that this copy is bound by the higher copy in Spec,CP

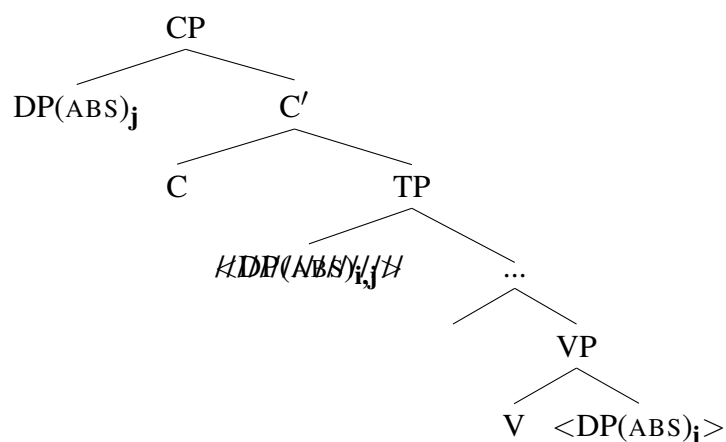
(240).

(240)



An interpretation of the structure in (240) as involving reconstruction of the absolute in its base-generated position would require the deletion of the intermediate copy in Spec,TP, leaving only the copies within VP and in Spec,CP (241). However, in the absence of the intermediate copy, these two copies bear distinct indices and thus cannot be interpreted as parts of a single movement chain, resulting in an ill-formed derivation.

(241)

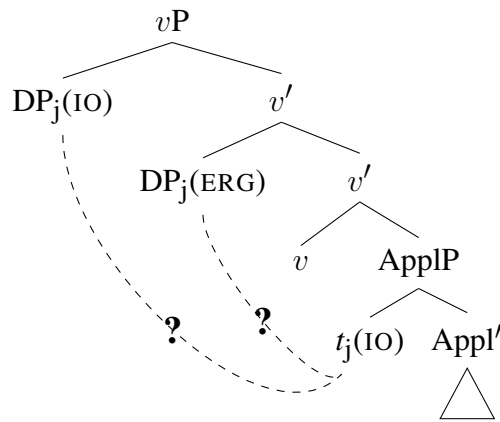


This is an important point, because if reconstruction of the lower copy had been possible in the configuration in (241), this would mean that the absolute theme may undergo wh-movement from

its base-generated position which does not c-command the ergative or applied object DPs, falsely predicting that relativization of the absolutive argument should not trigger an anti-c-command effect in regards to clausemate DPs.

Returning to the question of A-scrambling of the applied object, it is important to note that the movement of the applied object to Spec,*v*P above the ergative agent does not give rise to new binding possibilities for reflexive and reciprocal anaphors: as discussed in chapter 3, in anaphor binding, the ergative agent uniformly behaves as if it c-commands the applied object and not vice versa. For reciprocals, this is simply due to the fact that the movement of the applied object to the specifier of the same head as the co-indexed ergative agent would give rise to Lethal Ambiguity (McGinnis 1998b, 2004): after scrambling, both the applied object and the reciprocal in the position of the ergative agent would be equidistant from the trace of the applied object – a configuration that is ill-formed because the trace cannot be unambiguously connected to its binder (242).

(242)



In regards to reflexive binding, recall that the applied object generally cannot serve as an antecedent for a reflexive pronoun in the presence of an ergative agent. Since the choice of antecedent for a reflexive is determined solely by the locality of the antecedent DP to Voice<sub>REFL</sub>, this means that Voice<sub>REFL</sub> does not select for a *v*P that contains a scrambled applied object. Within a feature-based system, this could be modeled by assigning a distinct category feature to *v*<sup>0</sup> with the scrambling feature [**•SCR•**], e.g. *v*<sub>SCR</sub>. Voice<sub>REFL</sub> then simply may not select for this type of *v*<sup>0</sup>.

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.

## 4.6 Cross-clausal parasitic gap dependencies

This section briefly discusses the distribution of parasitic gaps in embedded clauses. At first glance, the distribution of parasitic gaps in embedded clauses pose a challenge to the generalizations established in the previous sections, because the anti-c-command condition appears to not apply across a clausal boundary. This means that regardless of the status of the embedded clause as an adjunct or a complement, and the position of the licensing gap, parasitic gaps may always appear within an embedded clause, even if the licensing gap c-commands it.<sup>20</sup> However, I argue here that this property of clausal embedding straightforwardly connects with other unusual traits of embedded clauses in West Circassian, in particular, that clausal boundaries appear to obviate Condition C violations.

### 4.6.1 *Adjuncts*

Parasitic gaps may appear in any argument position within conditional, temporal and purpose adjunct clauses; in this case the licensing gap may be any argument of the matrix verb, including the absolutive theme or the absolutive argument of an intransitive verb. This is illustrated in the examples below.

In (243) the licensing gap appears in the applied object position of the matrix clause: in this case the co-referent applied object within the temporal adjunct may either be expressed as a null

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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 intra-clausal cases, where the additional *wh*-agreement appears within a clausemate DP. Given that the two constructions otherwise have a very similar distribution, as shown in section 4.3, 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 constructions involving embedded clauses and ones that do not.

pronoun triggering regular third person agreement (243a), or be replaced with a parasitic gap which correspondingly triggers wh-agreement on the embedded predicate (243b).

(243) Temporal adjunct, applied object licensing gap, applied object parasitic gap:

- a. xet-a [RC Op<sub>i</sub> zarjəne<sub>j</sub>(ERG) [ADJUNCT *pro*<sub>j</sub>(ABS) *pro*<sub>i</sub>(IO)  
 who-Q Zarina  
 Ø- Ø- je- mə- wəpč'ə -ž' -ew ] txəλ(ABS) t<sub>i</sub>(IO)  
 3ABS- 3SG.IO- DAT- NEG- ask -RE -ADV book  
 Ø- qə- z- f- jə- š'efə -be] -r  
 3ABS- DIR- WH.IO- BEN- 3SG.ERG- buy -PST -ABS  
 'Who did Zarina buy a book for without asking him?'
- b. xet-a [RC Op<sub>i</sub> zarjəne<sub>j</sub>(ERG) [ADJUNCT *pro*<sub>j</sub>(ABS) \_\_PG(IO)  
 who-Q Zarina  
 Ø- z- e- mə- wəpč'ə -ž' -ew ] txəλ(ABS) t<sub>i</sub>(IO)  
 3ABS- WH.IO- DAT- NEG- ask -RE -ADV book  
 Ø- qə- z- f- jə- š'efə -be] -r  
 3ABS- DIR- WH.IO- BEN- 3SG.ERG- buy -PST -ABS  
 'Who did Zarina buy a book for without asking \_\_?'

An example of a parasitic gap within a purpose adjunct clause is presented in (244): if the ergative agent in the matrix clause is relativized, the co-referent ergative argument in the embedded clause may either be expressed as a pronoun triggering third person singular ergative agreement (244a), or it may be replaced with a parasitic gap with corresponding wh-agreement expressed on the embedded predicate (244b).

(244) Purpose adjunct, ergative licensing gap, ergative parasitic gap:

- a. marə [RC λ-ew<sub>i</sub> [ADJUNCT *pro*<sub>i</sub>(ERG) məž<sup>w</sup>e(ABS) Ø-  
 here man-ADV stone- 3ABS-  
 r- jə- š'e -n -ew ] t<sub>i</sub>(ERG) tačke(ABS) Ø- qə-  
 LOC- 3SG.ERG- bring -MOD -ADV wheelbarrow 3ABS- DIR-  
 t- fe- zə- š'a -be] -r  
 1PL.IO- BEN- WH.ERG- bring -PST -ABS
- b. marə [RC λ-ew<sub>i</sub> [ADJUNCT \_\_PG(ERG) məž<sup>w</sup>e(ABS) Ø- rə-  
 here man-ADV stone- 3ABS- LOC-  
 zə- š'e -n -ew ] t<sub>i</sub>(ERG) tačke(ABS) Ø- qə- t-  
 WH.ERG- bring -MOD -ADV wheelbarrow 3ABS- DIR- 1PL.IO-

fe- zə- š'a -be ] -r  
 BEN- **WH.ERG**- bring -PST -ABS

‘Here is the man who brought the wheelbarrow to us in order to carry the stones.’

An absolutive gap may license a parasitic gap within an adjunct clause regardless of its status as the theme of a transitive verb or the external argument of an intransitive verb.<sup>21</sup> Thus, if the absolutive theme of the transitive verb *jəʒən* ‘throw away’ is relativized, the co-referent applied object in the temporal adjunct clause may either be expressed as a pronoun (245a) or may be replaced with a parasitic gap, triggering corresponding wh-agreement on the embedded predicate (245b).

(245) Temporal adjunct, absolutive theme licensing gap, applied object parasitic gap:

- a. marə [RC txəλ-ew<sub>i</sub> [ADJUNCT *pro<sub>i</sub>*(IO) s- Ø- je- mə- ʒe -ze ]  
 here book-ADV 1SG.ABS- **3SG.IO**- DAT- NEG- read -CNV  
*t<sub>i</sub>*(ABS) Ø- jə- z- ʒə -ʒ'a -be] -r  
**WH.ABS**- LOC- 1SG.ERG- throw -RE -PST -ABS  
 ‘Here is the book that I threw away without reading it.’
- b. marə [RC txəλ-ew<sub>i</sub> [ADJUNCT \_\_PG(IO) s- z- e- mə- ʒe -ze ]  
 here book-ADV 1SG.ABS- **WH.IO**- DAT- NEG- read -CNV  
*t<sub>i</sub>*(ABS) Ø- jə- z- ʒə -ʒ'a -be] -r  
**WH.ABS**- LOC- 1SG.ERG- throw -RE -PST -ABS  
 ‘Here is the book that I threw away without reading \_\_.’

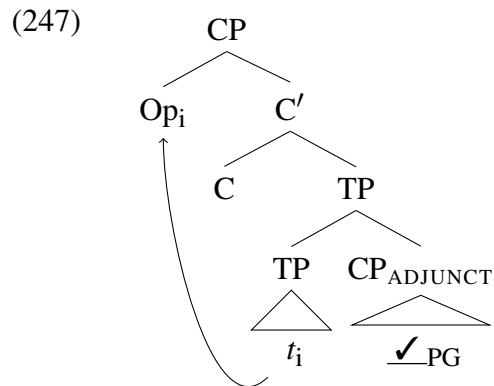
An absolutive argument of an unergative predicate like *š'əsən* ‘sit’ may likewise license a parasitic gap within a temporal adjunct clause: if the absolutive argument is relativized, the co-referent ergative argument may surface as a pronoun (246a) or may be replaced with a parasitic gap which triggers corresponding wh-agreement on the embedded predicate (246b).

(246) Temporal adjunct, absolutive external argument licensing gap, ergative parasitic gap:

21. The fact that an absolutive trace may license a parasitic gap in cross-clausal contexts provides support for the approach to relativization of the absolutive argument that is advocated in this chapter – it involves wh-movement and a null allomorph of wh-agreement, rather than the operator remaining in-situ and the null morphology on the predicate being regular third person  $\phi$ -agreement; see also discussion in subsection 4.2.1.

- a. mə pšeše-žəje-r arə [RC Op<sub>i</sub> t<sub>i</sub>(ABS) pče-m dež'  
 this girl-small-ABS PRED door-OBL at  
 Ø- Ø- š'ə- sə -be -r [ADJUNCT *pro*<sub>i</sub>(ERG) kartweške-r(ABS)  
 3ABS- 3SG.IO- LOC- sit -PST -ABS potato-ABS  
 Ø- ə- šx -ew] ]  
 3ABS- **3SG.ERG**- eat -ADV
- b. mə pšeše-žəje-r arə [RC Op<sub>i</sub> t<sub>i</sub>(ABS) pče-m dež'  
 this girl-small-ABS PRED door-OBL at  
 Ø- Ø- š'ə- sə -be -r [ADJUNCT PG(ERG) kartweške-r(ABS)  
 3ABS- 3SG.IO- LOC- sit -PST -ABS potato-ABS  
 Ø- **zə**- šx -ew] ]  
 3ABS- **3SG.ERG**- eat -ADV
- ‘Here is the girl sat by the door while eating potato.’

The fact that any gap within the matrix clause, including an absolutive trace, may license a parasitic gap within an adjunct clause could be taken as evidence that all adjunct clauses adjoin high in the clausal spine, so that they are not c-commanded by any of the verbal arguments in the embedded clause – this is illustrated schematically in (247): an adjunct clause adjoins to TP after the absolutive argument moves to Spec,TP and is thus not c-commanded by any of the verbal arguments, including the absolutive DP.



This hypothesis is however further challenged by the fact that parasitic gaps within embedded complement clauses likewise fail to display any anti-c-command effects.

## 4.6.2 Complements

Complement clauses may host parasitic gaps, and just as with adjunct clauses, a trace in any argument position within the matrix clause may license a parasitic gap.

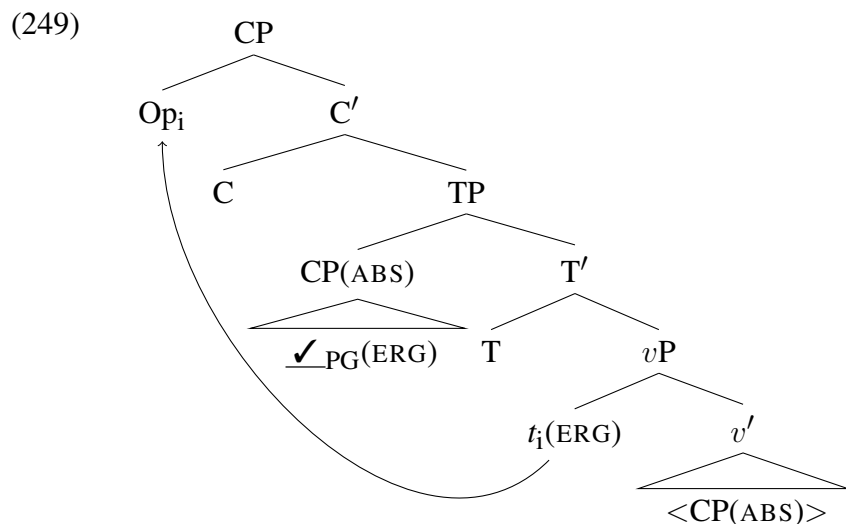
Thus, in (248) the ergative argument of the control verb *jebež'en* ‘begin’ is relativized – in this case the controlled participant within the embedded clause may appear as a null pronoun which triggers regular third person ergative agreement (248a), or may be replaced with a parasitic gap which triggers wh-agreement (248b).

(248) Absolutive complement, ergative licensing gap, ergative parasitic gap:

- a. marə [RC pšaš-ew<sub>i</sub> [CP *pro*<sub>i</sub>(ERG) aslen(ABS) Ø- ə- šə -n -ew ]  
 here girl-ADV lion 3ABS- **3SG.ERG**- do -MOD -ADV  
*t<sub>i</sub>*(ERG) Ø- je- z- be- ž'a -be ] -r  
 3ABS- DAT- **WH.ERG**- CAUS- begin -PST ABS
- b. marə [RC pšaš-ew<sub>i</sub> [CP \_\_PG(ERG) aslen(ABS) Ø- zə- šə -n -ew ]  
 here girl-ADV lion 3ABS- **WH.ERG**- do -MOD -ADV  
*t<sub>i</sub>*(ERG) Ø- je- z- be- ž'a -be ] -r  
 3ABS- DAT- **WH.ERG**- CAUS- begin -PST ABS
- ‘Here is the girl who started drawing a lion.’

The data in (248) does not necessarily present a challenge to the parasitic gap analysis of multiple wh-agreement or to the application of the anti-c-command condition in West Circassian: given that the complement clause occupies the position of the absolutive argument of the verb *jebež'en* ‘begin’, it may be reasonable to assume that the full clause undergoes movement to Spec,TP c-commanding the ergative agent in the matrix clause (249). Within this configuration the licensing gap in Spec,vP does not c-command the parasitic gap within the complement clause.



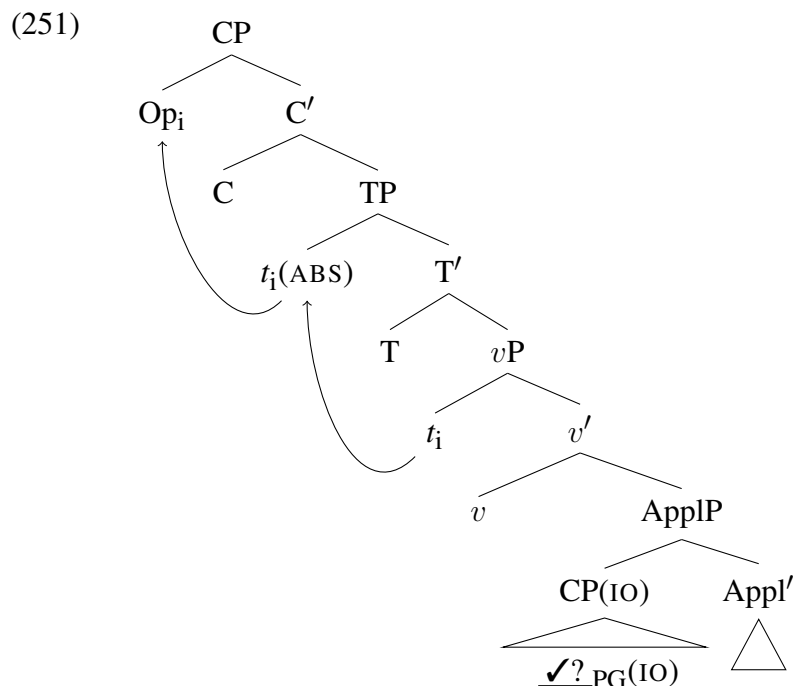


However, an absolutive trace in the matrix clause may likewise license a parasitic gap within a clausal complement: in (250) the absolutive argument of the verb *fejen* ‘want’ is relativized, and the co-referent applied object in the embedded clause may be expressed as a third person pronoun (250a) or as a parasitic gap (250b).

(250) Applied object complement clause, absolutive external argument licensing gap, applied object parasitic gap:

- a. mə pʃeʃe-ž'əje-r arə [RC Op<sub>i</sub> t<sub>i</sub>(ABS) [CP z-jə pro<sub>i</sub>(IO) Ø-  
 this girl-small-ABS PRED nothing-ADD 3ABS-  
 q- Ø- je- pλə -n -ew ] Ø- Ø- fe- mə- je] -r  
 DIR- 3SG.IO- DAT- look -MOD -ADV WH.ABS- 3SG.IO- BEN- NEG- want -ABS
- b. mə pʃeʃe-ž'əje-r arə [CP Op<sub>i</sub> t<sub>i</sub>(ABS) [CP z-jə \_\_ (IO) Ø-  
 this girl-small-ABS PRED nothing-ADD 3ABS-  
 qə- z- e- pλə -n -ew ] Ø- Ø- fe- mə- je] -r  
 DIR- WH.IO- DAT- look -MOD -ADV WH.ABS- 3SG.IO- BEN- NEG- want -ABS
- ‘This is the girl who doesn’t want for anyone to look at her.’

In this case the complement clause is licensed in the applied object position of the verb *fejen* ‘want’, and the absolutive argument is relativized from Spec,TP, which c-commands the position of the applied object (251). The anti-c-command condition, however, fails to apply.

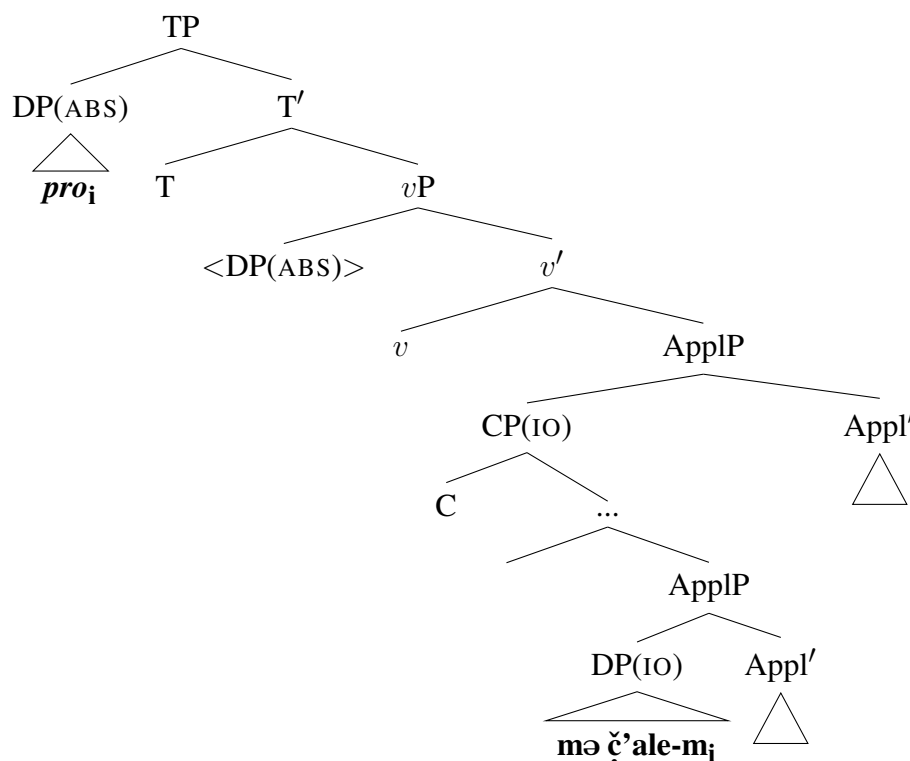


The fact that the Absolutive Constraint fails to apply in (250b) at first glance presents a serious counterargument to the anti-c-command analysis of this condition. However, embedded clauses in West Circassian display a number of other properties that suggest that the explanation for the grammaticality of (250) lies in the syntactic properties of embedded clauses, rather than in the syntactic conditions on parasitic gap licensing. One unusual property of embedded clauses in West Circassian is that they systematically allow for configurations which are expected to trigger either a Condition C or a crossover violation: if an argument in the matrix clause is co-indexed with an argument in the embedded clause, either of the co-indexed participants may be expressed as the full lexical phrase, regardless of its syntactic position (Testelele 2009b; see also discussion of this phenomenon in chapter 5). For example, if the absolutive argument of the verb *fejen* ‘want’ is co-referent to the embedded applied object, the corresponding lexical DP may either appear in the matrix clause with absolutive case marking (252a) or in the embedded clause with oblique case marking (252b).

- (252) a. **mə ɕ’ale-r<sub>i</sub>(ABS)** [CP *pro<sub>i</sub>*(IO) t-Ø-je-mə-pɭə-n-ew ]  
**this boy-ABS** 1PL.ABS-3SG.IO-LOC-NEG-look-MOD-ADV

b. *pro*<sub>i</sub>(ABS) [CP **mə** **č’ale-m<sub>i</sub>**(IO) t-Ø-je-mə-pλə-n-ew ]  
**this boy-OBL** 1PL.ABS-3SG.IO-LOC-NEG-look-MOD-ADV  
 Ø-Ø-faj  
 3ABS-3SG.IO-want  
 ‘This boy doesn’t want us to look at him.’

(253)



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the applied object.

- (254) *proj*<sub>j/\*i</sub>(ABS)    [DP *č'*ale-m<sub>i</sub>(PR)    Ø-jə-ha](IO)    Ø-q-Ø-je-ẓ̌a-ɸ  
                                  boy-OBL                    3SG.PR-POSS-dog 3ABS-DIR-3SG.IO-DAT-call-PST  
                                  ‘S/he<sub>i/\*j</sub> called the boy<sub>i</sub>’s dog.’

Thus, the lack of anti-c-command effects in cross-clausal contexts is likely to be connected with the lack of Condition C effects in the same contexts. One possible explanation is that embedded clauses are always dislocated to the clausal periphery, as e.g. proposed for Hindi by Dayal (1996). Under this approach, complement clauses wouldn’t be subject to the anti-c-command condition or Condition C due to them adjoining outside the c-command domain of any verbal arguments in the matrix clause, as with the adjunct clause in (247). The biggest challenge to this approach is that it predicts that all embedded clauses should be islands for extraction, but, as discussed in subsection 4.3.5, relativization out of complement clauses is in fact possible (with obligatory wh-agreement on the matrix predicate for some speakers).

Another, more promising avenue is to draw a direct connection between the anti-c-command condition and Condition C and derive the lack of anti-c-command effects in cross-clausal contexts from the parametrization of Condition C itself. Prior to Nissenbaum (2000), a prominent approach to the anti-c-command condition has been that it is due to the status of the parasitic gap or the operator that binds the parasitic gap as a type of R-expression that may not be A-bound (see e.g. Kayne 1983; Chomsky 1986 and discussion in Culicover 2001:9-13). In order to account for the lack of both Condition C and anti-c-command condition violations in cross-clausal contexts, one would have to assume that Condition C fails to apply across CP boundaries in West Circassian – an analysis along these lines has been previously proposed for apparent violations of the anti-c-command condition in Hungarian clausal embedding (Horvath 1992). If on the right track, the cross-clausal data presented in this section also poses a challenge to Nissenbaum’s (2000) account of the anti-c-command condition as a simple consequence of semantic compositionality: such a theory cannot readily accommodate any violations to the anti-c-command condition.

A detailed analysis of cross-clausal parasitic gap dependencies and an account of the anti-c-command condition remains outside the scope of this dissertation. The important takeaway of this section is that the lack of anti-c-command effects in cross-clausal contexts does not pose a challenge to the analysis of multiple wh-agreement as a parasitic gap dependency, but is rather connected to other unusual properties of clausal embedding in West Circassian.

## 4.7 Conclusion

In this chapter 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 cross-linguistically. I then explore the consequences of this analysis for the understanding of subjecthood in West Circassian 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. This means that the absolutive DP occupies the highest A-position in the clause, i.e. that it is the surface subject. We further observe that an ergative wh-trace can successfully license a parasitic gap within the applied object DP, indicating that the applied object may undergo optional scrambling to Spec,*v*P.

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 powerful tool for diagnosing clause structure in 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, a close examination of morphological forms and their distribution may shed light on the underlying syntactic structure of a language.

This chapter contributes to the literature on syntactic ergativity effects by presenting a novel

diagnostic for argument asymmetries in a syntactically ergative system. This suggests that the investigation of conditions on parasitic gap licensing may be a fruitful avenue for diagnosing syntactic ergativity in other languages, and for evaluating the source of better known syntactic ergativity effects such as the accessibility for A'-extraction. Additionally, in conjunction with reciprocal binding patterns discussed in chapter 3, the parasitic gap data presented in this chapter provides strong evidence that the high position of the absolutive argument is derived via A-movement, rather than A'-movement.

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 syntax of parasitic gaps generally. For example, as discussed in section 4.6, 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. The lack of anti-c-command effects in cross-clausal contexts may 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 (Testelefs 2009b). The behavior of embedded clauses may be due to their dislocated nature (as e.g. proposed for Hindi by Dayal 1996); alternatively, these constructions may be used to argue for a Condition C account of anti-c-command effects, wherein clausal boundaries obviate Condition C requirements for referential DPs in embedded contexts (see e.g. Horvath 1992 for a binding account of counterexamples to the anti-c-command condition). Further investigation of conditions on parasitic gap licensing in West Circassian may thus aid in identifying the source of the anti-c-command condition.

## CHAPTER 5

### SYNTACTIC ERGATIVITY AND OBLIGATORY CONTROL

#### 5.1 Introduction

In the previous two chapters I presented evidence for West Circassian having a syntactically ergative clause structure, with the absolutive DP raising to occupy Spec,TP – the highest A-position within the clausal spine. Evidence for this high position comes from reciprocal binding and conditions on parasitic gap licensing. I further demonstrated that reflexive binding, which follows a syntactically accusative pattern, does not in fact present counterevidence to a high absolutive analysis of the clause structure: West Circassian reflexives belong to a cross-linguistically common type of anaphor, which may only take the highest DP within *v*P as its antecedent. This chapter tackles another subjecthood diagnostic which appears to provide evidence for a syntactically accusative clause structure: control and raising configurations. West Circassian has a small set of obligatory control verbs which require co-indexation of an argument within the embedded clause with an argument of the matrix control predicate; the choice of the controlled argument follows an accusative pattern (Testelefs 2009b:678-680). This means that if the embedded predicate takes an ergative agent and an absolutive theme, the ergative agent must be controlled, and not the absolutive theme (255); if an unergative verb with an absolutive external argument and an applied object is embedded, the absolutive argument is controlled, rather than the applied object (256).

(255) Embedded transitive verb (ERG-ABS):

- a. [DP<sub>i</sub> V<sub>CONTROL</sub> [CP DP<sub>j</sub>(ABS) [<sub>v</sub>P **PRO**<sub>i</sub>(ERG) ... t<sub>j</sub>(ABS)]
- b. \* [DP<sub>j</sub> V<sub>CONTROL</sub> [CP **PRO**<sub>j</sub>(ABS) [<sub>v</sub>P DP<sub>i</sub>(ERG) ... t<sub>j</sub>(ABS)]

(256) Embedded unergative verb (ABS-IO):

- a. [DP<sub>i</sub> V<sub>CONTROL</sub> [CP **PRO**<sub>i</sub>(ABS) [<sub>v</sub>P t<sub>i</sub>(ABS) [ApplP DP<sub>j</sub>(IO) ...
- b. \* [DP<sub>j</sub> V<sub>CONTROL</sub> [CP DP<sub>i</sub>(ABS) [<sub>v</sub>P t<sub>i</sub>(ABS) [ApplP **PRO**<sub>j</sub>(IO) ...

(257) a. jane<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(ERG) subjəj-xe-r(ABS)  
3PL.PR+mother child-PL-ABS  
Ø-ə-ʁe-pskə-n-ew] Ø-ə-wəxə-ɪ  
3ABS-3SG.ERG-CAUS-bathe-MOD-ADV 3ABS-3SG.ERG-finish-PST

**PRO=DP<sub>ERG</sub>**

- lit. ‘The children<sub>i</sub> finished the mother bathing them<sub>i</sub>.’

**\*PRO=DP<sub>ABS</sub>**

- ‘The teacher finished scolding the children.’

**PRO=DP<sub>ABS</sub>**

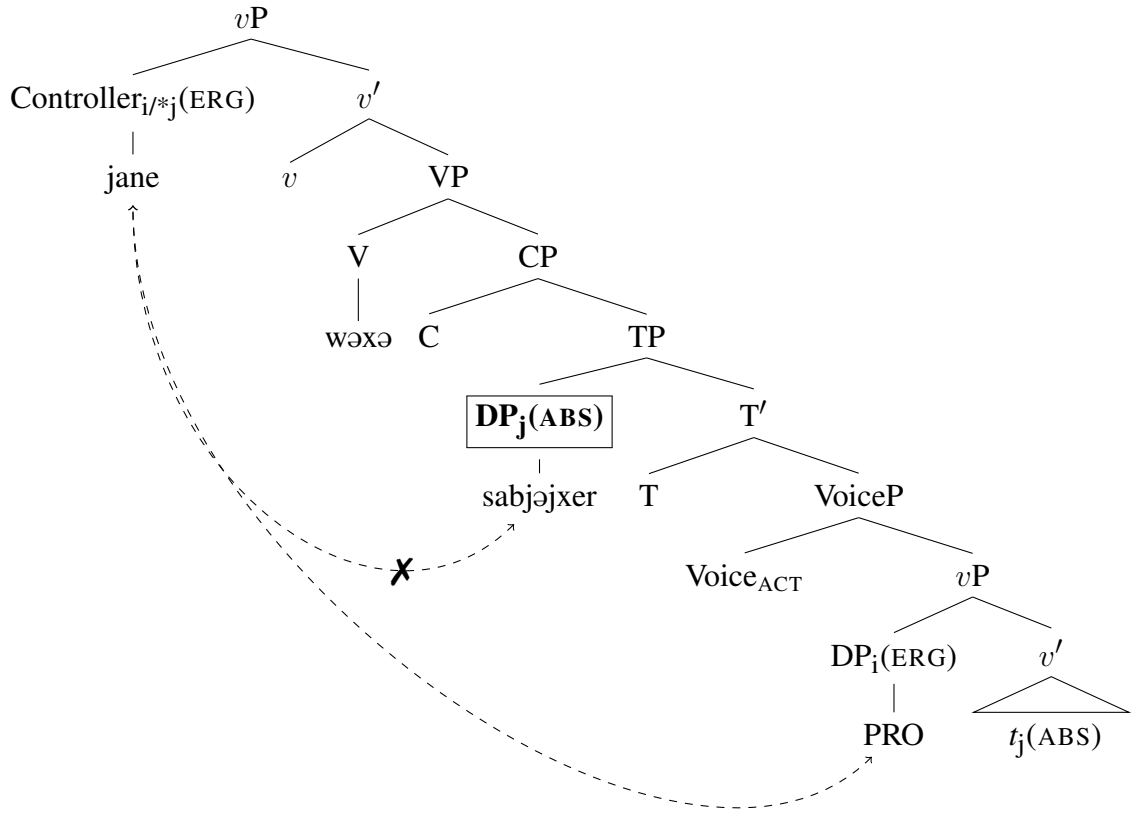
- 201



lit. 'The children<sub>i</sub> finished the teacher scolding them<sub>i</sub>.'

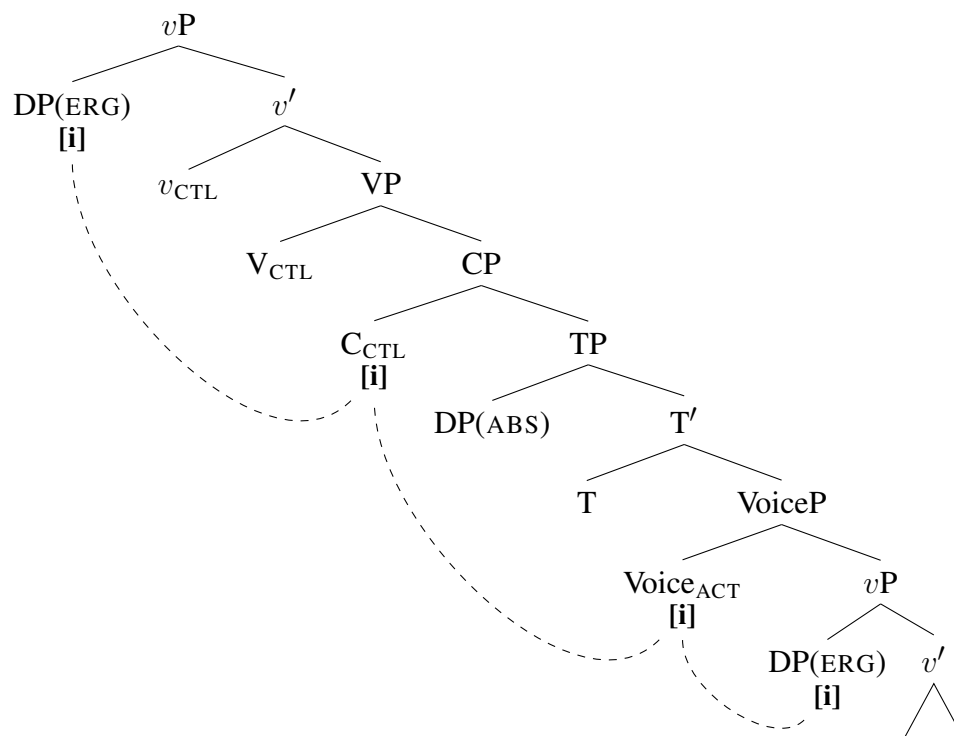
A robust property of control constructions cross-linguistically is that the controlled argument must be the subject (see e.g. discussion in Landau 2013:108-123), and most theories of control appeal to the structurally privileged position of the controlled argument. This property of control has been implemented in a variety of ways, e.g. the controlled argument (=PRO) may only be licensed in the position of the specifier of nonfinite  $I^0/T^0$  (Chomsky 1981; Chomsky and Lasnik 1993; Bošković 1997; Martin 2001); the relation between the controller and the controlled argument relies on locality between the controlled argument and the embedded  $I^0/T^0$  or the embedded  $C^0$  (Borer 1989; Landau 2000, 2015), or control constructions involve A-movement from within the embedded clause, which may only target the highest nominal in the clause due to standard conditions on locality of movement (Hornstein 1999, 2001, 2003; Boeckx et al. 2010; papers in Hornstein and Polinsky 2010). The West Circassian data then pose a serious problem for standard analyses of control: given that the absolutive DP is the highest argument within the embedded clause in (257), why can't it be controlled, and why must the ergative agent be the controlled argument instead (259)? Cross-linguistically, this puzzle is generally extendable to other languages that display syntactic ergativity effects – Dixon (1994:136) notes that the sensitivity of control constructions (constructions involving 'secondary' verbs in Dixon's (1994) terms) to the distinction between S/A and O appears to be cross-linguistically universal and is observed in languages that otherwise provide evidence for a syntactically ergative clause structure.

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In this chapter I demonstrate that a slight adjustments to Landau's (2000) Agree-based account of exhaustive (or predicative in Landau's (2015) terms) control provides a solution to this puzzle. In particular, I propose that just like reflexive binding, control in West Circassian is mediated via the  $\text{Voice}^0$  projection:  $\text{Voice}^0$  facilitates the transfer of the index feature from the highest argument within its c-command domain (the controlled argument) to the external argument of the embedding control verb (the controller). Building on Landau's (2000) account, this transfer of the index feature is established via the Agree operation. This analysis is schematically represented in (260): an obligatory control clause involves the transfer of the index of the controlled argument to the controller via Agree, which is mediated via  $\text{Voice}^0$  and the embedding  $C^0$ .

(260)



The analysis proposed here subsumes under itself another challenge to the high absolutive analysis proposed in the previous two chapters. In particular, Potsdam and Polinsky (2012) argue that a small set of verbs in West Circassian display a subject-to-subject raising structure; the verb in (257)-(258) in fact belongs to this class of predicates. Since a raising structure involves local A-movement from within the embedded clause to the matrix clause, it is expected to be subject to standard locality conditions on movement, and thus appears to provide evidence for the ergative argument being the highest DP within the embedded clause, a point explicitly mentioned by e.g. Caponigro and Polinsky (2011:79). As discussed in subsection 5.2.4, the speakers I have consulted treat the verbs presented by Potsdam and Polinsky (2012) as control, rather than raising, predicates, drawing no distinction between these verbs and the larger class of obligatory control predicates. However, the account of control proposed in this chapter may be extended to accommodate cases of raising for speakers who display the patterns described by Potsdam and Polinsky (2012); see section 5.4 for discussion.

The remainder of the chapter is structured as follows. Section 5.2 presents the basic inventory of control predicates and the morphosyntactic properties of control clauses; section 5.3 presents the analysis; section 5.4 discusses how the analysis may be extended to cases of raising; and section 5.5 concludes.

## 5.2 The morphosyntax of obligatory control constructions

This section outlines the morphosyntactic properties of obligatory control (OC) constructions. Subsection 5.2.1 presents the inventory of obligatory control verbs; subsection 5.2.2 presents evidence that complement clauses of control verbs are full CPs; subsection 5.2.3 illustrates that the absolutive DP occupies the highest A-position within the complement clause of an obligatory control verb; subsection 5.2.4 presents evidence that these constructions involve control and not raising; and subsection 5.2.5 summarizes.

### 5.2.1 *Inventory of control verbs*

The following set of verbs requires obligatory co-indexation of an argument of the corresponding verb with the ergative agent or absolutive external argument of the embedded verb when selecting for a complement marked with the modal future form + adverbial or core case marking (*-n-ew/-nə-r/m*).<sup>2</sup> This set expands on the lists of verbs provided by Testelefs (2009b:672) and Potsdam and Polinsky (2012).<sup>3</sup> These verbs were elicited by going through the semantic classes of OC predicates listed by Landau (2013:89) and discarding the ones that failed to exhibit an OC profile; see Appendix 5.A for examples demonstrating the OC nature of each verb in this list.

(261) Obligatory control predicates:

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2. This means that a given verb may select for other types of complements which do not require obligatory control.

3. A small number of verbs listed in those papers are excluded from the set in (261) due to them (i) not exhibiting obligatory control or (ii) selecting for a complement smaller than CP; for discussion of these verbs see Appendix 5.C.

- a. Implicative: *zɛpɛsəʒʹən* ‘dare’, *tjɛgʷəʒxʷəhan* ‘risk’, *ʃʹəɸʷəpʃən* ‘forget’, *ʃʹənən* ‘fear’, *jezɛʃʹən* ‘tire of’
- b. Aspectual: *jɛɸɛʒʹən* ‘begin’, *fjɛʒʹən* ‘begin’, *wəɸlən* ‘begin’, *wəxən* ‘finish’, *zɛpəɸwɛwən* ‘stop’

This set of verbs is not meant to be exhaustive – it may be the case that other verbs that I have not been able to elicit likewise exhibit the OC profile. Many verbs that often do exhibit obligatory control, do not in West Circassian, including *zɛɸɛhəzərən* ‘prepare oneself’ and *pələn* ‘try’, which are included by Testelelets (2009b:672) in the set of obligatory control predicates – see Appendix 5.B for a list of verbs, including these two, which do not exhibit obligatory control despite belonging to semantic classes of predicates that often do. This chapter also does not aim to discuss the various aspects of the OC control profile that these constructions generally exhibit in addition to obligatory co-indexation of an argument in the matrix clause with an argument in the embedded clause (see e.g. Landau 2013:28-34 for detailed discussion), nor does this chapter explore the connection between the semantics of the predicates in question with the fact that they involve an OC configuration.

### 5.2.2 *Complement clauses are CPs*

This subsection demonstrates that obligatory control predicates select for a full CP, which is structurally equivalent to non-control clauses, thus indicating that a restructuring analysis (as proposed e.g. by Grano 2015), or an analysis wherein the absolutive DP does not undergo movement to Spec,TP and is thus not the highest argument in control clauses, is untenable.

The verbs in the set presented in (261) exhibit a uniform morphosyntactic behavior: they select for complements headed by a verbal form marked with the modal future suffix *-n* (see Serdobolskaya 2009 on the semantics of these forms) in combination with either the adverbial marker *-ew* or a core case marker corresponding to the syntactic position of the clause in question. For example, the complement clause of the verb *ʃʹəɸʷəpʃən* ‘forget’ may be marked with adverbial case (262a)

or absolutive case in accordance with its syntactic position as the theme/stimulus (262b) – this is in parallel to cases where this verb selects a nominal, rather than clausal complement (262c).

- (262) a.  $se_i(\text{IO})$  [ $_{\text{CP}}$   $PRO_i(\text{ERG})$   $p\check{s}e-r(\text{ABS})$   $\emptyset-z-\text{be}-p\acute{o}te-\textbf{n-ew}$ ]  
 I door-ABS 3ABS-1SG.ERG-CAUS-close-MOD-ADV  
 $\emptyset-s-\check{s}'\acute{o}-\text{B}^W p\check{s}a-\text{B}$   
 3ABS-1SG.IO-LOC-forget-PST  
 'I forgot to lock the door.'
- b.  $se_i(\text{IO})$  [ $_{\text{CP}}$   $PRO_i(\text{ERG})$   $p\check{s}e-r(\text{ABS})$   $\emptyset-z-\text{be}-p\acute{o}te-\textbf{n\acute{o}-r}$ ]  
 I door-ABS 3ABS-1SG.ERG-CAUS-close-MOD-ABS  
 $\emptyset-s-\check{s}'\acute{o}-\text{B}^W p\check{s}a-\text{B}$   
 3ABS-1SG.IO-LOC-forget-PST  
 'I forgot to lock the door.'
- c.  $g^W \acute{o}\check{s}'\acute{o} \text{?e-}\check{c}'\acute{o}ha-xe-r(\text{ABS})$   $\emptyset-s-\check{s}'-e-\text{B}^W p\check{s}e-x$   
 word-long-PL-ABS 3ABS-1SG.IO-LOC-DYN-forget-PL  
 'I am forgetting long words.'

An example of an obligatory control verb that selects for an oblique clausal argument is *jezeš'an* 'tire of' – in this case the clausal adjunct may either be marked with the adverbial suffix (263a) or the oblique case marker (263b), which corresponds to the regular case assigned to a nominal theme/stimulus argument (263c).

- (263) a. [ $_{\text{CP}}$   $m\acute{o}$   $p\check{s}a\check{s}e-m_i(\text{ERG})$   $la\check{w}e-xe-r(\text{ABS})$   $\emptyset-\acute{o}-tha\check{c}'\acute{o}-\textbf{n-ew}$  ]  
 this girl-OBL dish-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV  
 $PRO_i(\text{ABS})$   $\emptyset-\emptyset-je-ze\check{s}'\acute{o}-\text{B}$   
 3ABS-3SG.IO-DAT-tire-PST  
 'This girl is tired of washing the dishes.'
- b. [ $_{\text{CP}}$   $m\acute{o}$   $p\check{s}a\check{s}e-r_i(\text{ABS})$   $je\check{z}a\check{p}e$   $\emptyset-k^W e-\textbf{n\acute{o}-m}$  ]  $PRO_i(\text{ABS})$   
 this girl-ABS school 3ABS-go-MOD-OBL  
 $\emptyset-\emptyset-je-ze\check{s}'\acute{o}-\text{B}$   
 3ABS-3SG.IO-DAT-tire-PST  
 'This girl is tired of going to school.'
- c.  $tatjane(\text{ABS})$   $naw\acute{o}ke-\textbf{m}(\text{IO})$   $\emptyset-\emptyset-je-ze\check{s}'\acute{o}-\check{s}'t\acute{o}-\text{B-ep}$   
 Tatjana science-OBL 3ABS-3SG.IO-DAT-tire-IPF-PST-NEG  
 'Tatjana didn't get tired of science.' (AC)

(264) a. [CP PRO<sub>i</sub>(ABS) mə meʒə-m sə-ḵ<sup>w</sup>e-n-ew ]      pro<sub>i</sub>(ABS)  
              this forest-OBL 1SG.ABS-go-MOD-ADV  
  
              s-e-š'əne  
              1SG.ABS-DYN-fear  
  
              'I am afraid to go into this forest.'

b. \* [CP PRO<sub>i</sub>(ABS) mə meʒə-m sə-ḵ<sup>w</sup>e-nə-m ]      pro<sub>i</sub>(ABS)  
              this forest-OBL 1SG.ABS-go-MOD-OBL  
  
              s-e-š'əne  
              1SG.ABS-DYN-fear  
  
              Intended: 'I am afraid to go into this forest.'

- Additionally, some obligatory control predicates select for clausal complements headed by a bare verb stem marked with the adverbial case suffix; this strategy appears to be in free variation with the strategy involving modal future marking (*-n-ew*) (266).

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Obligatory control clauses are morphosyntactically identical to non-control clauses: the predicate displays the full set of  $\phi$ -agreement morphology, including agreement with the controlled argument. For example, the verb in the clausal complement of *jebež'en* 'begin' displays first person ergative agreement in (267a), third person plural agreement in (267b), and third person singular agreement in (267c).

- An unusual property of clausal embedding in West Circassian is that it appears to be insensitive to Condition C: if an argument in the matrix clause is co-indexed with an argument in the embedded clause, the corresponding lexical DP may appear either in the matrix, or in the embedded clause, despite the latter configuration being an apparent violation of Condition C (Testelets 2009b). An example of this type of configuration with a non-control complement clause is in (268): the absolutive argument of the matrix predicate *fejen* ‘want’ is co-indexed with the embedded ergative agent.



(268) a. [CP *pro*<sub>i</sub>(ERG) s-a-*ʁe-šxe-n-ew*] s-šəpɣ<sup>w</sup>ə-xe-r<sub>i</sub>(ABS)  
 1SG.ABS-3PL.ERG-CAUS-eat-MOD-ADV 1SG.PR-sister-PL-ABS  
 Ø-Ø-faje-x-ep  
 3ABS-3SG.IO-want-PL-NEG

b. [CP s-šəpɣ<sup>w</sup>ə-xe-m<sub>i</sub>(ERG) s-a-*ʁe-šxe-n-ew*] *pro*<sub>i</sub>(ABS)  
 1SG.PR-sister-PL-OBL 1SG.ABS-3PL.ERG-CAUS-eat-MOD-ADV  
 Ø-Ø-faje-x-ep  
 3ABS-3SG.IO-want-PL-NEG  
 ‘My sisters don’t want to feed me.’

(269) a. **mə ɕʼale-r<sub>i</sub>(ABS)** [<sub>CP</sub> *pro*<sub>i</sub>(IO) t-Ø-je-mə-plə-n-ew ]  
**this boy-ABS** 1PL.ABS-3SG.IO-LOC-NEG-look-MOD-ADV  
 Ø-Ø-faj  
 3ABS-3SG.IO-want

b. *pro*<sub>i</sub>(ABS) [<sub>CP</sub> **mə ɕʼale-m<sub>i</sub>(IO)** t-Ø-je-mə-plə-n-ew ]  
**this boy-OBL** 1PL.ABS-3SG.IO-LOC-NEG-look-MOD-ADV  
 Ø-Ø-faj  
 3ABS-3SG.IO-want  
 ‘This boy doesn’t want us to look at him.’

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(2008); Potsdam and Haddad (2017) for an overview of backward control phenomena. When overtly expressed, the controlled argument is marked with the case that corresponds to its syntactic position, indicating that OC clauses are not deficient in either  $\phi$ -agreement or case assigning properties. This is illustrated in the examples below. In case of cross-clausal co-indexation, it is generally the case that only one of the arguments is overtly expressed as a nominal phrase, while the other co-indexed argument is present as a null pronoun, the presence of which can be diagnosed by the agreement it triggers on the corresponding predicate. For example, in (270) the ergative agent of the matrix verb *jebež'en* 'begin' is co-indexed with the absolutive external argument of the embedded verb *qeš<sup>w</sup>en* 'dance': in this case, the corresponding lexical DP may appear either in the matrix clause (270a), or in the embedded clause (270b) – in the former case the DP bears oblique case, as expected of an ergative participant, and in the latter case it bears absolutive case, as expected of the external argument of the embedded intransitive verb.

- (270) a. **pšaše-m<sub>i</sub>(ERG)** [CP PRO<sub>i</sub>(ABS) Ø-qe-š<sup>w</sup>e-n-ew ]  
**girl-OBL** 3ABS-DIR-dance-MOD-ADV  
 Ø-r-jə-ʁe-ž'a-ʁ  
 3ABS-DAT-3SG.ERG-CAUS-begin-PST
- b. PRO<sub>i</sub>(ERG) [CP **pšaše-r<sub>i</sub>(ABS)** Ø-qe-š<sup>w</sup>e-n-ew ]  
**girl-ABS** 3ABS-DIR-dance-MOD-ADV  
 Ø-r-jə-ʁe-ž'a-ʁ  
 3ABS-DAT-3SG.ERG-CAUS-begin-PST  
 'The girl started to dance.'

This pattern is likewise possible if the matrix predicate selects for an absolutive argument, and the co-indexed participant in the embedded clause is ergative. For example, the predicate *jezeš'en* 'tire of' selects for an absolutive argument and an oblique clausal complement. In (271) the absolutive argument of the matrix predicate is co-indexed with the ergative agent of the embedded verb: in this case the corresponding lexical DP may appear in the matrix clause, which is evident from its absolutive case marking (271a), or in the embedded clause instead, with corresponding oblique case marking (271b).

- (271) a. **mə pšaše-r<sub>i</sub>(ABS)** [CP PRO<sub>i</sub>(ERG) **laʁe-xe-r(ABS)**  
**this girl-ABS** dish-PL-ABS  
 Ø-ə-thač'ə-n-ew ] Ø-Ø-je-zeš'ə-ʁ  
 3ABS-3SG.ERG-wash-MOD-ADV 3ABS-3SG.IO-DAT-tire-PST
- b. PRO<sub>i</sub>(ABS) [CP laʁe-xe-r(ABS) **mə pšaše-m<sub>i</sub>(ERG)**  
 dish-PL-ABS **this girl-OBL**  
 Ø-ə-thač'ə-n-ew ] Ø-Ø-je-zeš'ə-ʁ  
 3ABS-3SG.ERG-wash-MOD-ADV 3ABS-3SG.IO-DAT-tire-PST  
 'The girl is tired of washing the dishes.'

The word order in (271b) rules out an interpretation of this construction as case transmission between the co-indexed embedded and matrix arguments. Under such an interpretation, the embedded argument would be uniformly covert, while the matrix argument would optionally surface with the case marking of the embedded argument – in (271b) this would mean that the oblique case-marked DP *mə pšašem* is in fact the absolutive DP in the matrix clause with the case value of the controlled argument copied onto it. However, such an interpretation is unavailable, because this would require for the absolutive DP to scramble out of the embedded clause to the left periphery of the matrix clause – as schematically illustrated in (272a). As shown in (272b), such a structure is impossible if the co-indexed lexical DP is marked with the absolutive case of the controller – this means that the lexical DP in (271b) is indeed embedded within the complement clause.<sup>4</sup>

4. In the raising constructions analyzed by Potsdam and Polinsky (2012), the authors provide evidence for the embedded status of a given DP through clause-bound NPI licensing. I was not able to replicate this test because my speakers disallow the use of an embedded NPI as the controlled argument (cf. example (24a) in Potsdam and Polinsky 2012:84):

- (i) a. \* PRO<sub>i</sub>(ERG) [CP **zə-r-jə<sub>i</sub>(ABS)** televizorə-m(IO) Ø-Ø-je-**mə**-pλə-n-ew ]  
**one-ABS-ADD(NPI)** television-OBL 3ABS-3SG.IO-DAT-NEG-watch-MOD-ADV  
 Ø-r-jə-ʁe-ž'a-ʁ  
 3ABS-DAT-3SG.ERG-begin-PST  
 Intended: 'No one began to watch television / Someone began to not watch television.'
- b. \* PRO<sub>i</sub>(ABS) [CP **zə-m-jə<sub>i</sub>(ERG)** laʁe-xe-r(ABS) Ø-ə-**mə**-thač'ə-n-ew ]  
**one-OBL-ADD(NPI)** dish-PL-ABS 3ABS-3SG.ERG-NEG-wash-MOD-ADV  
 Ø-Ø-je-zeš'ə-ʁ  
 3ABS-3SG.IO-DAT-tire-PST  
 Intended: 'No one is tired of washing the dishes / Someone is tired of not washing the dishes.'

I leave the investigation of the source of this ungrammaticality to future research; note that it is not due to the fact that the controlled argument is a quantifier, cf. (274a) with a universal quantifier appearing as the controlled argument in the embedded clause. A possible avenue of explanation lies in establishing whether the use of an NPI as the controlled

(272) a. Putative cross-clausal scrambling:

DP<sub>j</sub>(ABS) DP<sub>i</sub>(ABS) V<sub>CONTROL</sub> [CP PRO<sub>i</sub>(ERG) t<sub>j</sub>(ABS) ....



- b. \* laʁe-xe-r<sub>j</sub>(ABS) mə pšaše-r<sub>i</sub>(ABS) [CP PRO<sub>i</sub>(ERG) t<sub>j</sub>(ABS)  
dish-PL-ABS this girl-ABS  
Ø-ə-thač'ə-n-ew ] Ø-Ø-je-zeš'ə-ʁ  
3ABS-3SG.ERG-wash-MOD-ADV 3ABS-3SG.IO-DAT-tire-PST  
Intended: 'The girl is tired of washing the dishes.'

Note that only one of the co-indexed arguments may be overtly expressed: an overt demonstrative pronoun cannot be used to express the other argument, either in the embedded (273a) or the matrix clause (273b).

- (273) a. \* pšaše-m<sub>i</sub>(ERG) Ø-r-jə-ʁe-ž' a-ʁ [CP a-r<sub>i</sub>(ABS)  
girl-OBL 3ABS-DAT-3SG.ERG-CAUS-begin-PST that-ABS  
Ø-qe-š<sup>w</sup>e-n-ew ]  
3ABS-DIR-dance-MOD-ADV
- b. \* [CP pšaše-r<sub>i</sub>(ABS) Ø-qe-š<sup>w</sup>e-n-ew ] a-š'<sub>i</sub>(ERG)  
girl-ABS 3ABS-DIR-dance-MOD-ADV that-OBL  
Ø-r-jə-ʁe-ž' a-ʁ  
3ABS-DAT-3SG.ERG-CAUS-begin-PST  
Intended: 'The girl started to dance.'

The lexical phrase referring to the co-indexed argument may be expressed in the embedded clause even if it includes a quantifier, resulting in a 'backward binding' or Strong Crossover configuration. Thus, if an unergative verb such as *qeš<sup>w</sup>en* 'dance' is embedded under the control verb *jeʁež'en* 'begin', the quantifier phrase that corresponds to the controlled argument may appear within the embedded clause (274a) – this is evinced by the absolutive case marking on the quantifier. The other option is for the quantifier phrase to be expressed in the position of the controller in the matrix clause: in this case it appears with oblique case marking, as expected of the ergative agent (274b).

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argument alongside embedded negation leads to a semantic clash in the absence of matrix negation, given that the controlled argument is co-indexed with an argument in the matrix clause. Further investigation of this construction may shed light on the semantic nature of binding in 'backward control' constructions, where a quantifier surfaces within the embedded clause.



- (276) a. [CP laʁe-xe-r Ø-ə-thač'ə-n-ew] ža-rə [RC Op<sub>i</sub> a-r  
dish-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV this-PRED that-ABS  
t<sub>1</sub>(IO) Ø- **zə**- f- je- ž'a -be] -r  
3ABS- **WH.IO**- BEN- DAT- begin -PST -ABS
- b. [CP laʁe-xe-r Ø-ə-thač'ə-n-ew] ža-rə [RC Op<sub>i</sub> t<sub>1</sub>(ABS)  
dish-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV this-PRED  
a-š'(ERG) Ø- r- jə- be- ž'a -be] -r  
that-OBL **WH.ABS**- DAT- 3SG.ERG- CAUS- begin -PST -ABS  
'Washing the dishes – that's what she began doing.' (as an answer to a question)

In this respect, control clauses again behave in a parallel fashion to non-control clauses: the complement of the non-control predicate *fejen* ‘want’ may likewise be relativized, triggering wh-agreement in the applied object position, in accordance with the argument structure of the embedding predicate (277).

- (277) [RC Op<sub>i</sub> s-jə-pšêšer<sup>w</sup>ə-xe-r Ø-q-Ø-je-χ<sup>w</sup>epse-n-x-ew  
1SG.PR-POSS-girlfriend-PL-ABS 3ABS-DIR-3SG.IO-DAT-desire-MOD-PL-ADV  
sə- zə- faje] -r [Cp sə-qe-ŝ<sup>w</sup>e-n-ew ] arə  
1SG.ABS- WH.IO- want -ABS 1SG.ABS-DIR-dance-MOD-ADV PRED  
‘What I want to do so that my friends also want to do it, is dance.’

Thus, obligatory control clauses display the same  $\phi$ -agreement, case assigning and general distributional properties as non-control clauses, rendering a restructuring analysis of these constructions untenable.

### 5.2.3 Syntactic ergativity in complement clauses

Another important property of embedded control clauses is that, just as in matrix clauses, the absolutive argument occupies the highest A-position within the embedded clause. This is evident from (i) the directionality of reciprocal binding and (ii) anti-c-command effects with parasitic gaps.

## Reciprocal binding

We observed in chapter 3 that reciprocals follow a syntactically ergative pattern: if an absolutive theme and ergative agent of a transitive verb are in the reciprocal relation, the reciprocal pronoun appears in the ergative position, with the antecedent appearing in the position of the absolutive theme. This is evident from the positions of the agreement morphemes within the predicate in question:  $\phi$ -agreement with the antecedent appears in the absolutive position, while agreement with the reciprocal pronoun appears in the ergative agreement slot. In chapter 3 I use this as evidence for the absolutive DP raising to occupy the highest A-position within the clausal spine – Spec,TP. Importantly, the same directionality of binding is observed in embedded control clauses: (278a) shows the absolutive theme binding an ergative reciprocal pronoun under the control verb *jebež'en* ‘begin’, and (278b) shows the same binding pattern under the control verb *fjež'en* ‘begin’.

- [illegible]

Thus, patterns of reciprocal binding provide evidence for the high position of the absolutive DP in obligatory control clauses.

## Parasitic gaps

Embedded clauses display a syntactically ergative pattern in regards to conditions on parasitic gap licensing as well. In chapter 4 I presented evidence that multiple *wh*-agreement constructions in

West Circassian are manifestations of a parasitic gap dependency, and that the absolutive trace fails to license parasitic gaps within clausemate DPs due to the anti-c-command condition, which states that a parasitic gap may not be c-commanded by the licensing gap. The same pattern is observed in both obligatory control and non-control clausal complements. Thus, if the absolutive theme is relativized out of the clausal complement of the non-control verb *š'əg<sup>w</sup>əB<sup>w</sup>ən* 'hope', the co-referent possessor pronoun within the embedded applied object DP may not be replaced with a parasitic gap (279).

- (279) marə [RC haʒ<sup>w</sup>-ew<sub>i</sub> [CP t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane](IO)  
 here puppy-ADV 3SG/\***WH.PR**-mother  
 Ø-Ø-r-a-tə-ž'ə-n-č'e ] sə-z-š'ə-g<sup>w</sup>əB<sup>w</sup>ə-re]  
**WH.ABS**-3SG.IO-DAT-3PL.ERG-give-RE-MOD-INS 1SG.ABS-WH.IO-LOC-hope-DYN  
 -r  
 -ABS  
 'Here is the puppy whom I hope they will return to its mother.'

The same pattern is observed with the obligatory control predicates *jeBəž'en* 'begin' (280) and *fjež'en* 'begin' (281): if the absolutive theme of the embedded predicate is relativized, it may not license a parasitic gap within a clausemate DP in the embedded clause – in this case, in the position of the possessor of the applied object.

- (280) marə [RC pšaš-ew<sub>i</sub> [CP t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane](IO)  
 here girl-ADV 3SG/\***WH.PR**-mother  
 Ø-Ø-fe-s-fepe-n-ew ] Ø-je-z-Bə-ž'a-Bə] -r  
**WH.ABS**-3SG.IO-BEN-dress-MOD-ADV 3ABS-DAT-1SG.ERG-CAUS-begin-PST -ABS  
 'Here is the girl whom I started dressing for her mother.'
- (281) marə [RC sabjəj-x-ew<sub>i</sub> [CP t<sub>i</sub>(ABS) [DP pro<sub>i</sub> / \*<sub>PG</sub>(PR) Ø / \***z**-jane  
 here child-PL-ADV 3SG/\***WH.PR**-mother  
 Ø / \***z**-jate-xe-m](IO) Ø-ja-s-tə-ž'ə-n-x-ew ]  
 3SG/\***WH.PR**-father-PL-OBL **WH.ABS**-3PL.IO+DAT-1SG.ERG-give-RE-MOD-PL-ADV  
 sə-Ø-f-je-ž'a-Bə] -r  
 1SG.ABS-3SG.IO-BEN-DAT-begin-PST -ABS  
 'Here are the children whom I started returning to their parents.'



This is truly the anti-c-command condition in effect, rather than a general ban on parasitic gap licensing in embedded contexts: if the relativized participant is not absolutive, e.g. an applied object, a co-referent possessor pronoun within a clausemate DP may be replaced with a parasitic gap (282).

- (282) marə [RC bzəlfəw-ew<sub>i</sub> [CP [DP *pro*<sub>i</sub> / \_\_<sub>PG</sub>(PR) Ø / z-jə-mašjəne](ABS)  
 here woman-ADV 3SG/WH.PR-POSS-car  
 t<sub>i</sub>(IO) Ø-zə-fe-s-šə-ž'a-n-ew ]  
 3ABS-WH.IO-BEN-1SG.ERG-do-RE-MOD-ADV  
 sə-Ø-f-je-ž'a-ɸe / Ø-je-z-ɸe-ž'a-ɸe] -r  
 1SG.ABS-3SG.IO-BEN-DAT-begin-PST / 3ABS-DAT-1SG.ERG-CAUS-begin-PST -ABS  
 'Here is the woman for whom I started fixing her car.'

Thus, conditions on parasitic gap licensing in control clauses completely parallel the conditions on parasitic gaps in other contexts, indicating that the absolutive DP c-commands other clausemate DPs in control clauses.

Thus, we have seen that obligatory control predicates select for a full CP complement which displays the same structural properties as an independent clause, including syntactic ergativity effects found in non-control clauses: the absolutive DP binds reciprocal anaphors and an absolutive trace fails to license parasitic gaps in clausemate DPs due to the anti-c-command condition.

#### 5.2.4 *Control, not raising*

When presented with a construction that involves obligatory co-indexation between an argument in the matrix and the embedded clauses, the obvious question that arises is whether this construction is a control or a raising configuration. Schematically, a control configuration involves two co-indexed arguments that are assigned distinct  $\theta$ -roles (283a), while a raising configuration involves the introduction of an argument in the embedded clause which undergoes A-movement to a position in the matrix clause (283b).

- (283) a. [ DP<sub>i</sub> V<sub>CONTROL</sub> [CP PRO<sub>i</sub> V ... ]  
└──────────┘  
CONTROL
- b. [ DP<sub>i</sub> V<sub>RAISING</sub> [CP <DP<sub>i</sub>> V ... ]  
└──────────┘  
RAISING

This subsection provides several arguments in favor of a control analysis of obligatory co-indexation for the obligatory control predicates presented in (261), and, in particular, that these verbs assign a  $\theta$ -role to the co-indexed argument in the matrix clause. The arguments are the following:

1. In the absence of an embedded clause, control verbs generally select for two arguments.
2. Control clauses are may not be used with true expletives and are stilted with weather verbs.
3. Controlled arguments cannot be parts of idiom chunks.

Additionally, as discussed in the previous subsection, control clauses involve the embedding of a full CP with the same  $\phi$ -agreement and case assigning properties as a non-control clause. This means that even if this is a case of raising, this would have to be a hyper-raising construction, with a case-marked nominal undergoing A-movement across a CP boundary, as has been proposed e.g. in Lubukusu and Lusaamia (Carstens and Diercks 2013), Janitzio P'urhepecha (Zyman 2018), and Mongolian (Fong 2019), a.o. Control clauses in West Circassian, however, differ from hyper-raising constructions in other languages in several crucial ways, which is discussed below.

### The controller gets a theta-role

This subsection presents the evidence that obligatory control verbs select for two arguments: the complement clause and the controller, and the controller is assigned a theta-role by the control verb.

In terms of their argument structure and case-assigning properties, obligatory control verbs fall into the groups presented in (284): most control verbs assign ergative case to the controller, several assign absolutive case, and one assigns the experiencer theta-role to an applied object, which acts as the controller.

(284)	ERG-ABS	ABS-IO	IO-ABS
	zepesəž'en 'dare'	tjeg <sup>w</sup> əšx <sup>w</sup> əhan 'risk'	š'əB <sup>w</sup> əpšen 'forget'
	jevež'en 'begin'	jezeš'en 'tire of'	
	wəblen 'begin'	fjež'en 'begin'	
	wəxən 'finish'		
	zerəwəwən 'stop'		

There are several reasons to believe that control predicates assign a theta-role to the controller argument.

First, most obligatory control verbs may select for a DP instead of a clausal complement; in this case, the verbs act as two-place predicates that assign two theta-roles.<sup>5</sup> This is illustrated in the examples below: *jevež'en* 'begin' (285), *wəblen* 'begin' (286), and *wəxən* 'finish' (287) select for an ergative agent and an absolutive theme.

- (285) se(ERG)    wərwekə-r(ABS)    Ø-je-s-e-ɸa-ž'e  
 I            lesson-ABS            3ABS-DAT-1SG.ERG-DYN-CAUS-begin  
 'I am starting the lesson.'
- (286) š<sup>w</sup>əzə-m(ERG)    ɽ<sup>w</sup>efə-r(ABS)    Ø-    ə-            wəbla -ɸ  
 woman-OBL            work-ABS            3ABS- 3SG.ERG- begin -PST  
 'The woman began the task.'
- (287) š<sup>w</sup>əzə-m(ERG)    ɽ<sup>w</sup>ef-šenə-r(ABS)    Ø-    q-    ə-            wəxə -ɸ  
 woman-OBL            work-do-ABS            3ABS- DIR- 3SG.ERG- finish -PST  
 'The woman finished the job.'

5. The only exception is *š'ənen* 'fear', which in its obligatory control use may not select for a nominal complement.

The verbs *fjež'en* 'begin' (288) and *jezeš'an* 'tire of' (289) select for an absolutive external argument and an applied object.

- (288) λə-r(ABS) ʔ<sup>w</sup>efə-m(IO) Ø- Ø- f- je- ž'a -ɸ  
 man-ABS work-OBL 3ABS- 3SG.IO- BEN- DAT- begin -PST  
 'The man began the task.'

- (289) tatjane(ABS) nawəke-m(IO) Ø-Ø-je-zeš'ə-š'tə-ɸ-ep  
 Tatjana science-OBL 3ABS-3SG.IO-DAT-tire-IPF-PST-NEG  
 'Tatjana didn't get tired of science.' (AC)

Finally, *š'əɸ<sup>w</sup>əpšen* 'forget' falls into a small class of 'inverse' predicates which select for an applied object and an absolutive theme (see chapter 3:99-102 for details) – this is illustrated in (290).

- (290) [mə bzəlfəɸe-m Ø-jə-sajəj-xe-m](IO) s-a-š'ə-ɸ<sup>w</sup>əpša-ɸ  
 this woman-OBL 3SG.POSS-child-PL-OBL 1SG.ABS-3PL.IO-LOC-forget-PST  
 'This woman's children forgot about me.'

Thus, control verbs generally assign a theta-role to the controller argument, even in the absence of a clausal complement.

Another piece of evidence for the co-indexed argument in the matrix clause receiving a theta-role is that constructions involving weather verbs are mostly unacceptable, and expletive subjects of the predicates *-ɸ<sup>w</sup>eje* 'difficult' / *-ɸ<sup>w</sup>ešə* 'easy' may not be controlled.

Since (Chomsky 1981:323-327) it has been noted that even though weather verbs are generally unable to select for a regular DP as their subject, they do not involve a true expletive pronoun, but instead assign a non-agentive theta-role to its argument (see also Svenonius 2002; Krejci 2014; Levin and Krejci to appear, a.o.). The non-agentive nature of the theta-role assigned by a weather verb predicts that while weather verbs may sometimes appear in control constructions, their use may be more limited than for predicates that select for an external argument. This is confirmed in West Circassian.

An example of a weather construction is presented in (291a): in this case, the predicate selects for a locative applied object, which is evinced by the locative applicative morpheme *š'ə-* and, presumably, a phonologically covert absolutive subject. The only control predicate that may productively combine with this type of weather verb is *jebež'en* 'begin' (291b); (291c)-(291e) show that this weather verb may not be embedded under the control verbs *wəblen* 'begin', *fjež'en* 'begin', or *wəxən* 'finish'.

- (291) a. *š'ag<sup>w</sup>ə-m* *pro<sub>WEATHER</sub>(ABS)* *Ø-qə-Ø-š'ə-wəčəɽ<sup>w</sup>ə-ɸ*  
yard-OBL 3ABS-DIR-3SG.IO-LOC-cool.down-PST  
'It is getting colder outside.'
- b. *pro<sub>WEATHER</sub>(ERG)* [<sub>CP</sub> *PRO* *Ø-qə-wəčəɽ<sup>w</sup>ə-n-ew* ]  
3ABS-DIR-cool.down-MOD-ADV  
*Ø-ɽ-jə-ɸe-ž'a-ɸ*  
3ABS-DAT-3SG.ERG-CAUS-begin-PST  
'It started to get colder.'
- c. \**pro<sub>WEATHER</sub>(ERG)* [<sub>CP</sub> *PRO* *Ø-qə-wəčəɽ<sup>w</sup>ə-n-ew* ]  
3ABS-DIR-cool.down-MOD-ADV  
*Ø-ə-wəbla-ɸ*  
3ABS-3SG.ERG-begin-PST  
Intended: 'It started to get colder.'
- d. \**pro<sub>WEATHER</sub>(ERG)* [<sub>CP</sub> *PRO* *Ø-qə-wəčəɽ<sup>w</sup>ə-n-ew* ]  
3ABS-DIR-cool.down-MOD-ADV  
*Ø-Ø-f-je-ž'a-ɸ*  
3ABS-3SG.IO-BEN-DAT-begin-PST  
Intended: 'It started to get colder.'
- e. \**pro<sub>WEATHER</sub>(ERG)* [<sub>CP</sub> *PRO* *Ø-qə-wəčəɽ<sup>w</sup>ə-n-ew* ]  
3ABS-DIR-cool.down-MOD-ADV  
*Ø-ə-wəxə-ɸ*  
3ABS-3SG.ERG-finish-PST  
Intended: 'It stopped getting colder.'

If these constructions involved simple raising, we would not expect to observe any difference in acceptability between (291b) and (291c)-(291e). If we assume that the embedding verbs in these cases assign their own theta-roles to the controller, the difference in acceptability can be

A construction that is likely to involve a true expletive subject or no subject at all is formed with the suffixes *-B<sup>w</sup>eje* ‘difficult’ and *-B<sup>w</sup>eṣ<sup>w</sup>* ‘easy’ (Rogava and Keraševa 1966:297-299; Smeets 1992:130; Arkadiev et al. 2009:63; Letuchiy 2010:344-345). A full analysis of these constructions lies outside the scope of this dissertation, but I assume here that these suffixal heads are lexical verbs (V<sup>0</sup>) which select for VoiceP as their complement. Within this construction, the highest nominal in VoiceP – the ergative agent or the absolutive external argument of an unergative verb – is often expressed as PRO, or may be overtly present.<sup>6</sup> For example, the unergative verb *jegəjən* ‘reproach’ in (292a) takes a first person absolutive external argument and a reflexive as the applied object. If this verb is embedded under *-B<sup>w</sup>eṣ<sup>w</sup>* ‘easy’, the agreement marker referring to the external argument may be present (292b), thus signaling that there is a null first person pronoun in the absolutive position, or it may be omitted, as in (292c). Importantly, in both cases, the applied object agreement remains intact.

6. The non-PRO usage of the external argument within this construction appears to be constrained for reasons that are not well-understood; see Letuchiy (2010:344-345) and Lander (2016:3522) for discussion.

The fact that the external argument is present as PRO even in the absence of corresponding agreement on the verb is evinced by the fact that it binds the reflexive pronoun in (292c); this is thus evidence against a valency-reduction account of this construction, as proposed e.g. by Letuchiy (2010:344-345).

If we assume that constructions headed by *-B<sup>w</sup>eje* / *-B<sup>w</sup>eŋ<sup>w</sup>* involve an expletive absolutive argument, these constructions should not be embeddable under control verbs. This is confirmed to be the case: it is impossible to embed the construction in (293a) under *jebež'en* ‘begin’ (293b) or *fjež'en* ‘begin’ (293c).

- (293) a. *pro*<sub>expletive</sub> [VoiceP PRO<sub>arb</sub> a-š' Ø- š'ə- zeprə- č'ə ] -B<sup>w</sup>aj  
that-OBL 3SG.IO- LOC- TRANS- go -difficult  
'It is difficult to walk through there.'
- b. \**pro*<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(EXPLETIVE) [VoiceP PRO<sub>arb</sub> a-š' Ø- š'ə-  
that-OBL 3SG.IO- LOC-  
zeprə- č'ə] -B<sup>w</sup>eje-n-ew ] Ø-r-jə-be-ž'a-B  
TRANS- go -difficult-MOD-ADV 3ABS-DAT-3SG.ERG-CAUS-begin-PST
- c. \**pro*<sub>i</sub>(ABS) [CP PRO<sub>i</sub>(EXPLETIVE) [VoiceP PRO<sub>arb</sub> a-š' Ø- š'ə-  
that-OBL 3SG.IO- LOC-  
zeprə- č'ə] -B<sup>w</sup>eje-n-ew ] Ø-Ø-f-je-ž'a-B  
TRANS- go -difficult-MOD-ADV 3ABS-3SG.IO-BEN-DAT-begin-PST  
Intended: 'It began to be difficult to walk through there.'

Finally, the behavior of idiom chunks likewise do not provide support for a raising analysis of obligatory control constructions. The evidence regarding idioms is not exhaustive, because idioms which involve an argument that could be potentially controlled in an obligatory control construction and that may carry overt case marking are difficult to find. Additionally, to test both transitive and unergative control predicates, one needs to identify two idioms wherein the potential controlled argument would be assigned a case that is distinct from the case of the controller.

One idiom that involves an ergative external argument is in (294):<sup>7</sup>

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7. This idiom is also discussed by Potsdam and Polinsky (2012) as a diagnostic for raising.

- (294) pčenə-m(ERG)    šəne(ABS)    Ø-q-ə-λfə-r-ep  
goat-OBL            lamb            3ABS-DIR-3SG.ERG-give.birth-DYN-NEG  
'Miracles don't happen.' (lit. 'A goat does not give birth to a lamb')

The speakers I have consulted do not allow for this construction to be embedded under a control verb, regardless of where the lexical DP referring to the embedded ergative agent surfaces: in the embedded clause with oblique case (295a) or in the matrix clause with absolutive case (295b).

- (295) a. \*PRO<sub>i</sub>(ABS) [CP pčənə-m<sub>i</sub>(ERG) šəne  
goat-OBL lamb  
q-ə-mə-λfə-n-ew ] Ø-Ø-f-je-ž'a-ɐ  
DIR-3SG.ERG-NEG-give.birth-MOD-ADV 3ABS-3SG.IO-BEN-DAT-begin-PST
- b. \*pčənə-r<sub>i</sub>(ABS) [CP PRO<sub>i</sub>(ERG) šəne  
goat-ABS lamb  
q-ə-mə-λfə-n-ew ] Ø-Ø-f-je-ž'a-ɐ  
DIR-3SG.ERG-NEG-give.birth-MOD-ADV 3ABS-3SG.IO-BEN-DAT-begin-PST
- Intended: 'Miracles don't begin to happen.' (lit. 'A goat begins not to give birth to a lamb.')

It is worth noting that the incompatibility of this idiom with an aspectual control verb may be for semantic, rather than syntactic reasons; however, the data in (295) at least provides no support for a raising analysis.

Another idiom involving an ergative agent is in (296a). This idiom likewise may not be embedded under the control verb *jfež'en* ‘begin’ regardless of whether the lexical DP referring to the controlled argument surfaces in the embedded (296b) or matrix clause (296c).

- [illegible]





- b. \**pro*<sub>EXPLETIVE</sub> [CP *pro*<sub>i</sub>(ERG) laβe-xe-r Ø-s-thač'ə-n-ew ]  
 dish-PL-ABS 3ABS-1SG.ERG-wash-MOD-ADV  
 Ø-r-jə-βe-ž'a-β / Ø-Ø-f-je-ž'a-β  
 3ABS-DAT-3SG.ERG-CAUS-begin-PST / 3ABS-3SG.IO-BEN-DAT-begin-PST  
 Intended: 'I began to wash the dishes.'

Secondly, a possible prediction of a hyper-raising analysis is that, since hyper-raising involves movement out of CP – a syntactic phase, according to the Phase Impenetrability Condition, it would have to stop over at the phase edge – Spec,CP. This may predict that any additional movement, such as wh-movement, would be blocked in a hyper-raising construction (see e.g. Zyman 2018:111-114 for discussion of this prediction). This prediction is not confirmed: for example, the extraction of the applied object from within the complement clause of the control verbs *fjež'en* 'begin' (298a) and *jeβež'en* 'begin' (298b) is perfectly grammatical. In addition to the wh-agreement in the applied object slot within the embedded clause, the verb *fjež'en* 'begin' may also display wh-agreement in the applied object slot, which generally expones agreement with the complement clause; see chapter 4:161-163 for discussion of the nature of this wh-agreement marker.

- (298) a. xet-a [RC Op<sub>i</sub> we<sub>j</sub>(ABS) [CP PRO<sub>j</sub>(ABS) wə- z- e- χ<sup>w</sup>enə -n  
 who-Q you 2SG.ABS- WH.IO- DAT- scold -MOD  
 -ew ] wə- zə / %Ø- f- je- ž'a -βe] -r  
 -ADV 2SG.ABS- WH/3SG.IO- BEN- DAT- begin -PST -ABS  
 'Who did you begin to scold?'  
 b. xet-a [RC Op<sub>i</sub> we<sub>j</sub>(ABS) [CP PRO<sub>j</sub>(ABS) wə- z- e- χ<sup>w</sup>enə -n  
 who-Q you 2SG.ABS- WH.IO- DAT- scold -MOD  
 -ew ] Ø- je- b- βe- ž'a -βe] -r  
 -ADV 3ABS- DAT- 2SG.ERG- CAUS- begin -PST -ABS  
 'Who did you begin to scold?'

Finally, if West Circassian control constructions were to involve a raising structure, this would have to be a case of raising to ergative, which is otherwise unobserved in the language: for example, the addition of an applicative argument to an intransitive verb does not induce ergative case assignment to its sole argument. One of the cross-linguistically robust properties of ergative case is that it is restricted to external arguments, which has been the motivating factor for analyzing

ergative case as inherent (Legate 2008, a.o.). While some counterevidence to this generalization has been discussed in the literature (see e.g. Baker 2014; Rezac et al. 2014; Deal to appear), in the absence of other compelling evidence for a raising analysis of control constructions or for the existence of derived ergative positions in other parts of the West Circassian grammar, this additionally takes away from the credibility of a raising account of these constructions.

### 5.2.5 *Summary: the morphosyntax of obligatory control constructions*

To summarize this section, a small set of verbs in West Circassian require obligatory co-indexation between an argument in the embedded clause and an argument in the matrix clause. The constructions involving this type of obligatory co-indexation display properties that suggest that these constructions involve control: the embedded clause is a full CP and the verb that selects for the clausal complement assigns a theta-role to the co-indexed argument in the matrix clause.

Additionally, embedded clauses involved in obligatory control constructions are morphosyntactically indistinguishable from non-control clauses: they display the full range of  $\phi$ -agreement and case assigning properties of a finite clause. As with non-control clauses, the lexical DP referring to the co-indexed participant may surface either in the matrix, or in the embedded clause, despite the latter being an apparent Condition C violation. Like non-control clauses, complements of control verbs provide evidence for a high position of the absolutive argument within the clause: an absolutive DP within a control complement may bind reciprocal pronouns and an absolutive trace may not license parasitic gaps within clausemate DPs per the anti-c-command condition.

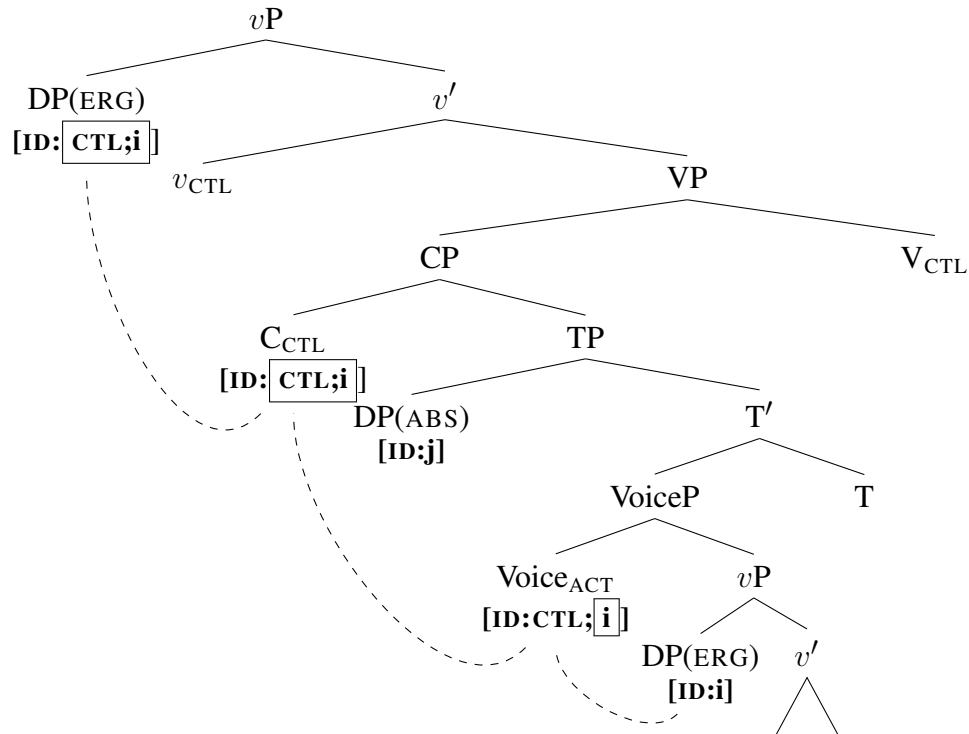
Despite control clauses displaying a syntactically ergative clause structure, obligatory control constructions follow a syntactically accusative pattern in the choice of controlled argument: if a transitive verb with an ergative agent and an absolutive theme is embedded under an obligatory control verb, the ergative agent must be co-indexed with the controller, not the absolutive theme. Given the general structure of these clauses, this poses a challenge to analyses of control which rely on the subject status of the controlled argument: the ergative DP in these constructions is not

the highest DP within the embedded clause, but nevertheless must be the controlled argument.

### 5.3 Analysis

This section lays out the analysis of obligatory control constructions in West Circassian. The main puzzle regarding these constructions is that despite the absolutive DP occupying the highest A-position within the embedded control clause, the controlled argument must be the highest DP within *v*P. In this sense, control clauses parallel in distribution with reflexives, which are discussed in chapter 3. The solution to the puzzle hinges on the same idea as the solution to the reflexive puzzle: control in West Circassian is mediated via Voice<sup>0</sup>, which agrees in the index feature with the highest DP in its c-command domain. Voice<sup>0</sup> is additionally partially valued for the index feature value with [CTL] – a feature that is specifically targeted by C<sup>0</sup> in control configurations. This index feature is then transferred to the embedded C<sup>0</sup> via Agree, and then to the controller in the matrix clause. The absolutive DP in Spec,TP does not act as an intervener for Agree-mediated control, because it does not bear the set of matching index features. This configuration is schematically represented in (299): Voice<sup>0</sup> agrees with the highest DP in its c-command domain – the ergative external argument – in the index feature; additionally, Voice<sup>0</sup> is partially valued for this feature with [CTL]. C<sup>0</sup> then probes for [CTL] and agrees with Voice<sup>0</sup>, triggering a transfer of the index of the ergative DP. Finally, the controller likewise probes for the [CTL] feature and agrees with C<sup>0</sup>, resulting in the transfer of the index feature of the controlled argument to the controller.

(299)



This analysis captures two unusual properties of West Circassian control constructions: (i) the lack of immediate locality between the controlled argument and control  $C^0$  or the controller, and (ii) the fact that the controlled argument in the embedded clause may be a lexical DP, i.e. may be an R-expression or a quantifier phrase, unlike PRO in better studied languages.

The remainder of this section is organized in the following way: subsection 5.3.1 presents evidence that the choice of controller is parallel to the choice of antecedent in reflexive binding and subsection 5.3.2 presents the details of the analysis.

### 5.3.1 Control via Voice: Parallels with reflexive binding

This subsection argues that the choice of controller in obligatory control configurations is mediated via the embedded Voice<sup>0</sup> head, just as reflexive binding is mediated by a reflexive Voice<sub>REFL</sub>.

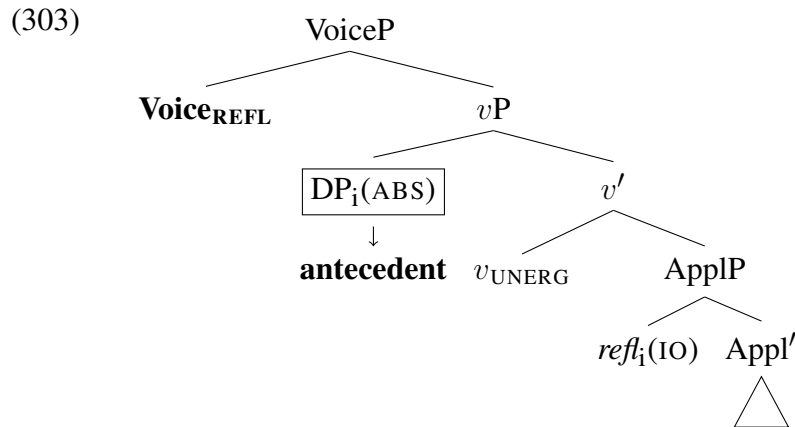
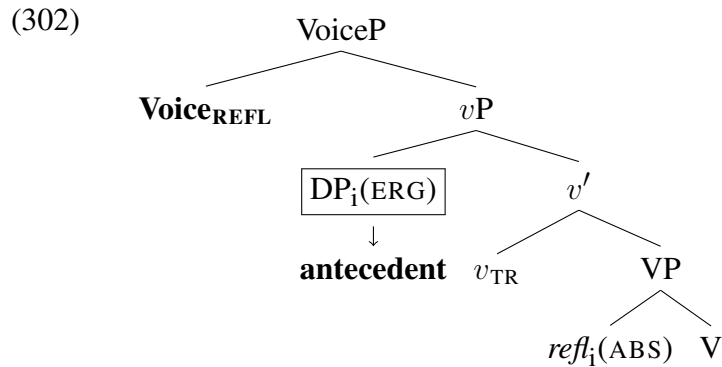
Recall from chapter 3 that reflexive binding appears to follow a syntactically accusative pattern: the first person plural ergative agent of the transitive verb in (300) binds the absolutive theme, and

the second person singular absolutive external argument of an unergative verb binds an applied object in (301).

- (300)  $\boxed{pro_i(\text{ERG})}$   $refl_i(\text{ABS})$  **zə-**  $\boxed{t-}$   $\lambda eB^wə -\mathfrak{B}$   
**REFL.ABS-** **1PL.ERG-** see **-PST**  
 ‘We saw ourselves.’

- (301)  $\boxed{pro_i(\text{ABS})}$   $refl_i(\text{IO})$   $\boxed{wə-}$  **zə-** f- je- že -ž’ə - $\mathfrak{B}$   
**2SG.ABS-** **REFL.IO-** BEN- DAT- read -RE -PST  
 ‘You studied for yourself.’

I argue in chapter 3 that the binding pattern observed in (300)-(301) is the consequence of reflexive binding being mediated by  $\text{Voice}_{\text{REFL}}$ , which selects the highest DP in its c-command domain as the antecedent for the reflexive: in (300) it is the ergative agent (302) and in (301) it is the absolutive external argument (303).



An important testing case for this proposal concerns unaccusative verbs with an applicative argument: given that Voice<sub>REFL</sub> simply selects the highest nominal in its c-command domain as the antecedent, we expect an applied object to be an eligible antecedent for the absolutive theme of an unaccusative verb. As discussed in chapter 3:100, unaccusative verbs do not productively combine with applicative arguments, however, a small class of so-called ‘inverse’ predicates may be a lexicalized result of such a derivation. Crucially, these inverse predicates provide support for Voice-mediated reflexive binding: as predicted by this analysis, if the two arguments of the inverse verb *š’əB<sup>w</sup>əpšen* ‘forget’ are co-indexed, the experiencer in the applied object position may bind a reflexive in the position of the absolutive theme (304a). The opposite configuration, wherein the absolutive argument binds the experiencer, is also possible (304b) – I propose in chapter 3 that this is due to the availability of an unergative structure for these verbs.

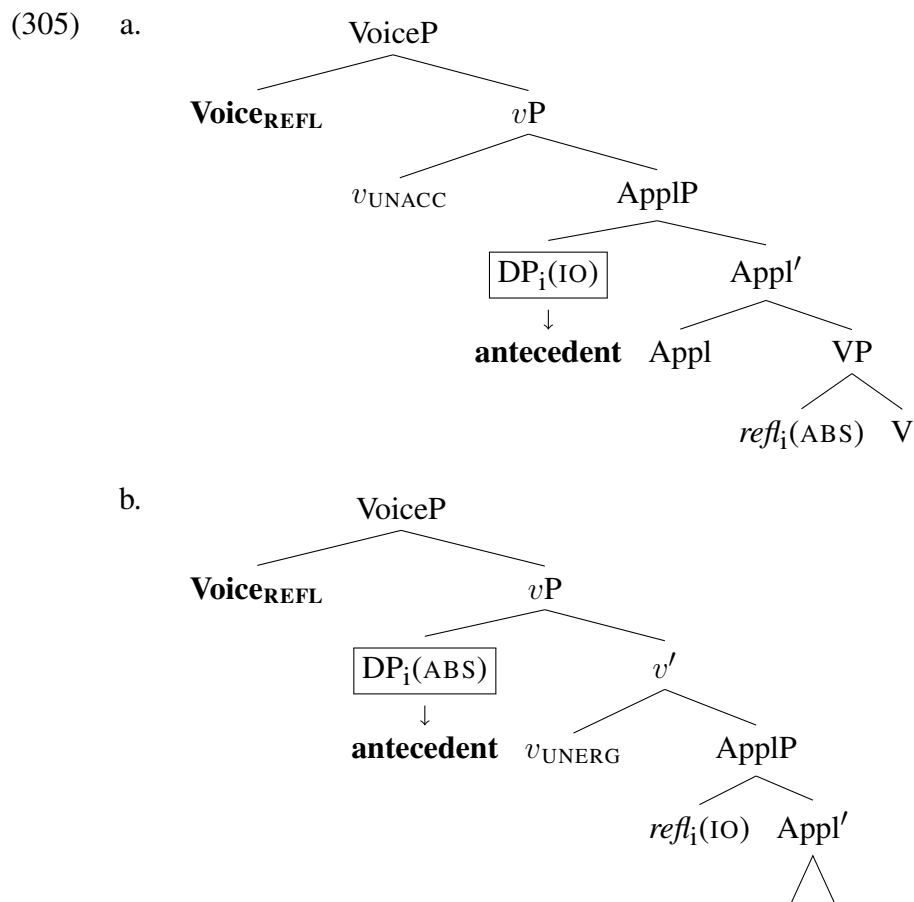
(304) a. *pro*<sub>i</sub>(IO) *refl*<sub>i</sub>(ABS) **zə-** s- *š’ə- B<sup>w</sup>əpše -ž’ə -B*  
**REFL.ABS-** 1SG.IO- LOC- forget -RE -PST

b. *pro*<sub>i</sub>(ABS) *refl*<sub>i</sub>(ABS) sə- **z-** *š’ə- B<sup>w</sup>əpše -ž’ə -B*  
 1SG.ABS- **REFL.IO-** LOC- forget -RE -PST

‘I forgot about myself (e.g. when serving food).’

**ABS>IO|IO>ABS**

The structure for (304a) is schematically represented in (305a): since the applied object is merged in Spec,ApplP of the unaccusative verb, it is the highest nominal in the c-command domain of Voice<sub>REFL</sub>, making it an eligible antecedent for reflexive binding. The structure for (304b) is shown in (305b): in this case, the base verb is reinterpreted as unergative due to the presence of the applicative morphology (since applicatives are generally incompatible with unaccusative predicates) – this means that the absolutive external argument is merged higher than the experiencer in the applied object position. In this case, the absolutive argument serves as the antecedent for the reflexive pronoun.



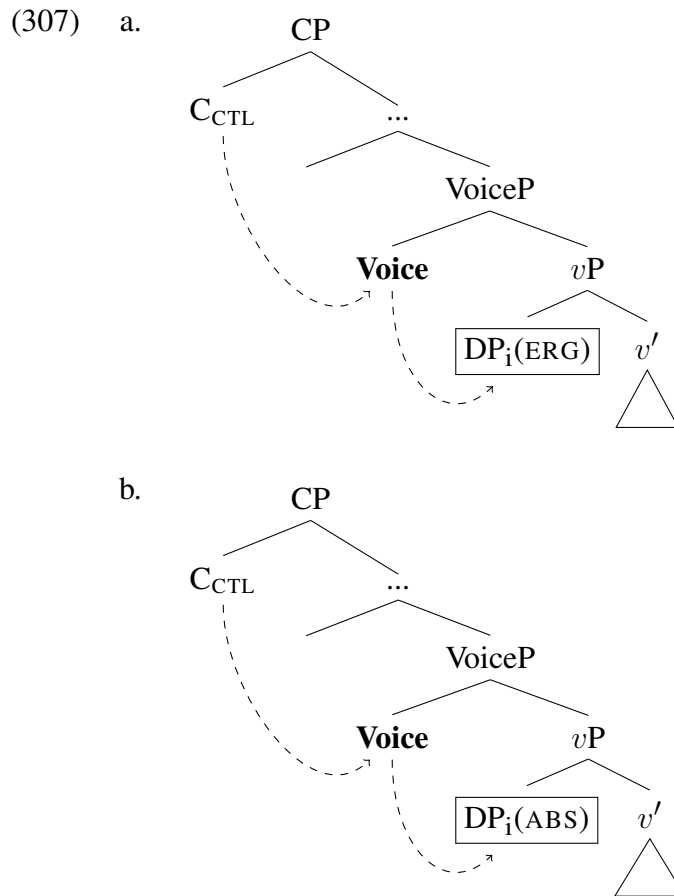
As discussed in the introduction, the choice of controller in obligatory control clauses follows a syntactically accusative pattern, as with reflexive binding: if a transitive verb is embedded under a control verb like *jebež'en* ‘begin’, the ergative agent is the controlled argument (306a), and if an unergative predicate with an applied object is embedded under a control verb, the absolutive external argument is controlled (306b).

- (306) a. ha-m<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(ERG)] haž<sup>w</sup>ə-š'ər-xe-r  
 dog-OBL puppy-cub-PL-ABS  
 Ø-ə-ʁe-šxe-n-ew ] Ø-r-jə-ʁe-ž'a-ʁ  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-DAT-3SG.ERG-CAUS-begin-PST  
 ‘The dog began to feed the puppies.’
- b. č'elejeʁaž-e-m(ERG) [CP PRO<sub>i</sub>(ABS)] sabjəj-xe-m  
 teacher-OBL child-PL-OBL  
 Ø-ja-çeçe-n-ew ] Ø-r-jə-ʁe-ž'a-ʁ  
 3ABS-3PL.IO+DAT-scold-MOD-ADV 3ABS-DAT-3SG.ERG-CAUS-begin-PST



‘The teacher began to scold the students.’

I propose that the reason for this is that control, just like reflexive binding, is mediated by Voice<sup>0</sup>: following Landau (2000), control is established via agreement between the controlled argument and the controller. This agreement relation is mediated via embedded Voice<sup>0</sup> and C<sup>0</sup>. As with reflexive binding, the participation of Voice<sup>0</sup> in this derivation ensures that only the highest DP in the c-command domain of Voice<sup>0</sup> may be controlled in an obligatory control configuration: in the case of a transitive verb like *beşxen* ‘feed’ in (306a), this is the ergative agent (307a), and in the case of an unergative verb like *jeçeçen* ‘scold’ in (306b), this is the absolutive external argument (307b).

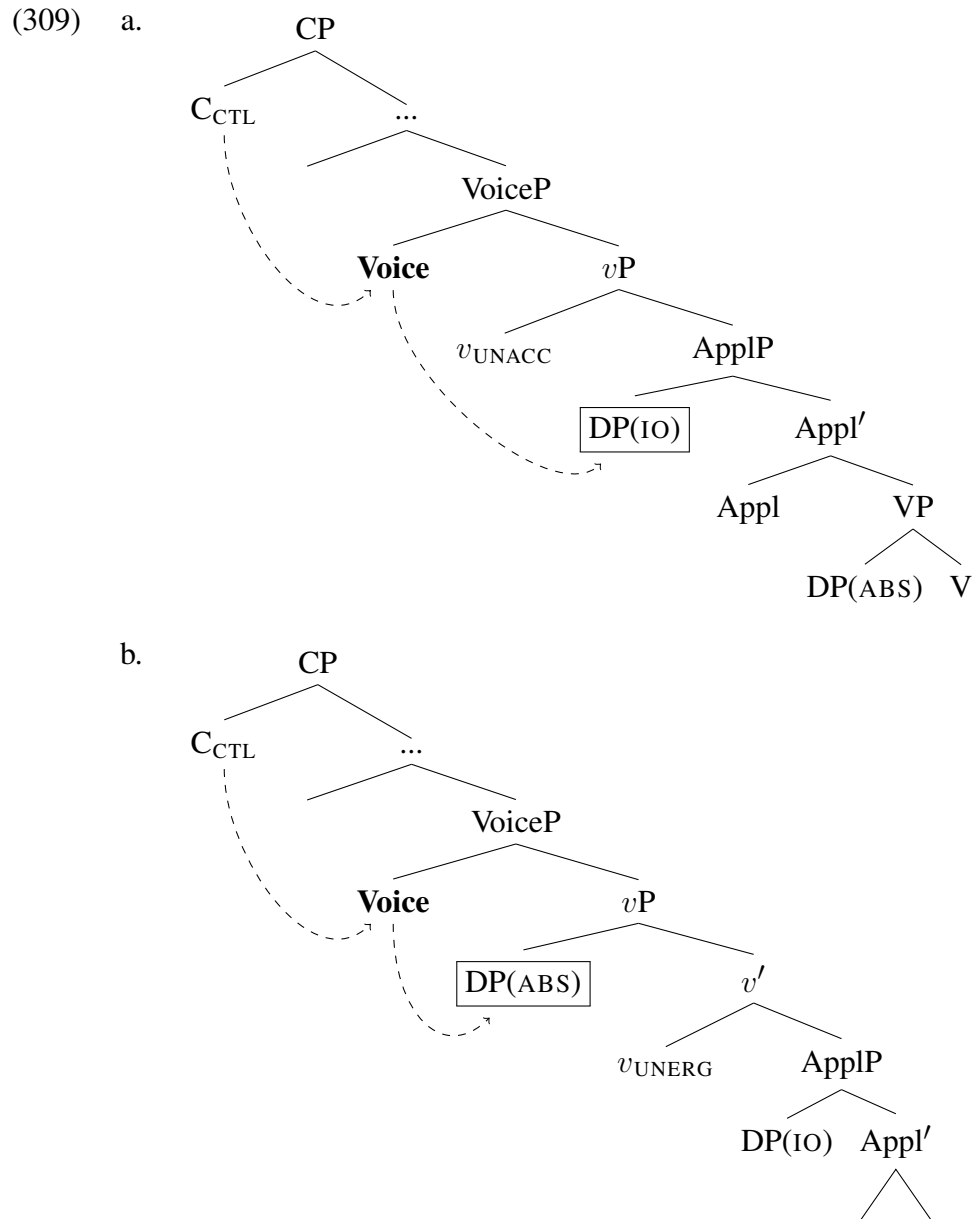


The parallel with reflexives is further confirmed by the behavior of inverse predicates in control clauses: if an inverse predicate like *ş’əB<sup>w</sup>əpşen* ‘forget’ is embedded under a control verb, either

the applied object or the absolutive argument may be controlled. This is shown in (308): in (308a) the controlled argument is the first person applied object – this is evident from the first person ergative agreement on the matrix verb. In (308b), on the other hand, the absolutive argument is the controlled argument – this is evinced by the third person plural agreement on the control verb.

- (308) a. *pro<sub>i</sub>*(ERG) [CP **PRO<sub>i</sub>**(IO)] s-jə-nəbž’əč’e-B<sup>w</sup>ə-m  
 1SG.PR-POSS-young-time-OBL  
 Ø-qə-s-š’ə-ŋə-ɓe-xe-r(ABS) Ø-**s-**š’ə-B<sup>w</sup>əpše-n-ew]  
 3ABS-DIR-1SG.IO-LOC-do-PST-PL-ABS 3ABS-**1SG.IO-**LOC-forget-MOD-ADV  
 Ø-je-**s-**e-ɓa-ž’e  
 3ABS-DAT-**1SG.ERG-**DYN-CAUS-begin  
 ‘I am starting to forget what happened to me in my childhood.’
- b. g<sup>w</sup>əš’əʔe-č’əha-xe-m<sub>i</sub>(ERG) [CP **PRO<sub>i</sub>**(ABS)]  
 word-long-PL-OBL  
 Ø-**s-**š’ə-B<sup>w</sup>əpše-n-ew] Ø-r-**a-**ɓe-ž’a-B]  
**3ABS-**1SG.IO-LOC-forget-MOD-ADV 3ABS-DAT-**3PL.ERG-**CAUS-begin-PST  
 ‘Long words are beginning to be forgotten (by me).’

The fact that both the applied object and the absolutive argument of an inverse predicate may be controlled in an obligatory control construction confirms that the choice of controller parallels the choice of antecedent in reflexive binding. It is thus reasonable to attribute the choice of controlled argument to Voice<sup>0</sup>. The possibility of both the applied and the absolutive argument being controlled in a control construction is then due to the same reason that either of these arguments may serve as an antecedent for reflexive binding – inverse verbs have two possible structures: one on the basis of an unaccusative verb, with the applied argument being the highest nominal in the c-command domain of Voice<sup>0</sup> (309a), and one on the basis of an unergative structure, with the absolutive argument being introduced higher than the applied object (309b).



Thus, the choice of controlled argument is constrained in ways that parallel it with the choice of antecedent for reflexive binding, indicating that this choice is mediated by  $\text{Voice}^0$ , which singles out the highest nominal within its c-command domain. The following section lays out the details of the analysis.

### 5.3.2 *Control as index agreement*

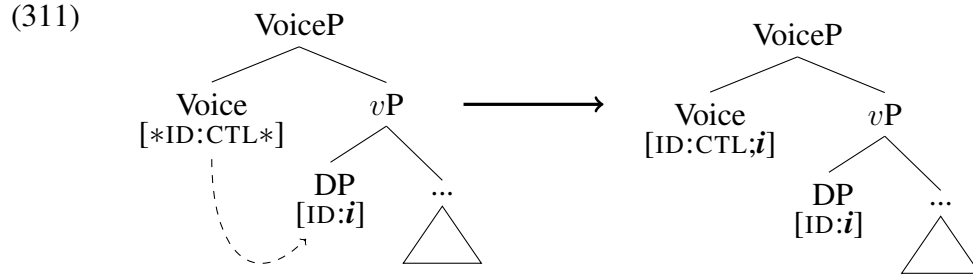
This subsection lays out the details of the analysis of obligatory control in West Circassian. This analysis builds on aspects of Landau's (2000) Agree-based analysis and binding approaches to control (see e.g. Chomsky 1981; Borer 1989 and Landau's (2015) treatment of PRO as a minimal pronoun akin to reflexives).

This analysis relies on several assumptions. The first assumption is that one of the features that may participate in an Agree operation is the index feature; see Rezac (2004); Kennedy (2014); Grosz (2015); Arregi and Hanink (2018) for independent evidence for this type of agreement. Agree-based control is then the result of the matching of index values between two nominal phrases via Agree. The second assumption concerns the role of index matching for interpretation. The basic assumption is that if two DPs bear the same index, i.e. are co-indexed, and one c-commands the other, they are in a binding relation (Chomsky 1980, 1981).

There are three elements that are instrumental to the syntactic configuration that results in obligatory control: Voice<sup>0</sup>, control C<sup>0</sup> and the controller – a DP with an unvalued index feature.

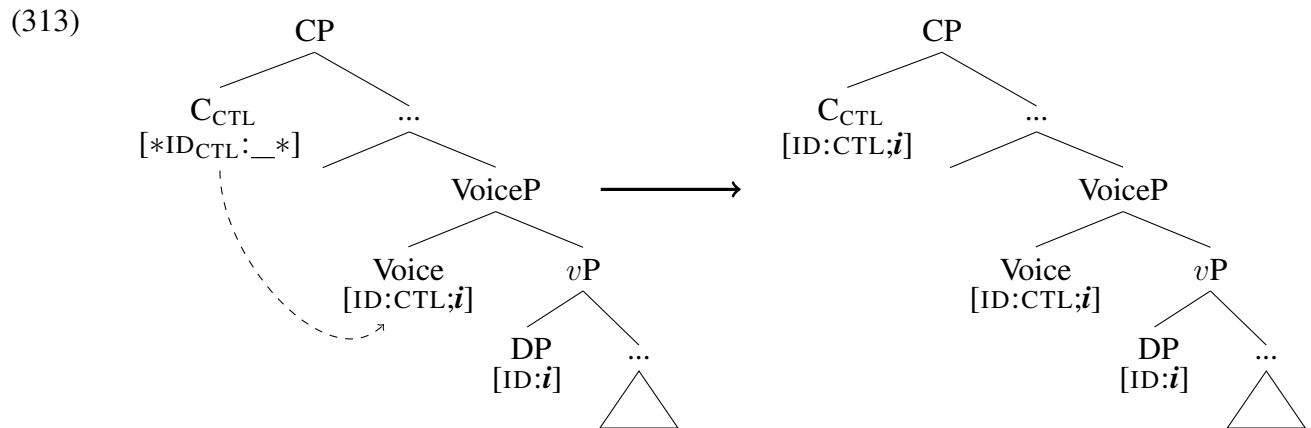
The Voice<sup>0</sup> head that mediates obligatory control is not particular to control configurations – the assumption is that it enters this agreement relation regardless of whether or not the full clause ends up embedded within a control construction. Setting aside subcategorization features, Voice<sup>0</sup> bears an agreement feature [ID] which (i) is seeking a goal with a matching valued [ID] feature and (ii) is partially valued with the value [CTL] (310). The result of Voice<sup>0</sup> agreeing with a DP is the transfer of the goal's index feature, which becomes the value of [ID] alongside the pre-valued feature [CTL] (311).

(310) Voice<sup>0</sup>: [\*ID:CTL\*]



The transfer of the index feature to the controller is further mediated by  $C_{CTL}$ , which carries a relativized index probe, for which the only viable goal is  $Voice^0$  (312).  $C_{CTL}$  agrees with  $Voice^0$ , resulting in valuation of the index feature on  $C_{CTL}$  with the value of the controlled argument (313).

(312)  $C_{CTL}$ : [ $*ID_{CTL}:\_*$ ]

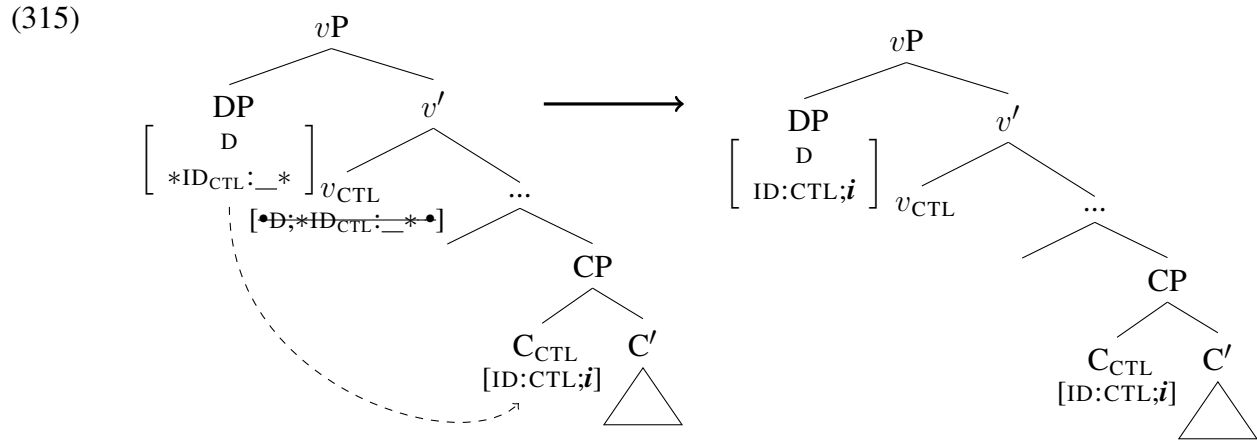


Besides  $C_{CTL}$ , a control clause involves a special type of matrix  $v_{CTL}$ , which selects for a referentially deficient external argument – the controller. The feature content of the controller argument is in (314a): it is a DP which has an unvalued index feature and which carries a relativized index probe that must agree with a goal that has [CTL] as part of its index feature set. The head that selects for this argument correspondingly carries a structure-building feature that requires this particular feature set (314b).

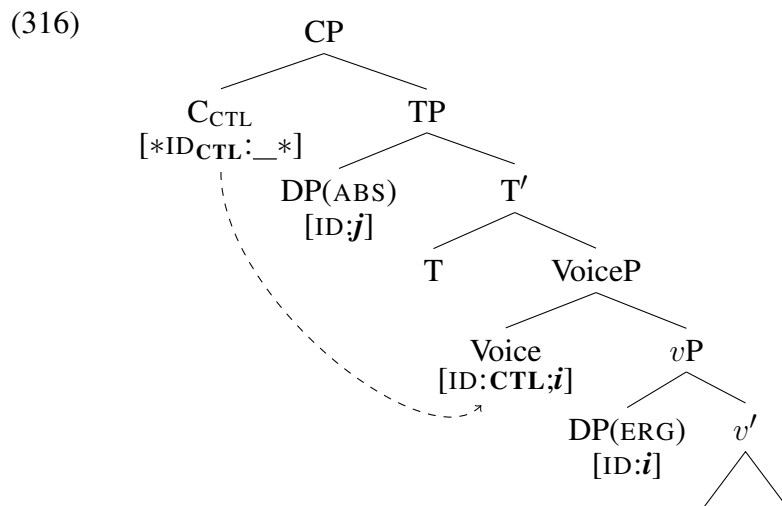
(314) a. Controller DP: [ $D;*ID_{CTL}:\_*$ ]

b.  $v_{CTL}$ : [ $\bullet D;*ID_{CTL}:\_ * \bullet$ ]

The controller DP probes and agrees with the closest eligible goal –  $C_{CTL}$ , resulting in the transfer of the index feature that originated on the controlled argument in the embedded clause to the controller DP (315).



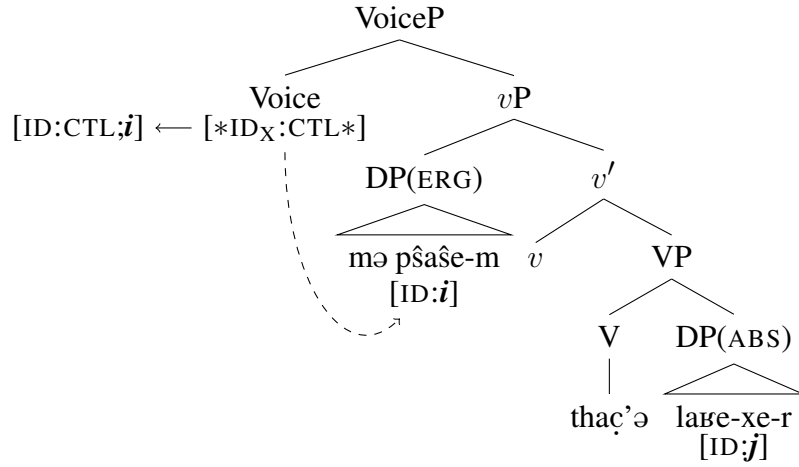
The participation of  $Voice^0$  in the agreement chain between the controller and the controlled argument derives the fact that the control configuration appears to be insensitive to the high position of the absolutive argument within the embedded clause: since  $C_{CTL}$  and the controller carry an index probe that is relativized to the  $[CTL]$  feature on  $Voice^0$ , the absolutive argument is not an eligible goal for  $C_{CTL}$  unless it is the highest nominal within  $vP$ , despite being more local to the probe than  $Voice^0$  (316).



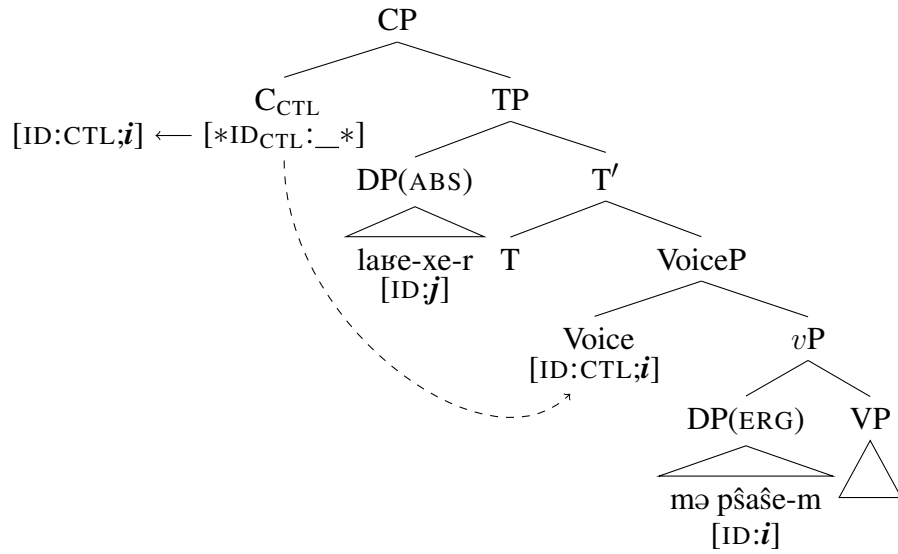
A few sample derivations are provided below. Let us first consider a case wherein a referential lexical DP is merged within the embedded clause, as in (271b), repeated below in (317).

- First, an active Voice<sup>0</sup> selects for *v*P, which contains an ergative agent in Spec,*v*P and an absolutive theme within VP; Voice<sup>0</sup> probes for the index feature, which is valued with the index on the ergative DP (318a). Then T<sup>0</sup> is merged and attracts the absolutive theme to Spec,TP, followed by the merging of C<sub>CTL</sub>. C<sub>CTL</sub> then probes and agrees with Voice<sup>0</sup> (318b). The control verb and *v*<sub>CTL</sub> merge above CP; *v*<sub>CTL</sub> selects for the controller, and the controller agrees with C<sub>CTL</sub> (318c).

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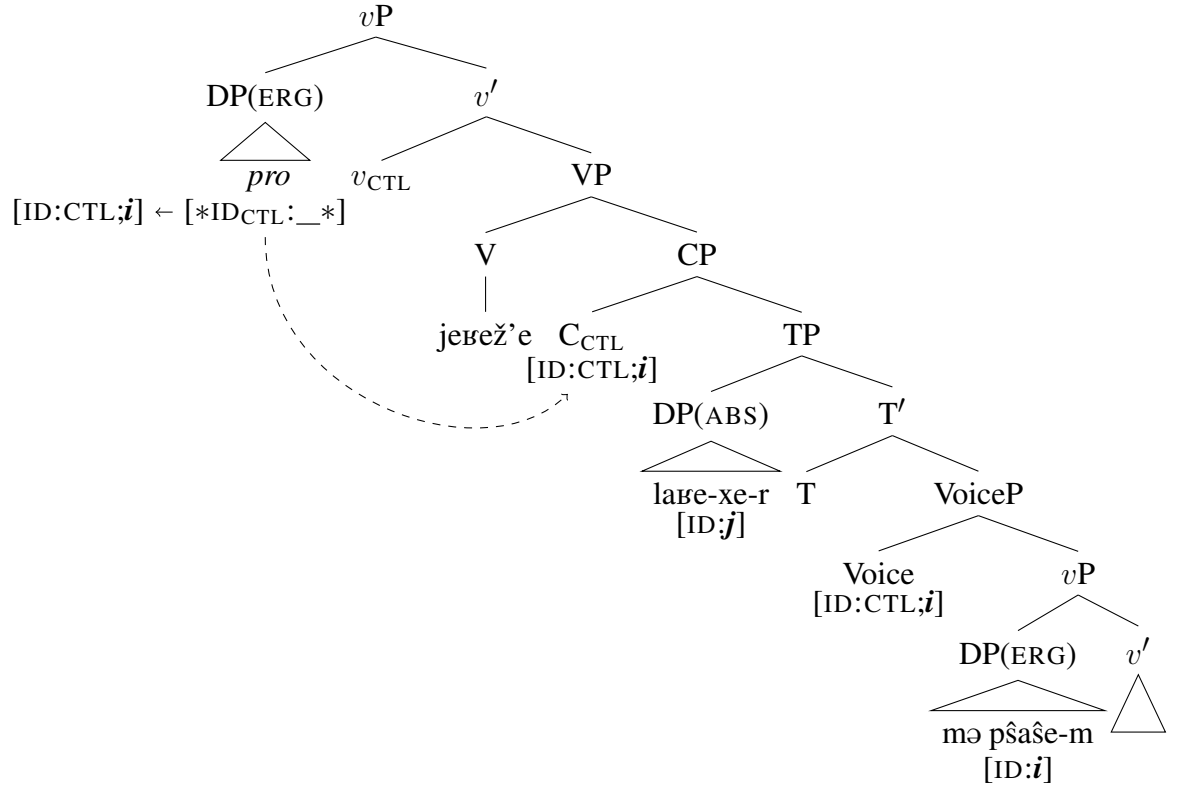


b.  $C_{CTL}$  agrees with  $Voice^0$ :



c. The controller agrees with  $C_{CTL}$ :

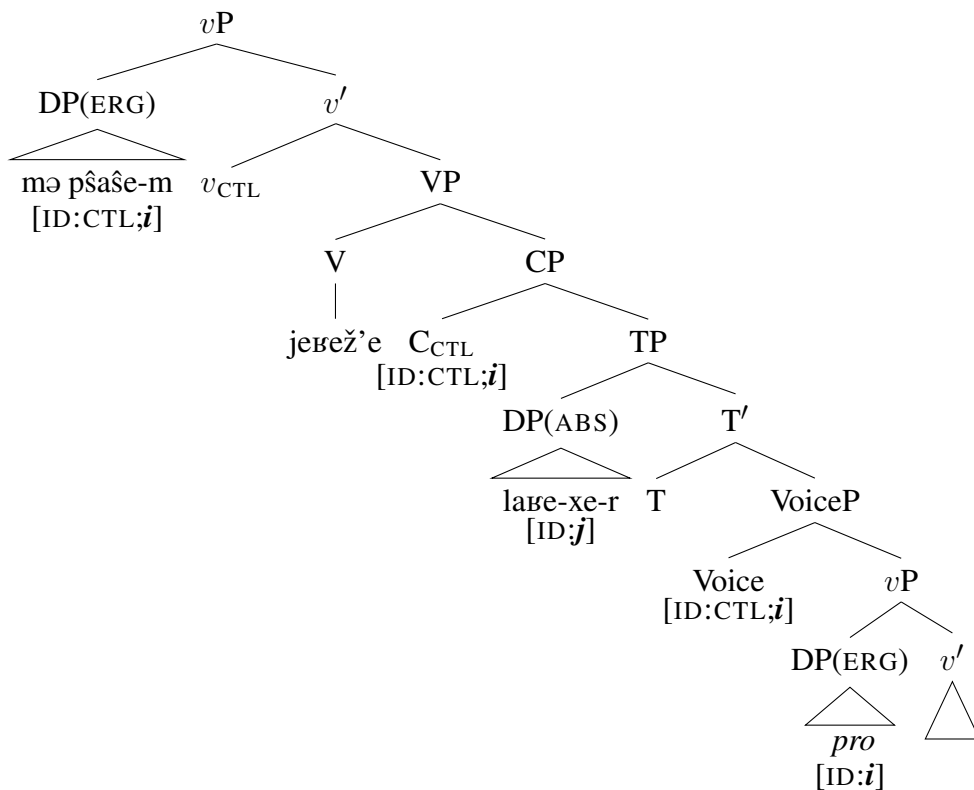




The structure for (271a), repeated below in (319), is the same as (318c), with one difference: the lexical DP is merged in the matrix clause, while the co-indexed argument which introduces the index is merged as a null pronoun (*pro*) – this is shown in (320).

- (319) **mə pšaše-r<sub>i</sub>(ABS)** [CP PRO<sub>i</sub>(ERG) laɞe-xe-r(ABS)  
**this girl-ABS** dish-PL-ABS  
 Ø-ə-thač'ə-n-ew ] Ø-Ø-je-zeš'ə-ɸ  
 3ABS-3SG.ERG-wash-MOD-ADV 3ABS-3SG.IO-DAT-tire-PST

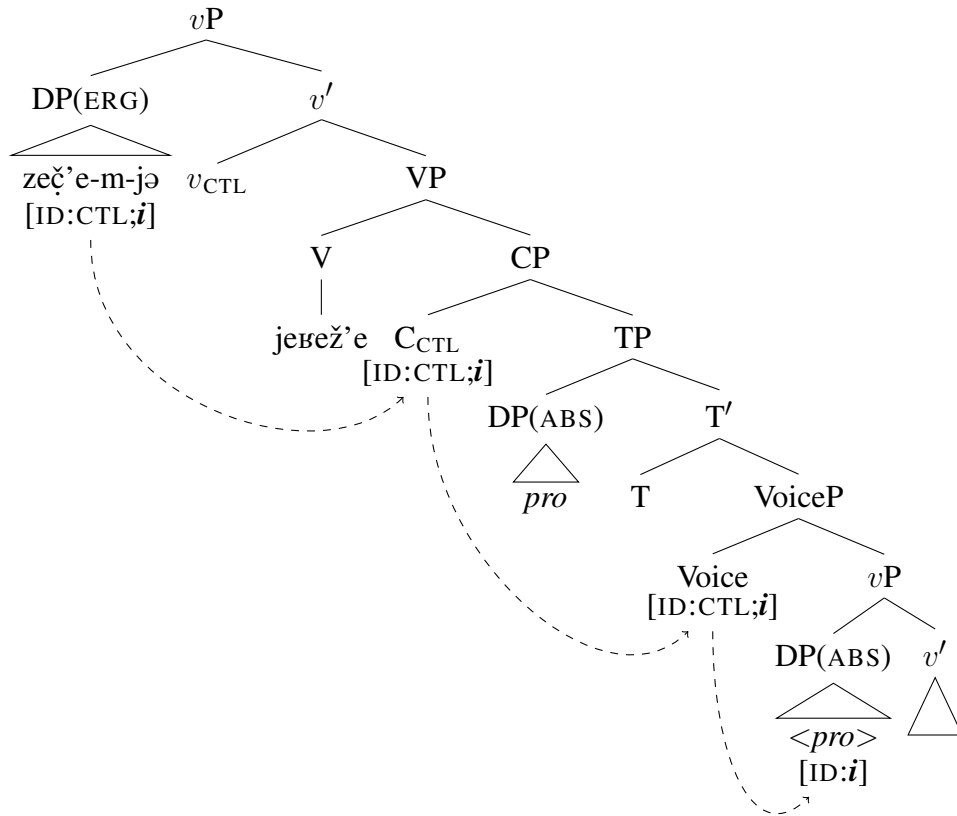
(320)



The structure for a control configuration involving a quantifier phrase as the controller, as in (274b), repeated below in (321), is shown in (322). In this case the controlled argument is introduced as the external argument in the embedded clause; Voice<sup>0</sup> agrees with it in the index feature, which is then transferred via agreement to C<sub>CTL</sub> and subsequently to the controller. The controller and the controlled argument are then interpreted as being in a binding relation due to them being co-indexed.

- (321) [CP PRO<sub>i</sub>(ABS) Ø-qe-š<sup>w</sup>e-n-ew ] zeč̣'e-m-jə<sub>i</sub>(ERG)  
 3ABS-DIR-dance-MOD-ADV all-OBL-ADD  
 Ø-r-a-ŋe-ž'a-ŋ  
 3ABS-DAT-3PL.ERG-CAUS-begin-PST  
 'Everyone started to dance.'

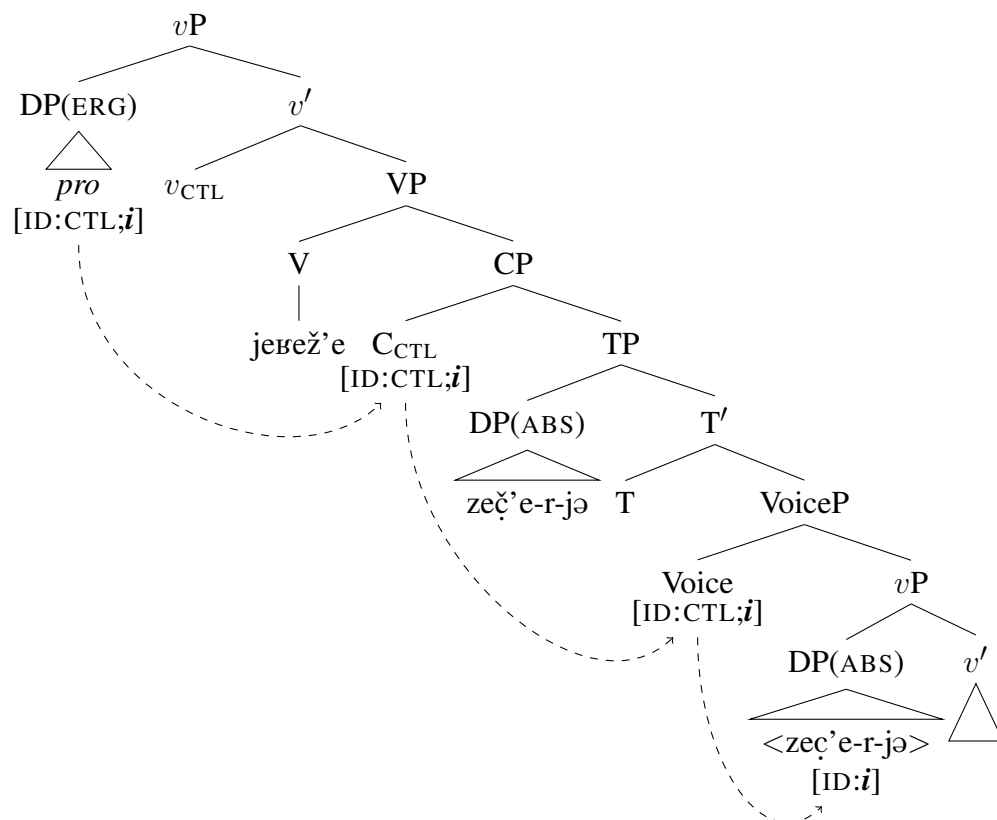
(322)



Finally, if the quantifier phrase appears in the embedded clause, as in (274a), repeated below in (323), the structure is analogous to (322), except that the quantifier phrase is merged within the embedded clause (324).

- (323) [CP **zeč'e-r-jə<sub>i</sub>**(ABS)    Ø-qe-š<sup>w</sup>e-n-ew ]    PRO<sub>i</sub>(ERG)  
          **all-ABS-ADD**            3ABS-DIR-dance-MOD-ADV  
          Ø-r-a-be-ž'a-ŋ  
          3ABS-DAT-3PL.ERG-CAUS-begin-PST

(324)



It is evident from the structure in (324) that the index feature is not the morphosyntactic realization of a referential index – rather, it must be understood in more general terms, as a means of establishing a binding or co-reference relation between nominals.

Recall that apparent cross-clausal Condition C violations are rampantly available in West Circassian, as shown for non-control verbs in (268)-(269). Crossover configurations with quantifiers are also generally possible, with some variation among speakers; see also discussion in (Testelefs 2009b:693-700). For example, in the sentence in (325) the quantifier phrase *sabjəj-pepč* ‘every child’ is embedded within the complement clause of the verb *ʔ<sup>w</sup>en* ‘say’ – despite the lack of overt case marking on the quantifier phrase, its embedded status is evinced from the fact that it is surrounded by linguistic material belonging to the embedded clause. This sentence has two interpretations: one wherein the possessor of the matrix ergative agent is interpreted as referring to a contextually salient participant (325a) and one wherein this possessor pronoun is interpreted as bound by the embedded quantifier phrase (325b).

- (325) [CP *deɤ<sup>W</sup>-ew* *sabjəj-pepč<sub>i</sub>*(ABS) *Ø-qa-ŝ<sup>W</sup>-ew*] [DP *pro<sub>i/j</sub>*(PR)  
           good-ADV child-every                   3ABS-DIR-dance-ADV  
           ə-š-xe-m](ERG)                   Ø-a-ʔ<sup>W</sup><sub>e</sub>  
           3SG.PR-brother-PL-OBL 3ABS-3PL.ERG-say
- a. His/her brothers say that every child dances well.
- b. Every child's brother says that she dances well.

The question of what allows for these Condition C and crossover violations in West Circassian is outside the scope of this dissertation. For the purposes of this chapter it suffices to say that a c-command relation between a pronoun and a co-indexed nominal phrase is sufficient for establishing a binding relation, regardless of whether the nominal phrase c-commands the pronoun or vice versa.<sup>8</sup>

To conclude this section, the syntactically accusative orientation of control in West Circassian can be accounted for by an analysis that appeals to Voice<sup>0</sup> as a mediating head in the relation between the controller and the controlled argument. Control is then established via agreement in the index feature, with co-indexed nominals interpreted as being in a binding configuration.

## 5.4 Raising constructions

This section briefly addresses the question of how the control analysis proposed in this chapter could be extended to subject-to-subject raising constructions discussed by Potsdam and Polinsky (2012). The authors analyze a subset of the verbs discussed in this chapter as raising predicates, arguing that (i) the verbs in question are unaccusative and (ii) select for TP (rather than CP).<sup>9</sup> For example, the authors would label the construction involving the matrix verb *fjež'en* 'begin' in (326) as a raising construction, involving the movement of the embedded ergative agent to Spec,TP in the matrix clause:

8. See Testelefs (2009b) for discussion of this phenomenon in West Circassian and e.g. Davis et al. (2007) for an analysis of similar Condition C violation in Salish languages and the Southern Wakashan language Nuuchahnulth.

9. The authors convincingly argue for a bi-clausal analysis of the construction in question, but do not explicitly argue against treating the embedded clause as a full CP.

- (326) [CP pšaše-m<sub>i</sub>(ERG) lare-xe-r Ø-ə-thač'ə-n-ew ] pšaše-r<sub>i</sub>(ABS)  
 girl-OBL dish-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV girl-ABS  
 Ø-Ø-f-je-ž'a-ɸ  
 3ABS-3SG.IO-BEN-DAT-begin-PST  
 'The girl began to wash the dishes.'

As discussed in subsection 5.2.4, the verbs analyzed by the authors do not display raising properties for the speakers I have consulted: the majority of the verbs the authors present display clear properties of control verbs (327a), and two verbs display properties of one-place predicates that select for a proposition as their argument and do not allow raising of any of the embedded participants (327b).<sup>10</sup>

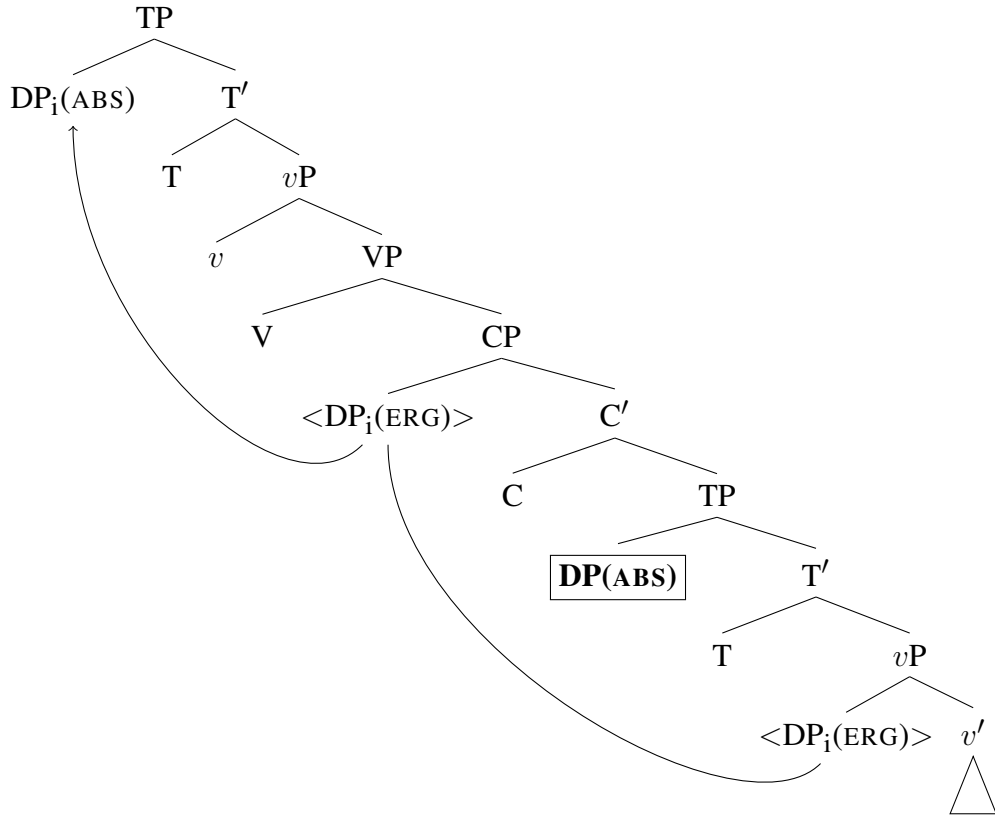
- (327) a. Control verbs: *fjež'en* 'begin', *wəblen* 'begin', *wəxən* 'finish'  
 b. One-place aspectual verbs: *χ<sup>w</sup>ən* 'become, turn out', *qəč'eč'ən* 'happen to'

However, if the verbs discussed by Potsdam and Polinsky (2012) are in fact raising verbs which display syntactically accusative patterns of subject-to-subject raising, they pose the same challenge as control constructions: how does the ergative agent undergo raising over the absolutive DP, despite the absolutive DP being structurally higher than the ergative (328)?<sup>11</sup>

- (328) The raising puzzle:

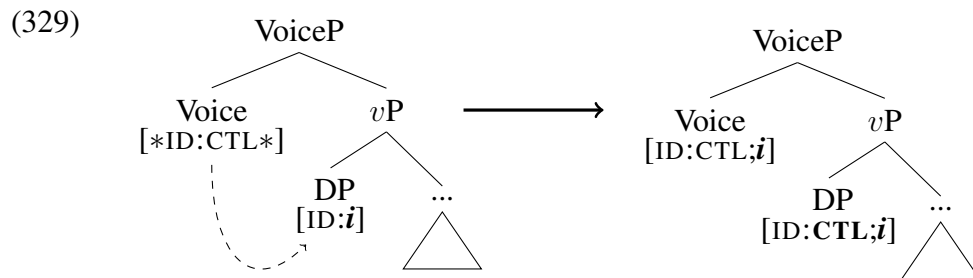
10. See Appendix 5.C for discussion of the latter two verbs.

11. There are several additional questions a raising analysis must address, which I do not discuss here. Two obvious questions concern (i) how case is reassigned to a case-marked nominal within the matrix clause and (ii) what motivates this movement. While Potsdam and Polinsky (2012) present evidence from the embedding of weather verbs and idiom chunks to support the raising analysis of these verbs, it would be worthwhile to check whether these verbs display any other properties associated with hyper-raising constructions, such as (i) the compatibility with true expletives like *-ɸ<sup>w</sup>eš<sup>w</sup>* 'easy' / *-ɸ<sup>w</sup>eje* 'difficult', (ii) blocking effects for additional movement out of the embedded CP, (iii) the possibility of the raised argument to remain in situ with an expletive argument surfacing in the matrix clause, and (iv) the case-assigning properties of the verbs in question, given that a number of the verbs discussed by the authors (*wəxən* 'finish' and *wəblen* 'begin') assign ergative case to the controller in the dialect spoken by my consultants.

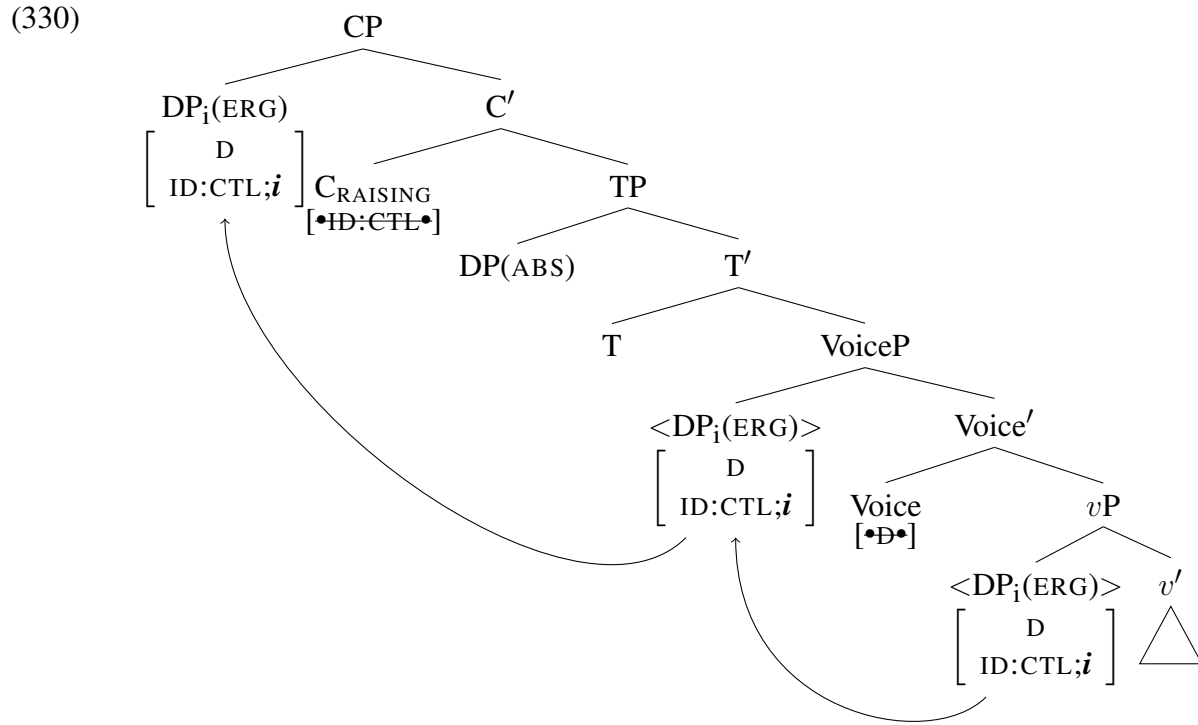


The analysis proposed in this chapter for obligatory control constructions can be used to account for this puzzle as well, with a few adjustments.

First, the operation Agree must result in mutual valuation of the feature participating in Agree. For example, if  $\text{Voice}^0$  enters an agreement relation with the highest nominal in its c-command domain, with  $\text{Voice}^0$  carrying a partially valued [ID] feature, the partial value ([CTL]) is transferred to the goal as a result of Agree (329).



The next step would involve obligatory movement of the highest DP in the c-command domain of Voice<sup>0</sup> to Spec,VoiceP, triggered by the structure-building feature [**•D•**] on Voice<sup>0</sup>. From this position, the ergative DP may raise to C<sub>RAISING</sub>, which would have a structure-building feature [**•ID:CTL•**] to attract the ergative argument (330).



As a result of movement to Spec,CP, the ergative DP becomes the highest DP in the c-command domain of the raising verb that selects this CP, allowing for further movement of this DP into the matrix clause.

To conclude this section, if subject-to-subject raising is a possibility for some speakers of West Circassian, this configuration may be derived in a similar fashion to the obligatory control configuration discussed in this chapter – via movement that is mediated by Voice<sup>0</sup> in the embedded clause, thus ensuring that the raised element corresponds to the highest DP in the c-command domain of Voice<sup>0</sup>, rather than the highest DP in TP.



## 5.5 Conclusion

The choice of controlled argument in obligatory control constructions follows a syntactically accusative pattern in West Circassian – a property that is arguably a typological universal, even for languages that otherwise display syntactic ergativity effects (Dixon 1994:136). Given that West Circassian otherwise presents compelling evidence for the absolutive occupying the highest A-position in the clausal spine, the puzzle is then the following: why does control single out the highest argument in *v*P – the ergative agent, rather than the highest argument in the full embedded clause – the absolutive theme? I propose that the solution to this puzzle lies in the behavior of Voice<sup>0</sup> – the same functional projection that is responsible for restricting possible antecedents in reflexive constructions. If control is established via an agreement relation, Voice<sup>0</sup> mediates this relation by carrying the feature [CTL], which is specifically targeted for agreement by the embedding C<sub>CTL</sub> and the controller.

The proposed analysis may be extended to other languages that display a similar mismatch between the choice of controlled argument and other subjecthood diagnostics. As in the previous chapters, this analysis confirms that subjecthood diagnostics are context-specific and do not necessarily uniformly single out a particular nominal or even a single syntactic position. As with reflexive binding, the controlled argument must be the highest nominal in *v*P, but it need not be the external argument – it may be an applied object, as long as it is not c-commanded by another nominal within VoiceP.

The analysis developed here differs significantly from analyses that rely on the morphosyntactic properties of PRO, the nominal element that is generally understood to occupy the syntactic position of the controlled argument in the embedded clause. This is a logical deviation, given that West Circassian control clauses provide no evidence for control constructions obligatorily containing a phonologically null operator or referentially deficient pronominal element in the embedded clause. This analysis, however, has the potential of being extendable to languages with PRO, by

simply accommodating the possibility that the expression of two co-indexed elements in a control configuration may be governed by language-specific rules which determine both the form of the embedded predicate and the form of the controlled nominal in the embedded clause.

## Appendix 5.A Obligatory control verbs

The following verbs in West Circassian display an obligatory control profile:

(331) Obligatory control predicates:

- a. Implicative: *zepesəž'en* 'dare', *tjeg<sup>w</sup>əšx<sup>w</sup>əhan* 'risk', *š'əB<sup>w</sup>əpšen* 'forget', *š'ənən* 'fear', *jezeš'en* 'tire of'
- b. Aspectual: *jebež'en* 'begin', *fjež'en* 'begin', *wəblen* 'begin', *wəxən* 'finish', *zerəwewən* 'stop'

The examples below illustrate the requirement that an argument in the matrix clause is the highest argument in *vP*.

(332) *zepesəž'en* 'dare'

- a. *pro<sub>i</sub>*(ERG) Ø-z-e-s-pesə-ž'ə-B-ep [CP PRO<sub>i</sub>(ERG)  
3ABS-REFL.IO-DAT-1SG.ERG-allow-RE-PST-NEG  
a-fede g<sup>w</sup>əš'əʔe-xe-r Ø-qe-s-ʔ<sup>w</sup>e-n-ew]  
3PL.PP-like word-PL-ABS 3ABS-DIR-1SG.ERG-say-MOD-ADV  
'I didn't dare say such words.'
- b. \* *pro<sub>i</sub>*(ERG) Ø-z-e-s-pesə-ž'ə-B-ep [CP *pro<sub>j</sub>*(ERG) *pro<sub>i</sub>*(IO) a-fede g<sup>w</sup>əš'əʔe-xe-r  
3ABS-REFL.ABS-DAT-1SG.ERG-allow-RE-PST-NEG  
3PL.PP-like word-PL-ABS  
Ø-qə-s-e-p-ʔ<sup>w</sup>e-n-ew  
3ABS-DIR-1SG.IO-DAT-2SG.ERG-say-MOD-ADV  
lit. 'I didn't dare for you to say such words to me.'

(333) *tjeg<sup>w</sup>əšx<sup>w</sup>əhan* 'risk'

- a. zarjəne<sub>i</sub>(ABS) [C<sub>P</sub> PRO<sub>i</sub>(ERG) ha-xe-r(ABS)  
 Zarina dog-PL-ABS  
 Ø-ə-ʔe-šxe-n-ew] Ø-Ø-tje-g<sup>w</sup>ə.šx<sup>w</sup>ə.ha-ʔ-ep  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-3SG.IO-LOC-risk-PST-NEG  
 ‘Zarina didn’t risk feeding the dogs.’
- b. \* ha-xe-r<sub>i</sub>(ABS) [C<sub>P</sub> zarjəne(ERG) pro<sub>i</sub>(ABS)  
 dog-PL-ABS Zarina  
 Ø-ə-ʔe-šxe-n-ew] Ø-Ø-tje-g<sup>w</sup>ə.šx<sup>w</sup>ə.ha-ʔe-x  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-3SG.IO-LOC-risk-PST-PL  
 lit. ‘The dogs risked Zarina feeding them.’

(334) š’əʔ<sup>w</sup>əpšen ‘forget’

- a. [C<sub>P</sub> PRO<sub>i</sub>(ERG) hak<sup>w</sup>ə-r Ø-qe-z-ʔe-ḵ<sup>w</sup>ese-ž’ə-n-ew]  
 oven-ABS 3ABS-DIR-1SG.ERG-CAUS-burn.out-RE-MOD-ADV  
 pro<sub>i</sub>(IO) Ø-s-š’ə-ʔ<sup>w</sup>əpša-ʔ  
 3ABS-1SG.IO-LOC-forget-PST  
 ‘I forgot to turn off the stove.’
- b. \* [C<sub>P</sub> pro<sub>j</sub>(ERG) pro<sub>i</sub>(ABS) ježape-m  
 school-OBL  
 sə-qə-š’-a-ʔe-šxe-n-ew] pro<sub>i</sub>(IO)  
 1SG.ABS-DIR-LOC-3PL.ERG-CAUS-eat-MOD-ADV  
 Ø-s-š’ə-ʔ<sup>w</sup>əpša-ʔ  
 3ABS-1SG.IO-LOC-forget-PST  
 lit. ‘I forgot for them to feed me at school.’

The non-control use requires different complement headed by *-me* ‘COND’:

- (335) pro<sub>i</sub>(IO) Ø-s-š’ə-ʔ<sup>w</sup>əpša-ʔ [C<sub>P</sub> pro<sub>j</sub>(ERG) pro<sub>i</sub>(ABS) ježape-m  
 3ABS-1SG.IO-LOC-forget-PST school-OBL  
 sə-qə-š’-a-ʔe-šxa-ʔe-me]  
 1SG.ABS-DIR-LOC-3PL.ERG-CAUS-eat-PST-COND  
 ‘I forgot whether they fed me at school.’

(336) š’ənen ‘fear’

- a. [C<sub>P</sub> PRO<sub>i</sub>(ABS) mə mezə-m sə-ḵ<sup>w</sup>e-n-ew] pro<sub>i</sub>(ABS)  
 this forest-OBL 1SG.ABS-go-MOD-ADV  
 s-e-š’əne  
 1SG.ABS-DYN-fear

‘I am afraid to go into this forest.’

- b. \* [CP mə ɕəf-xe-m(ERG) *pro*<sub>i</sub>(ABS) s-a-šte-n-ew /  
           this person-PL-OBL 1SG.ABS-3PL.ERG-take-MOD-ADV /  
           w-a-šte-n-ew] *pro*<sub>i/j</sub>(ABS) s-e-š’əne  
           2SG.ABS-3PL.ERG-take-MOD-ADV 1SG.ABS-DYN-fear  
           lit. ‘I am afraid for these people to take me/you.’

Compare the non-control equivalent š’ə-š’ənen (LOC+‘fear’):

- (337) [CP mə ɕəf-xe-m *pro*<sub>i/j</sub>(ABS) w-a-šte-nə-m /  
           this person-PL-OBL 2SG.ABS-3PL.ERG-take-MOD-OBL /  
           s-a-šte-nə-m] *pro*<sub>i</sub>(ABS) sə-Ø-š’-e-š’əne  
           1SG.ABS-3PL.ERG-take-MOD-OBL 1SG.ABS-3SG.IO-LOC-DYN-fear  
           ‘I am afraid of them taking you/me.’

- (338) jezeš’ən ‘tire of’

- a. [CP PRO<sub>i</sub>(ERG) wa-wəž š<sup>w</sup>ejə-xe-r  
           2SG.PP-after dirty-PL-ABS  
           Ø-ʔ<sup>w</sup>ə-s-xə-ž’ə-n-ew] *pro*<sub>i</sub>(ABS) s-Ø-je-zeš’ə-ɸ  
           3ABS-LOC-1SG.ERG-take-RE-MOD-ADV 1SG.ABS-3SG.IO-DAT-tire-PST  
           ‘I’m tired of picking up trash after you.’
- b. \* [CP mə ɕ’ale-r(ABS) *pro*<sub>i</sub>(IO) Ø-qə-s-e-plə-n-ew]  
           this boy-ABS 3ABS-DIR-1SG.IO-DAT-look-MOD-ADV  
           *pro*<sub>i</sub>(ABS) s-Ø-je-zeš’ə-ɸ  
           1SG.ABS-3SG.IO-DAT-tire-PST  
           Intended: ‘I’m tired of this boy looking at me.’

The non-control use requires a factive complement:

- (339) [CP mə ɕ’ale-r *pro*<sub>i</sub>(IO) Ø-qə-zere-s-e-plə-zepət-re-m]  
           this boy-ABS 3ABS-DIR-WH.FACT-1SG.IO-DAT-look-always-DYN-OBL  
           *pro*<sub>i</sub>(ABS) s-Ø-je-zeš’ə-ɸ  
           1SG.ABS-3SG.IO-DAT-tire-PST  
           ‘I’m tired of this boy looking at me.’

- (340) jevež’en ‘begin’

- a. č'elejeɤaʒe-m<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(ERG) č'ale-xe-r(ABS)  
 teacher-OBL boy-PL-ABS  
 Ø-ə-λəte-n-ew] Ø-r-jə-ɤe-ž'a-ɤ  
 3ABS-3SG.ERG-count-MOD-ADV 3ABS-DAT-3SG.erg-CAUS-begin-PST  
 'The teacher began to count the students.'
- b. \* č'ale-xe-m<sub>i</sub>(ERG) [CP č'elejeɤaʒe-m(ERG) pro<sub>i</sub>(ABS)  
 boy-PL-OBL teacher-OBL  
 Ø-ə-λəte-n-ew] Ø-r-a-ɤe-ž'a-ɤ  
 3ABS-3SG.ERG-count-MOD-ADV 3ABS-DAT-3PL.ERG-CAUS-begin-PST  
 lit. 'The children began for the teacher to count them.'

(341) fjež'en 'begin'

- a. [CP haž<sup>w</sup>ə-š'ər-xe-r ha-m<sub>i</sub>(ERG) Ø-ə-ɤe-šxe-n-ew]  
 puppy-cub-PL-ABS dog-OBL 3ABS-3SG.ERG-CAUS-eat-MOD-ADV  
 PRO<sub>i</sub>(ABS) Ø-Ø-f-je-ž'a-ɤ  
 3ABS-3SG.IO-BEN-DAT-begin-PST  
 'The dog began to feed the puppies.'
- b. \* [CP haž<sup>w</sup>ə-š'ər-xe-r(ABS) ha-m<sub>i</sub>(ERG) Ø-ə-ɤe-šxe-n-ew]  
 puppy-cub-PL-ABS dog-OBL 3ABS-3SG.ERG-CAUS-eat-MOD-ADV  
 pro<sub>i</sub>(ABS) Ø-Ø-f-je-ž'a-ɤe-x  
 3ABS-3SG.IO-BEN-DAT-begin-PST-PL  
 lit. 'The puppies began for the dog to feed them.'

(342) wəɓlen 'begin'

- a. zarjəne<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(ERG) ha-xe-r(ABS)  
 Zarina dog-PL-ABS  
 Ø-ə-ɤe-šxe-n-ew] Ø-ə-wəɓla-ɤ  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-3SG.ERG-begin-PST  
 'Zarina began to feed to dogs.'
- b. \* ha-xe-m<sub>i</sub>(ERG) [CP zarjəne(ERG) pro<sub>i</sub>(ABS)  
 dog-PL-OBL Zarina  
 Ø-ə-ɤe-šxe-n-ew] Ø-a-wəɓla-ɤ  
 3ABS-3SG.ERG-CAUS-eat-MOD-ADV 3ABS-3PL.ERG-begin-PST  
 lit. 'The dogs began for Zarina to feed them.'

(343) wəxən 'finish'

- a. jane<sub>i</sub>(ERG) [CP PRO<sub>i</sub>(ERG) sabjəj-xe-r(ABS)  
 mother child-PL-ABS

Ø-ə-ʁe-pskə-n-ew] Ø-ə-wəxə-ʁ  
 3ABS-3SG.ERG-CAUS-bathe-MOD-ADV 3ABS-3SG.ERG-finish-PST  
 ‘The mother finished bathing the children.’

- b. \* subjəj-xe-m<sub>i</sub>(ERG) [Cp jane(ERG) pro<sub>i</sub>(ABS)  
 child-PL-OBL mother  
 Ø-ə-ʁe-pskə-n-ew] Ø-a-wəxə-ʁ  
 3ABS-3SG.ERG-CAUS-bathe-MOD-ADV 3ABS-3PL.ERG-finish-PST  
 lit. ‘The children finished the mother bathing them.’

(344) zepəʁewən ‘stop’

- a. [Cp PRO<sub>i</sub>(ERG) mə ha-xe-r(ABS) Ø-z-ʁe-ʃxe-n-ew]  
 this dog-PL-ABS 3ABS-1SG.ERG-CAUS-eat-MOD-ADV  
 pro<sub>i</sub>(ERG) Ø-ze-pə-z-ʁe-wə-ʁ  
 3ABS-REC.IO-LOC-1SG.ERG-CAUS-end-PST  
 ‘I stopped feeding these dogs.’
- b. \* [Cp pro<sub>i</sub>(ERG) mə ha-xe-r<sub>i</sub>(ABS) Ø-z-ʁe-ʃxe-n-ew]  
 this dog-PL-ABS 3ABS-1SG.ERG-CAUS-eat-MOD-ADV  
 pro<sub>i</sub>(ERG) Ø-ze-p-a-ʁe-wə-ʁ  
 3ABS-REC.IO-LOC-3PL.ERG-CAUS-end-PST  
 lit. ‘The dogs stopped me feeding them.’

## Appendix 5.B Non-control verbs

Some verbs that are often obligatory control, but are not in West Circassian: *jeʔ<sup>w</sup>en* ‘tell’ (345), *jeʁeg<sup>w</sup>əʁen* ‘promise’ (346), *jeʁezən* ‘force’ (347), *jeʁeʁən* ‘agree’ (348), *jeleʔ<sup>w</sup>ən* ‘ask’ (349), *zəʁehazərən* ‘prepare oneself’ (350), *jəχ<sup>w</sup>əhan* ‘decide’ (351), *ç’eʁ<sup>w</sup>ež’ən* ‘oppose’ (352), *məden* ‘refuse’ (353),<sup>12</sup> *pələn* ‘try’ (354), *ʃən* ‘know’ (355), *ʃ’əg<sup>w</sup>əʁ<sup>w</sup>ən* ‘hope’ (356), *jəç’esen* ‘like’ (357).

- (345) [Cp marjəne ʒexaš<sup>w</sup>e-xe-r Ø-ə-thač’ə-n-ew]  
 Marina floor-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV  
 Ø-qə-s-e-p-ʔ<sup>w</sup>a-ʁ  
 3ABS-DIR-1SG.IO-DAT-2SG.ERG-say-PST

12. This verb must include overt negation: *mə-* in the non-finite citation form and *-ep* in the finite forms.

‘You told me that Marina should wash the floors’ (lit. ‘You told me for Marina to wash the floors.’)

- (346) [CP pčəhe-m zarjəne laʁe-xe-r Ø-ə-thač’ə-n-ew]  
 evening-OBL Zarina dish-PL-ABS 3ABS-3SG.ERG-wash-MOD-ADV  
 Ø-w-e-s-e-ʁe-g<sup>w</sup>əʁe  
 3ABS-2SG.IO-DAT-1SG.ERG-DYN-CAUS-hope  
 ‘I promise to you that Zarina will wash the dishes in the evening’ (lit. ‘I promise to you for Zarina to wash the dishes in the evening’)

- (347) % sə-Ø-r-a-ʁe-zə-ʁ [CP we čəle-m  
 1SG.ABS-3SG.IO-DAT-3PL.ERG-CAUS-force-PST you village-OBL  
 wə-de-č’ə-n-ew  
 2SG.ABS-LOC-leave-MOD-ADV  
 ‘They forced me to make you leave the village’ (lit. ‘They forced me for you to leave the village’)

- (348) [CP a-š’ wə-ḵ<sup>w</sup>e-n-ew] s-Ø-je-zeʁə-ʁ-ep  
 that-OBL 2SG.ABS-go-MOD-ADV 1SG.ABS-3SG.IO-DAT-agree-PST-NEG  
 ‘I didn’t agree for you to go there.’

- (349) ahmed s-Ø-je-ʁe-ʔ<sup>w</sup>ə-n-ew sə-Ø-faj [CP  
 Ahmed 1SG.ABS-3SG.IO-DAT-LOC-say-MOD-ADV 1SG.ABS-3SG.IO-want  
 ə-q<sup>w</sup>e deḵ<sup>w</sup>ejape-r Ø-ə-ʂə-ž’ə-n-ew]  
 3SG.PR-son porch-ABS 3ABS-3SG.ERG-do-RE-MOD-ADV  
 ‘I want to ask Ahmed for his son to fix the porch.’

- (350) sabjəj-xe-m [CP jane(ERG) pro<sub>i</sub>(ABS) Ø-ə-fepe-n-ew]  
 child-PL-OBL 3PL.PR+mother 3ABS-3SG.ERG-dress-MOD-ADV  
 z-a-ʁe-hazəʁə-ʁ  
 REFL.ABS-3PL.ERG-CAUS-ready-PST  
 ‘The children got ready for their mother to dress them.’

- (351) ? [CP njewəš’ məjeq<sup>w</sup>ape wə-ḵ<sup>w</sup>e-n-ew]  
 tomorrow Maykop 2SG.ABS-go-MOD-ADV  
 Ø-jə-s-χ<sup>w</sup>əha-ʁ  
 3SG.ABS-LOC-1SG.ERG-decide-PST  
 ‘I decided for you to go to Maykop tomorrow.’

- (352) a-xe-r Ø-Ø-č’e-ʁ<sup>w</sup>e-ž’ə-ʁe-x [CP mə wəne-r  
 that-PL-ABS 3ABS-3SG.IO-LOC-reject?-RE-PST-PL this house-ABS

Ø-t-š'e-n-ew]

3ABS-1PL.ERG-sell-MOD-ADV

'They opposed us selling the house.'

- (353) a-xe-me [CP wəne Ø-t-š'e-n-ew]  
that-PL-PL.OBL house 3ABS-1PL.ERG-sell-MOD-ADV  
Ø-a-da-ɐ-ep  
3ABS-3PL.ERG-concede?-PST-NEG

'They refused for us to sell the house.'

- (354) [CP səmežə-m w-a-š'e-nə-m] sə-Ø-pəλ  
hospital-OBL 2SG.ABS-3PL.ERG-bring-MOD-OBL 1SG.ABS-3SG.IO-try  
lit. 'I will try for them to take you to the hospital.'

- (355) ? [CP mə-š' fede žane Ø-a-də-n-ew]  
this-OBL like dress 3ABS-3PL.ERG-sew-MOD-ADV  
Ø-s-ŕe-r-ep  
3ABS-1SG.ERG-know-DYN-NEG

'I don't know if they can sew a dress like this.' (lit. 'I don't know for them to sew a dress like this.')

- (356) [CP njewəš' ta-dež' wə-qe-k<sup>w</sup>e-nə-m / wə-qe-k<sup>w</sup>e-n-ew]  
tomorrow 1PL.PP-at 2SG.ABS-DIR-go-MOD-OBL / 2SG.ABS-DIR-go-MOD-ADV  
sə-Ø-š'-e-g<sup>w</sup>əɐ<sup>w</sup>  
1SG.ABS-3SG.IO-LOC-DYN-hope

'I hope that you will come to our place tomorrow' (lit. 'I hope for you to come to our place tomorrow.')

- (357) [CP se adəye-šxən-č'e s-a-ɐe-šxe-n-ew] Ø-s-jə-č'as  
I Adyghe-food-INS 1SG.ABS-3PL.ERG-CAUS-eat-MOD-ADV 3ABS-1SG.IO-LOC-like  
'I like for them to feed me with Adyghe food.'

## Appendix 5.C Other verbs not discussed in chapter 5

### 5.C.1 *ləč'an* 'be able to'

The modal verb *ləč'an* 'be able to' is listed by Testelefs (2009b:672) as an obligatory control verb, but it exhibits several properties that suggest that it selects for a complement that is smaller than



CP and thus involves restructuring or a monoclausal construction.

1. Unlike control verbs, it selects for the bare modal future marked with *-n* and does not allow adverbial or core case marking on the complement clause:

- (358) a. se [wə-z-ʁe-šxe-n] Ø-s-ʎeč'ə-š't  
 I 2SG.ABS-1SG.ERG-CAUS-eat-MOD 3ABS-1SG.ERG-be.able-FUT  
 'I can feed you.'
- b. \*se [wə-z-ʁe-šxe-n-ew] Ø-s-ʎeč'ə-š't  
 I 2SG.ABS-1SG.ERG-CAUS-eat-MOD-ADV 3ABS-1SG.ERG-be.able-FUT
- c. \*se [wə-z-ʁe-šxe-nə-r] Ø-s-ʎeč'ə-š't  
 I 2SG.ABS-1SG.ERG-CAUS-eat-MOD-ABS 3ABS-1SG.ERG-be.able-FUT  
 Intended: 'I can feed you.'

2. Unlike control verbs, it does not allow for relativization of the complement clause:

- (359) a. a-š' [ʒane Ø-ə-də-n] Ø-j-e-ʎeč'ə  
 that-OBL dress 3ABS-3SG.ERG-sew-MOD 3ABS-3SG.ERG-DYN-be.able  
 'S/he can sew dresses.'
- b. \* [ʒane Ø-ə-də-nə-r]<sub>i</sub> ʒarə [RC Op<sub>i</sub> a-š'  
 dress 3ABS-3SG.ERG-sew-MOD-ABS here that-OBL  
 t<sub>i</sub>(ABS) Ø-ə-ʎeč'ə-re-r  
 3ABS-3SG.ERG-be.able-DYN-ABS  
 Intended: 'Sew dresses – that's what she can do.'

### 5.C.2 χ<sup>w</sup>ən 'turn out, become' and qəč'eč'ən 'happen to'

The verbs χ<sup>w</sup>ən 'turn out, become' in its aspectual use and qəč'eč'ən 'happen to' are classified as raising by (Potsdam and Polinsky 2012). In the Temirgoy variety spoken in Adygea, on which this work is based, they behave as one-place predicates that select for a proposition and do not allow raising of any participants into the matrix clause (Testelelets 2009b:680-690).

1. Embedded ergative argument cannot surface with absolutive case:

(360)  $\chi^w_{\text{an}}$  ‘become’

- a. [CP a-xe-**me**(ERG) wəse Ø-a-txə-n-ew ]  $\chi^w_{\text{ə-be}}$   
that-PL-**PL.OBL** poem 3ABS-3PL.ERG-write-MOD-ADV become-PST
- b. \* [CP a-xe-**me**(ERG) wəse Ø-a-txə-n-ew ]  
that-PL-PL.OBL poem 3ABS-3PL.ERG-write-MOD-ADV  
a-xe-**r**(ABS)  $\chi^w_{\text{ə-be}}$   
that-PL-**ABS** become-PST  
‘It turned out that they wrote a poem.’ (Testelelets 2009b:681)

(361) qəč’eč’ən ‘happen to’

- a. [CP sabəjə-**m**(ERG) wəse-r Ø-ə-txə-**B**-ew]  
child-**OBL** poem-ABS 3ABS-3SG.ERG-write-PST-ADV  
qəč’eč’ə-**B**  
DIR-LOC-exit-PST
- b. \* [CP sabəjə-**m**(ERG) wəse-r Ø-ə-txə-**B**-ew]  
child-**OBL** poem-ABS 3ABS-3SG.ERG-write-PST-ADV  
sabəjə-**r**(ABS) qəč’eč’ə-**B**  
child-**ABS** DIR-LOC-exit-PST  
‘It so happened that the child wrote the poem.’ (Testelelets 2009b:687)

2. Embedded argument cannot trigger prefixal agreement on the matrix predicate:

(362) [CP se sə-xe-čəja-**B**-ew ]  $\chi^w_{\text{ə-be}}$  / \*sə- $\chi^w_{\text{ə-B}}$   
I 1SG.ABS-LOC-sleep-PST-ADV become-PST **1SG.ABS**-become-PST  
glt ‘It turned out that I fell asleep.’ (Testelelets 2009b:683)

(363) [CP  $\hat{s}^w_{\text{e}}$   $\hat{s}^w_{\text{ə-čəja-B-ew}}$  ] (\* $\hat{s}^w_{\text{ə-}}$ )qəč’eč’ə-**B**  
you(PL) 2PL.ABS-sleep-PST-ADV (\***2PL.ABS**-)DIR-LOC-exit-PST  
‘It so happened that you were sleeping.’ (Testelelets 2009a:688)

## CHAPTER 6

### CONCLUSION

This dissertation provides an analysis of argument alignment in West Circassian. The main claim of the thesis is that West Circassian is syntactically ergative, with the absolutive argument raising to an A-position c-commanding other verbal arguments. Evidence for this clausal configuration comes from patterns of reciprocal binding and parasitic gap licensing. Standard subjecthood diagnostics – reflexive binding patterns and obligatory control configurations – are shown to single out the ergative agent as the subject due to additional syntactic constraints that limit the application of these diagnostics to VoiceP. I outline the main takeaway points of the dissertation below.

#### 6.1 Syntactic ergativity

This dissertation shows that in West Circassian, the absolutive argument undergoes A-movement to a position c-commanding both the ergative agent and any applied objects. In line with previous proposals for a high absolutive (Bittner and Hale 1996; Manning 1996; Baker 1997; Aldridge 2008; Coon et al. 2014; Yuan 2018, a.o.), this dissertation confirms that the high position of the absolutive argument is derived. By examining a number of previously undiscussed ergativity diagnostics, this project provides compelling evidence that this high position must be derived via A-movement, rather than A'-movement.

I propose a principled way of deriving the high position of the absolutive argument through a system of feature-driven nominal licensing in the spirit of Minimalist Grammars (Stabler 1997, 2010; Keenan and Stabler 2003; Lecomte and Retoré 1999, 2001). The ergative agent and any applied objects are licensed by the functional heads that introduce them –  $v_{TR}$  and  $Appl^0$  respectively – while the absolutive argument remains unlicensed until the merging of  $T^0$  and is subsequently licensed via movement to Spec,TP. The featural implementation of nominal licensing ensures that the ergative agent and applied objects do not act as interveners in the movement of the absolutive

argument to Spec,TP since they no longer carry the relevant licensee feature after they are licensed. This aspect of the analysis bears a significant similarity to approaches that treat ergative and applied object case as inherent and thus opaque for further case or licensing related syntactic operations (see e.g. McGinnis 1998a; Woolford 2006; Legate 2008). Morphological case is then determined configurationally after the full TP is constructed per Marantz (1991); McFadden (2004); Baker (2015); Yuan (2018): the ergative agent and applied objects, which are both c-commanded by the absolutive argument, are assigned dependent oblique case, while the absolutive argument is assigned default absolutive case. Defining case marking via structural means after nominal licensing has taken place allows for a simple and principled account for the ergative agent and applied objects bearing the same oblique case marker, while at the same time preserving the basic intuition behind the inherent case approach – that ergative and applied arguments are licensed by the heads that assign their theta-roles.

## 6.2 Subjecthood and syntactic ergativity

In regards to the notion of subjecthood, this dissertation confirms the idea that subjecthood properties may be distributed across several position in the clausal spine (Harley 1995; Bobaljik and Jonas 1996; McCloskey 1997). In a syntactically accusative language, it is generally the case that the different positions are associated with a single nominal, which undergoes movement through these positions in the course of the derivation. Through the examination of subjecthood diagnostics in a syntactically ergative language like West Circassian, we arrive at a further deconstruction of the notion of subject. In West Circassian, the different positions associated with particular subjecthood properties may be systematically occupied by distinct nominals: for example, in the case of a transitive verb, the highest A-position in the clause is occupied by the absolutive theme and the highest A-position within VoiceP is occupied by the ergative agent. This means that within a given utterance, there is no single position and no single nominal which may be tangibly identified as the subject. Thus, in a syntactically ergative system it is especially apparent that the term ‘subject’

bears no theoretical significance for a generative phrase structure model.

### 6.3 Anaphors and syntactic ergativity

This dissertation provides an analysis of the seemingly puzzling behavior of anaphors in West Circassian: reflexives appear to follow a syntactically accusative pattern, while reciprocals follow a syntactically ergative pattern, in some cases resulting in opposite directionality of binding. The main takeaway of the analysis is that in a syntactically ergative system, subjecthood diagnostics such as conditions on anaphor binding may be constrained in a way that appears to give rise to contradictory syntactic structures, but are in fact simply sensitive to different structural domains. Reciprocals are standard anaphors which must be A-bound within TP, while reflexives must be licensed by  $\text{Voice}_{\text{REFL}}$ , which limits the set of possible antecedents for a reflexive to the highest argument in the verbal theta-domain. Reciprocals thus provide evidence for a syntactically ergative clause structure, while reflexives provide insight into the syntactic constraints governing local subject orientation, a cross-linguistically common property of anaphors (see e.g. Ahn 2015).

The behavior of reflexives in West Circassian provides support for a locality-based account for local subject orientation without any reference to subjecthood, such as the one proposed by Ahn (2015). As a syntactically ergative language, wherein the local subject (i.e. the highest argument in the theta-domain) might not correspond to the surface subject (i.e. the highest argument in the A-domain), West Circassian confirms an implicit prediction of Ahn's (2015) analysis: the constraint that the antecedent of a local subject oriented reflexive must be both the 'deep' and the 'surface' subject is epiphenomenal to the way arguments are promoted to the surface subject position in syntactically accusative languages. In a syntactically ergative language, the antecedent of a local subject oriented anaphor need not be the surface subject, because the movement of the absolutive DP to surface subject position is a uniform structural phenomenon which is not associated with a particular  $\text{Voice}^0$  head or with the demotion of the notional subject.

## 6.4 Parasitic gaps and syntactic ergativity

The analysis of parasitic gaps provided in this dissertation makes a two-fold contribution. On the one hand, conditions on parasitic gap licensing are used as a novel diagnostic for syntactic ergativity: since parasitic gaps are expected to be constrained in predictable configurational ways – by c-command relations between the real gap and the parasitic gap (Engdahl 1983) – parasitic gaps may be used to diagnose the relative structural positions of various arguments. In West Circassian, the behavior of parasitic gaps confirms the high position of the absolutive argument, providing support for the main proposal of the dissertation. On the other hand, the analysis of parasitic gaps in a syntactically ergative language like West Circassian demonstrates that the structural constraints on parasitic gaps which have been documented in syntactically accusative systems are similarly active in a language with a different system of argument alignment, thus expanding the empirical base for the discussion of the syntax of parasitic gaps cross-linguistically.

## 6.5 Control and syntactic ergativity

An arguably universal property of all languages regardless of their system of argument alignment is that they follow a syntactically accusative syntax in the domain of obligatory control (Dixon 1994:136). A syntactically ergative language like West Circassian thus poses a challenge for standard analyses of control which appeal to the structural prominence of the controlled argument (see e.g. Chomsky 1981; Chomsky and Lasnik 1993; Bošković 1997; Borer 1989; Hornstein 1999, 2001, 2003; Landau 2000, 2015; Martin 2001; Boeckx et al. 2010). I propose a solution to this problem: control is analyzed as agreement in the index value between the controller in the matrix clause and the controlled argument in the embedded clause. This agreement is mediated by embedded Voice<sup>0</sup> and thus singles out the highest nominal in the c-command domain of Voice<sup>0</sup>, i.e. the theta-domain, as the controlled argument. If this analysis is on the right track, it has the potential of explaining why obligatory control constructions never follow a syntactically ergative

pattern: if the choice of controlled argument is established within the theta-domain, rather than within the full embedded clause, and syntactic ergativity is always derived, the logical conclusion is that control can never display a syntactically ergative pattern.

## **6.6 Polysynthesis/non-configurationality**

An important contribution of this dissertation is that it provides evidence for a configurational structure in a polysynthetic language with many typical properties associated with non-configurationality, such as prominent pro-drop, free word order and no free standing anaphors. Through the close examination of the morphological forms and their correlation with the full clause structure, I demonstrate that arguments are organized asymmetrically within the West Circassian clause. In this sense this project falls in line with research demonstrating that the typological properties which have been subsumed under the label of non-configurationality cannot be determined macro-parametrically as proposed e.g. by Hale (1983, 1994); Jelinek (1984); Baker (1996), but instead arises as a consequence of multiple micro-parameters obscuring the underlyingly configurational clause structure (see e.g. Bruening 2001; Legate 2002; Davis and Matthewson 2009).

Another contribution of this dissertation is that it provides a way of analyzing syntactic structure based primarily on morphological cues, given that, as a polysynthetic language, West Circassian lacks many typical syntactic cues. For example, I demonstrate that the syntax of anaphor binding may be determined prevalently through the order of agreement prefixes on the predicate, and wh-movement and parasitic gaps are both diagnosed primarily through the overt wh-agreement that is triggered by the real or parasitic wh-trace.

## **6.7 Future directions**

This project gives rise to a number of questions which warrant closer investigation.

### 6.7.1 Syntactic accusativity in the absence of $T^0$

First, a prediction of the analysis proposed for the West Circassian clause structure is that syntactic constructions which lack the TP layer will display syntactic accusativity effects, because within such a construction the absolutive argument would not undergo raising to Spec,TP. This prediction is confirmed by the behavior of verbal nominalizations, which include the full  $vP$ , but lack  $T^0$ . In these nominalized constructions, the arguments are strictly ordered in a syntactically accusative fashion: the ergative agent of a transitive verb must precede the absolutive theme, and an absolutive external argument of an unergative verb must precede the applied object. The constrained ordering of these arguments thus directly reflects structural distance from the lexical verb: the internal argument appears closer to the verbal root than the external argument (Ershova 2015, 2018, 2019). This is demonstrated in the examples below: if an ergative verb such as *thačʼən* ‘wash’ in (364a) is nominalized, the ergative agent must appear farther from the root than the absolutive theme – in this case, the ergative agent is expressed as a possessor and the theme is expressed as an incorporated nominal (364b); the opposite order of arguments is deemed ill-formed (364c).

- (364) a. *mə pšaše-m(ERG) laɁe-xe-r(ABS) Ø-j-e-thačʼə*  
           this girl-OBL       dish-PL-ABS   3ABS-3SG.ERG-DYN-wash  
           ‘This girl is washing the dishes.’
- b. *pšaše-m Ø-jə-leɁe-thačʼə-čʼe                   səg<sup>w</sup> rjehə*  
           girl-OBL 3SG.PR-POSS-dish-wash-NML I like  
           ‘I like the girl’s manner of dish-washing.’
- c. # *laɁe-me       ja-pšeše-thačʼə-čʼe                   səg<sup>w</sup> rjehə*  
           dish-PL.OBL 3PL.PR+POSS-girl-wash-NML I like  
           Intended: ‘I like the girls’ manner of washing dishes.’  
           #‘I like the dishes’ manner of washing girls’ (Ershova 2019)

Likewise, if an unergative verb with an applied object such as *ježen* ‘wait’ in (365a) is nominalized, the absolutive external argument must appear farther away from the root than the applied object (365b) – once again, the reverse order of arguments is impossible.



- (365) a. mə pšaše-r(ABS) hač'e-me(IO) Ø-ja-že  
 this girl-ABS guest-PL.OBL 3ABS-3PL.IO+DAT-wait  
 'This girl is waiting for the guests.'
- b. marə hač'e-me ja-pšeše-je-ža-pe  
 here guest-PL.OBL 3PL.PR+POSS-girl-DAT-wait-NML  
 'Here is the place for the guests' waiting for the girl.'
- \*'Here is the place for the girls' waiting for the guests.'

The constrained order of arguments in verbal nominalizations thus confirms the prediction that in the absence of  $T^0$ , the absolutive argument will not display subjecthood properties: in the case of nominalizations, the absolutive theme does not undergo movement to a position c-commanding the ergative agent and thus must appear closer to the verbal root than the agent. The details of the analysis of argument licensing in nominalized constructions however remain for future research.

### 6.7.2 *Other syntactic ergativity effects*

Second, a logical continuation of this project is the investigation of other phenomena in West Circassian which appear to display syntactic ergativity effects. One such effect is the absence of overt wh-agreement morphology with an absolutive trace. In this dissertation, the lack of overt exponence in this case has been taken as a case of accidental allomorphy. However, given that subjects are believed to be the most accessible arguments for extraction (Keenan and Comrie 1977), this has been suggested by Lander (2009b) to be an indication of the subjecthood status of the absolutive DP. It remains an open question whether the absence of overt absolutive wh-agreement can be connected to the high position of the absolutive argument in a meaningful way.

Another syntactic ergativity effect that is briefly discussed in chapter 4 and was also pointed out by Lander (2009b) is the islandhood of non-absolutive DPs: possessor extraction is possible only out of an absolutive DP. This once again confirms that the absolutive argument has a syntactic status that is distinct from other arguments, however, the question of what makes extraction out of non-absolutive arguments ungrammatical remains for future research.

### 6.7.3 *The syntax of clausal embedding*

The discussion of parasitic gap constructions and obligatory control configurations raises a number of questions regarding the syntax of clausal embedding. One question concerns the fact that in West Circassian, clausal boundaries appear to obviate Condition C, the anti-c-command condition on parasitic gaps, and allow for backward control in control configurations. It is likely that these three phenomena are related to each other and have an explanation in the rules governing binding and co-reference in the language.

Another question regarding clausal embedding concerns the syntax of long-distance wh-movement: which types of clausal complements allow such movement, and whether such movement obligatorily or optionally triggers additional wh-agreement on the embedding predicate. As discussed in chapter 4, the additional wh-agreement observed in these cases is distinct from the multiple wh-agreement observed in parasitic gap constructions for a number of reasons, and is likely to be either triggered by successive-cyclic movement through the embedded Spec,CP, as has been proposed for Chamorro by Chung (1994, 1998), or a scope-marking constructions wherein the matrix and embedded clause involve two separate cases of relativization, as has been proposed for Hindi by Dayal (1994) and for Passamaquody by Bruening (2004, 2006), among others. A closer investigation of this construction remains for future research.

### 6.7.4 *Word order*

Finally, based on the interaction between the ergative and applied object DPs in terms of parasitic gap licensing and weak crossover effects, I have argued in chapter 4 that the applied object may undergo A-scrambling to a position c-commanding the ergative agent. Among other things, this may serve as a source of free word order in a subdomain of the clause structure. However, free ordering of the ergative and applied object DPs is clearly not the only potential word order permutation allowed within the West Circassian clause. Thus, the task of future research is the investigation of

the mapping between the configurational syntactic structure and the free word order observed in the language.

This dissertation thus lays the groundwork for future investigation into a number of grammatical domains which can shed light both on the syntactic structure of West Circassian and on the general nature of the phenomena under scrutiny.

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